obesityweek℠2018

Nashville, Tennessee | November 11-15

ASMBS

OBESITY SOCIETY

ASMBS Abstracts

About the American Society for Metabolic and Bariatric Surgery

The ASMBS is the largest national society for this specialty. The vision of the Society is to improve public health and well-being by lessening the burden of the disease of obesity and related diseases throughout the world.

Founded in 1983, foremost American surgeons have formed the society's leadership and have established an excellent organization with educational and support programs for surgeons and integrated health professionals. The purpose of the society is to advance the art and science of metabolic and bariatric surgery by continually improving the quality and safety of care and treatment of people with obesity and related diseases by:

- Advancing the science of metabolic and bariatric surgery and increase public understanding of obesity.
- Fostering collaboration between health professionals on obesity and related diseases.
- Providing leadership in metabolic and bariatric surgery the multidisciplinary management of obesity.
- Advocating for health care policy that ensures patient access to prevention and treatment of obesity.
- Serving the educational needs of our members, the public and other professionals.

About ObesityWeek[SM]

ObesityWeek[sm] is a unique, international event focused on the basic science, clinical application, surgical intervention and prevention of obesity. Co-locating both TOS and ASMBS annual meetings brings together world-renowned experts in obesity to share innovation and breakthroughs in science unmatched around the globe. Attendees will enjoy the diverse educational opportunities, networking events, and scientific synergies created through the collaboration of these leading obesity organizations.

2018 ASMBS Program Committee

The Program Committee is responsible for developing and arranging all of the annual educational events for the ASMBS with the annual conference being the primary educational event. The committee identifies needs, professional gaps, and barriers; reviews and grades submitted abstracts; selects relevant topics and educational design; secures guest speakers; contributes to the development of overall conference programming.

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ASMBS Abstracts 2018
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Future Obesity Week Event Dates

2019	**Las Vegas, NV | Nov. 3 – Nov. 7** **Mandalay, Bay**
2020	**Atlanta, GA | Nov. 2 – Nov. 6** **Georgia World Congress Center**
2021	**Dallas, TX | Oct. 29 – Nov. 6** **Kay Bailey Hutchison Convention Center**

Educational Overview and Information

Purpose

The American Society for Metabolic and Bariatric Surgery is committed to providing tools for physicians and integrated health professionals as they participate in the Maintenance of Certification program, a lifelong learning process which includes areas of self-assessment and quality improvement of practice performance by physician specialists. Presentations of papers submitted from the most current research, as well as invited lecturers, promote the exchange of information and experiences between those practiced in bariatric surgery and newcomers to the field. The Scientific Session is offered as a culmination to the selection of courses presented in various learning formats designed to meet the needs of the learner. The primary goal is continual improvement in the competence and performance of those in the field of bariatric surgery which will result in improved patient outcomes.

Target Audience

The conference is designed for all clinical and academic surgeons and support staff, including any health professional involved in the care of the patient with obesity, who wish to increase their knowledge of the surgical and perioperative management of the patient with obesity. The conference is also designed for those seeking practical pearls and hands-on experience to modify their practice and thereby achieve more favorable patient outcomes.

Educational Objectives

Upon completion of this conference, physicians and support staff should be able to:

- Define, discuss and solve specific challenges in the treatment of patients who suffer from obesity and obesity-related and metabolic diseases and conditions
- Describe the development and use of new techniques to achieve weight loss by surgery in patients with obesity
- Examine the broad scope of patient care services
- Identify the specific needs of bariatric patients and assist in targeting their care in a coordinated multidisciplinary team effort

Accreditation Statements

The American Society for Metabolic and Bariatric Surgery (AMSBS) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The American Society for Metabolic and Bariatric Surgery designates this educational activity for a maximum of 32 AMA PRA Category 1 Credit(s)™.

Physicians should only claim credit commensurate with the extent of their participation in the activity.

Nursing Credits (up to 33.5 CE contact hours) are provided by Taylor College, Los Angeles, California (possibly may not be accepted for national certification.)

APA and NASW credits for the ASMBS Masters in Behavioral Health Course are pending. This course is co-sponsored by Amedco and the American Society for Metabolic and Bariatric Surgery (ASMBS).

Educational Disclaimer

The primary purpose of this conference is education. Information presented, as well as publications, technologies, products, and/or services discussed, are intended to inform you about the knowledge, techniques and experiences of bariatric surgeons who are willing to share such information with colleagues. A diversity of professional opinions exists in bariatric surgery, and the views of the conference's faculty are offered solely for educational purposes. Faculty's views neither represent those of the ASMBS nor constitute endorsement by the Society. The ASMBS declaims any and all liability or damages to any individual attending this conference and for all claims, which may result from the use of information, publications, technologies, products, and/or services of the meeting. Faculty disclosure statements have been requested from the speakers and will be presented in the conference materials.

ASMBS Abstracts 2018 Schedule of Oral Presentations

Paper Sessions

Tuesday, November 13th, 2018

TOP TEN PAPERS SESSION I **10:20am–12:00pm**

10:20am **A101 Does the RYGB Common Limb Length Influence Hypertension Remission, Weight Loss and Cardio-Metabolic Parameters? Data from the GATEWAY TRIAL.**
Carlos A. Schiavon, MD; Dimas Ikeoka, MD; Renato N Santos, Stat; Eliana V Santucci, RT; Tamiris A Miranda, Pharm; Lucas P Damiani, MSc; Juliana D Oliveira, Nut; Camila R Torreglosa MD; Priscila T Bueno, Psy; Angela C Bersch-Ferreira, PhD; Patrcia M Noujaim, MD; Ricardo V Cohen, MD; Helio Halpern, MD; Frederico LJ Monteiro MD; Marcio G Sousa MD, PhD; Celso Amodeo, MD; Luiz Bortolloto, PhD; Otávio Berwanger, MD; Alexandre B Cavalcanti, MD, PhD; Luciano F Drager, MD

10:40am **A102 Effects of bariatric surgery on the glomerular integrity of morbidly obese patients with chronic kidney disease (CKD).**
David Romero Funes, MD; David Gutierrez Blanco MD; Mauricio F Sarmiento-Cobos, MD; Rama Ganga, MD; Emanuele Lo Menzo, MD, PhD, FASMBS; Samuel Szomstein, MD, FASMBS; Raul J Rosenthal, MD

11:00am **A103 Bariatric Surgery is Safe and Effective in ALL Medicare Patients Regardless of Age**
Jai Prasad, MD; Jacob A Petrosky, MD; Jason Kuhn, DO; Robert Cunningham, MB, BCh; James T Dove, BA; Marcus Fluck, BS; Christopher Still, DO; Craig Wood, MS; David M Parker, MD; Jon Gabrielsen, MD; Anthony Petrick, MD, FASMBS

11:20am **A104 Bariatric Surgery Reduces the Incidence of Atrial Fibrillation: A Propensity Score Matched Analysis**
Kevin Lynch, MD; J. Hunter Mehaffey, MD, MSc; Robert B Hawkins, MD, MSc; Taryn Hassinger, MD, MSc; Bruce Schirmer, MD; Peter T Hallowell, MD; Jennifer Kirby, MD, PhD

11:40am **A105 Bariatric Surgery Decreases Mortality of Congestive Heart Failure: A Nationwide Study**
Essa M. Aleassa, MD; Zhamak Khorgami, MD; Chao Tu, MS; Philip R Schauer, MD; Stacy A Brethauer, MD, FASMBS; Ali Aminian, MD, FASMBS

Thursday, November 15th, 2018

TOP TEN PAPERS SESSION II **10:30am – 12:00pm**

10:30am **A106 Aspiration Therapy for the Treatment of Obesity: 2-4 Year Results of the PATHWAY Multicenter Randomized Controlled Trial**
Christopher C Thompson, MD, MSc, FACG, FASGE, AGAF; Barham K Abu Dayyeh, MD, MPH, FASGE; Vladimir Kushnir, MD; Robert F Kushner, MD; Alan B Schorr, DO, FAAIM, FACE; Louis J Aronne, MD; Anastassia Amaro, MD; David L Jaffe, MD; Allison R Schulman, MD, MPH; Dayna Early, MD; Adam C Stein, MD; Reem Sharaiha, MD; Steven A Edmundowicz, MD; J. Matthew Bohning, MD; Michael D Jensen, MD; Alpana P Shukla, MD; Caroline Apovian, MD; Dong Wook Kim, MD; Daniel Tran, MD; Amir Zarrinpar, MD, PhD; Michele B Ryan, MS; Meredith Young, MS, RD, LD; Abigail Lowe, MS, RD; Miki Haas, RN, BSN, CCRP; Heidi Goldsmith, RN, MS; Jennifer McCrea, MS; Shelby Sullivan, MD

10:50am **A107 Manometric Changes After Sleeve gastrectomy, Are there any Preoperative Manometric Findings that could Predict Reflux?**
Luciano Poggi, MD; Gerardo Arredondo, MD; Felix Camacho, MD; Omar Ibarra, MD; Diego Romani, MD; Luis Poggi, MD

11:10am **A108 Efficiency and safety of One Anastomosis Gastric Bypass versus Roux-en-Y Gastric Bypass: preliminary data of the YOMEGA randomized controlled trial.**
Maud Robert, MD, PhD; Philippe Espalieu, MD; Elise Pelascini, MD; Robert Caiazzo, MD, PhD; Adrien Sterkers, MD; Litavan Khamphommala, MD; Tigran Poghosyan, MD, PhD; Adriana Torcivia, MD; Jean Marc Chevallier, MD; Vincent Malherbe, MD; Elie Chouillard, MD, PhD; Fabian Reche, MD; Delphine Maucort-Boulch, MD, PhD; Sylvie Bin, MD; François Pattou, MD; Emmanuel Disse, MD, PhD

11:30am **A109 Employing New Enhanced Recovery Goals for Bariatric Surgery (ENERGY): A Metabolic and Bariatric Surgery Accreditation and Quality Improvement (MBSAQIP) National Quality Improvement Project**
Stacy A Brethauer, MD, FASMBS; Anthony Petrick, MD, FASMBS; Arielle Grieco, MPH; Teresa R Fraker, MS, RN; Kimberly Evans-Labok, BA; April N Smith, PharmD; Matthew McEvoy, MD; John M Morton, MD, MPH, FACS, FASMBS

11:50am **A110 Metabolic surgery versus best medical management for type 2 diabetes: Interim analysis of the REMISSION prospective controlled trial**
Laurent Biertho, MD; Mélanie Nadeau, MSc; Melissa Pelletier, MSc; Simon Marceau, MD; Stefane Lebel, MD; Frederic-Simon Hould, MD; Francois Dube, MD; Denis Richard; Andre Tchernof, PhD;

Tuesday, November 13th, 2018

PAPER SESSION I **3:45pm – 5:15pm**

3:45pm **A268 The Effects of a Dexamethasone-based Prophylaxis Protocol on Postoperative Nausea and Vomiting (PONV) and the Duration and Associated Cost of the Hospital Stay**
Sharon A. Krzyzanowski, RN, CBN; Keith Kim, MD; Dennis C Smith, MD, FACS, FASMBS; Michele Young, PAC; Cynthia K Buffington, PhD

3:56pm **A269 A Novel Risk Prediction Model for Complications and Readmissions Following Bariatric Surgery Based on the MBSAQIP database**
Maher El Chaar, MD, FACS, FASMBS; Jill Stoltzfus, PhD; Keith S Gersin, MD, FASMBS; Kyle J Thompson, PhD

4:07pm **A270 Postoperative complications increase the risk of venous thromboembolism following sleeve gastrectomy and gastric bypass**
Arthur M. Carlin, MD, FASMBS; Oliver A Varban, MD, FASMBS; Jonathan F Finks, MD; Matthew J Weiner, MD; Aaron J Bonham, MSc; Amir A Ghaferi, MD, MS

4:18pm **A271 MBSAQIP National Registry Study of Robotic-assisted Outcomes in Patients Undergoing Sleeve Gastrectomy or Roux-en-Y Gastric Bypass**
Pavlos K. Papasavas, MD, FASMBS; Richard L Seip, PhD; Andrea Stone, BS; Tara McLaughlin, PhD; Darren Tishler, MD, FASMBS

4:29pm **A111 Current role of staple line reinforcement in 30-day Outcomes of Primary Laparoscopic Sleeve Gastrectomy: An analysis of MBSAQIP data, 2015-2016 PUF**
Andrew Demeusy, MD, MBA; Anne Sill, MSHS; Andrew Averbach, MD, FACS, FASMBS

4:40pm **A112 The impact of chronic kidney disease on peri-operative outcomes following bariatric surgery: An analysis of the MBSAQIP Participant Use Data File**
Michael Mazzei, MD; Michael A Edwards, MD, FACS, FASMBS

4:51pm **A113 How Safe is Bariatric Surgery in Patients with Class I obesity (BMI 30-35 kg/m2)?**
Xiaoxi Feng, MD, MPH; Amin Andalib, MD, MSc; Stacy A Brethauer, MD, FASMBS; Philip R Schauer, MD; Ali Aminian, MD, FASMBS

5:02pm **A114 The Effect of Intraoperative Leak Testing on Postoperative Leak-related outcomes after Bariatric and Metabolic Surgery: An Analysis of the MBSAQIP Database**
Kamthorn Yolsuriyanwong MD; Bipan Chand, MD, FASMBS; Eric Marcotte, MD, MSc, FASMBS

Wednesday, November 14th, 2018

PAPER SESSION II **8:00am – 9:45am**

8:00am **A115 Cardiac Complications after Bariatric Surgery: Does the Type of Procedure Matter?**
Zhamak Khorgami, MD; Ali Aminian, MD, FASMBS; Theresa N Jackson, MD; James M Sahawneh, MD; Guido M Sclabas, MD; Geoffrey S Chow, MD

8:11am **A116 Cardiovascular Biomarkers after Metabolic Surgery versus Medical Therapy for Diabetes: Insights from the STAMPEDE Trial**
Deepak L Bhatt, MD, MPH; Sangeeta Kashyap, MD; Philip R Schauer, MD; Ali Aminian, MD, FASMBS; John P Kirwan, PhD; Kathy Wolski, MPH; Stacy A Brethauer, MD, FASMBS; Steven E. Nissen, MD

8:22am **A117 Sleeve Gastrectomy in obese, Wistar rats improves diastolic function independent of weight loss.**
Jennifer Strande, MD, PhD; John Corbett, PhD; Gwen Lomberk, PhD; Tammy L Kindel , MD, PhD, FASMBS; Cristian Milla Matute, MD

8:33am **A118 Development of a Bariatric Surgery Specific Scoring Syestem for Screening Patients at Risk for Perioperative Myocardial Infarction.**
Amlish B Gondal, MD; Chiu-Hsieh Hsu, PhD; Rostam Khoubyari, MD; Matthew Mobily, MD; Iman Ghaderi, MD, MSc, FASMBS

8:44am **A119 Can surgical weight loss reduce the risk of developing Coronary Heart Disease?**
David Gutierrez Blanco, MD; David Romero Funes, MD; Rama Ganga, MD; Emanuele Lo Menzo, MD, PhD, FASMBS; Samuel Szomstein, MD, FASMBS; Raul J Rosenthal, MD, FASMBS

8:55am **A120 Adolescent Gastric Banding: a five-year longitudinal study in 137 individuals**
Jeffrey L Zitsman, MD; Mary F DiGiorgi, PhD; Janet S Kopchinski, RD, CNSC; Robyn Sysko, PhD; Lori Lynch, MSN, APRN, CPNP, CBN; Michael Devlin, MD; Ilene Fennoy, MD

9:06am **A121 Sleeve Gastrectomy in 2,019 Children and Adolescents: Nine Years Long-Term Outcomes**
Aayed R Alqahtani, FRCSc, FACS; Yara A Alqahtani, MD; Mohamed O Elahmedi, MD

9:17am **A122 A comparative 100-participant 5-year study of aspiration therapy versus roux-en-y gastric bypass: 2nd and 3rd year results**
Erik B. Wilson, MD; Erik Noren, MD; Jakob Gruvaeus, MD; Christian Paradis, MD

9:28pm **A123 The Effects of Endoscopic and Surgical Bariatric Interventions On Gastric Emptying: A Systematic Review and Meta-analysis**
Eric J Vargas, MD; Fateh Bazerbachi, MD; Tarek Sawas, MD; Andrew C Storm, MD; Andres Acosta, MD, PhD; Barham K Abu Dayyeh, MD, MPH, FASGE

Wednesday, November 14th, 2018

PAPER SESSION III **1:30pm – 3:00pm**

1:30pm **A124 Is Weight Loss Better if Staged Single Anastomosis Duodeno-ileal Bypass is Performed within the First Year of Sleeve Gastrectomy?**
Hinali M Zaveri, MD; Amit K Surve, MD; Daniel R Cottam, MD; Peter C Ng, MD, FACS, FASMBS; Lindsey S Sharp, MD; Dustin Bermudez, MD, FACS, FASMBS; Sophia E Menozzi, Student; Austin Cottam, BS; John Ambrose; Walter Medlin, MD; Christina Richards, MD, FACS; Legrand Belnap, MD; Samuel Cottam, CAN; Benjamin H Horsley, EMT

1:41pm **A125 Effect of Single Anastomosis Duodenal-ileal Bypass with Sleeve Gastrectomy on Glucose Tolerance Test: Comparison with other Bariatric Procedures (Roux-En-Y Gastric Bypass, Sleeve Gastrectomy and Biliopancreatic Diversion)**
Luca Sessa, MD; Valerio Spuntarelli, MD; Caterina Guidone, MD, PhD; Pierpaolo Gallucci, MD; Giulia Giannetti, PhD; Amerigo Iaconelli, MD; Esmeralda Capristo, MD; Piero Giustacchini, MD; Luigi Ciccoritti, MD; Chiara Bellantone, MD; Giuseppe Nanni, MD; Geltrude Mingrone, MD; Marco Raffaelli, MD

1:52pm **A126 Comparison of Laparoscopic Sleeve Gastrectomy Leak Rates in Five Staple-Line Reinforcement Options: A Systematic Review.**
Paul R Kemmeter, MD; Michel Gagner, MD

2:03pm **A127 Beyond Five Years: A Matched Cohort of Sleeve vs Bypass**
Katherine S Blevins, MD, PhD; Luis Garcia, MS; Joe D Forrester, MD, MSc; John M Morton, MD, MPH, FACS, FASMBS; Dan E Azagury, MD

2:14pm **A128 A Multi-Institutional Study on the Mid-term Outcomes of Single Anastomosis Duodeno-ileal Bypass as a Surgical Revision Option after Sleeve Gastrectomy.**
Hinali M Zaveri, MD; Amit K Surve, MD; Daniel R Cottam, MD; Peter C Ng, MD, FACS, FASMBS; Lindsey S Sharp, MD; Dustin M Bermudez, MD; Sophia E Menozzi, Student; Austin Cottam, BS; John Ambrose; Walter Medlin, MD; Christina Richards, MD, FACS; Legrand Belnap, MD; Samuel Cottam, CNA; Benjamin H Horsley, EMT

2:25pm **A129 One Anastomosis Gastric Bypass after ten years: low morbidity, low bile reflux and stable excess weight loss.**
Jean Marc Chevallier, MD; Tigran Poghosyan, MD, PhD; Matthieu M. Bruzzi, MD; Richard Douard, MD, PhD

2:36pm **A130 Implementation of a Bariatric ERAS Program at a Community Hospital Improves Both Perioperative and 30-day Outcomes and Reduces Cost**
David C Voellinger, MD, FASMBS; Vicki Morton, DNP, AGNP-BC; Craig Kolasch, MD, FASMBS; Ellen A Carraro, MD; Christopher J Duggins, MD; James G Benonis, MD

2:47pm **A131 Impact of an Emergency Department-based Clinical Observation Unit on Bariatric Readmissions and Cost**

Joshua P Landreneau, MD; Dominykas Burneikis, MD; Andrew T Strong, MD; Matthew Kroh, MD; Stacy A Brethauer, MD, FASMBS; John Rodriguez, MD

Wednesday, November 14th, 2018

PAPER SESSION IV **3:45pm – 5:15pm**

3:45pm **A132 Obesity -Related Frailty: A New Bariatric Frailty Score Can Be Used to Predict Postoperative Adverse Outcomes, Analysis Using The MBSAQIP-2015-2016 Database**
Raul Sebastian, MD; Andrew Sparks, MS; Gina Adrales, MD, MPH; Alisa Coker, MD; Thomas H Magnuson, MD; Michael A Schweitzer, MD, FASMBS; Hien Nguyen, MD

3:55pm **A133 Postoperative opioid prescribing practices and evidence-based guidelines in bariatric surgery**
Danielle Friedman, MD; Saber Ghiassi, MD, MPH, FASMBS; Matthew Hubbard, MD; Andrew J Duffy, MD, FASMBS

4:05pm **A134 Bariatric Surgery Outcomes in Patients with BMI≥50**
Elizabeth Pontarelli, MD; Gary Grinberg, MD; Adam J Meyers, MD; Dhanyaja Kadiyala, MS; Sanjoy K Dutta, MD; Pandu R Yenumula, MD

4:15pm **A135 Impact of bariatric surgery on kidney function of diabetic patients**
David Romero Funes, MD; David Gutierrez Blanco, MD; Camila Ortiz Gomez, MD; Rama Ganga, MD; Emanuele Lo Menzo, MD, PhD, FASMBS; Samuel Szomstein, MD, FASMBS; Raul J Rosenthal, MD, FASMBS

4:25pm **A136 Metabolic surgery reduces mortality and macrovascular complications in patients with type 2 diabetes mellitus compared to medical therapy: a meta-analysis**
Adrian AB Billeter, MD, PhD; Sebastian Eichel, Medical Student; Katharina Scheurlen, MD; Stefan Kopf, MD; Pascal Probst, MD; Beat P. Müller-Stich, MD

4:35pm **A137 Late Relapse of Diabetes after Bariatric Surgery Should not be Considered as a Failure**
Ali Aminian, MD, FASMBS; Zubaidah Nor Hanipah, MD; Gautam Sharma, MD; Chao Tu, MS; Stacy A Brethauer, MD, FASMBS; Philip R Schauer, MD

4:45pm **A138 Impact of Ursodeoxycholic Acid on Biliary Complications after Bariatric Surgery**
Erin Caddell, MD; Jacob Palubicki, MD; Joel Brockmeyer, MD, FACS; Andrew J. Borgert, PhD; Kara J. Kallies, MS; Byron Faler, MD, FACS; Yong Choi, MD, FACS; Shanu N. Kothari, MD, FACS, FASMBS

4:55pm **A139 Buyer's Remorse: What predicts post-decision dissonance after bariatric surgery?**
Lyndsey Wallace, PsyD; Melissa C Helm, MS, RN; Kathleen Lak, MD; Rana Higgins, MD, FASMBS; Jon C Gould, MD, FASMBS; Tammy L Kindel, MD, PhD, FASMBS

5:05pm **A328 The First Six Months of Commercial Experience with a Swallowable Gas-filled Three Balloon System Results in Safe and Clinically Meaningful Weight Loss**

Rachel L Moore, MD, FACS, FASMBS; Michael V Seger, MD, FASMBS

Thursday, November 15th, 2018

PAPER SESSION V **1:30pm – 3:00pm**

1:30pm **A140 A Utilizing Low-Dose Phentermine for Preoperative Weight Loss Prior to Bariatric Surgery: A Prospective, Randomized, and Placebo-Controlled Trial**
John Morton, MD, MPH, FACS; Homero Rivas, MD, MBA, FACS, FASMBS; Luis Garcia, MS; Dan E Azagury, MD

1:41pm **A141 Predicting Early Weight Loss Failure Using a Bariatric Surgery Outcomes Calculator and Weight Loss Curves**
Oliver A Varban, MD, FASMBS; Anne Cain-Nielsen, MS; Corey Lager, MD; Nazanene Esfandiari, MD; Elif Oral, MD; Andrew Kraftson, MD; Christopher D Still, DO, FACN, FACP; Anthony Petrick, MD, FASMBS

1:52pm **A142 Why are Bariatric Medicare Patients Younger than 65 Disabled and Does Disability Impact Safety?**
Jai Prasad, MD; Jacob A Petrosky, MD; Jason Kuhn, DO; Robert Cunningham, MB, ChB; Craig Wood, MS; James Dove, BA; Marcus Fluck, BS; Parker M David, MD, FACS, FASMBS; Jon Gabrielsen, MD, FASMBS

2:03pm **A143 Social Factors as Predictors of Outcomes in Primary Bariatric Surgery**
Marcoandrea Giorgi, MD; Richie Goriparthi, MD; Cullen Roberts, BA; Yuqi Zhang, MD; Seungjun Kim, AB; Alicia Alterio, MD; Aevan McLaughlin, MD; G. Dean Roye; Todd Stafford, MD; Beth A Ryder, MD; Sivamainthan Vithiananthan, MD

2:14pm **A144 Preoperative Weight Loss but not Insurance-Mandated Weight Management Requirement Improves Weight Loss at 2 Years Post-Bariatric Surgery**
Yannis Raftopoulos, MD, PhD; Ioannis Raftopoulos, PA-C; Marissa Chiapperino, MPH, RD, CSO, LDN, CDE, CNSC; Lindsay Pasdera, MS, RDN, CSOWM, LDN, CDE; Karen Robert, AS, MA

2:25pm **A145 Safety analysis of bariatric surgery in patients on home oxygen**
Benjamin G Crisp, MD; Zhamak Khorgami, MD; Teodora Fatchikova, MD; Ali Aminian, MD, FASMBS; Michael Passero Jr., MD; Christopher R Daigle, MD, FRCSC

2:36pm **A146 Longitudinal Outcomes in Cardiovascular Risk Factors-Sleeve vs. Bypass**
John Morton, MD, MPH, FACS; Homero Rivas, MD, MBA, FACS, FASMBS; Luis Garcia, MS; Dan E Azagury, MD

2:47pm **A147 Safety and efficacy of outpatient sleeve gastrectomy: 2,528 cases performed in a single free-standing ASC**
Peter S Billing, MD; Josiah P Billing, BS; Jedediah A Kaufman, MD; Kurtis Stewart, MD; Eric Harris, MD; Robert Landerholm, MD

Video Sessions

Tuesday, November 13th, 2018

VIDEO ABSTRACT SESSION 1 **1:30pm – 3:00pm**

1:30pm **A202 Roux-en-Y Gastric Bypass after Failed Lower Esophageal Sphincter Magnetic Augmentation Procedure**
Darren Tishler, MD, FASMBS; Andrea Stone, BS; Beata Lobel, MB, BCh, BAO; Pavlos K Papasavas, MD, FASMBS

1:41pm **A203 Laparosocpic Nissen fundoplication with the excluded stomach for Recalcitrant GERD after a Roux-En-Y gastric bypass.**
Rana Pullatt, MD, FASMBS; Karl T Byrne, MD; Benjamin White, MD; Diana Axiotis, MPAS, PA-C; Molly Jones, RD; Shelby Allen, MD; Nina M Crowley, PhD, RD, LD

1:52pm **A204 Laparoscopic Repair of Recurrent Hiatal Hernia with Ligamentum Teres Cardiopexy**
Rena Moon, MD; Vincent Kirkpatrick, MD; Andre Teixeira, MD, FACS, FASMBS; Muhammad A Jawad, MD

2:03pm **A205 Laparoscopic Resection of Intussusception: Comparison Between the Conventional and A Simplified Approach**
Ariel Shuchleib, MD; Ikemefuna Akusoba, MD; Pearl K Ma, MD; Daniel Swartz, MD; Keith B Boone, MD, FASMBS; Kelvin Higa, MD, FASMBS

2:14pm **A206 Laparoscopic Conversion of Gastric Bypass to Duodenal Switch**
Peter C. Ng, MD; Lindsey S. Sharp, MD; Dustin M Bermudez, MD; Erica M. McKearney, PA-C; Jillian M. Vari, PA-C, RD; John D. Ambrose; Sophia E. Menozzi

2:25pm **A207 Type 3 Hiatal hernia complicating a mediogastric stenosis after gastric banding: cure of hiatal hernia and revision to Roux en Y Gastric Bypass.**
Maud Robert, MD, PhD; Arnaud Pasquer, MD

2:36pm **A208 Laparoscopic Reversal of Roux en Y Gastric Bypass with an Intraoperative Challenge**
Arpit Patel, MD; Nathaniel R Kopelan; Alan A Saber, MD

2:47pm **A522 Nissen Re-Fundoplication With Sleeve Gastrectomy**
Theadore Hufford, MD

Tuesday, November 13th, 2018

VIDEO ABSTRACT SESSION 1 - Edited 3:45pm – 5:15pm

3:45pm **A226 Latrogenic Esophageal Perforation and Stenting in a Patient with Gastro-Gastric Fistula**
Gerardo G Davalos, MD; Daniel D Guerron, MD; Dana D Portenier, MD

3:55pm **A227 Laparoscopic management of strangulated Petersen's hernia in pregnant female after LRYGBP**
Arpit Patel, MD; Alan A Saber, MD

4:05pm **A228 Laparoscopic Gastrogastric anastomosis for a twisted Sleeve**
Rana Pullatt, MD, FASMBS; Karl T Byrne, MD; Shelby Allen, MD; Nina M Crowley, PhD, RD, LD

4:15pm **A229 Management of Stricture after VBG with Gastro-gastrostomy**
Rena Moon, MD; Muhammad Ghanem, MD; Andre Teixeira, MD, FACS, FASMBS; Muhammad A Jawad, MD

4:25pm **A523 Gastro-Colo-Bronchial Fistula with Feculent Expectoration after Sleeve Gastrectomy Leak**
Ravikanth Kongara, MD;

4:35pm **A230 Laparoscopic Roux-en-Y Fistulo jejunostomy for a Chronic sleeve leak with Bronchopleural fistula**
Rana Pullatt, MD, FASMBS; Karl T Byrne, MD; Benjamin White, MD; Shelby Allen, MD; Nina M Crowley, PhD, RD, LD; Diana Axiotis, MPAS, PA-C

4:45pm **A231 Robot assisted takedown of gastrocutaneous fistula and conversion of sleeve gastrectomy to RNY gastric bypass**
Crystal Alvarez, DO; Juan C Quispe, MD; Esther Yung, MD; Marcos Michelotti, MD, FACS; Daniel Srikureja, MD; Jeffrey Quigley, DO; Keith R Scharf, DO, FACS, FASMBS; Aarthy Kannappan, MD

4:55pm **A232 Intussusception Post-Roux-en-Y Gastric Bypass: Laparoscopic Management Compilation**
Gerardo G Davalos, MD; Sugong Chen, MD; Dana D Portenier, MD; Daniel D Guerron, MD; Kunoor Jain-Spangler, MD

5:05pm **A524 Gastro-gastric Fistula, 'Candy Cane' Roux Syndrome and Hiatal Hernia.**
Napoleon Cieza, MD; Subhash Kini, MD

Wednesday, November 14th, 2018

VIDEO ABSTRACT SESSION 2 **8:00am – 9:45am**

8:00am **A209 Complications of Roux-en-O gastric bypass**
Pearl K Ma, MD; Ikemefuna Akusoba, MD; Ariel Shuchleib, MD; Daniel Swartz, MD; Keith B Boone, MD, FASMBS; Kelvin Higa, MD, FASMBS

8:11am **A210 Laparoscopic RYGB in a Patient with a History of an Angelchik Prosthesis**
Bradley Kushner, MD; J. Chris Eagon, MD

8:22am **A211 Robot-assisted Reversal of Biliopancreatic Diversion (BPD) due to severe malabsorption**
Mario Masrur, MD; Roberto Bustos, MD; Gabriela Aguiluz, MD; Alberto Mangano, MD; Lisa Sanchez-Johnsen, PhD; Chandra Hassan, MD; Pier Cristoforo Giulianotti, MD;

8:33am **A212 Chronic Marginal Ulceration and Gastrogastric Fistula: Complications From a 360 Degree Twist of the Roux Limb at the Gastrojejunostomy**
Ikemefuna Akusoba, MD; Ariel Shuchleib, MD; Pearl K Ma, MD; Daniel E Swartz, MD; Keith B Boone, MD, FASMBS; Kelvin Higa, MD, FASMBS;

8:44am **A213 Surgical Treatment of Paralyzed Left Hemi-diaphragm with Laparoscopic Sleeve Gastrectomy and Diaphragm Plication**
Kellen Hayes, MD; Ali Aminian, MD, FASMBS;

8:55am **A214 Conversion of Laparoscopic Roux en Y Gastric Bypass to Single Anastomosis Duodenal Switch/SIPS: A technique to make a safer gastro-gastric anastomosis**
Andrew Godwin, MD; Sarah Pearlstein, Resident; Mitchell S Roslin, MD, FASMBS

9:06am **A215 Endoscopic Removal of an Eroded Gastric Band into the Colon**
Mohammad Farukhi, MD; Michael V Seger, MD, FASMBS

9:17am **A216 Robot-assisted laparoscopic gastrojejunostomy revision for chronic marginal ulcer**
Peter Lundberg, MD; Maher El Chaar, MD

9:28am **A217 Robotic revision of gastric sleeve gastrocolic fistula to RYGB**
Christopher De Jesus, MD; Julio Teixeira, MD

Wednesday, November 14th, 2018

VIDEO ABSTRACT SESSION 3 **1:30pm – 3:00pm**

1:30pm **A218 The application of intermittent splenic artery occlusion in iatrogenic splenic injury-A case of LSG**
Xiaocheng Zhu Sr., PhD, MD

1:41pm **A219 Roux-en-y Gastric Bypass after Billroth II Gastrectomy**
Kyle J Leneweaver, DO; Darshak S Shah, MD, MBBS; Sanjeev Rajpal, MD, FACS, FASMBS

1:52pm **A220 Laparoscopic Repair of Congenital Diaphragm Hernia with Gastric Bypass**
Kellen Hayes, MD; Philip R Schauer, MD

2:03pm **A221 Laparoscopic excision of anastomotic stricture and remnant gastrectomy with conversion to esophago-jejunostomy**
Peter Lundberg, MD; Maher El Chaar, MD

2:14pm **A222 Magnetic Sphincter Augmentation for Refractory Reflux Following Laparoscopic Sleeve Gastrectomy**
Ryan D Horsley, DO; Gordian U Ndubizu, DO; Anthony Petrick, MD, FASMBS

2:25pm **A223 Rescuing the Failed Sleeve Gastrectomy from Conversion to Gastric Bypass**
William Stembridge, DO; Melissa Brooks, PA; Vivek Kumbhari, MD; Alejandro Gandsas, MD, MBA

2:36pm **A224 Laparoscopic Distalization of Gastric Bypass**
Christopher R Taglia, MD; Sarah Langdon, MD; David S Thoman, MD

2:47pm **A225 Double trouble after gastric bypass – regurgitation and hypoglycemia**
Stephan S Axer, MD

Thursday, November 15th, 2018

VIDEO ABSTRACT SESSION 2 - Edited **1:30pm – 3:00pm**

1:30pm **A233 Laparoscopic Biliopancreatic Diversion with Duodenal Switch- Technical Considerations in the High BMI patient.**
Rana Pullatt, MD, FASMBS; Karl T Byrne, MD; Nina M Crowley, PhD, RD, LD; Amanda Peterson, RDN, LD; Molly Jones, RD; Diana Axiotis, MPAS, PA-C; Benjamin White, MD; Shelby Allen, MD

1:40pm **A234 Laparoscopic Single Anastomosis Duodenal Switch by Linear Triple Staple Technique**
Peter C. Ng, MD; Lindsey S. Sharp, MD; Dustin M Bermudez, MD; Erica M. McKearney, PA-C; Jillian M. Vari, PA-C, RD; John D. Ambrose; Sophia E. Menozzi

2:50pm **A235 Conversions of Gastric Restrictive Procedures to Single Anastomosis Duodenal Switch (SADS/SIPS)**
Varun Krishnan, MD; Mitchell S Roslin, MD, FASMBS

Integrated Health Abstract Session
Tuesday, November 13th, 2018

Integrated Health Abstract Session **10:00am – 12:00pm**

10:00am **A236 Avoidance of Diagnosis of Obesity in Patients Referred for Bariatric Surgery**
Ann M Rogers, MD, FASMBS; Ashton Brooks, MD; Myunghoon Kim, BS

10:15am **A237 Problematic Alcohol Use after Bariatric Surgery: Sleeve Gastrectomy versus Gastric Bypass**
Lisa R Miller-Matero, PhD; Julia Orlovskaia, MD; Aaron Hamann, PsyD; Kellie M Martens, PHD; Aaron J Bonham, MSc; Arthur M Carlin, MD, FASMBS

10:30am **A238 Prevention of Nutrient Deficiencies following Sleeve Gastrectomy, Roux-en-Y Gastric Bypass and the Duodenal Switch**
Ciara Lopez, RN; Dennis C Smith, MD, FACS, FASMBS; Lauren Lapp, PA-C; Cynthia K Buffington, PhD

10:45am **A239 Bariatric Surgery does not increase the ability to work- a Danish nationwide registry study**
Claus B. Juhl, MD, PhD; Rene Holst, PhD; Jon Michael Gran, PhD; Lene Hymøller Mundbjerg, MD, PhD; Charlotte Røn Stolberg, MD; Gert Frank Thomsen, MD, MR

11:00am **A240 Slimming Down Medication Errors Through Pharmacist Specialist Integration into the Multidisciplinary Collaborative Care Team**
Nicole Y Nguyen, PharmD, BCPS

11:15am **A241 An Examination of Chronic Pain in Patients undergoing Bariatric Surgery**
Afton M Koball, PhD, ABPP; Kara J. Kallies, MS; Andrew J. Borgert, PhD

11:45am **A242 Contemporary racial and ethnic disparities in bariatric surgery in the United States**
Allison Bruff, MD; Michael Mazzei, MD; Satyajit Reddy, MD; Ryaz Bashir, MD; Michael A Edwards, MD, FACS, FASMBS

Nutrition Abstracts

Sunday, November 11th, 2018

Nutrition I **8:00am-12:00pm**

11:15am **A255 Tryptophan and Bariatric Nutritional Metabolomics**
Carol Wolin-Riklin, MA, RD, LD; Shinil Shah, DO; Erik Wilson, MD

11:25am **A256 Nutrition supplement after bariatric surgery: Does it really make difference?**
Wah Yang, MD; Songhao Hu, MD; Pik Nga Cheung, MD; Cunchuan Wang, MD, PhD

11:35am **A257 10 years follow-up after Bariatric Surgery (BS): body composition, weight and diabetes**
Andrea Z Pereira, MD, PhD

Sunday, November 11th, 2018

Nutrition II **1:30pm-5:00pm**

3:30pm **A258 Food Cravings after Bariatric Surgery: Sleeve Gastrectomy versus Roux-en-Y Gastric Bypass**
Afton M Koball, PhD, ABPP; Kara J. Kallies, MS; Luis D Ramirez, MPH

3:50pm **A260 INADEQUATE VITAMIN D does not interfere with body weight reduction in women of childbearing age after Roux-en-Y Gastric Bypass.**
Jean-Marie Molasoko, MD, FASMBS

Master Course in Behavioral Health Abstract Sessions

Sunday, November 11th, 2018

Masters of Behavioral Health Session I 1:30pm-5:30pm

1:35pm **A243 Prevalence and Correlates of Psychiatric Medication Discontinuation One Month After Bariatric Surgery**
Kasey Goodpaster, PhD; Leslie J Heinberg, PhD; Ninoska D Peterson, PhD

1:55pm **A244 Health or Appearance? Factors Motivating the Decision to Seek Bariatric Surgery**
Rebecca Pearl, PhD; Thomas A Wadden, PhD; Kaylah Walton; Kelly C Allison, PhD; Jena S Tronieri, PhD; Noel N Williams, MD, FASMBS

2:15pm **A245 Relationship between depression, weight, and patient satisfaction two years after bariatric surgery**
Kellie M Martens, PhD; Aarron Hamann, PsyD; Lisa R Miller-Matero, PhD; Chazlyn Miller, BS; Aaron J Bonham, MSc; Arthur M Carlin, MD, FASMBS

2:35pm **A246 Pain perceptions in bariatric surgery candidates: The role of pain catastrophizing**
Colleen Schreyer, PhD; Jessica K. Salwen-Deremer, PhD; Amanda Montanari, BA; Breanna Holloway, BA; Janelle W Coughlin, PhD

4:50pm **A247 The BARS Study: Patient Understanding and Use of Alcohol after Bariatric Surgery**
Lisa R Miller-Matero, PhD; Joseph P. Coleman, PhD; Leah LaLonde, MS; Kellie M Martens, PhD; Aaron Hamann, PsyD; Arthur M Carlin, MD, FASMBS

5:10pm **A248 Alcohol Use Disorders and Psychiatric Hospitalizations after Bariatric Surgery**
Wynne Lundblad, MD; Rachel P Kolko; Alexis M Fertig, MD, MPH; Michele D Levine, PhD Marsha D Marcus, PhD

Monday, November 12th, 2018

Masters of Behavioral Health Session II 8:00am-12:00pm

10:05am **A249 Insomnia and night eating syndrome in bariatric surgery patients**
Jesica K Salwen-Deremer, PhD; Colleen Schreyer, PhD; Amanda Montanari, BA; Breanna Holloway, BA; Janelle W Coughlin, PhD

10:25am **A250 Patients with Insufficient weight loss and with successful weight loss: Differences in eating behavior one year after gastric bypass**

Verónica Vázquez-Velázquez, PhD; Valeria Soto Fuentes, Psy; Mauricio Sierra Salazar, MD, FACS; Juan Pablo Pantoja, MD, FACS; Samuel Ordoñez Ortega, MD; Eduardo García MD

Monday, November 12th, 2018

Masters of Behavioral Health Session III 1:30pm-5:00pm

1:35pm **A252 The relationship between psychopathology, disordered eating, and impulsivity in patients seeking bariatric surgery**
Jacqueline C Spitzer, MSEd; David B Sarwer, PhD; Kelly C Allison, PhD; Rebecca L Ashare, PhD; Thomas A Wadden, PhD; Courtney McCuen-Wurst, PsyD; Caitlin LaGrotte, PsyD, MEd; Alberly Perez, BA; Colleen Tewksbury, PhD, MPH, RD, LDN; Noel N Williams, MD, FASMBS; Michael Edwards, MD, FACS, FASMBS; Jingwei Wu, PhD

3:50pm **A254 Food insecurity is associated with lower rates of bariatric surgery and longer timeframe to completing surgery**
Lisa M Nackers, PhD, MPH; Yiwei Xu, MHS; Luke M Funk, MD, MPH, FASMBS; Sally Jolles, MA; Jacob A Greenberg, MD, EdM; Anne Lidor, MD, MPH

Thursday, November 15th, 2018

ASMBS QUICKSHOTS ABSTRACT SESSION I 8:00am-9:45am

8:00am **A158 Comparison of robotic revisional weight loss surgery and laparoscopic revisional weight loss surgery using the MBSAQIP database.**
Benjamin L Clapp, MD, FASMBS; Robert Jones, BS; Alan Tyroch, MD; Christopher Dodoo, MS; Evan Liggett, MD

8:07am **A159 Perioperative outcomes of bariatric surgery in the setting of chronic steroid use: a MBSAQIP database analysis**
Michael Mazzei, MD; Michael A Edwards, MD, FACS, FASMBS

8:14am **A160 Risk Factors and Predictors of Hypoglycemia after Bariatric Surgery in the LABS Consortium**
Laura E Fischer, MD, MS; Jonathan Q Purnell, MD; Nora Fino, MS; Carrie M Nielson, MPH, PhD; Mary Patti, MD; Bruce M Wolfe, MD, FACS, FASMBS

8:21am **A161 Perioperative Outcomes, Safety profile, and Factors affecting Mortality and Complications of Laparoscopic Sleeve Gastrectomy and Roux en Y Gastric Bypass in the Elderly Population**
Onur Kutlu, MD; Grigoriy Klimovich, MD; Nestor F de la Cruz-Munoz, MD

8:28am **A162 Is Sleeve Gastrectomy Superior to Roux- en-Y Gastric bypass in patients with End Stage Renal Disease? Analysis of MBSAQIP Data**
Adel Alhaj Saleh, MD; Grant Sorensen, PhD; John Griswold, MD, FACS; Amir H Aryaie, MD

8:35am **A163 Comparative analysis of 30-days outcomes of single stage conversion of laparoscopic adjustable gastric band (LAGB) to sleeve gastrectomy (SG) or gastric bypass (GB): 2015-2016 PUF MBSAQIP data.**
Sandra Wischmeyer, DO; Anne Sill, MSHS; Andrew Averbach, MD, FACS, FASMBS

8:42am **A164 First look at the Outcomes of the Different Sleeve Gastrectomy (SG) Surgical Techniques Reported in MBSAQIP: What Did We Learn?**
Maher El Chaar, MD; Jill Stoltzfus, PhD

8:49am **A165 Perioperative outcomes following robotic bariatric surgery: an MBSAQIP analysis**
Rana Higgins, MD, FASMBS; Melissa C Helm, MS, RN; Tammy L Kindel, MD, PhD, FASMBS; Jon C Gould, MD, FASMBS; Semeret Munie, MD

8:56am **A166 How safe are Laparoscopic Sleeve Gastrectomy and Laparoscopic Roux-en-Y Gastric Bypass in super-super-obese patients? An investigation from Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP).**
Amlish B Gondal, MD

9:03am **A167 DiaREM scores predict diabetes remission after bariatric surgery**
Daniel D Guerron, MD; Gerardo G Davalos, MD; Dana D Portenier, MD; Hui-Jie Lee, PhD, Leonor Corsino, MD, MHS

9:10am **A168 Dysphagia predicts greater weight regain after Roux-en-Y gastric bypass**
Thomas Runge, MD Pichamol Jirapinyo, MD; Walter W Chan, MD, MPH; Christopher C Thompson, MD, MSc, FACG, FASGE, AGAF

9:17am **A169 Predictors of Long-Term Weight Loss after Bariatric Surgery**
William Chang, MD; Devon Hawkins, MD; Joel R Brockmeyer, MD; Byron J Faler, MD; Balakrishna M Prasad, PhD

9:24am **A170 Endoscopic Sleeve Gastroplasty in Children and Adolescents with Obesity: Outcomes During the First Year**
Aayed Alqahtani FRCSc FACS, Yara Alqahtani, MD; Abdullah Al-Darwish, MD; Mohamed Elahmedi, MD

9:31am **A171 National Post-Bariatric Surgery Outcomes in Patients with Kidney Disease**
Colleen Tewksbury, PhD, MPH, RD, LDN; Jordana Cohen, MD, MSCE; Samuel Torres Landa. MD; Octavia Pickett-Blakely, MD, MHS; Noel N Williams, MD, FASMBS; Kristoffel R. Dumon, MD

9:38am **A172 Hospital vs. Surgeon Volume and Bariatric Surgery Outcomes-What Matters Most?**

John Morton, MD, MPH, FACS; Kristopher Huffman, MS; Arielle Grieco, MPH; Stacy A Brethauer, MD, FASMBS; Anthony Petrick, MD, FASMBS; David Provost, MD; Wayne J English, MD, FASMBS; Matt Hutter, MD; Teresa R Fraker, MS, RN; Eric DeMaria, MD, FASMBS; Samer G Mattar, MD, FASMBS; Cliff Ko, MD

Thursday, November 15th, 2018

ASMBS QUICKSHOTS ABSTRACT SESSION II 8:00am-9:45am

8:00am **A173 Jejuno-ileal loop bipartition (JILB): a novel stand-alone or sleeve plus procedure**
Xiong Zhang, MD; Peng Zhang, MD, PhD

8:07am **A174 Longer Common Channels In Duodenal Switch Improves Vitamin A Absorption And Albumin Levels, But Can Negatively Impact Weight Loss In The Super Obese Patient: Implications For The Single Anastomosis Duodenal Switch**
Lindsey S Sharp, MD, FASMBS; Dustin M Bermudez, MD; Tricia Burns, PA-C; Krista V Herrell, BSN; Erica M McKearney, PA-C; Peter C Ng, MD, FACS, FASMBS; Jillian Vari, PA-C, RD

8:14am **A175 Preoperative Intragastric Balloon for reduction of surgical risk in 273 patients with BMI > 50kg/m²**
Afonso Sallet, MD; Carlos Pizani, MD; Thomaz V Monclaro, MD; Ana Caroline Fontinele, MD; Dirceu B Santos, MD; Marcelo F Carneiro, MD; Eduardo Sticca, MD; Sansiro de Brito, MD; Carlos De Souza Filho, MD; Paulo C Sallet, MD, PhD

8:21am **A176 Revisional surgery after sleeve gastrectomy: Gastric bypass or duodenal switch?**
Ainitze I Ibarzabal, MD; Amanda Jimenez, MD, PhD; Dulce Momblan, MD; Gabriela Chullo Llerena, MD; Ana de Hollanda, MD; Violeta Moizé, RD, PhD; Víctor Turrado-Rodríguez, MD; Julio Jimenez-Lillo, MD; Josep Vidal, MD, PhD; Antonio M. Lacy, MD, PhD

8:28am **A177 Disparity in peri-operative outcomes among ethnic minority compared to caucasian patients following bariatric surgery**
Allison Bruff, MD; Michael Mazzei, MD; Michael A Edwards, MD, FACS, FASMBS

8:35am **A178 Metabolic and Bariatric Surgery 30-day Post-op Readmission Reduction**
Gwendolyn L Crispell, MSN, RN, CBN; Jeffrey Friedman, MD

8:42am **A179 Revisional surgery results after sleeve gastrectomy. A retrospective cohort study comparing gastric bypass to re-sleeving**
Zvi Perry, MD, MA; Mohammed Al Abri, MD, FRCSC; Amin Andalib, MD, MSc; Olivier Court, MD, FRCSC; Sebastian V Demyttenaere, MD

8:49am **A180 Variables Associated with Weight Loss after Laparoscopic Sleeve Gastrectomy: A 10-year follow-up and 8800 BMI Statistical Model Analysis.**
Federico Perez Quirante, MD; Lisandro Montorfano, MD; David Gutierrez Blanco, MD; Emanuele Lo Menzo, MD, PhD, FASMBS; Samuel Szomstein, MD, FASMBS; Raul J Rosenthal MD, FASMBS

8:56am **A181 Patients undergoing intra-gastric balloon achieve approximately 50% of their target weight loss in the first month postoperatively: a Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program analysis.**
Priscila R Armijo, MD; Dietric Hennings, MD; Melissa Leon, MPH; Dmitry Oleynikov, MD; Vishal M Kothari, MD

9:03am **A182 Ultrasonographic regression of Hepatic Steatosis after Bariatric Surgery**
Camila Ortiz Gomez, MD; David Romero Funes, MD; Mauricio F Sarmiento Cobos, MD; Rene Aleman, MD; Emanuele Lo Menzo, MD, PhD, FASMBS; Samuel Szomstein, MD, FASMBS; Raul J Rosenthal, MD, FASMBS

9:10am **A526 Use of Non-invasive Positive Pressure Ventilation in Patients with Severe Obesity Undergoing Upper Endoscopy Procedures**
Makram Gedeon, MD, FASMBS

9:17am **A183 The impact of staple line reinforcement on perioperative staple line leak and bleeding rates following sleeve gastrectomy: An analysis of MBSAQIP data registry**
Matthew A Cunningham-Hill, MD; Michael Mazzei, MD; Michael A Edwards, MD, FACS, FASMBS

9:24am **A184 How Many Pills are Enough? Opioid Use and Postoperative Pain Levels in Bariatric Surgery Patients.**
Melissa DeSouza, MD; Tarin C Worrest, MD; Elizabeth N Dewey, MS; Vanessa Shay, RN, BSN, CBN; Farah A Husain, MD, FASMBS

9:31am **A185 Effects of a New Procedurless Intragastric Balloon (Elipse®) on Metabolic Syndrome and Pre-diabetes: Italian Group's Experience on 324 patients with overweight and obesity**
Alfredo Genco, MD; Cristiano Giardiello, MD; Marcello Lucchese, MD; Michele Rosa, MD; Marco Rovati, MD; Samir Giuseppe Sukkar, MD; Andrea Formiga, MD; Andrea Formiga, MD; Marco Zappa, MD

9:38am **A186 Comparison of peri-operative bariatric complications using two large databases: does the data add up?**
Benjamin L Clapp, MD, FASMBS; Robert Cullen, BS; Christopher Dodoo, MS; Carl Devemark, MD; Elizabeth De La Rosa, MD; Jesus Gamez, MD; Alan Tyroch, MD

Thursday, November 15th, 2018

ASMBS QUICKSHOTS ABSTRACT SESSION III **8:00am-9:45am**

8:00am **A187 Impact of Bariatric Surgery on Thyroid Function and Medication use in Patients with Hypothyroidism**

Cristian Milla Matute, MD; Maria C Fonseca Mora, MD; David Romero Funes, MD Emanuele Lo Menzo, MD PhD, FASMBS; Samuel Szomstein, MD, FASMBS; Raul J Rosenthal, MD, FASMBS

8:07am **A188 Glycemic metabolism and enterohormonal evaluation in early postoperative Roux-en-Y gastric bypass in morbidly diabetic obese patients: comparison the oral and gastrostomy route**
Marco A Santo, MD, PhD; Gustavo Fernandes Filippe Mota, MD; Gabriela Zandonadi Goncalves, MD; Andrea Bastos; Daniel Riccioppo, MD, PhD; Denis Pajecki, MD; Roberto de Cleva, MD, PhD

8:14am **A189 The Relationship between the Frequency and Duration of the Preoperative Assessment Process and Early Postoperative Weight Loss**
Colleen Tewksbury, PhD, MPH, RD, LDN; Jingwei Wu, PhD; Kelly C Allison, PhD; Heather Gardiner, PhD; Kristoffel R. Dumon, MD; Noel N Williams, MD, FASMBS; David B Sarwer, PhD

8:21am **A190 Mobile Health Interventions are Ineffective in the Bariatric Surgery Population**
Patricia D Cherasard, PA-C; Collin EM Brathwaite, MD; Alex Barkan, MD; Keneth Hall II, MD, FACS, FASMBS; Barbara M Brathwaite, DNP, RN; Melissa Fazzari, PhD; Donald A Brand, PhD; Borivoje-Boris Djokic, PhD; Mary Granoff, DBA, MBA, MSN, RN; Jeff Ritter, DBA, MBA; Mary Schaefer, RN, MSN, FNP-BC; Omodolapo Familusi, RN, MSN, ANP-C; Karen Norowski, RN, CBN; Gerald Dessart Jr., BA, CPC

8:28am **A191 Revisiting COI: A Comparison of Public Open Payments Data and Financial Disclosures for Obesity Week 2016**
Tara L McGraw, DO; Ryan D Horsley, DO, Jai Prasad, MD; Jacob Petrosky, MD; James Dove, BA; Marcus Fluck, BS; Anthony Petrick, MD, FASMBS

8:35am **A192 Men and women differ in body composition: using bioelectric impedance technology to challenge the status quo why Fat-Mass-Index should replace Body-Mass-Index**
Erika D La Vella, DO; Michael Saleh; Kirsti Troyer, RD; Olivia Pipitone, MPH; Don Yarbrough, MD

8:42am **A193 When should endoscopy and 24h pH-test be done before bariatric surgery?**
Guilherme Mazzini, MD, PhD; Daniel Navarini, MD; Guilherme M Campos, MD, FACS, FASMBS; Jad Khoraki, MD; Fabio R Barão, Master; Carlos A Madalosso, MD; Richard R Gurski, MD, PhD

8:49am **A194 First Assistant Impact on Early Morbidity and Mortality in Bariatric Surgery**
Mark Mahan, DO; Marcus Fluck, BS; David M Parker, MD; Jon Gabrielsen, MD, FASMBS; Anthony Petrick, MD, FASMBS, Ryan D Horsley, DO

8:56am **A195 An Evaluation of the Utility of Routine Pathological Examination of the Gastric Remnant Post-Sleeve Gastrectomy.**
Kejal Shah, MD; Emily C Benham, MD; Munyaradzi Chimukangara, MD; Bradley Needleman, MD, FASMBS; Sabrena F Noria, MD, PhD, FRCSC, FASMBS

9:03am **A196 Analysis of Self vs Peer Ratings of Surgical Skill with Bariatric Surgery**
Oliver A Varban, MD, FASMBS; Jyothi Thumma, MPH; Arthur M Carlin, MD, FASMBS; Jonathan F Finks, MD; Amir A Ghaferi, MD, MS; Justin B Dimick, MD, MPH, FACS

9:10am **A197 Non-Alcoholic Steatohepatitis - The Hidden Comorbidity: No Referral for Bariatric Surgery**
Tripurari Mishra, MD; Leroy J Trombetta, MD; Kara J. Kallies, MS; Shanu N Kothari, MD, FASMBS

9:17am **A198 State Variation in Obesity, Bariatric Surgery, and Economic Ranks: A Tale of Two Americas**
Eric DeMaria, MD, FASMBS; Wayne J English, MD, FASMBS; Samer G Mattar, MD, FASMBS; Stacy A Brethauer, MD, FASMBS; Matthew Hutter, MD, MPH; John M Morton, MD, MPH, FACS, FASMBS

9:24am **A199 Multimodal pain management with liposomal bupivicaine and intravenous acetaminophen in a post-operative bariatric population**
Richard Ing, MD; Michele Radaszewski, RN, MS, CBN; Stephanie L Rozick, LPN

9:31am **A200 Impact of a low calorie diet before bariatric surgery on reducing the histologic appearance of liver steatosis**
Risa Wolf, MD; Kiyoko Oshima, MD, PhD; Kimberley E Steele, MD, PhD, FACS, FASMBS

9:38am **A201 Decision Regret up to Four Years after Gastric Bypass and Gastric Banding**
Christina C Wee, MD, MPH; Aaron Fleishman, MPH; Ashley McCarthy, BA; Donald T Hess, MD; Caroline A Apovian, MD; Daniel Jones, MD MS, FASMBS

Thursday, November 15th, 2018

ASMBS BRAZIL QUICKSHOTS ABSTRACT SESSION 1:30pm-3:00pm

3:07pm **A264 Correlation of 25-hidroxyvitamin D levels with non-alcoholic fatty liver disease and levels of inflammatory and biochemical markers of metabolic syndrome in pre-operative patients for bariatric surgery**
Carolina C Ribeiro, MD; Loraine M Ferraz, MSc; Andressa G Gaudencio; Guilherme N Pinheiro, MD; Gisele A Noronha, PhD; Paula Perricelli

3:21pm **A266 Safety of early discharge in 605 patients submitted to bariatric surgery in a SRC Bariatric Center**
Thomaz V Monclaro, MD; Carlos Pizani, MD; Ana Caroline Fontinele, MD; Dirceu B Santos, MD; Marcelo F Carneiro, MD; Eduardo Sticca, MD; Sansiro de Brito, MD; Carlos De Souza Filho, MD; Paulo C Sallet, MD, PhD; Afonso Sallet, MD

3:28pm **A267 Impact of loss of lean mass in the resting metabolic rate in obeses undergoing gastric bypass surgery – a pilot study**

Marcos de Oliveira, MSc; Ana Beatriz Guiesser, RDN, Margaretth Arruda, RDN; Thomaz V Monclaro, MD; Afonso Sallet, MD; Paulo C Sallet, MD, PhD

3:35pm **A265 Brazilian National Bariatric Surgery Registry – Pilot Study**
Lyz L Silva, MD, MS; Luiz G de Quadros, MD; Caetano C Marchesini, MD; Victor GL Cabral da Costa, Medical Student; Gabriel TX Simplicio; Eduardo SN Godoy, MD; Manoel G Galvao Neto, MD; Almino C Ramos, MD, FASMBS; Josemberg Campos, MD

Thursday, November 15th, 2018

PEDIATRICS AND OBESITY SURGERY ABSTRACT SESSION 10:30 AM - 12:00 PM

TBD **A261 Can children with genetic syndrome be offered bariatric surgery?**
Mahendra Narwaris, MS, GI Bariatric & Metabolic surgeon

TBD **A262 Intra-Gastric balloon surgery as an alternative to surgery in adolescents**
Derman Ozdemir, CCP; Robert Dabek, MD

TBD **A263 The Prevalence of Co-Morbidities in Adults and Adolescents Seeking Sleeve Gastrectomy**
Julie Liu, BS; Mireya Montalvan-Panzer, MSHS, CCRC; Ilene Fennoy, MD; Jennifer Woo Baidal, MD, MPH; Lori Lynch MSN, APRN, CPNP, CBN; Elizabeth Ranish, RD, CSP, CDN, CNSC; Robyn Sysko, PHD; Jeffrey L. Zitsman, MD

TBD **A521 Slipped capital femoral epiphysis (SCFE) and Blount's disease as indicators for early metabolic surgery**
Cornelia Griggs, MD; Numa Perez, MD; Janey Pratt, MD, FACS

Monday, November 12th, 2018

STUDENTS, RESIDENTS, FELLOWS ABSTRACT SESSION 8:00AM-12:00pm

8:00am **A148 Early Indicators of Long-Term Weight Regain After Gastric Bypass in a Veteran Population**
Andrew A Taitano, MD; Candis M. Cornell, PsyD; Lynne K. Olson, MSN, FNP, CBN

8:20am **A149 Gastric bypass surgery in patients with psychiatric diagnoses – risk of reoperation and length of hospital stay**
Ylva T Lagerros, MD; Lena Brandt, MSc; Jakob Hedberg, MD; Magnus Sundbom, MD, PhD; Robert Bodén, MD, PhD

8:40m **A150 Transversus abdominis plane (TAP) block significantly improves opioid use and length of stay in bariatric surgery patients**

Laurel Mulder, MD; Emily Ramirez, RN; Jennifer Poirier, PhD; Alfonso Torquati, MD, MSCI, FASMBS; Philip A Omotosho, MD

9:00am **A151 Who really decides? Surgeon preference trumps patient factors in predicting whether patients receive a sleeve or bypass.**
Brooks Udelsman, MD; Ginger Jin, MS; David C Chang, PhD, MPH, MBA, Matthew Hutter, MD, MPH, Elan R Witkowski, MD, MS

10:00am **A152 Google Trends as a Resource for Bariatric Education: What do Patients Want to know?**
Cristian Milla Matute, MD; Maria C Fonseca Mora, MD; Camila Ortiz Gomez, MD; David Gutierrez Blanco, MD; Emanuele Lo Menzo, MD, PhD, FASMBS; Samuel Szomstein, MD, FASMBS; Raul J Rosenthal, MD, FASMBS

10:40am **A154 The Impact of Revision Bariatric Surgery on Comorbidities**
Varun Krishnan, MD; Andrew Godwin, MD; Kevin Hutchings; Julio A Teixeira, MD

11:00am **A155 Bariatric surgery with Vertical Sleeve Gastrectomy (VSG) or Modified Duodenal Switch (MDS) modified peripheral gene expression associated with coronary artery disease and inflammation**
Sarah Sabrudin, MD

11:20am **A156 Detailed Analysis of Venous Thromboembolism within 180 days of Bariatric Surgery: A 6-Year Retrospective Single Center Review**
Beata Lobel, MB, BCh, BAO; Andrea Stone, BS; Richard Seip, PhD; Ilene Staff, PhD; Darren Tishler, MD, FASMBS; Pavlos K Papasavas, MD, FASMBS

11:40am **A157 Title: Safety of Bariatric Surgery in Patient Older than 65**
Iliya Goldberg, MD; Andrew Bates, MD; Salvatore Docimo, DO, MS; Tyler D. Cohn, MD; Aurora D Pryor, MD, FASMBS; Konstantinos Spaniolas, MD

A101

Does the RYGB Common Limb Length influence Hypertension Remission, Weight Loss and Cardio-Metabolic Parameters? Data from the GATEWAY TRIAL.

Carlos Schiavon *Sao Paulo* [1], Dimas Ikeoka *Sao Paulo* [2], Renato Santos *São Paulo* [1], Eliana Santucci *São Paulo* [3], Tamiris Miranda *São Paulo* [1], Lucas Damiani *São Paulo* [1], Juliana Oliveira *Sao Paulo* [1], Camila Torreglosa *São Paulo* [1], Priscila Bueno *São Paulo* [1], Angela Bersch-Ferreira *SÃO PAULO* [4], Patrcia Noujaim *Sao Paulo* [5], Ricardo Cohen *Sao Paulo* [6], Helio Halpern *sao paulo* [5], Frederico Monteiro *São Paulo* [5], Marcio Sousa *Sao Paulo* [7], Celso Amodeo *São Paulo* [7], Luiz Bortolloto *São Paulo* [8], Otávio Berwanger *Sao Paulo* [9], Alexandre Cavalcanti *São Paulo SC*[1], Luciano Drager *São Paulo* [8]
Research Institute - Heart Hospital[1] Intensive Care Unit - Heart Hospital[2] Reserch Institute - Heart Hospital[3] Research Institute Heart Hospital[4] Surgical Center - Heart Hospital[5] Oswaldo Cruz German Hospital[6] Dante Pazzanese Institute of Cardiology[7] Heart Institute, Hypertension Unit[8] ARO - Albert Einstein Hospital[9]

Background: Although Roux-en-Y Gastric Bypass (RYGB) results for weight loss (WL) and cardio-metabolic improvement are well established, there is no consensus for the optimum limb lengths to obtain the best results.

Objective: To evaluate if there is any correlation between the common limb (CL) length with hypertension remission rate, WL and other cardio-metabolic parameters in the GATEWAY TRIAL surgical patients.

Methods: GATEWAY is a randomized trial designed to evaluate the efficacy of RYGB on hypertension improvement and other cardio-metabolic parameters in patients with grade 1 and 2 obesity compared to medical therapy. We randomized (1:1) a hundred patients and we analyzed 45 patients submitted to RYGB with 1 year of follow-up. We measured the entire bowel in all patients and used a 150cm alimentary limb (AL) and a 100cm biliopancreatic limb (BPL). Univariate logistic regression was used to analyze associations of CL length with hypertension remission. Pearson and Spearman correlation were used to evaluate the correlation between the CL length and the variance of weight loss, glycemic/A1c, HDL and LDL cholesterol and triglycerides levels.

Results: 51% of the patients from the RYGB group showed hypertension remission (controlled blood pressure without medication). CL length was not significantly associated with hypertension remission (Figure)(odds ratio [95% CI] for 50 units increase in

the CL: 0.97[0.68; 1.38], p =0.88). Pearson and Spearman Correlation showed no significant correlation for WL and the others cardio-metabolic parameters (Table).

Conclusions: CL length does not have influence over hypertension remission, WL and cardio-metabolic parameters after a standard RYGB.

A102

Effects of bariatric surgery on the glomerular integrity of morbidly obese patients with chronic kidney disease (CKD).

David Romero Funes *Weston FL*[1], David Gutierrez Blanco *Weston FL*[1], Mauricio Sarmiento-Cobos *Weston* [1], Rama Rao Ganga *Columbia MO*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

INTRODUCTION
Obesity induces glomerular injury through hyperfiltration. Albuminuria can gauge glomerular integrity and reflects the increased glomerular permeability. The objective of our study is to assess the beneficial extent of bariatric surgery in patients with CKD.

METHODS
We conducted a retrospective chart review of all patients who underwent Bariatric surgery at our institution for the last 16 years. Kidney function measured as glomerular filtration rate (GFR) and proteinuria were assessed using the Chronic Kidney Disease Epidemiology Collaboration Study (CKD-EPI) equation/classification and Urinary albumin/creatinine ratio (uACRmg/g) classification of the National Kidney Foundation guidelines. All measurements assessed pre-operatively up to 3months and at 12 months.

RESULTS
Among the 2924 patients reviewed, 2.35%(n=69) presented all the variables for (CKD-EPI) GFR-calculation and uACR measurement at 12 months. Our population was predominantly Caucasian women 65.21%(n=45) and 73.91%(n=51) respectively, with a mean age of 60±13.42. The most prevalent procedure was LSG 60.86%(n=42). The most significant improvements were in patients with CKD stage ≥3 showing a 48.67ml/min/1.73m2 difference at 12 months (P=0.0001) (Table 1.). The uACR showed improvement in all stages of CKD and a most significant improvement in the patients with severely increased albuminuria, with an improvement of -739mg/g at 12 months (p=0.0252).

CONCLUSIONS
Bariatric surgery has a clear positive impact on the improvement of kidney function. Furthermore, our findings suggest that bariatric surgery has a positive effect on the glomerular permeability and the regression of

glomerular injury. These findings suggest a relationship between the physiologic mechanisms of bariatric surgery and the kidney function.

A103

Bariatric Surgery is Safe and Effective in ALL Medicare Patients Regardless of Age

Jai Prasad *Danville PA*[1], Jacob Petrosky *Danvillle PA*[1], Jason Kuhn *Danville PA*[1], Robert Cunningham *Danville PA*[1], James Dove *Danville PA*[1], Marcus Fluck *Danville PA*[1], Christopher Still *Danville PA*[1], G. Craig Wood *Danville PA*[1], David Parker *Danville PA*[1], Jon Gabrielsen *Danville PA*[1], Anthony Petrick *Danville PA*[1] Geisinger[1]

Introduction: Studies have shown Bariatric surgery in older patients is safe and effective. However, it is unclear how the outcomes of bariatric surgery differ within the Medicare population. The purpose of this study was to evaluate the safety and efficacy of bariatric surgery in older (CMS≥65) and younger (CMS<65) Medicare patients.

Methods & Procedures: A prospectively maintained database of 3300 patients who underwent bariatric surgery between January 2007 and December 2017 was utilized. There were n=139 CMS≥ 65 who underwent Laparoscopic sleeve gastrectomy (LSG) or Roux-en-Y gastric bypass (RYGB) who were compared to n=505 CMS<65.

Results (Table): CMS≥65 had a higher percentage of white race, more metabolic comorbidities (hypertension, hyperlipidemia), renal disease and a higher Charlson co-morbidity index. However, there were no differences in peri-operative outcomes between the groups. After adjusting for gender, race, BMI, presence of metabolic disease (diabetes, hypertension, hyperlipidemia), and surgery type, the %TBWL was higher in CMS<65 (31.8%) as compared to CMS≥65 (29.3%, p<0.0001). After adjusting for DiaRem score and surgery type, the rate of complete remission was higher in the CMS<65 group (HR=2.10, p=0.011).

Conclusions: The safety of bariatric surgery in CMS≥65 patients is similar to CMS<65 patients. CMS<65 patients had greater total body weight loss (2.5 points more) and a greater chance of compete diabetes remission. However, bariatric surgery was safe and effective in both groups.

A104

Bariatric Surgery Reduces The Incidence of Atrial Fibrillation: A Propensity Score Matched Analysis

Kevin Lynch *Charlottsville VA*[1], James Mehaffey *Charlottesville VA*, Robert Hawkins *Charlottesville Virginia*, Taryn Hassinger *Charlottesville VA*, Bruce Schirmer *Charlottesville* , Peter

Hallowell *Charlottesville VA*, Jennifer Kirby *Charlottesville VA*
University of Virginia[1]

Introduction: Obesity is associated with an increased risk of atrial fibrillation (AF). Bariatric surgery results in a high rate of long-term weight loss and is associated with amelioration of several chronic comorbidities. We hypothesize weight reduction with bariatric surgery will reduce the long-term incidence of AF.

Methods: All patients who underwent bariatric surgery at a single institution (n=3,572) from 1985-2015 were propensity score matched 1:1 to a control population (n=42,987) of morbidly obese patients with outpatient appointments in our clinical data repository. Patients with prior AF were excluded. Relevant comorbidities, demographics and insurance status were collected and a chart review was performed for all patients with AF. Paired univariate analyses were used to compare the two groups.

Results: After propensity score matching, a total of 5,034 patients were included (2517 surgery vs 2517 medical). There was no difference in preoperative body mass index (BMI) (47.9 vs 47.80, p=0.36) or medical comorbidities (Table) with an average follow-up of 7.9 years. The incidence of AF was lower in the bariatric surgery population than the medical population (0.8% vs 2.9%, p=0.0001) while time from enrollment to development of AF did not differ between groups. Finally, patients undergoing surgery who developed AF had significantly greater reduction in excess BMI then those managed medically who developed atrial fibrillation (55.8% vs -8.3%, p<0.001).

Conclusion: The prevalence of AF was lower among patients who underwent bariatric surgery than their medically managed counterparts. Weight reduction with bariatric surgery may reduce the long-term incidence of atrial fibrillation.

A105
Bariatric Surgery Decreases Mortality of Congestive Heart Failure: A Nationwide Study

Essa Aleassa *Winnipeg MB*[1], Zhamak Khorgami *Tulsa OK*[1], Chao Tu *Cleveland OH*[1], Philip Schauer *Cleveland OH*[1], Stacy Brethauer *Cleveland OH*[1], Ali Aminian *Pepper Pike OH*[1]
Cleveland Clinic[1]

Background: The impact of bariatric surgery on hard cardiovascular events has been less characterized.

Methods: 2,810 patients with a principal diagnosis of congestive heart failure (CHF) who also had history of prior bariatric surgery were identified in the National Inpatient Sample database (2007-2014). These patients were matched 1:5 with patients who had similar principal diagnoses but no history of bariatric surgery (controls).

Propensity scores, balanced on 30 baseline characteristics, were used to assemble two control groups. Control group-1 included patients with obesity (BMI ≥35kg/m^2) only and control group-2 were matched according to post-surgery BMI with the bariatric surgery group. Multivariate regression models were utilized to calculate the odds ratio (OR) and 95% confidence interval (CI) of mortality (primary endpoint) and length of stay (LOS, secondary endpoint) in CHF patients with and without history of bariatric surgery.

Results: A total of 33,720 (weighted) patients were included in the analysis. The distribution of covariates was well-balanced after propensity matching. Mortality rates after CHF were significantly lower in patients with history of bariatric surgery compared with control group-1 (0.96% versus 1.86%, OR 0.52, 95%CI 0.35-0.77, p=0.0013) and control group-2 (0.96% versus 1.86%, OR 0.52, 95%CI 0.35-0.77, p=0.0011). Furthermore, LOS was significantly shorter in bariatric surgery group compared with control group-1 (4.8±4.4 versus 5.7±5.7 days, p<0.001) and control group-2 (4.8±4.4 versus 5.4±6.3 days, p<0.001).

Conclusion: Findings of this study, for the first time, suggest that prior bariatric surgery is associated with almost 50% reduction in in-hospital mortality and shorter LOS in patients with CHF.

A106

Aspiration Therapy for the Treatment of Obesity: 2-4 Year Results of the PATHWAY Multicenter Randomized Controlled Trial

Christopher Thompson *Boston MA*[1], Barham Abu Dayyeh *Rochester MN*[2], Vladimir Kushnir *st louis MO*[3], Robert Kushner *Chicago IL*[4], Alan Schorr *Langhorne PA*[5], Louis Aronne *New York NY*[6], Anastassia Amaro *Philadelphia PA*[7], David Jaffe *Philadelphia PA*[7], Allison Schulman *Ann Arbor MI*[8], Dayna Early *St. Louis MO*[9], Adam Stein *Chicago IL*[10], Reem Sharaiha *NYC NY*[11], Steven Edmundowicz *Aurora CO*[12], J. Matthew Bohning *Langhorne PA*[5], Michael Jensen *Rochester MN*[2], Alpana Shukla *New York NY*[6], Caroline Apovian *Boston MA*[13], DONG WOOK KIM *Boston MA*[13], Daniel Tran *Washington DC*[14], Amir Zarrinpar *La Jolla CA*[15], Michele Ryan *Boston MA*[1], Meredith Young *Doral FL*, Abigail Lowe *Denver CO*, Miki Haas *Philadelphia PA*, Heidi Goldsmith , Jennifer McCrea *King of Prussia PA*, Shelby Sullivan *Aurora CO*

Brigham and Women's Hospital[1] Mayo Clinic, Rochester, MN

USA[2] Washington University St Louis, St. Loui[3] Northwestern University Feinberg School[4] St. Mary Medical Center, Langhorne, PA[5] Weill Cornell Medical College[6] University of Pennsylvania, Philadelphia[7] Michigan Medicine Internal Medicine[8] Washington University in St. Louis[9] Northwestern University[10] Weill Cornell Medicine[11] University of Colorado Denver[12] Boston Medical Center[13] Howard University[14]University of California, San Diego[15]

Background

The AspireAssist is the first FDA-approved endoluminal device indicated for treatment of Class II and III obesity. We earlier reported one-year results of the PATHWAY study: a 10-center randomized controlled trial involving 171 participants with the treatment arm receiving Aspiration Therapy (AT) plus Lifestyle Therapy and the control arm receiving Lifestyle Therapy (2:1 randomization). Here, we report 2-4 year outcomes.

Methods

Per protocol, AT participants were allowed to continue in the study after the first year for an additional 4 years providing they achieved at least 10% total weight loss from baseline at one year. Of the 82 AT participants who completed one-year, 57 met this criterion at one-year; 55 participants elected to continue the study beyond 1-year. Mean baseline BMI of these 55 participants was 42.1±5.0 kg/m^2.

Results

Compared to baseline, weight loss, quality of life scores, and improvement in select cardiometabolic parameters at year 1 were maintained at Years 2, 3 and 4. There were no clinically siginifcant metabolic or electrolytes disorders observed, nor any evidence of a development of an eating disorder. Primary reasons for discontinuation of therapy included fatigue with the therapy or study and achievement of weight loss goal. There was no loss to follow-up.

Conclusions

This randomized controlled trial has shown that Aspiration Therapy is an effective, durable and safe weight loss therapy for people with Class II and III obesity.

A107
MANOMETRIC CHANGES AFTER SLEEVE GASTRECTOMY, ARE THERE ANY PREOPERATIVE MANOMETRIC FINDINGS THAT COULD PREDICT REFLUX?

Luciano Poggi *Lima* [1], Gerardo Arredondo *Lima* [1], Felix Camacho *Lima* [1], Omar Ibarra [1], Diego Romani *Lima* [2], Luis Poggi *Lima 27* [1]

CLINICA ANGLO AMERICANA[1] CLINICA ANGLOAMERICANA[2]

Introduction: Sleeve gastrectomy is currently the most common bariatric procedure performed. One of its most concerning secondary effect is alteration of the antireflux mechanism. Several theories have been described to explain the etiology of “de Novo” reflux. **Methods:** A retrospective search of our prospectively collected database between 2006-2016 was conducted to identify patients with preoperative and postoperative esophageal manometry studies. We also included the intragastric pressure, baseline and after 100 ml water swallow. Patients also answered a survey during follow up regarding reflux symptoms. Our goal was to evaluate the physiological consequences on esophageal and gastric manometry perioperatively and its relationship with reflux. A total of 56 patients were included in our analysis. **Results:**The lower esophageal portion was found to have a decrease in pressure from 99 mmhg to 88 mmhg before and after surgery respectively. The lower esophageal sphincter (LES) mean pressure decreased from 12.5 to 8.7mmhg ($p<0.001$). 18 of 56 patient had a baseline incompetent LES and after surgery 35 patients were classified as an incompetent LES ($p<0.001$). 10 patients prior to surgery had esophageal dismotility and after surgery this number increased to 18 ($p=0.013$). Intragastric pressure increased from 11mmhg to 20 mmhg and the intragastric pressure after 100cc of water swallow went from 24 mmhg to 142 mmhg. Preoperative esophageal dismotility was associated with reflux after surgery (OR=1.62).**Conclusion:** Sleeve gastrectomy and reflux are associated with esophageal dismotility and a marked increase in the intragastric pressure,which proves that the Sleeve Gastrectomy is a high-pressure system.

A108

Efficiency and safety of One Anastomosis Gastric Bypass versus Roux-en-Y Gastric Bypass: preliminary data of the YOMEGA randomized controlled trial .

Maud Robert *LYON* [1], Philippe Espalieu *Saint Etienne* [2], Elise PELASCINI *Lyon* [3], robert Caiazzo *Lille Hauts de France*[4], Adrien STERKERS [5], Litavan KHAMPHOMMALA *Saint gregoire GU*[5], Tigran POGHOSYAN *Paris* [6], Adriana Torcivia *Bondy* [7], JEAN MARC CHEVALLIER *PARIS* [6], Vincent MALHERBE *GUILHERAND GRANGES* [8], Elie CHOUILLARD *POISSY* [9], Fabian RECHE *Grenoble* [10], Delphine MAUCORT-BOULCH *Lyon FL*[3], Sylvie BIN *LYON* [3], Francois Pattou *Lille* [4], Emmanuel DISSE *Pierre Benite* [11]

Edouard Herriot University Hospital, Department of bariatric surgery[1] Hôpital Privé de la Loire[2] Edouard Herriot University

Hospital[3] Centre Hospitalier Universitaire Lille[4] Clinique Saint Grégoire[5] Hôpital Européen Georges Pompidou[6]Hôpital Pitié Salpétrière[7] Hôpital Privé Drôme Ardèche[8] POISSY-SAINT-GERMAIN-EN-LAYE MEDICAL CEN[9] Centre Hospitalo-Universitaire Grenoble[10] Centre Hospitalier Lyon Sud[11]

BACKGROUND
One anastomosis gastric bypass (OAGB) is increasingly used in the treatment of morbid obesity. The efficiency and safety outcomes of this procedure remains however debated. We report here the preliminary data of YOMEGA, a randomized controlled trial comparing the outcomes of OAGB vs standard Roux-en-Y gastric bypass (RYGB).
METHOD
YOMEGA is a prospective multicenter, open label, randomized clinical trial comparing OAGB vs RYGB (NCT02139813). Study primary outcome was excess body mass index loss (EBL%) at 2 years. Here, we analyzed EBL%, glucose control (HbA1c) and nutritional status (serum albumin) at 1 year, and serious adverse events (SAE). Variables were compared using adequately t-test, Man-Whitney test, Chi2 and Poisson regression.
RESULTS
From May 2014 to March 2016, 9 high volume institutions enrolled 253 patients with morbid obesity (129 OAGB vs 124 RYGB). After one year, mean EBL% was not different between RYGB and OAGB (84.7 vs 88.9; p= 0.18). Mean HbA1c and serum albumin at 1 year were lower in 0AGB (-0.6%, p<0.01; -0.8g/L, p=0.03, respectively). At the time of this analysis, 65 SAE related to surgery have been reported (23 in RYGB vs 42 in OAGB group). The mean number of SAE (0/1/2/3/4) experienced by each patient was higher after OAGB (101/18/7/2/1) than after RYGB (106/13/5/0/0) (P=0.03, Poisson Regression).
CONCLUSION
Preliminary results of the YOMEGA Study show no significant difference of weight loss after 1 year between OAGB and RYGB, slightly lower levels of HbA1c and serum albumin after OAGB and a higher risk of SAE after OAGB

A109
Employing New Enhanced Recovery Goals for Bariatric Surgery (ENERGY): A Metabolic and Bariatric Surgery Accreditation and Quality Improvement (MBSAQIP) National Quality Improvement Project

Stacy Brethauer *Cleveland OH*[1], Anthony Petrick *Danville PA*[2], Arielle Grieco *Chicago IL*[3], Teresa Fraker *Chicago IL*[3], Kimberly Evans-Labok *Chicago IL*[3], April Smith *Omaha NE*[4], Matthew McEvoy *Nashville TN*[5], John Morton *Stanford CA*[6]
Cleveland Clinic[1] Geisinger Health System[2] American College of

Surgeons[3] Creighton University[4] Vanderbilt University[5] Stanford University[6]

Introduction: To date, there have been no large-scale enhanced recovery projects in bariatric surgery. The aim of this project was to implement a multi-center enhanced recovery protocol for selected MBSAQIP centers.
Methods: Participating sites were identified based on historical extended length of stay (ELOS,≥ 4 days). A six-month run-up period was used to allow implementation of the protocol. Primary procedures were included in the analysis which compared historical data (2016) to the first six months of the project. Relationships between adherence to 28 process measures and ELOS were analyzed.
Results: 36 centers participated with a total of 4692 eligible cases in the first 6 months of the study period compared to 8696 in 2016. Adherence to the process measures increased from 59% during the run-up period to 78% during the study period. Comparing 2016 cases to the first 6 months of ENERGY, average LOS decreased from 2.24 to 1.76 days ($p<0.001$) and ELOS decreased from 8.2% to 4.4% ($p<0.001$) without increased bleeding, reoperation, or readmission rates. There was a significant association between increased adherence to the protocol and decreased odds of ELOS ($p<0.001$). Participating centers reported that 27% of ttheir patients did not receive postoperative opioids.
Conclusion: Implementation of a large-scale enhanced recovery project in bariatric surgery is feasible. The first 6 months of the ENERGY project has seen a decrease in ALOS and ELOS without increasing adverse events or readmissions. Better adherence to the ENERGY protocol was associated with decreased ELOS. Opioid-free recovery was achieved in 27% of patients.

A110

Metabolic surgery versus best medical management for type 2 diabetes: Interim analysis of the REMISSION prospective controlled trial

Laurent Biertho *Quebec Quebec,* Mélanie Nadeau *Quebec City* , Melissa Pelletier *Québec* , Simon Marceau *Quebec City* , Stefane Lebel *Sainte Foy AB,* Frederic-Simon Hould *Quebec AB,* Francois Julien *Quebec QC,* Francois Dube *Québec* , Denis Richard , Andre Tchernof *Quebec City* [1]
Laval University Medical Center[1]

Background: The effects of sleeve gastrectomy (SG), Roux-en-Y gastric bypass (RYGB) and biliopancreatic diversion with duodenal switch (BPD-DS) have never been directly compared in a well-controlled, prospective study. ***Methods:*** Interim analysis of a prospective non-randomized controlled

trial comparing SG, RYGB or BPD-DS to best medical treatment in obese patients with Type 2 Diabetes (T2DM). Evolution of T2DM was based on International Diabetes Federation criteria. Differences in weight loss trajectories were tested in patients with complete 12-month data with adjustment for baseline BMI. ***Results:*** 177 patients were recruited. Baseline BMI was significantly different in the BPD-DS, RYGB, SG and Control group (48.8±5.0, 41.0±2.5, 44.5±4.9 and 42.5±6.7kg/m^2 respectively, $p<0.0001$). At 12 months, BPD-DS induced significantly greater weight loss compared to RYGB and SG, at 90.7±2.7 (n=29), 63.2±3.6 (n=15) and 58.3±2.0% (n=42) Excess Weight Loss (EWL), respectively ($p<0.0001$). Weight loss trajectories of RYGB and SG patients did not differ significantly. Complete T2DM remission rates were 79%, 37% and 39% in patients receiving BPD-DS, RYGB and SG respectively ($p=0.06$). Improvement/partial remission was respectively observed in 21%, 62% and 53%. Outcomes for all surgical arms were significantly superior to medical treatment which induced a -0.8±2.9%EWL, 27% T2DM improvement with no complete or partial remission. ***Conclusion:*** At one year, the three current bariatric operations are superior to medical treatment for weight loss and T2DM remission. BPD-DS induces significantly more weight loss and higher diabetes remission rates compared to the other surgical approaches. RYGB and SG have a comparable impact on weight loss and diabetes remission.

A268

The Effects of a Dexamethasone-based Prophylaxis Protocol on Postoperative Nausea and Vomiting (PONV) and the Duration and Associated Cost of the Hospital Stay

Sharon Krzyzanowski *Harmony FL*[1], Keith Kim *Celebration FL*[1], Dennis Smith *Celebration FL*[1], Michele Young *Celebration FL*[1], cynthia buffington *Celebration FL*[1]
Florida Hospital Celebration Health[1]

Introduction. Postoperative nausea and vomiting (PONV) is common with bariatric surgeries. PONV impedes recovery and may lengthen the duration and, thereby, the cost of the hospital stay. In this study, we have determined the effects of a prophylaxis protocol involving high dose dexamethasone on the incidence and severity of PONV and the length of the hospital stay (LOS).

Methods. The antiemetic protocol consisted of 10 mg Dexamethasone (IV early intraoperatively and 8 hours postoperatively), 4 mg ondansetron (intraoperatively), and early (4 hour) introduction to fluids. PONV severity

was assessed by the need for antiemetic rescue medication (RM). Protocol effectiveness was determined pre- and post-protocol by examining PONV severity, LOS and costs for 104 (52/52) Roux-en-Y gastric bypass and 104 (52/52) sleeve gastrectomy (SG) patients similar in age, weight and gender.
Results. The dexamethasone-based protocol significantly improved both the incidence and severity of PONV. After initiation of the protocol, the percentage of patients with severe PONV (≥5 RM) declined from 33% to 10% and the percentage of patients without PONV (0 RM) increased from 27% to 62%. Reduction in PONV severity was associated with a significant ($p<0.01$) decrease in LOS. Duration of hospitalization post-protocol fell from 2.36 to 1.63 days ($p<0.0001$) for all patients, i.e. RYGB=2.44 to 1.76 days, SG=2.27 to 1.49 days. The reduction in LOS resulted in an average cost savings of $428.35 per person.
Conclusions. A protocol involving high dose dexamethasone improves the incidence and severity of PONV and significantly reduces the duration and costs of hospitalization.

A269
A Novel Risk Prediction Model for Complications and Readmissions Following Bariatric Surgery Based on the MBSAQIP database

Maher El Chaar *Allentown PA*[1], Jill Stoltzfus *Bethlehem PA*[2], Keith Gersin *Charlotte NC*[3], Kyle Thompson *Charlotte NC*[3]
St Luke's University Hospital[1] St luke's University and Health Network[2] Carolinas Medical Center[3]

Introduction: The objective of this study is to evaluate the outcome and safety of sleeve (SG) and gastric bypass (GB) based on patient characteristics and develop a risk prediction model for the occurrence of Serious Adverse Events (SAE) and readmission within the first 30-days following surgery using for the first time the MBSAQIP data registry.
Methods: Using the 2015 MBSAQIP PUF we selected all SG and GB and then we created two separate direct multivariate logistic regression models using SAS 9.4 (Cary, NC) for the following outcomes: 1) Serious Adverse Events (SAE) and 2) readmissions. We included 12 covariates in our models. We report c-statistic as measures of the models' predictive capability. Models goodness of fit was assessed using Pearson's chi square. External validation was performed using 2016 MBSAQIP PUF.
Results: For the SAE and readmission models , the following covariates significantly and independently predicted complications: preoperative BMI (AOR 1.07 and 1.05) GB surgery (AOR 2.08 and 1.81), cardiovascular disease (AOR 1.43 and 1.61); smoking (AOR 1.12 and 1.14); diabetes (AOR 1.15 and 1.08); hypertension (AOR

1.17 and 1.11); limited ambulation (AOR 1.48 and 1.55); sleep apnea (AOR 1.12 and 1.11) and history of pulmonary embolism (AOR 2.81and 2.35).
SAE and readmission models had a c-statistic of 0.64 and 0.61 respectively and a significant Pearson's chi square.
Conclusion: Using the MBSAQIP database and for the first time we have developed a clinical risk prediction model for SAE and readmission in the first 30-days following bariatric surgery.

A270

Postoperative complications increase the risk of venous thromboembolism following sleeve gastrectomy and gastric bypass

Arthur Carlin *Detroit MI*[1], Oliver Varban *Ann Arbor MI*[2], Jonathan Finks *Ann Arbor MI*[2], Matthew Weiner *West Bloomfield MI*, Aaron Bonham *Ann Arbor MI*[2], Amir Ghaferi *Ann Arbor MI*[2]
Henry Ford Health System - Wayne State University[1] University of Michigan[2]

Background: Patient specific risk factors associated with venous thromboembolism (VTE) following bariatric surgery are currently used to direct routine chemoprophylaxis. Additional innovative strategies are required to further reduce VTE. The impact of postoperative complications on subsequent risk of VTE after bariatric surgery is relatively unknown.
Objective: To evaluate the association of postoperative complications on the subsequent risk of VTE following sleeve gastrectomy and gastric bypass.
Methods: Utilizing a statewide clinical registry, all patients undergoing sleeve gastrectomy (34,460) and gastric bypass (28,568) from June 2006 thru September 2017 were assessed for postoperative complications and subsequent VTE within 30 days following surgery. Multivariate analyses were adjusted for patient specific risk factors for VTE.
Results: The rate of VTE in these 63,028 patients was 0.475%. The mean age and BMI were 46 years and 48 kg/m^2 with 79% female and 76% white. A surgical or medical complication was associated with VTE in 51% of those having a VTE. All complications were significant predictors of VTE ($p<0.0001$). The most common associated complications were respiratory (17%) and hemorrhage (15%). Of the surgical complications leak/perforation (OR 21; 95% CI 12.3-36.7) was most strongly associated with VTE, followed by hemorrhage (OR 9; 6.2-13), obstruction (OR 5; 2.6-7.8) and infection (OR 4; 2.4-7.4). Overall medical complications were strongly associated with VTE (OR 21; 12.7-35.2).
Conclusions: Postoperative complications increase the risk of VTE following bariatric surgery. Strategies to extend the duration and intensity of chemoprophylaxis should be

considered in patients that develop postoperative complications to mitigate the risk of VTE.

A271

MBSAQIP National Registry Study of Robotic-assisted Outcomes in Patients Undergoing Sleeve Gastrectomy or Roux-en-Y Gastric Bypass

Pavlos Papasavas *Hartford CT*[1], Richard Seip *Glastonbury CT*[2], Andrea Stone *Glastonbury CT*[1], Tara McLaughlin *Hartford CT*[3], Darren Tishler *Glastonbury CT*[1]
Hartford Hospital - Metabolic and Bariat[1] Hartford Hospital Metabolic and Bariatric Surgery Center[2] Hartford Hospital[3]

Introduction: Robotic-assisted (RA) bariatric surgery is increasing. We investigated the safety of the RA surgical approach in the context of sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB) as principle bariatric procedures.
Methods: The MBSAQIP 2015-16 registry included patients who underwent conventional laparoscopic SG (N=84,651), RA SG surgery (N=6,945), conventional laparoscopic RYGB (N=33,682), and RA RYGB (N=2,270). Cases that were converted from laparoscopic to open were included. Excluded were patients who underwent previous foregut surgery; whose surgery represented revision or conversion; emergent cases, and cases with other or concurrent CPT codes.
Results: The RA approach significantly lengthened operation time by 26 and 34 minutes, respectively, for SG and RYGB, without affecting the time from operation to discharge (see Table for details). The RA approach did not affect the 30 day mortality rate for either surgery. However, healthcare service utilization was differentially affected. Within SG, RA slightly but significantly increased the rates of intervention and ED visits. In contrast, within RYGB, ED visit rate was unaffected, but rates of intervention, re-admission, and re-operation were increased. RA RYGB was associated with less blood transfusions.
Conclusion: The RA approach lengthens surgical time but is as safe as the conventional laparoscopic approach. For RYGB, the conventional laparoscopic approach favors small reductions in re-admit, re-op and intervention while robotic assist results in lesser need for blood transfusion. Some of these differences may not be clinically relevant and may be the result of preoperative differences in patient characteristics.

A111

Current role of staple line reinforcement in 30-day Outcomes of Primary Laparoscopic Sleeve Gastrectomy: An analysis of MBSAQIP data, 2015-2016 PUF

Andrew Demeusy *Baltimore MD*[1], Anne Sill *Baltimore MD*[1], Andrew Averbach *Baltimore MD*[1]
St. Agnes Hospital[1]

Background: Laparoscopic Sleeve Gastrectomy (LSG) has become a dominant bariatric procedure. In the past, significant leak rates prompted the search for staple line reinforcement techniques. Previous analysis of MBSAQIP database for all LSG suggested a detrimental influence of staple line reinforcement on leak rates and overall morbidity.
Objective: Investigate the relationship between various staple line reinforcement techniques and bougie size with 30-day outcomes.
Setting: MBSAQIP-accredited bariatric surgery hospitals.
Methods: Using the MBSAQIP 2015-2016 Participant Use File (PUF) data, primary LSG cases were divided in study groups based on staple line reinforcement techniques. All variables were reported in PUF except leak rate and overall morbidity which had to be derived. Multiple bivariate analyses were used to analyze the 30-day outcomes.
Results: A total of 198,339 primary LSG operations were included and grouped into No reinforcement (No SLR, 23%), Staple Line Reinforcement (SLR, 54%), Over-sewn Staple Line (OSL, 9%), and a combination of SLR+OSL (13%). There were no statistical differences between study groups in mortality, overall morbidity, or leak rate. Bleeding and reoperation rates were statistically higher in the No SLR group. Bougie size was not associated with change in leak rates.
Conclusion: Primary LSG is a safe procedure with a low morbidity and mortality. Staple line reinforcement is associated with decreased rates of bleeding and reoperations, but does not affect leak rates. The selection of staple line reinforcement technique should be left to surgeon's discretion with an understanding of the risks, benefits and costs of the various techniques.

A112

The impact of chronic kidney disease on peri-operative outcomes following bariatric surgery: An analysis of the MBSAQIP Participant Use Data File

Michael Mazzei *Philadelphia PA*[1], Michael Edwards *Philadelphia PA*[1]
Temple University Hospital[1]

Introduction: Morbid obesity is considered a strong independent risk factor for chronic kidney disease (CKD), and bariatric surgery remains the most effective treatment for obesity-related comorbidities. Previous large database analyses have suggested that CKD does not independently increase the risk of adverse outcomes following bariatric surgery. The safety of elective bariatric surgery in this patient population remains unclear. We compared 30-day outcomes in this patient population after laparoscopic sleeve gastrectomy (LSG) or gastric bypass (LGB).
Methods: Using the Metabolic and Bariatric Surgery Accreditation Quality Improvement Program (MBSAQIP) database, we identified patients with CKD who underwent LSG or LGB in

2015 or 2016. An un-matched cohort analysis as well as a propensity-matched cohort analysis was performed of patients with and without CKD.
Results: Of the 302,092 patients who underwent a LSG or LGB in 2015-2016, 2,362 (0.7%) had CKD, of which 837 (35.4%) required dialysis. CKD patients were older with significantly higher rates of comorbid conditions. HLOS, unplanned ICU admission, reoperation, readmission, bleeding, cardiopulmonary, infectious complications and mortality were significantly higher in CKD patients. In a matched analysis of 3,592 patients, poorer outcomes in CKD patients were preserved, including 30-day readmission, reoperation and intervention (Table 1).
Conclusions: In contrast to previously reported large database analysis, chronic kidney disease and dependence on dialysis independently increases the risk of some 30-day adverse outcomes following primary bariatric surgery. The benefits conferred by bariatric surgery should be carefully weighed against the increased risk of complications in this challenging surgical population.

A113
How Safe is Bariatric Surgery in Patients with Class I obesity (BMI 30-35 kg/m2)?
Xiaoxi Feng *Cleveland OH*[1], Amin Andalib *Westmount QC*[2], Stacy Brethauer *Cleveland OH*[1], Philip Schauer *Cleveland OH*[1], Ali Aminian *Pepper Pike OH*[1]
Cleveland Clinic[1] McGill University[2]

Background: Safety profile of bariatric surgery in patients with class I obesity (BMI 30-35 kg/m^2) has been a matter of concern among patients and physicians.

Methods: The Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) dataset was queried for patients with a BMI≥30 and <35kg/m^2 who underwent primary bariatric procedures in 2015-6. The 30-day postoperative safety profile, predictors of adverse events, and comparison between Roux-en-Y gastric bypass (RYGB) versus sleeve gastrectomy (SG) were studied.

Results: A total of 8,628 cases with a mean preoperative BMI of 33.7±1.1 kg/m^2 were analyzed: 1,838 (21.3%) RYGB, 6,243 (72.4%) SG, 532 (6.1%) gastric banding, and 17 (0.2%) duodenal switch procedures were performed. 33.9% had diabetes and 75% had hypertension. Incidence of all individual major complications was <0.3% in this cohort except for postoperative bleeding (0.9%). The composite morbidity rate (defined as presence of any of 24 postoperative adverse events) for the entire cohort was 3.8%, and the serious morbidity rate (presence of any of 9 serious complications) was 0.7%. The 30-day mortality rate was 0.05% (4 cases). Presence of diabetes (OR: 2.4, 95%CI:

1.4-3.9), cardiac disease (OR: 4.2, 95%CI: 2.1-8.6), and chronic kidney disease (OR: 11.1, 95%CI: 3.3-37.0) were predictors of serious morbidity. Patients who underwent SG had significantly better short-term safety outcomes than patients who underwent RYGB (Table 1).

Conclusion: Findings of this study, the largest series to date, indicate that bariatric surgery, which is a two-hour surgery requiring less than two-day hospital stay, is safe in patients with BMI<35 kg/m^2.

A114

The Effect of Intraoperative Leak Testing on Postoperative Leak-related outcomes after Bariatric and Metabolic Surgery: An Analysis of the MBSAQIP Database

Kamthorn Yolsuriyanwong *Hat Yai* [1], Bipan Chand *Maywood IL*[2], Eric Marcotte *Maywood IL*[2]

1. Loyola University Chicago Stritch School of Medicine, IL, USA. ... 2. Songklanagarind Hospital, Prince of Songkla University, Thailand[1] Loyola University Chicago Stritch School of Medicine, Maywood, IL, USA[2]

Background: Intraoperative leak testing (IOLT) is commonly performed to evaluate the integrity of an anastomosis or staple line during bariatric surgery. We aimed to evaluate the impact of IOLT on postoperative leak-related outcomes after bariatric surgery.

Methods: Using the 2015 and 2016 database of accredited centers, data was analyzed for primary sleeve gastrectomy (SG), Roux-en-Y gastric bypass (RYGB) and biliopancreatic diversion with duodenal switch (BPDDS) to determine the outcomes of anastomotic/staple line leak (A/SL). Multivariable logistic regression was used to evaluate the effect of IOLT on the outcomes of interest.

Results: A total of 266,665 patients who underwent SG (69.9%), RYGB (29.3%) or BPDDS (0.8%) were analyzed. IOLT was performed in 81.9% of all cases. Overall A/SL and mortality rate in patients with leak were 0.5% and 0.012%, respectively. There was no significant difference between the IOLT and non-IOLT groups after SG or RYGB in terms of A/SL (0.5%vs0.5% in SG, 0.5%vs0.4% in RYGB), leak-related readmission (0.3%vs0.3% in SG, 0.2%vs0.1% in RYGB), leak-related reoperation (0.2%vs0.2% in SG, 0.3%vs0.3% in RYGB), leak-related intervention (0.3%vs0.3% in SG, 0.2%vs0.2% in RYGB) or organ/space surgical site infection (0.3%vs0.3% in SG, 0.6%vs0.8% in RYGB). However, patients who underwent BPDDS with IOLT had significantly fewer A/SL (2.7%vs7.2%, adjusted odds ratio: 0.36, 95% confidence interval: 0.20-0.65, p<0.001) compared with non-IOLT group.

Conclusion: The overall rate of A/SL and leak-related morbidity was low. This study provided no evidence of benefit or harm from IOLT in patients

who underwent SG or RYGB. However, IOLT should be considered in BPDDS patients.

A115
Cardiac Complications after Bariatric Surgery: Does the Type of Procedure Matter?

Zhamak Khorgami *Tulsa OK*[1], Ali Aminian *Pepper Pike OH*[2], Theresa Jackson *Tulsa OK*[1], James Sahawneh [1], Guido Sclabas *Tulsa OK*[1], Geoffrey Chow *Tulsa OK*[1]
University of Oklahoma - Tulsa[1] Cleveland Clinic, Ohio[2]

Introduction: Cardiac complications after surgery are among the major postoperative events that may need several diagnostic studies, advanced interventions, and may increase length of stay (LOS) and mortality.

Method: Data of adult patients with morbid obesity who underwent primary sleeve gastrectomy (SG) or Roux-en-Y gastric bypass (RYGB) were retrieved from the Nationwide Inpatient Sample database (2011-2015). Cardiac adverse events (CAEs) were identified as a composite variable including myocardial infarction (MI), acute ischemic heart disease without MI, and acute heart failure. Dysrhythmias (except premature beats) were also identified as a separate outcome. Association of demographic factors, BMI, comorbidities, and type of surgery (SG vs. RYGB) with CAEs was assessed using multivariate regression analysis

Results: 108,432 patients (SG: 54.6% and RYGB: 45.4%) were analyzed. 116 patients (0.1%) were diagnosed with CAEs and 3,670 patients (3.4%) experienced dysrhythmia. Median (interquartile range) of LOS was 4.5(4) days in patients with CAEs compared to 2(1) days in patients without CAEs ($P<0.001$). There were 43 deaths in the entire cohort, and 31 (0.8%) was in patients with CAEs or dysrhythmias ($p<0.001$). In patients with CAEs, mortality was similar in RYGB and SG. On multivariate analysis, six independent predictors of CAEs were identified (Table). RYGB vs. SG was not an independent predictor for CAEs (odds ratio: 1.41, 95%confidence interval: 0.77-2.55).

Conclusion: While CAEs are rare after bariatric surgery, their occurrence can increase LOS and mortality. Older age, male gender, and cardiopulmonary comorbidities predict CAEs. RYGB does not add the overall risk of CAEs comparing to SG.

A116
Cardiovascular Biomarkers after Metabolic Surgery versus Medical Therapy for Diabetes: Insights from the STAMPEDE Trial

Deepak Bhatt *Boston MA*[1], Sangeeta Kashyap *Cleveland OH*[2], Philip Schauer *Cleveland OH*[2], Ali Aminian *Pepper Pike OH*[2], John Kirwan *Cleveland Ohio*[2], Kathy Wolski *Cleveland OH*[2], Stacy Brethauer *Cleveland OH*[2], Steven Nissen *Cleveland OH*[2]
Harvard Medical School[1] Cleveland Clinic[2]

Background: Longitudinal studies have shown that bariatric and metabolic surgery is associated with significant reduction in cardiovascular events and mortality. The Surgical Treatment And Medications Potentially Eradicate Diabetes Efficiently (STAMPEDE) trial showed that 5-years after randomization, Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG) were superior to intensive medical therapy (IMT) alone in achieving glycemic control in patients with type 2 diabetes mellitus (T2DM). The aim of this study was to assess long-term changes in cardiovascular biomarkers after surgical versus medical treatment of T2DM.

Methods: Blood samples for measurement of 11 cardiovascular biomarkers were available in 100 patients (IMT n=25, RYGB n=39, SG n=36) at baseline and 5-years after randomization. Percent changes from baseline were compared between the study groups.

Results: Table 1 summarizes the findings. Biomarkers associated with cardiovascular risk including apolipoprotein A1, high-sensitivity C-reactive protein, and plasminogen activator inhibitor-1 were significantly improved in both surgical groups at 5 years compared with the medical group. Furthermore, myeloperoxidase, interleukin-6, leptin, and uric acid were significantly reduced after RYGB compared with IMT. Leptin was reduced after RYGB compared with SG. Changes in apolipoprotein B, lipoprotein (a), homocysteine, and pro B-type natriuretic peptide were not statistically significant among the study groups.

Conclusion: In patients with T2DM, bariatric surgery is associated with long-term favorable changes in key cardiovascular biomarkers compared with IMT. These findings can provide direction for studies on the possible mechanisms of cardio-protection after metabolic surgery.

A117

Sleeve Gastrectomy in obese, Wistar rats improves diastolic function independent of weight loss.

Jennifer Strande *Milwaukee WI*[1], John Corbett *MILWAUKEE WI*[1], Gwen Lomberk *Milwaukee WI*[1], Tammy Kindel *Milwaukee WI*[1]
Medical College of Wisconsin[1]

Introduction. Heart failure with preserved ejection fraction (HFpEF) is the most common cause of heart failure and characterized by impaired diastolic

relaxation. Bariatric surgery significantly improves diastolic relaxation due to unknown mechanisms. In this study, we tested the hypothesis that a sleeve gastrectomy (SG) will improve diastolic dysfunction independent of weight loss.

Methods. Male, Wistar rats were fed a high-fat (HF) or low-fat (LF) diet for 10 weeks followed by SG-HF, pair-fed sham (PF-HF), ad-lib sham (AL-HF), or ad-lib LF sham surgery (n=10-14 per group). Echocardiograms were performed pre- and at 8 weeks post-operatively. At 10 weeks, blood was collected 15 minutes after a liquid meal. Left ventricular tissue was analyzed for mRNA and protein expression.

Results. PF-HF rats weighed the same as SG-HF rats throughout the study period. Only SG induced a significant improvement in diastolic relaxation (IVRT pre: 14.7 ± 2.3 msec, post: 11.2 ± 1.8 msec, $p<0.001$). SG significantly increased glucagon-like peptide-1 (GLP-1) compared to PF-HF rats ($p=0.03$) without a change in total bile acids, glucose or insulin concentrations. Surprisingly, there was a significant decrease in cardiac FXR gene expression ($p=0.04$) and in down-stream effectors of the GLP-1 receptor including p38-MAPK ($p=0.01$) and GLUT-1 ($p=0.003$).

Discussion. SG improved diastolic function with a significant reduction in stress-induced signaling and changes in glucose transporters independent of weight loss. SG may improve diastolic dysfunction due to changes in cardiac metabolism initiated by the entero-cardiac axis and translate to extending metabolic surgery to patients with HFpEF independent of obesity status.

A118

Development of a Bariatric Surgery Specific Scoring Syestem for Screening Patients at Risk for Perioperative Myocardial Infarction.

Amlish Gondal *Tucson AZ*[1], Chiu-Hsieh Hsu *Tucson AZ*[1], Rostam Khoubyari *Tucson AZ*[2], Matthew Mobily *Tucson AZ*[1], Iman Ghaderi [3]
The University of Arizona[1] CareMore Health[2] University of Arizona[3]

Background:
Perioperative myocardial infarction (MI) is a dangerous cardiac complication after non-cardiac surgery. Bariatric surgery, due to its intraabdominal nature, has traditionally been considered an intermediate risk procedure; however, there is limited large scale data on MI rates and its predictors in patients undergoing bariatric surgery.

Methods:
Patients undergoing primary bariatric surgery were identified from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP®) participant use file(PUF) 2016. Preoperative characteristics that

correlated with perioperative MI were identified by multiple regression analysis. PUF 2015 was used to validate the scoring system developed from initial analysis.

Results:

A total of 172017 patients were studied from PUF 2016. Event rate for MI within 30 days of the operation was 3/10000 procedures; with a mortality rate of 17.3% in patients who had an MI. Four variables correlated with perioperative MI on regression analysis, including history of a previous MI (OR= 8.57, CI=3.4-21.0), preoperative renal insufficiency (OR=3.83, CI=1.2-11.4), hyperlipidemia (OR=2.60, CI=1.3-5.1), and age>50 (OR=2.15, CI=1.1-4.2). Each predicting variable was assigned a score of 1 and event rate for MI was assessed with similarly increasing risk score in PUF 2015. The risk increased from 8.7 per 100000 operations with a score of 0 to 3.2 per 100 with a score of 4.

Conclusion:

The incidence of MI after bariatric surgery is lower than other intraabdominal surgeries, however, mortality with perioperative MI is high. This simple scoring system can be used by bariatric surgeons to identify patients who will benefit from focused perioperative cardiac workup.

A119

Can surgical weight loss reduce the risk of developing Coronary Heart Disease?

David Gutierrez Blanco *Weston FL*[1], David Romero Funes *Weston FL*[1], Cristian Milla Matute *Davie FL*[1], Rama Rao Ganga *Columbia MO*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

INTRODUCTION

Coronary Heart Disease(CHD) is the leading cause of death in the United States, with obesity being one of its major modifiable risk factors. The aim of this study is to determine the impact of bariatric surgery, especially Laparoscopic Sleeve Gastrectomy(LSG), on the risk of developing CHD.

METHODS

We retrospectively reviewed all patients who underwent Bariatric Surgery from 2010 to 2016. All patients between 30 and 74 years of age without a previous Coronary Heart Disease were included in our study. The risk score for predicting the incidence of CHD was measured preoperatively and at 12 months of follow-up.

RESULTS

Of the 1330 patients studied, 225(16.9%) patients had all the required variables to calculate the CHD risk score. The mean age of our population was 51.44±11.29years, mostly females (67%N=152) and

Caucasians (58.7%N=132). All the major metabolic parameters improved 12 months after surgery (Table1). The mean percentage of estimated BMI loss and percentage of total weight loss at 12 months follow-up was 69.07% and 26.65% respectively. The CHD preoperative risk was 8.87±7.66% or 8-fold higher than the ideal risk. After 12 months of follow-up, females had a 2.71% absolute risk reduction(ARR) corresponding to a 42.01% Relative Risk Reduction(RRR), and males had an ARR of 5.4%(RRR:38.82%). The improvement was significant after both LSG and RYGB (Table 2).
CONCLUSION
Surgical weight-loss, especially after Laparoscopic Sleeve Gastrectomy, has an important role in the reduction of the risk of developing Coronary Heart Disease. Further studies should assess these findings in a long-term follow-up.

A120
Adolescent Gastric Banding: a five-year longitudinal study in 137 individuals

Jeffrey Zitsman *New York NY*[1], Mary DiGiorgi *New York NY*[2], Janet Kopchinski *New York NJ*[3], Robyn Sysko *New York NY*[4], Lori Lynch *New York NY*[3], Michael Devlin *New York NY*[5], Ilene Fennoy *New York NY*[3]
Morgan Stanley Children's Hospital of NY Presbyterian[1] Pacira Pharmaceuticals[2] Morgan Stanley Children's Hospital/NYP[3] Mt Sinai School of Medicine[4] NY State Psychiatric Inst[5]

Background
Laparoscopic adjustable gastric banding (AGB) is used to treat obesity primarily in adults. Less is known about long-term results of AGB in adolescents. We report outcomes of AGB at five years in teenagers with severe obesity.

Methods
Adolescents (14-19 years) underwent AGB in an FDA-approved observational clinical trial. Outcomes measured included anthropometric measurements, co-morbidities, complications, and band retention. Individuals who missed visits were contacted to maximize data collection. Continuous variables were analyzed with an unpaired *t*-test when two groups were compared or with analysis of variance (ANOVA) when more than two groups were compared.

Results
One hundred thirty-seven subjects underwent AGB (94 female, 43 male; 43 % Caucasian, 37% Hispanic, 17% African-American; 4% other). Mean age and body mass index (BMI) pre-operatively were 17.0 $\pm$ 1.2 years and 48.3 $\pm$ 8 kg/m^2. Comorbidities were present in 71%. Maximum weight loss occurred by 36 months and continued through five years for most subjects. Twenty-three (32%) of 72 adolescents achieved loss of 50%

calculated excess weight at 5 years, representing 17% of all subjects. Weight loss was associated with improvement in comorbid conditions; weight regain resulted in relapse. Complications requiring additional surgery occurred 80 times in 63 patients. Twenty-six percent of subjects contacted at five years had undergone band removal.

Conclusions
AGB helps some adolescents with obesity lose weight and improve their health. Early operative morbidity is low, but 50% of patients require additional surgery. Available data support sleeve gastrectomy and gastric bypass over AGB in adolescents with severe obesity.

A121
Sleeve Gastrectomy in 2,019 Children and Adolescents: Nine Years Long-Term Outcomes
Aayed Alqahtani *Riyadh* [1], Yara Alqahtani [2], Mohamed Elahmedi *Riyadh Central Region*[2]
King Saud University[1] Obesity Chair, King Saud University[2]

Background
Bariatric surgery has proven safety and efficacy in inducing significant weight loss and co-morbidity resolution in children and adolescents. However, long-term evidence in this age group is yet to be reported.
Objective
To report single-surgeon experience with long-term weight loss and morbidity in severely obese children and adolescents (aged 5-21 years) who underwent laparoscopic sleeve gastrectomy (LSG) in our center.
Methods
Our standardized prospective outcomes research program database was queried for data pertaining to all nonsyndromic children and adolescents who underwent LSG since the inauguration of the program. Baseline and annual visit data regarding weight loss, readmissions and postoperative adverse events were analyzed for the purpose of this study.
Results
2,019 children and adolescents underwent LSG during the study period. Baseline age and body mass index (BMI) were 15.2 ± 3.8 years and 46.4 ± 10 kg/m^2. Male:Female ratio was 1:1. Mean % excess weight loss (%EWL) at one (N=1,296), three (N=503), five (N=144), seven (N=55), and nine years (N=14) was 55.4 ± 21.5%, 79.1 ± 27.6%, 84.9 ± 39.1%, 86.3 ± 50.6%, and 71.6 ± 49.8%, respectively.
Among those who completed at least five years of follow-up, 9.5% had occasional fatigability, and 19% had moderate-to-severe symptoms of gastroesophageal reflux disease (GERD). There were no bariatric-related readmissions, significant morbidity or mortality after surgery
Conclusions
LSG induces significant, sustained long-term weight loss without significant safety concerns, being the

longest reported follow-up to date. However, a fifth of patients developed long-term symptoms of GERD, and a tenth reported occasional fatigability.

A122

A comparative 100-participant 5-year study of aspiration therapy versus roux-en-y gastric bypass: 2nd and 3rd year results

Erik Wilson *Houston TX*[1], Erik Noren *Karlskrona* [2], Jakob Gruvaeus *Karlskrona* [2], Christian Paradis *Karlskrona* [2]
University of Texas McGovern Medical School at Houston[1] Blekinge County Hospital[2]

Background

Aspiration therapy (AT) is the first FDA-approved endolumenal procedure for primary weight loss and is indicated for patients with Class II and III obesity and for long duration of use. We earlier reported Year-1 results of a study at Blekinge County Hospital in Karlskona, Sweden comparing AT to Roux-en-Y gastric bypass (RYGB) involving ~100 participants.[i] We report on year 2 and 3 results.

Methods

Standard inclusion and exclusion criteria for weight loss surgery at Blekinge were used for both arms. The two arms were matched in age and baseline health status. Mean baseline body mass index was 42.6±7.5 and 41.1+5.0 kg/m^{2}for the AT and RYGB participants, respectively.

Results

Weight loss is shown in the table for Years 1-3. In the 1st, 2nd, and 3rdyears, 0, 3, and 10 AT participants, respectively, withdrew; 5 participants withdrew because they reached their weight-loss goal. Mean percent excess weight-loss (%EWL) at the time of withdrawal was 43%. In the first 3 years, 0 AT and 20 RYGB participants were lost to follow-up (LFU). In the AT group one buried bumper in both Years 2 and 3 were reported; no complication data is available on after Year 1 in the RYGB group.

Conclusions

The RYGB grouped experienced greater weight loss than AT participants at Year 1-3, but more serious complications in Year 1 than the AT group in 3 years. Both groups saw a slight trend in weight regain at Year 3 from Year 1.

[I]Wilson et al, ASMBS 2017.

A123

The Effects Of Endoscopic and Surgical Bariatric Interventions On Gastric Emptying: A Systematic Review and Meta-analysis

Eric Vargas *Rochester MN*[1], Fateh Bazerbachi *Rochester MN*[1], Tarek Sawas *Rochester MN*[1], Andrew Storm *Rochester MN*[1], Andres Acosta *Rochester MN*[1], Barham Abu Dayyeh *Rochester MN*[1]
Mayo Clinic[1]

Introduction: Gastric emptying is a fundamental regulator of appetite, and can have prognostic implications on weight loss, symptoms and quality of life after weight loss endoscopic and surgical interventions. We sought to characterize and quantify these changes after a variety of bariatric endoscopic and surgical interventions **Methods:** A comprehensive search of multiple databases through Jan 2018 was conducted for gastric emptying, bariatric surgery and endoscopic bariatric therapies by 2 independent reviewers. Outcome of interest was T1/2(minutes) measured through gastric scintigraphy before and after intervention. A random effects model was used to pool the mean change in T1/2 (minutes). Heterogeneity was calculated using the I^2 statistic. Quality assessment was performed using the Newcastle-Ottawa Scale for nonrandomized studies.**Results:** A total of 704 citations were reviewed with 9 SG and 5 IGB citations fulfilling inclusion criteria for the meta-analysis. After SG, the pooled mean change in gastric emptying at 3 months was a significant acceleration in T1/2 gastric emptying by 27.5 minutes (95% CI: 14.7-40.3). Significant heterogeneity was found (I^2=92%). During IGB therapy, the pooled mean delay in gastric emptying was -44.7 minutes (95% CI: - 89.5 - 0.18). Significant heterogeneity was found (I^2=85.5%). On priori subgroup analysis, air-filled balloons did not significantly delay emptying (pooled mean T1/2=2.88 min) whereas fluid-filled balloons significantly delayed emptying (pooled mean T1/2= - 132.3 min). **Conclusion:** Sleeve gastrectomy accelerates gastric emptying while fluid-filled IGBs delay gastric emptying. Air-filled IGBs have no impact on gastric emptying. These findings give insights into physiologic mechanisms of action of these interventions

Paper Session III Wednesday November 14th, 2018 1:30PM-3:00PM

A124

Is Weight Loss Better if Staged Single Anastomosis Duodeno-ileal Bypass is Performed within the First Year of Sleeve Gastrectomy?

Hinali Zaveri *Salt Lake City UT*[1], Amit Surve *Salt Lake City UT*[1], Daniel Cottam *Salt Lake City UT*[2], Peter Ng *Raleigh NC*[3], Lindsey Sharp *Raleigh NC*[3], Dustin Bermudez *Raleigh NC*[3], Sophia Menozzi *Raleigh NC*[3], Austin Cottam *Salt lake City UT*[1], John Ambrose Ambrose [3], Walter Medlin *Salt Lake City UT*[1], Christina Richards *Salt Lake City UT*[1], Legrand Belnap *Salt Lake City UT*[1], Samuel Cottam *Salt Lake City UT*[1], Benjamin Horsley *Salt Lake City UT*[1]
Bariatric Medicine Institute[1] Bariatric Medical Institute[2] REX Surgical Specialists Bariatric Speci[3]

Introduction: The failure rates of Sleeve gastrectomy (SG) are increasing especially in patients with super obesity. The two-stage approach to single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) allows the surgeons to do the SG first and conversion to SADI if failure is identified. Weight loss after SG stalls by 12-18 months. However, if this is true then what should be the golden period to perform this conversion, in order maximize the weight loss?
Aim: We present and compare the weight loss outcomes of revision SADI-S if it is done within and after the 1st year of SG.
Method: Retrospective analysis of the prospective kept database from 2 US centers were performed. Sixty-one patients were identified and were divided into 2 groups: Group A (n=26) received revision SADI, within the first year of SG because of super obesity and Group B (n=35) received revision SADI, one year after the SG due to weight loss failure or weight regain.
Results: The two groups lost statistically similar % excess weight lost (EWL) after SG. Post-SADI, group B had rapid excess weight loss in first 6 months; however; thereafter group A lost more weight compared to group B and this difference was statistically significant ($p<0.001$). The EWL for group A and group B at 24 months was 67.6% and 63.3% respectively (fig. 1).
Conclusion: Weight loss is better if staged SADI is performed within the first year of SG and patients go on to lose similar weight to primary SADI-S surgery.

A125
EFFECT OF SINGLE ANASTOMOSIS DUODENAL-ILEAL BYPASS WITH SLEEVE GASTRECTOMY ON GLUCOSE TOLERANCE TEST: COMPARISON WITH OTHER BARIATRIC PROCEDURES (ROUX-EN-Y GASTRIC BYPASS, SLEEVE GASTRECTOMY AND BILIOPANCREATIC DIVERSION)

Luca Sessa *Rome* [1], Valerio Spuntarelli *ROME* [1], Caterina Guidone *Roma* [1], Pierpaolo Gallucci *Rome* [1], Giulia Giannetti *rome* [1], Amerigo Iaconelli *Rome* [1], Esmeralda Capristo *Rome* [1], Piero Giustacchini *Rome* [1], Luigi Ciccoritti *Roma* [1], Chiara Bellantone *Rome* [1], Giuseppe Nanni *Roma* [1], Geltrude Mingrone *Roma* [1], Marco Raffaelli *Rome* [1]
Università Cattolica del Sacro Cuore, Rome[1]

Background. No data have been reported regarding the risk of hyperinsulinemic response and reactive hypoglycemia after single anastomosis duodenal-ileal bypass with sleeve gastrectomy (SADI -S). Furthermore comparative studies with other bariatric procedures are lacking. We compared response to oral glucose tolerance test (OGTT) in patients who underwent SADI-S, Roux-en-Y gastric bypass (RYGP), sleeve gastrectomy (SG) and

biliopancreatic diversion (BPD).

Methods. Consenting consecutive non-diabetic patients, matched for age, sex and pre-operative BMI, who underwent SADI-S, RYGB, SG and BPD were recruited. An OGTT with 75 g of oral glucose bolus was performed pre- and post-operatively (2 months after surgery). Plasma insulin (pIns-μUI/mL) and glucose (pGlu–mg/dL) were measured at baseline, +30, +60, +90, +120, +150, +180 minutes. Severe hypoglycemia was defined as pGlu concentration ≤50 mg/dL.

Results. Thirty-five patients were recruited: 9 SADI-S, 11 RYGB, 7 SG, 8 BPD. Comparing preoperative and postoperative responses to OGTT, all the procedures result effective in improvement of glycemic control with better early results after SADI-S and BPD when compared to RYGB and SG as shown Figure1 reporting the mean pIns and pGlu levels, respectively. No patients showed severe hypoglycemia. Significantly more patients who underwent RYGB and SG showed asymptomatic pGlu ≤70 mg/dL after post-operative OGTT when compared with SADI-S and BPD (63.6% and 57.1% Vs 22.2% and 12.5%, respectively, $p<0.05$).

Conclusions. Similarly to BPD, SADI-S seems associated with an improvement in insulin sensitivity and glucose homeostasis with a reduced risk of hyperinsulinemic response and subsequent hypoglycemia with respect to RYGB and SG.

A126

Comparison of Laparoscopic Sleeve Gastrectomy Leak Rates in Five Staple-Line Reinforcement Options: A Systematic Review.

Paul Kemmeter *Grand Rapids MI*[1], Michel Gagner *Montreal QC*[2]
Grand Health Partners[1] Hopital du Sacré Coeur, Montréal, QC, Ca[2]

Background: Staple-line leaks following laparoscopic sleeve gastrectomy (LSG) remain a concerning complication. Staple-line buttressing is largely adopted as an acceptable reinforcement, but data regarding leaks have been equivocal.
Objectives: This study compared staple-line leaks in five reinforcement options during LSG: no reinforcement (NO-SLR), oversewing (Suture), nonabsorbable bovine pericardial strips (BPS), tissue sealant or fibrin glue (Seal), or absorbable polymer membrane (APM).
Setting: University and Community Hospitals
Methods: A systematic review study of articles published between 2012-2016 regarding LSG leak rates aligned with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Variables of interest included leak rates, bleeding, and complications in addition to surgical and population parameters. An independent Fisher's exact tests were

used to compare the number of patients with and without leaks for the different reinforcement options.
Results: Of the 1,633 articles identified, 148 met inclusion criteria and represented 40,653 patients. Differences in age (older in APM; p=0.001), starting body mass index (lower in Suture; p=0.008), and distance from pylorus (closer in BPS; p=0.04) were observed between groups, but mean bougie size was equivalent. The overall leak rate of 1.5% (607 leaks) ranged from 0.7% for APM (significantly lower than all groups; p≤0.007) to 2.7% (BPS).
Conclusions: This systematic review of staple-line leaks following LSG demonstrated a significantly lower rate using APM staple-line reinforcement as compared to oversewing, use of tissue sealants, BPS reinforcement, or no reinforcement. Variation in surgical technique may also contribute to leak rates.

A127
Beyond Five Years: A Matched Cohort of Sleeve vs Bypass
Katherine Blevins *Stanford CA*[1], Luis Garcia *Fargo ND*[2], Joe Forrester *Stanford CA*[1], John Morton *Stanford CA*[2], Dan Azagury *Stanford CA*[2]
Stanford University, Department of Surgery, Division of General Surgery[1] Stanford University, Department of Surgery, Division of General Surgery, Bariatric and Minimally Invasive Surgery[2]

Introduction: Bariatric surgery has demonstrated efficacy in weight loss. Existing studies suffer from loss to follow-up, and most long-term data focuses on Roux-en-Y gastric bypass (LRYGB). This study compares weight loss in patients >5 years from laparoscopic sleeve gastrectomy (LSG) to matched patients who underwent LRYGB.
Methods: We prospectively evaluated patients who underwent LSG before August 2012 with follow-up data >5 years. LSG patients were matched 1:1 with post-LRYGB patients by sex, age at surgery, and preoperative BMI. Univariate and multivariate analysis was performed with weight loss at the longest duration the primary outcome. IRB approval was obtained.
Results: One-hundred sixty-five patients underwent LSG during the study period. Long-term follow-up data (>5 years) was available for 85 patients (52%). There were no preoperative differences between those with and without follow-up data. 6 (7%) LSG patients were excluded as they underwent re-operation which altered intestinal anatomy. Of the 79 patients remaining, 75 were matched with post-LRYGB patients. The average follow-up period was 6.4y for LSG and 6.5y for LRYGB (p=0.08, NS). Percent of excess body weight loss (%EBWL) was 37% for LSG vs 67% for LRYGB (p<0.0001). Weight loss for LSG follow-up in clinic vs outside clinic was 46% vs 34% (p=0.18, NS).

Conclusion: LSG is now the most common bariatric surgery in the US. Long-term data is needed to confirm that observed short-term favorable outcomes are maintained. Recent studies have produced divergent results. We observed significantly less weight loss at 6+ years in LSG compared to matched LRYGB patients.

A128

A Multi-Institutional Study on the Mid-term Outcomes of Single Anastomosis Duodeno-ileal Bypass as a Surgical Revision Option after Sleeve Gastrectomy.

Hinali Zaveri *Salt Lake City UT*[1], Amit Surve *Salt Lake City UT*[1], Daniel Cottam *Salt Lake City UT*[2], Peter Ng *Raleigh NC*[3], Lindsey Sharp *Raleigh NC*[3], Dustin Bermudez *Raleigh NC*[3], Sophia Menozzi *Raleigh NC*[3], Austin Cottam *Salt lake City UT*[1], John Ambrose Ambrose [3], Walter Medlin *Salt Lake City UT*[1], Christina Richards *Salt Lake City UT*[1], Legrand Belnap *Salt Lake City UT*[1], Samuel Cottam *Salt Lake City UT*[1], Benjamin Horsley *Salt Lake City UT*[1]
Bariatric Medicine Institute[1] Bariatric Medical Institute[2] REX Surgical Specialists Bariatric Speci[3]

Introduction: Insufficient weight loss is one of the major concerns after sleeve gastrectomy (SG). Recently, a modification of duodenal switch (DS), a single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) has become increasingly popular for patients with BMI over 50 as a primary or staged surgery. Staging allows surgeons to do the SG first with the conversion only happening when a failure or technical challenge is identified.

Aim: We present the mid-term outcomes of single anastomosis duodeno-ileal bypass (SADI) surgery for failed SG patients.

Method: Retrospective analysis was performed on a prospectively collected database from 2 different US centers. Sixty-two patients with BMI of 43.9 ± 10.2 kg/m^2 and excess weight loss (EWL) of 24.7% after SG were submitted to SADI (300-cm common channel). Patients underwent either planned staged SADI-S due to super obesity or unplanned staged SADI-S for weight loss failure after SG.

Result: of 62 patients, 40 patients underwent unplanned staged SADI-S, and 22 patients underwent planned staged SADI-S. The mean interval between 2 procedures was 31.3 ± 27.8 months. The total mean operative time and hospital stay for SADI was 108.1±67.7 mins and 1.5± 1.3 days respectively. The postoperative early and late complication rate was 8% and 6.4% respectively (table 1). There were no deaths. The mean EWL was 66.4% 2 years after the staged SADI-S surgery. (fig. 1)

Conclusion: SADI-S is a safe and an effective weight loss option for surgical revision of failed SG. However, this approach needs more patients to

understand its limitations.

A129

One Anastomosis Gastric Bypass after ten years: low morbidity, low bile reflux and stable excess weight loss .

JEAN MARC CHEVALLIER *PARIS* [1], Tigran POGHOSYAN *Paris* [1], Matthieu BRUZZI *Paris Paris 15*[1], Richard DOUARD *Paris* [1]
Hopital Européen Georges Pompidou[1]

Background:One Anastomosis Gastric Bypass (OAGB) is a safe and effective alternative but controversy remains on long-term complications. We report results of the OAGB at 10 years in a University Hospital performing bariatric surgery since twenty five years.

Methods: From October 2006 to December 2017, 1585 patients underwent OAGB: a long and narrow gastric tube calibrated on a 32 Fr bougie, with a linear stapled gastroenterostomy 150 cm (if preoperative BMI < 50 kg/m2) to 200 cm (if BMI > 50 kg/m2) down from the Treitz ligament. 64/106 (60 .3%), operated before 2008, could be followed.

Results:There were 999 women (63%).Mean age was 43.5 years (15.5-62.4). Mean preoperative weight was 131.9 kg ± 23.9, mean BMI 47.03 kg/m^2 (± 7.07).
2 out of 3 deaths were related to surgery (1 pulmonary embolism, 1 myocardial infarction). Morbidity rate was 6.1 % (n=97). 49 patients were reoperated: 11 early for leaks (N=7,4 anastomotic), incisional hernia (N=2), 2 bleeding. 38 required late reoperation: 8 marginal ulcer perforations, 17 intractable bile reflux (1 %) converted into a RYGB, 10 bowel obstructions (one internal hernia through the Petersen's space), 3 protein deficiences. After 10 years, mean BMI decreased to 30.3 ± 5.9 kg/m^2, and mean EWL was 76.5 % ± 12.3.
The OAGB is an effective procedure with comparable long-term outcomes to RYGB but technically simpler. Endoscopic, manometric and biological data will soon be available.

A130

IMPLEMENTATION OF A BARIATRIC ERAS PROGRAM AT A COMMUNITY HOSPITAL IMPROVES BOTH PERIOPERATIVE AND 30-DAY OUTCOMES AND REDUCES COST

David Voellinger *Charlotte NC*[1], Vicki Morton *Charlotte NC*[2], Craig Kolasch *Matthews NC*[1], Ellen Carraro *Charlotte NC*[1], Christopher Duggins *Charlotte NC*[2], James Benonis *Charlotte NC*[2]
Novant Health Bariatric Solutions[1] Providence Anesthesiology[2]

Background:

Enhanced Recovery After Surgery (ERAS) programs have been shown to improve outcomes and cost in a variety

of surgical specialties. However, minimal data has been published on ERAS in bariatric surgery. This comparative analysis aims to evaluate the outcomes and cost during the first year of a newly implemented bariatric ERAS program.

Methods:

A retrospective analysis of bariatric cases from a high-volume community hospital was performed. Comparison was made between cases performed without ERAS protocol to cases performed under ERAS protocol. Outcomes analyzed included post-operative nausea and vomiting (PONV), opioid usage, hospital length of stay (LOS), hospital cost, complications, 30-day re-admissions, re-interventions and re-operations. Statistical analysis was completed using chi-square with p value significance at $p<0.05$.

Results:

938 bariatric cases were performed from February 2016 to January 2018: 520 non-ERAS (404 VSG, 97 RNY), 418 ERAS (304 VSG, 86 RNY). All outcome measures improved in the ERAS group. PONV decreased from 72% to 14% ($p=<0.001$). Opioid usage decreased from 100% to 34% ($p=<0.05$). Hospital LOS was reduced from 2.15 to .85 days ($p=<0.05$) and, in the ERAS group, 91% were discharged on POD1. Overall cost of hospital stay was reduced by 10%. Complications decreased from 13% to 6%. 30-day data also showed improvement (Table).

Conclusion:

Implementation of a bariatric ERAS program in a high-volume community hospital center showed improvements in perioperative outcomes, 30-day outcomes and cost of care. More study is needed to determine if these trends continue and to identify areas for program improvement.

A131
Impact of an Emergency Department-based Clinical Observation Unit on Bariatric Readmissions and Cost

Joshua Landreneau *Cleveland OH*[1], Dominykas Burneikis *Cleveland OH*[1], Andrew Strong *South Euclid OH*[1], Matthew Kroh *Abu Dhabi* [2], Stacy Brethauer *Cleveland OH*[1], John Rodriguez *Cleveland CA*[1]
Cleveland Clinic[1] Cleveland Clinic Abu Dhabi[2]

Introduction:
Hospital readmissions are associated with increased patient morbidity and significant use of medical resources. However, the services and resources needed to manage these complications may not warrant inpatient hospital admission.
Methods:
On June 26, 2016, our institution began a surgical observation pilot program

which consists of four dedicated bariatric patient beds in the Emergency Department's outpatient Clinical Decision Unit (CDU), with clear admission criteria. All patients undergoing bariatric surgery from June 2015 through June 2017 were retrospectively reviewed to determine the impact of the CDU on readmissions and cost.

Results:

Out of 625 operations performed, 22 patients were observed in the CDU within 30 days of discharge (3.5%). The most common complaints were abdominal pain with no identified pathology (37.5%) and dehydration (31.3%). Indications for CDU admission included need for serial physical exams and/or radiological imaging with intravenous hydration only (n=18), endoscopy (n=2), and investigating possible pulmonary embolism or cardiac pathology (n=2). Six patients required subsequent hospital admission (29.2%). Compared to the year prior, the readmission rate decreased from 3.8% to 3.2%. The mean per-day cost, including all interventions and evaluations, was 14.3% less for bariatric surgery patients under observation status in the CDU compared to the regular nursing ward.

Conclusion:

Following bariatric surgery patients commonly experience symptoms that warrant investigation or minor clinical intervention, but may not require inpatient hospital admission. A dedicated emergency department-based clinical observation unit facilitates access to these services at decreased cost compared to inpatient units, and may reduce readmissions following bariatric surgery.

Paper Session IV Wednesday November 14th, 2018 3:45PM-5:15PM

A132

Obesity -Related Frailty: A New Bariatric Frailty Score Can Be Used to Predict Postoperative Adverse Outcomes, Analysis Using The MBSAQIP-2015-2016 Database

Raul Sebastian *Ashburn VA*[1], Andrew Sparks *Washington DC*[1], Gina Adrales *Baltimore MD*[2], Alisa Coker *Baltimore MD*[2], Thomas Magnuson *Baltimore MD*[2], Michael Schweitzer *Baltimore MD*[2], Hien Nguyen *Baltimore MD*[2]
George Washington University[1] Johns Hopkins University[2]

Introduction

Frailty is associated with adverse outcomes in the elderly, but obesity can be thought of as accelerated aging with similar pathology seen in young severely obese individuals. Using the validated frailty accumulating deficits model in the Canadian Study of Health and Aging-Frailty Index (CSHA-FI) and the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program(MBSAQIP) 2015-2016 database, we developed a Bariatric Frailty Score (BFS) to predict

30-day adverse postoperative outcomes after bariatric surgery in patients with obesity-related frailty.

Methods

Fifteen variables of the CSHA-FI were mapped onto 10 variables of the MBSAQIP. Each component of our score was given equal weight with a minimal and maximal score between 0 and 10 (Figure). Correlations and binary logistical regression analysis were performed between BFS and postoperative adverse outcomes including 30-day mortality.

Results

In 354,865 patients (60% sleeve gastrectomy, 25% gastric bypass), the 30-day the mortality rate was 0.12%. Increasing BFS score was correlated strongly on linear regression with prolonged hospital stay (R^2=0.92), unplanned ICU admissions (R^2=0.88), readmissions (R^2=0.92), non-home discharge (R^2=0.81), and mortality (R^2=0.67). Multivariate analysis, the BFS retained the highest odds ratio for mortality compared to other factors such as ASA class and Age of 65 (Table).

Conclusion

Our BFS can lead to a predictive model for adverse postoperative outcomes including mortality following bariatric surgery. This simple tool can help assess Obese Frailty in bariatric patients and be used to determine strategies to potentially improve postoperative outcomes.

A133

Postoperative opioid prescribing practices and evidence-based guidelines in bariatric surgery

Danielle Friedman *New Haven CT*[1], Saber Ghiassi *Fairfield CT*[1], Matthew Hubbard *New Haven CT*[1], Andrew Duffy *New Haven CT*[1]
Yale University Department of Surgery[1]

Objective. Compare opioid prescribing practice for minimally invasive bariatric surgical procedures with self-reported patient use and satisfaction; create practice guidelines for postoperative prescriptions

Design. Survey administered at postoperative office visit

Setting. University hospital; ambulatory and short-stay surgery

Patients. All patients at initial postoperative visit were eligible. None declined or excluded. 115 patients were analyzed for 3 procedures: laparoscopic sleeve gastrectomy (LSG; n=53), laparoscopic roux-en-Y gastric bypass (LRYGB; n=50), and laparoscopic gastric band removal (LBR; n=12). Average body mass index 44.8 kg/m^2. Overall, 81% female, average age of 44 years (range 21-82). 51.0% African-American or Hispanic/Latino. 11.3 % had active preoperative narcotic prescriptions.

Main Outcome Measures. Number of pills prescribed (verified); proportion

used; duration of opioid use; satisfaction with pain control; non-narcotic analgesic use.

Results. 27±10 pills dispensed for LSG, 4.1 days of use; 28±7 pills for LRYGB, 4.6 days; 16±9 pills for LBR, 2.6 days. 33-74% reported retaining more than half or all of their opioids at the two-week visit (Figure). 56% utilized non-narcotic analgesics. 91.3% reported adequate pain control. For each procedure, average number of pills used was calculated with representative values for "less than half left" (75% of average number of pills prescribed) and "more than half left" (25% of average number of pills prescribed). LSG 10 pills used; LRYGB 14 pills, LBR 12 pills.

Conclusions. Opioid analgesics were overprescribed for the majority of our patients. Only slightly over half used non-narcotic analgesics. We now recommend prescriptions of no more than 10-14 pills after these common bariatric procedures.

A134

Bariatric Surgery Outcomes in Patients with BMI≥50

Elizabeth Pontarelli *Sacramento CA*[1], Gary Grinberg *Elk Grove CA*[1], Adam Meyers *Sacramento CA*[1], Dhanyaja Kadiyala *Oakland CA*[2], Sanjoy Dutta *Fremont CA*[3], Pandu Yenumula *Sacramento CA*[1]
Kaiser Permanente South Sacramento[1] Kaiser Permanente[2] Kaiser Permanente Freemont[3]

Introduction: Approximately 10-25% of patients undergoing bariatric surgery have a body mass index (BMI) over 50. Studies evaluating weight loss failure and postoperative complications in this group have had conflicting results. This study is the largest cohort to date looking at patients with BMI≥50 that includes 5 year follow-up.
Methods: This is a retrospective analysis of patients from 2007-2017 undergoing roux-en-y gastric bypass (RYGB) and sleeve gastrectomy (SG) in our health system (5 hospitals, 20 surgeons). We compared patients with BMI≥50 to those BMI<50. Operative parameters and outcomes were compared. Five-year outcomes were evaluated for patients between 2007-2012.
Results: 12,467 patients were identified during the study period (11% with BMI≥50). More patients in the BMI≥50 group had RYGB (44% v. 40%, p=0.01). We saw no significant difference in length of stay, or 30-day outcomes (emergency visits, reoperations, and readmissions) between the groups. The five-year follow-up rate was 26%. TBWL was not significantly different, even when controlling for type of surgery. Patients with BMI≥50 had a higher rate of weight loss failure at 5 years after SG (42.3% v. 37.4%, p=0.009), but not after RYGB (15.9% v. 17.3%, p=0.38). Similar rates of

revisional surgery were seen at 5 years (0.67 v. 0.71, p=0.85). The overall mortality was low at 5 years (0.46%) and did not differ between groups. Conclusion: Patients with BMI≥50 are not at a higher risk of postoperative complications, but may have a greater risk of weight loss failure after sleeve gastrectomy compared to roux-en-y gastric bypass.

A135

Impact of bariatric surgery on kidney function of diabetic patients

David Romero Funes *Weston FL*[1], David Gutierrez Blanco *Weston FL*[1], Camila Ortiz Gomez *Weston* [1], Rama Rao Ganga *Columbia MO*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

Introduction
Type 2 Diabetes Mellitus (T2DM) is the main risk factor for Chronic Kidney Disease(CKD). With the increased prevalence of obesity in recent decades, the incidence of CKD has exponentially increased. Our goal in this study is to demonstrate how bariatric surgery affects glomerular filtration rate in T2DM patients and compare it with non-diabetic patients.
Methods
We retrospectively reviewed all patients who underwent bariatric surgery at our institution for the last 6 years. Kidney function was assessed before and at 12 months after surgery using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation.
Results
Of the 2924 patients reviewed, A total of 652 (22.29%) met the criteria for (CKD-EPI) equation calculation. Among these, 61.96% (N=404) were diabetic. Common demographics such as gender, type of procedure and initial BMI were comparable between both groups (Table 1) except for age (P<0.001). The hyperfiltration parameter improved -8.72± 12.12(p=0.0001) in the Diabetic group, and -7.02± 10.21 in non-diabetics. Furthermore, patients with a GFR <90 (Chronic Kidney Disease Stage 2 or greater) had a similar significant improvement in both groups (12.28±15.85 [P=0.0001] increase in diabetic patients, and 11.33±14.15[P=0.0001] increase in non-diabetic patients). Total weight loss and Estimated BMI loss were also comparable between both groups (table 2).

Conclusion
Bariatric Surgery seems to improve kidney function in both, diabetic and non-diabetic patients. Patients with hyperfiltration, which is considered the first step in diabetic nephropathy, and patients with chronic kidney disease stage ≥2 benefit the most from a weight loss surgery.

A136

Metabolic surgery reduces mortality and macrovascular complications in patients with type 2 diabetes mellitus compared to medical therapy: a meta-analysis

Adrian Billeter *Heidelberg* [1], Sebastian Eichel *Heidelberg* [2], Katharina Scheurlen *Heidelberg* [2], Stefan Kopf *Heidelberg* [2], Pascal Probst *Heidelberg* [2], Beat Müller-Stich *Heidelberg Baden-Württemberg*[2]
University of Heidelberg Hospital[1] University of Heidelberg[2]

Background: Although metabolic surgery has been shown to be superior to medical therapy regarding glycemic control, it remains unclear whether these beneficial effects ultimately result in reduced mortality and macrovascular complications in patients with type 2 diabetes mellitus (T2DM).

Objective: To assess the effect of metabolic surgery on the incidence of macrovascular complications and mortality in patients with T2DM compared to medical therapy.
Methods: A systematic literature search was performed in MEDLINE, Web of Science and Cochrane Central Register of Controlled Trials (CENTRAL) without any restrictions, searching for randomized controlled trials (RCTs), case-control trials, and cohort studies comparing the effect of metabolic surgery on the incidence of diabetes-associated macrovascular complications and mortality to a medically treated control group.

Results: The literature search yielded 2'815 potentially eligible articles. 20 studies (6 RCTs, 14 controlled clinical trials) were ultimately included. Metabolic surgery reduced the all-cause mortality independent of duration of T2DM in comparison to medical therapy (OR 0.34, 95% CI [0.25; 0.46], $p<0.00001$). Furthermore, the incidence of all macrovascular complications (OR 0.38, 95% CI [0.22; 0.67], $p=0.0008$) was also significantly reduced by metabolic surgery although the duration of T2DM reduced the effect of metabolic surgery on the incidence of macrovascular complications.

Conclusions: Metabolic surgery reduces mortality and the incidence of macrovascular complications compared to medical therapy in patients with T2DM. T2DM-duration did not affect the beneficial effect of metabolic surgery on all-cause mortality but longer T2DM-duration diminished the effect on macrovascular complications.

A137

Late Relapse of Diabetes after Bariatric Surgery Should not be Considered as a Failure

Ali Aminian *Pepper Pike OH*[1], Zubaidah Nor Hanipah *Cleveland OH*[1], Gautam Sharma *Cleveland OH*[1], Chao Tu *Cleveland OH*[1], Stacy Brethauer *Cleveland OH*[1], Philip Schauer *Cleveland OH*[1]
Cleveland Clinic[1]

Background: Although the impressive metabolic effects of bariatric surgery in patients with type 2 diabetes (T2DM) are known, bariatric surgery is criticized by late relapse of diabetes.

Methods: Outcomes of 736 patients with T2DM who underwent Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG) at an academic center (2004-2012) and had ≥5 year glycemic follow-up were assessed. Out of 736 patients, 425 (58%) experienced diabetes remission (glycated hemoglobin (A1c) <6.5% off medications) in the first year after surgery. The later subgroup was followed to characterize late relapse of T2DM which was defined as fasting glucose (FBG) or A1c in the diabetic range (≥126mg/dL and ≥6.5%, respectively) or need for antidiabetic medication after initial remission.

Results: The median postoperative follow-up time was 8 years (range, 5-14). Of those 425 patients who initially achieved remission in short-term, 136 (32%) had late relapse of T2DM. Independent predictors of late relapse were preoperative number of diabetes medications (OR:1.85, 95%CI:1.35-2.53, p=0.0001), duration of T2DM (OR:1.08, 95%CI:1.02-1.15, p=0.012), and SG vs RYGB (OR:1.95, 95%CI:1.00-3.70, p=0.049). In patients who experienced late relapse, a significant improvement in glycemic control, number of medications including use of insulin, blood pressure, and lipid profile was still observed at long-term (Table-1).

Conclusion: While late relapse is a real phenomenon (one-third of our cohort), relapse of T2DM years after bariatric surgery should not be considered as a failure, as the trajectory of cardiometabolic risk factors (including 1.1% absolute reduction in A1c) is changed by surgery. Earlier surgical intervention would be associated with less diabetes relapse in long-term.

A138

Impact of Ursodeoxycholic Acid on Biliary Complications after Bariatric Surgery Erin Caddell MD, Jacob Palubicki MD, Joel Brockmeyer MD FACS, Andrew J. Borgert PhD, Kara J. Kallies MS, Byron Faler MD FACS, Yong Choi MD FACS, Shanu N. Kothari MD FACS FASMBS Dwight David Eisenhower Army Medical Center, Fort Gordon, GA; Gundersen Health System, La Crosse, WI

Erin Caddell *Fort Gordon GA*[1], Jacob Palubicki *Ft. Gordon GA*[1], Joel Brockmeyer *Evans GA*[1], Andrew Borgert *La Crosse WI*, Kara Kallies *La Crosse WI*, Byron Faler *Evans GA*[1], Yong Choi *The Woodlands TX*[1], Shanu Kothari *La Crosse WI*
Dwight D Eisenhower Army Medical Center[1]

Background: Biliary complications after Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG)

may occur due to rapid weight loss. Ursodeoxycholic acid (UCDA) has been shown to reduce the risk of biliary complications after bariatric surgery in a 1995 randomized controlled trial. The impact of UCDA in patients who have had SG is not well understood. Our objective was to review the incidence of biliary complications requiring intervention in patients after RYGB or SG and assess the timing of treatments based on whether UCDA was prescribed.

Methods: A multicenter retrospective review of patient medical records who underwent RYGB or SG was completed; revisional surgeries and patients with incomplete data were excluded. Patients who had surgery from September 2001-March 2016 and were prescribed UCDA 300 mg BID for six months postoperative at a community teaching hospital were compared to patients who underwent surgery from September 2006-March 2016 at a military hospital and were not prescribed UCDA. Statistical analysis included chi-square test and Wilcoxon Rank Sum test.

Results: Overall, 2,285 patients were included; 1,608 underwent RYGB and 677 underwent SG. Six hundred fifty-five (29%) patients had a history of cholecystectomy and were excluded from comparison. Of 1,630 patients without a prior cholecystectomy 151 (9%) had a biliary complication (Table). Three patients with previous cholecystectomy before RYGB required an intervention for common bile duct stones at 3, 11, and 12 years postoperatively.

Conclusions: A higher proportion of biliary complications occurred in patients who were prescribed UCDA compared to those who were not prescribed UCDA.

A139

Buyer's Remorse: What predicts post-decision dissonance after bariatric surgery?

Lyndsey Wallace *Milwaukee WI*[1], Melissa Helm *Milwaukee WI*[1], Kathleen Lak *Milwuakee WI*[1], Rana Higgins *Milwaukee WI*[1], Jon Gould *Fox Point WI*[1], Tammy Kindel *Milwaukee WI*[1]
Medical College of Wisconsin[1]

Introduction: Bariatric surgery continues to be the most effective long-term treatment for obesity and its associated co-morbidities. Despite the benefits, not all patients may repeat the decision to undergo bariatric surgery based on their post-operative experience. In this study, we explore the predictors of post-decision dissonance following bariatric surgery.

Methods: Patients at an accredited bariatric center who underwent bariatric surgery between the years 2011 and 2017 were surveyed to determine factors predictive of post-decision dissonance, as well as expectations, well-being and overall

satisfaction.

Results: A total of 591 patients were sent surveys, of which 184 (31.1%) responded. Of the 184 responders, 20 (10.9%) patients would not choose to undergo bariatric surgery if they had it do to over again (post-decision dissonance). There was no difference in the time since surgery, age, sex, or type of bariatric surgery between groups (Table 1). Dissonant patients were less likely to be married and privately insured. Dissonant patients were more likely to feel they had inadequate pre-operative education on post-operative expectations ($p<0.001$). These patients also had significantly greater post-operative weight regain, failed weight loss expectations, depression, and dissatisfied body image (Table 2).

Conclusion: Post-decision dissonance following bariatric surgery appears driven by inadequate pre-operative preparation of post-operative outcomes, coupled by post-operative weight regain and depression. This highlights the importance of pre-operative counseling on managing expectations and outcomes after surgery, as well as the need for continued post-operative engagement with a bariatric program to address weight regain and provide mental health support.

A328

The First Six Months of Commercial Experience with a Swallowable Gas-filled Three Balloon System Results in Safe and Clinically Meaningful Weight Loss

Rachel Moore *Metairie LA*[1], Michael Seger *San Antonio TX*[2]
Moore Metabolics and Tulane University[1] BMI of Texas[2]

Background: The Obalon Balloon System became available in January 2017. A Registry was provided to prescribing physicians to enter weight loss and safety data.

Methods: A retrospective analysis of registry data collected in first 6-months of commercialization was conducted. Patient demographics, weight and adverse events were analyzed.

Results: From January to June, 551 patients from 54 clinics were reported. 13 patients were removed from analysis (9 with incomplete entries and 4 with starting BMI <25 kg/m^2). Mean age was 46.3 (SD=11.1) years and 78% female. Mean starting weight/BMI were 220.9 (43.2) lbs/35.6 (5.4) kg/m^2. 90% (n=438) received 3 balloons and 7% (39) and 3% (16) received 1 balloon, respectively. Median therapy duration was 189 days, 1.5% of patients had balloons removed in less than 60 days. Mean 3-balloon weight loss was 9.1±5.8% TBWL and 20.1±13.9 lbs. Maximum weight loss was 87 lbs. Mean 2 and 1-balloon weight loss was 6.6±6.3% TBWL and 14.8±14.9 lbs, and 5.0±6.0% TBWL and 9.5±10.7 lbs, respectively. 94 patients reported 154 adverse events (17.5%). One (0.2%) serious adverse event was reported, vomiting, requiring IV fluids

and removal. The most common adverse event reported was nausea with 38 events from 33 patients (6.1%) followed by abdominal pain with 36 events from 32 patients (5.9%).
Conclusions: Clinically meaningful weight loss is achieved with Obalon Balloon System. Weight loss is highest with three balloons. 99.8% of adverse events reported were non-serious.Use of the Obalon balloon system provides a low risk, effective weight loss option for patients with obesity.

A140
Utilizing Low-Dose Phentermine for Preoperative Weight Loss Prior to Bariatric Surgery: A Prospective, Randomized, and Placebo-Controlled Trial
John Morton *Stanford CA*[1], Homero Rivas *Stanford CA*, Luis Garcia *Fargo ND*, Dan Azagury *Stanford CA*
Stanford School of Medicine[1]

Background: Preoperative weight loss before bariatric surgery can beassociated with improved surgical outcomes, including reduced complications and readmissions, and greater postoperative weight loss. Here we present results from the first randomized trial investigating the influence of adjuvant low-dose phentermine on preoperative weight loss.

Methods: Participants undergoing laparoscopic Roux-en-Y gastric bypass or sleeve gastrectomy were randomized to 14-weeks of low-dose phentermine (Lomaira®) or placebo. Demographic, anthropometric, CT scans and serologic data were collected at the consult visit and reassessed immediately prior to surgery.

Results: Participants (n=53) were predominantly female (91%) with a mean age of 41±11 years. The average baseline weight and BMI of the treatment group (n=32) were 290±55.0 lbs. and 49.3±7.9 kg/m^2, compared to 278±58.6 lbs. and 47.1±8.7 kg/m^2 in the control group (n=21). From the consult visit, the mean times to visit 1 and visit 2 were 5±1.5 and 13±5.0 weeks, respectively. No significant weight loss differences were observed at visit 1. Relative to the control group at visit 2, the treatment group had greater average %, Excess Weight Loss (10.3±8.8% vs. 2.7±8.8%, p<0.01), %, Total Body Weight Loss (TBWL) (4.7±4.3% vs. 1.1±3.6%, p=0.001), absolute weight loss (13.6±13.1 lbs. vs. 2.3±10.0 lbs., p=0.001) and more patients achieving ≥10% TBWL (%, 44 vs. 11, p=0.008) and less gaining weight (%, 4 vs. 39, p=0.008). No significant OR times, blood pressure, serologic or adverse events differences

were observed.

Conclusion: Patients on a 14-week course of low-dose phentermine safely experienced greater weight loss relative to control patients without adverse event
difference.

A141

Predicting Early Weight Loss Failure Using a Bariatric Surgery Outcomes Calculator and Weight Loss Curves

Oliver Varban *Ann Arbor MI*[1], Anne Cain-Nielsen *Ann Arbor MI*[2], Corey Lager *Ann Arbor MI*[2], Nazanene Esfandiari *Ann Arbor MI*[2], Elif Oral *Ann Arbor MI*[2], Andrew Kraftson *Ann Arbor MI*[2]
University of Michigan Health System[1] University of Michigan[2]

Background: Individual weight loss after bariatric surgery can be calculated based on specific patient characteristics and procedure type. Our goal was to determine how early after bariatric surgery patients can be identified as failing to reach their predicted weight.

Methods: Using a bariatric surgery outcomes calculator formulated by the Michigan Bariatric Surgery Collaborative (MBSC), predicted weight loss at 1 year after surgery was calculated on all patients who underwent primary bariatric surgery at a single center academic institution between 2006 and 2015 who also had a documented 1-year follow-up weight (n=1050). Weight loss curves were compared between high, low and non-outliers as defined by their observed to expected (O:E) weight loss ratio based on total body weight loss (TBWL) %.

Results: Mean predicted weight loss for the study group was 86.3 lbs +/- 21.9 lbs while mean actual weight loss was 87.6 lbs +/- 37.6 lbs, resulting in a mean O:E 1.01 (+/- 0.35). Low outliers (n=188, O:E 0.51) had significantly lower weight loss at 2 months (13% vs 15% and 16% TBWL, $p<0.0001$) and at 6 months (19% vs 26% and 30% TBWL, $p<0.0001$) when compared to non-outliers (n=638, O:E 1.00) and high outliers (n=224, O:E 1.46) respectively. There were no significant differences in the amount of preoperative weight loss or postoperative complication rates between the groups.

Conclusions: Weight loss curves based on individually calculated outcomes can help identify low outliers for additional interventions as early as 2 months after bariatric surgery.

A142

Why are Bariatric Medicare Patients Younger than 65 Disabled and Does Disability Impact Safety?

Jai Prasad *Danville PA*[1], Jacob Petrosky *Danvillle PA*, Jason Kuhn *Danville PA*, Robert Cunningham *Danville PA*, G. Craig Wood *Danville PA*, James Dove *Danville PA*, Marcus Fluck *Danville PA*, Parker David *Danville PA*, Jon

Gabrielsen *Danville PA*, Christopher Still *Danville PA*, Anthony Petrick *Danville PA*
Geisinger Medical Center[1]

Introduction: Medicare eligibility in patients <65 (CMS<65) is determined by the presence of long-term disability in at least one of fourteen disease categories. About two-thirds of Medicare patients undergoing bariatric surgery are <65 years and disabled, yet little is known about their disabilities. The purpose of this study was to identify disabilities in CMS<65 and to evaluate the safety of bariatric surgery in these patients.
Methods: A prospectively maintained database of patients who underwent bariatric surgery between January 2007 and December 2017 was utilized. 3146 patients, aged <65, who underwent Laparoscopic sleeve gastrectomy (LSG) or Roux-en-Y gastric bypass (RYGB) were evaluated and disability determined by chart review.
Results (Table): 505 patients were CMS<65. Musculoskeletal disorders (62%) followed by Mental health (19%) and Neurologic conditions (17%) were the most frequent disabilities. Multiple disabilities were present in 23% of patients.
Patients with musculoskeletal disability were older (51 vs 48 years) and less female (73% vs 82%). Patients with mental health disability were younger (44 vs 51), more female (88% vs 74%) and had less diabetes (40% vs 56%). Patients with cardiovascular disabilities were older (54 vs 50), less female (52% vs 78%) and had more diabetes (77% vs 51%). Those with respiratory disabilities had a higher mean age (54 vs 50). Disability did not predict any differences in perioperative outcomes or diabetes remission.
Conclusions: While there are demographic differences by disability in CMS<65 patients, the most common causes of disability do not impact perioperative safety or diabetes remission after bariatric surgery.

A143
Social Factors as Predictors of Outcomes in Primary Bariatric Surgery

Marcoandrea Giorgi *Providence RI*[1], RICHIE GORIPARTHI *north providence RI*, Cullen Roberts *Providence RI*, Yuqi Zhang *Woodbridge CT*, Seungjun Kim *Providence RI*, Alicia Alterio *Providence RI*, Aevan McLaughlin *Providence RI*, G. Roye *Providence RI*, Todd Stafford , Beth Ryder *Providence RI*, Sivamainthan Vithiananthan *Providence RI*
Brown University[1]

INTRODUCTION: Bariatric patients are a heterogeneous group of people. In this study we analyze social characteristics of patients undergoing primary bariatric surgery to identify factors associated with different outcomes.

METHODS: A retrospective analysis

was performed on all primary bariatric operations from January 2015 to January 2017. Patients undergoing laparoscopic Roux-en-Y gastric bypass (LRNYGB), laparoscopic sleeve gastrectomy (LSG) and laparoscopic gastric banding (LGB) were included. The social factors analyzed were: insurance status (government based vs. private insurance), marital status (married vs. not married patients), employment status (employed vs. not employed), ethnicity (hispanic vs. white vs. non white population). Outcomes were: length of stay (LOS), hospital readmissions, complications, re-operations, follow-up rates, ΔBMI (change in body mass index), %EBMIL (percentage of excess body mass index loss).

RESULTS: 303 patients were included. 139 patients underwent LRNYGB (45.9%), 159 underwent LSG (52.8%), 4 underwent LGB (1.3%). Statistically significant differences were observed for the following results: increased %EBWL (54.87 vs. 47.79, p=0.008) and ΔBMI (11.21 vs. 9.9, p=0.022) at the 3-7 month follow up visit and overall in the first year for private vs government insurance groups; for employed vs. non-employed patients significant difference was found for readmission (7% vs. 15.1% p=0.034) and complication rates (13% vs. 24.7% p=0.018); for married patients there were higher rates of follow-up after 1 year compared to non-married patients (55.1% vs. 41.3%, p=0.017).

CONCLUSIONS: Social factors are important outcome predictors in primary bariatric surgery that can help stratify risk and individualize perioperative management.

A144

PREOPERATIVE WEIGHT LOSS BUT NOT INSURANCE-MANDATED WEIGHT MANAGEMENT REQUIREMENT IMPROVES WEIGHT LOSS AT 2 YEARS POST-BARIATRIC SURGERY

Yannis Raftopoulos *Holyoke MA*[1], Ioannis Raftopoulos *Holyoke MA*[1], Marissa Chiapperino *Holyoke MA*[1], Lindsay Pasdera *Holyoke MA*[1], Karen Robert *Holyoke MA*[1]
Holyoke Medical Center[1]

Introduction: Preoperative weight loss (PWL) and insurance-mandated weight management requirement (IMWMR) on weight loss after bariatric surgery (BS) is assessed.
Methods: Of 1407 patients who underwent BS by one surgeon, 303 (21.5%) did not receive counseling for PWL (Group A: 2003-2007), 915 (65%) participated in a short-term low-calorie diet (LCD) without specific goals (Group B: 2007-2015) and 190 (13.5%) participated in a structured individual and group behavior modification and LCD with a goal of 10%TBWL preoperatively (Group C: 2015-2018).
Results: PWL was greater in Group C

patients (A: 1.2%±11.6%, B: 3.1%±5.0%, C: 10.5%±5.3, p<.0001). 50% of Group C patients achieved ≥10%TBWL compared to 9.4% and 0% in Groups B and C respectively. Time from initial visit to surgery (Tsurg) was not prolonged in Group C patients who achieved 10%TBWL (176.7±91.6 vs 200.4±114.34 days) but was progressively increased from Group A to C (A: 142.7±115, B: 166.0±149.2, C:188.6±104 days, p<.0001). IMWMR prolonged Tsurg (153.9±99.8 vs 144.3±126.1 days, p=.0037) without improving %TBWL (4.38%±6.3 vs 3.11%±5, p=.1795). Patients achieving ≥10%TBWL preoperatively experienced a greater %TBWL and BMI change at 12 (40.6%±9.6 vs 35.5%±9.4, p<.0001 & 20.4±7.1 vs 16.2±6.2 Kg/m^2, p<.0001) and 24 months (42.7%±11.9 vs 35.3%±12.2, p=.0042 & 23.5±8.7 vs 16.2±6.8 Kg/m^2, p<.0001) postoperatively. Multiple regression analysis determined that PWL was associated with superior %TBWL at 12 (p<.0001) and 24 months (p=.0129) controlling for demographics, BMI, surgery type, Group, comorbidities and insurance.

Conclusions: Structured, goal-targeted PWL improves %TBWL at 2 years after BS. IMWMR delays access to surgery without weight loss benefit.

A145

Safety analysis of bariatric surgery in patients on home oxygen

Benjamin Crisp *Akron OH*[1], Zhamak Khorgami *Tulsa OK*, Teodora Fatchikova *Akron OH,* Ali Aminian *Pepper Pike OH*, Michael Passero *Akron OH*, Christopher Daigle *Akron OH*
Cleveland Clinic Akron General[1]

Background:
A significant number of patients undergoing primary bariatric procedures require home oxygen; however, the outcomes in this cohort are unknown. The objective of this study was to use the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) user file to assess postoperative outcomes in patients on home oxygen.
Methods:
The 2015/2016 MBSAQIP user files were combined and analyzed using multivariate analysis to compare patients who were and were not oxygen-dependent. We compared complication rates between laparoscopic sleeve gastrectomy (LSG), Roux-en-Y gastric bypass (RYGB), and biliopancreatic diversion with duodenal switch (BPDDS) for patients on home oxygen.
Results:
In total, 324,539 primary bariatric surgery patients were included in the analysis. Of those, 2,285 (0.7%) were on home oxygen (1315 LSG; 810 RYGB; 137 BPDDS). There was no significant difference in mortality between patients who were or were not oxygen-dependent (OR 0.96, CI 0.51-

1.79, P=0.898). However, oxygen-dependent patients were more likely to experience any complication (OR 1.65, CI 1.36-2.01, P<0.001), serious complications (OR 1.67, CI 1.30-2.15, P<0.001), and pulmonary complications (OR 1.61, CI 1.14-2.28, P=0.007) based on variable definitions used. When assessing most commonly performed procedures, LSG had the lowest complication risk. When compared to LSG, BPDDS had the highest risk for complications (OR 5.02, CI 4.59-5.49, P<0.001), and RYGB fell between LSG and BPDDS (OR 2.48, CI 2.34-2.63, P<0.001).
Conclusions:
Oxygen-dependent patients can safely undergo bariatric surgery, albeit with higher morbidity than those not on home oxygen. LSG appears to be the safest procedural choice in this cohort.

A146
Longitudinal Outcomes in Cardiovascular Risk Factors-Sleeve vs. Bypass

John Morton *Stanford CA*[1], Homero Rivas *Stanford CA*, Luis Garcia *Fargo ND*, Dan Azagury *Stanford CA*
Stanford School of Medicine[1]

Background: Bariatric surgery is associated with cardiac risk factor improvement; however, few studies report long-term changes in cardiac risk factors through procedure comparisons.

Methods: This retrospective study included data from patients (n=1383) who underwent laparoscopic gastric bypass (GB, n=1200) or sleeve gastrectomy (SG, n=183) who had data available up to 3 years after surgery. Data collected included C-reactive protein (CRP), High- and Low- Density Lipoproteins (HDL, LDL), Triglycerides (TRG), Homocysteine, LipoProtein A, B-type natriuretic peptide, Systolic Blood Pressure (SBP) and Weight Loss. Follow-up rate at 1-3 years was 50% overall with no preoperative difference in those with and without follow up.

Results: Overall, the average preoperative weight and body mass index were 286 ±53.4 lbs. and 46.6 ±7.2 kg/m2 respectively. In examining what percent of patients had abnormal values pre-operatively and at 3 years postoperatively, the following was determined. First results for GB: %, pre vs. 3 year: CRP, 82 vs., 19; HDL, 38 vs. 7, LDL, 29 vs. 9; TRG, 19 vs. 1; SBP, 68 vs. 37, all p<. 0001). Second for SG: %, pre vs. 3 year: CRP*, 81 vs. 44; HDL*, 30 vs. 3, LDL, 16 vs. 14; TRG*, 20 vs. 13; SBP, 55 vs. 46, *, p<. 05). The percent of patients achieving >50% Excess weight Loss at 3 years was 84 vs. 34 respectively for gastric bypass and sleeve gastrectomy.

Conclusion: While both procedures provide improvement at three years, the gastric bypass significantly improves all cardiac risk factors particularly CRP, TRG and weight loss.

A147

Safety and efficacy of outpatient sleeve gastrectomy: 2,528 cases performed in a single free-standing ASC

Peter Billing *Seattle WA*[1], Josiah Billing *Shoreline WA*[1], Jedediah Kaufman *Shoreline WA*, Kurtis Stewart *Shoreline WA*[1], Eric Harris *Edmonds WA*[1], Robert Landerholm *Edmonds WA*[1] Eviva[1]

Background: Sleeve gastrectomy (SG) is currently the most widely performed operation for treatment of morbid obesity. SG leads to significant weight loss and reduction in weight related comorbidities. Procedures performed in ambulatory surgical centers (ASC) can provide several advantages over hospital-based surgery. We present results of 2,528 consecutive patients who underwent SG in an ASC.
Objective: Assess the safety and efficacy of outpatient SG in a freestanding ASC.
Setting: Free-standing ASC, Eviva Bariatrics, Seattle WA
Methods: Data was collected retrospectively for all patients undergoing SG from January 2008 – January 2018, n=2,528. Revisional procedures were not excluded from this study. Patients were excluded from the ASC if they weighed >450 pounds, if anticipated surgery time was > 2 hours, if the patient had impaired mobility limiting early ambulation, or if there were medical problems requiring postoperative monitoring beyond 23 hours.
Results: Mean age was 45.8 years. Mean preoperative body mass index (BMI) was 41.8. Mean operative time was 66.4 minutes. 184 (7.3%) 30-day complications included 3 mortalities (0.12%), 66 (2.61%) re-admissions, 36 (1.42%), re-operations, and 30 (1.19%) direct transfers from the ASC to a nearby hospital. There were 26 staple line leaks (1.03%). There were no open conversions. At 6 months (n=1,758) average excess body weight loss (EWL) was 55.1% and total weight loss (TWL) was 18.7%. At 1 year (n=1,360), EWL was 69.3% and TWL was 25.5%.
Conclusion: With experienced surgeons, appropriate protocols, and a consistent operative team, SG can be performed safely in a free-standing ASC.

Video Sessions

Video Abstract Session I Tuesday, November 13th, 2018 1:30pm-3:00pm

A202Roux-en-Y Gastric Bypass after Failed Lower Esophageal Sphincter Magnetic Augmentation Procedure

Darren Tishler *Glastonbury CT*[1], Andrea Stone *Glastonbury CT*[1], Beata

Lobel *Farmington CT*[1], Pavlos Papasavas *Hartford CT*[1]
Hartford Hospital[1]

Background:
Management of GERD in patients with obesity presents unique challenges. There are different schools of thought as to the type of procedure (anti-reflux vs. bariatric surgery) that should be offered to the patient with reflux. We present a video of a 49y/o female with a failed lower esophageal sphincter magnetic augmentation (LESM). The patient presented after referral to the bariatric practice after developing recurrent GERD (HRQL=13, on PPI), intermittent dysphagia, regurgitation and weight gain <24 months after LESM procedure. BMI at the time of the LESM procedure was 31.9 kg/m2 (down from 35.4 at consultation). At the time of bariatric consultation, her BMI was 38.6 kg/m2. Preoperative evaluation demonstrated the LESM beads approximately 1-2cm below the GE Junction with a small hiatal hernia.
Methods:
The video demonstrates technique and clinical pearls for laparoscopic identification and removal of the LESM device with a single-stage conversion to a RYGB with concomitant hiatal hernia repair using a robotic-assisted technique.
Results:
Postoperatively, the patient did well and was discharged to home on postoperative day 2. At 30d follow-up, GERD and dysphagia symptoms were improved. At 2months, the patient had a 34.9%EWL and BMI of 32.9 kg/m2.
Conclusion:
RYGB is a safe and feasible salvage procedure to revise a failed LESM in a patient with morbid obesity and recurrent GERD. Careful consideration of procedures should be made prior to anti-reflux procedures in patients with morbid obesity.

Due to abstract size restrictions, the video quality is reduced for this submission. Actual video is in HD

A203
Laparosocpic Nissen fundoplication with the excluded stomach for Recalcitrant GERD after a Roux en Y gastric bypass.
Rana Pullatt *Mt Pleasant SC*[1], Karl Byrne *Charleston SC*[2], Benjamin White *Charleston SC*[2], Diana Axiotis *Charleston SC*[2], Molly Jones *Mt. Pleasant SC*[2], Shelby Allen *Charleston SC*[2], Nina Crowley *Charleston SC*[2]
Medical University of South Carolina[1] MUSC Charleston[2]

The patient is a 63 y/o white female who had undergone a roux en y gastric bypass 10 years prior. Patient had excellent weight loss, however the patient had significant reflux which was managed with PPI's. The patient 3 years ago underwent a lenthening of the roux limb for presumed bile reflux, however the patient continued to

complain of significant reflux. She was then referred to us. The patient underwent a manometry which demonstrated good esophageal motility. Her impedence probe was significant for non acid reflux which was abnormal for total number of reflux episodes both supine and recumbent and associated with her symptoms. The patient's barium UGI demosntrated no hiatal hernia, a normal size pouch with significant reflux upt to the thoracic inlet. A decision was made to perform a Nissen fundoplication with the excluded stomach. Details of the surgery are demonstrated in the video.

A204
LAPAROSCOPIC REPAIR OF RECURRENT HIATAL HERNIA WITH LIGAMENTUM TERES CARDIOPEXY

Rena Moon *Orlando FL*[1], Vincent Kirkpatrick *Orlando FL*[1], Andre Teixeira *Orlando FL*[1], Muhammad Jawad *Orlando FL*[1]
Orlando Regional Medical Center[1]

Introduction
45 year old female who had previously undergone removal of gastric band with conversion to sleeve gastrectomy and repair of hiatal hernia 2 years prior who developed severe gastric reflux not controlled by medications. Upper GI showed a widened hiatus and EGD demonstrated a 2 cm recurrent hiatal hernia.

Materials and Methods: The abdomen was entered laparoscopically. We performed circumferential dissection of the gastroesophageal junction and made a window behind the esophagus. We identified the posterior vagus nerve and preserved it at all times. We divided the ligamentum teres flush with the abdominal wall and dissected it free from the falciform ligament on its vascular pedicle. We then placed a figure-of-eight stitch to approximate the left and right crura anterior to the esophagus. Next we brought the ligamentum teres behind the gastroesophageal junction wrapped it anteriorly and sutured it to itself with Ethibond. The stomach was then brought anterior to the ligamntum teres and sutured to the left and right crura.

Result:
Postoperatively the patient did well. UGI was negative for leak on the following day. The patient was started on a phase 1 bariatric diet and discharged home postoperative day 2. One month later in follow up in clinic the patient’s reflux is resolved.

Conclusion:
Laparoscopic ligamentum teres cardiopexy is an excellent anti-reflux procedure in the patient who has previously had a sleeve gastrectomy and it is a useful adjunct to hiatal hernia repair to address reflux.

A205

Laparoscopic Resection of Intussusception: Comparison Between the Conventional and A Simplified Approach

Ariel Shuchleib *Clovis CA*[1], Ikemefuna Akusoba *Coopersburg PA*, Pearl Ma *Fresno CA*, Daniel Swartz *Fresno CA*, Keith Boone *Fresno CA*, Kelvin Higa *Fresno CA*
UCSF Fresno[1]

Due to the long lasting history of the RYGB, it is not uncommon to see long-term complications from it; intussusception can be one of those. On a large series of patients, Dr. Elms et al. (Surg Endosc 2014;28(5):1624–8) found a 0.5% rate of intussusception.

The management is still debatable when those cases present, and due to its relative small incidence it is hard to assess what is the best treatment option. Some people recommend placing anchoring stiches in order to prevent recurrence. However, in our practice we don't believe that the problem will be solved that way, therefore, we resect the anastomosis most of the time.

In this video, we compare two techniques used to resect the anastomosis; one is the traditional way in which all limbs are resected and two new anastomoses are done. The second way is a simplified technique that involves transecting the bilio-pancreatic limb from the anastomosis, maintaining the Roux intact and doing only one anastomosis to restore the anatomy. We believe that making a small anastomosis is very important to try to prevent recurrence in the future.

Both cases demonstrated here presented with pain and not with a small bowel obstruction, and had an uneventful postoperative course.

A206

Laparoscopic Conversion of Gastric Bypass to Duodenal Switch Peter C. Ng, MD, Lindsey S. Sharp, MD, Dustin M Bermudez, MD, Erica M. McKearney, PA-C, Jillian M. Vari, PA-C, RD, John D. Ambrose, Sophia E. Menozzi

Peter Ng *Raleigh NC*[1], Lindsey Sharp *Raleigh NC*[2], Dustin Bermudez *Raleigh NC*[2], Erica McKearney *Raleigh NC*[2], Jillian Vari *Raleigh NC*[2], Sophia Menozzi *Raleigh NC*[3], John Ambrose Ambrose [3]
Rex Bariatric Specialist[1] Rex Bariatric Specialists[2] Research Assistant[3]

Effective options for gastric bypass revision or conversion remain limited and bypass is considered by many surgeons an end operation. Limited reports of conversion from bypass to duodenal switch suggest a higher level of efficacy in weight loss. However, adoption of this conversion type is limited largely by the technical

challenges of gastric reconstruction and relative inexperience in duodenal switch. We present our technique for laparoscopic linear stapled conversion from bypass to duodenal switch, demonstrating a reproducible and safe technique. We point out the critical aspects to preserving a vascularized gastrogastrostomy, as well as a linear stapled duodenoileostomy. Our experience reported with this technique includes 30 revisions from June 2015 to December 2017. We report a leak rate of 3.3% (1/30). The reported leak occured at the apex of a gastric pouch, related separation of the pouch and remnant. We noted no anastomotic leaks at either the gastrogastrostomy or duodenoileostomy.

A207

Title : Type 3 Hiatal hernia complicating a mediogastric stenosis after gastric banding: cure of hiatal hernia and revision to Roux en Y Gastric Bypass.

Maud Robert *LYON* [1], Arnaud Pasquer *Lyon* [2]
Edouard Herriot Hospital Department of bariatric surgery[1] Edouard Herriot Hospital[2]

Introduction
We present the case of a 54-year-old woman with a residual BMI of 35.4 kg/m2 after failure of gastric banding. She complained of persistent Gastro-Esophageal Reflux Disease (GERD) and dysphagia despite removal of the gastric band 3 years before.

Methods
The patient reported a history of inhalation pneumopathy and night cough. GERD symptoms became resistant to Proton Pomp Inhibitor medication. An upper Gastro-Intestinal endoscopy revealed an esophagitis with Barrett's esophagus and a large hiatal hernia. A gastrografin swallow completed by a Computed Tomography (CT scan) confirmed a large type 3 hiatal hernia with gastric stenosis and residual calcification on the older scare of the gastric band. The esophagus was dilated. We proposed a laparoscopic revisional surgery. We performed first a reduction of the hiatal hernia,, a cruroplasty, and a resection of the calcified peri-gastric fibrosis. Secondly, we performed a revision to RYGB according to Lonroth technique.
Results
Mean operative time was 250 minutes. Because of two subfebrile episodes, the patient had a CT scan on day 4 that revealed a bilateral pneumopathy. An oral antibiotic medication was effective and she was discharged at day 6. She didn't complain of GERD or dysphagia anymore.
Conclusion
Persistent dysphagia or GERD after gastric band removal should be investigated. Residual perigastric fibrosis and hiatal hernia are 2 possible causes. Residual perigastric fibrosis should be resected when the gastric band is removed and hiatal hernia has to be treated. Revisional RYGB is the procedure of choice in case of GERD following bariatric surgery.

A208

Laparoscopic Reversal of Roux en Y Gastric Bypass with an Intraoperative Challenge

Arpit Patel *Brooklyn NY*[1], Nathaniel Kopelan [2], Alan Saber *Short Hills NJ*[3]
University of Washington[1] Newark Beth Israel Medical Center[2] Newark Beth Israel[3]

Introduction

Despite impressive effectiveness of Roux en Y gastric bypass in the majority of patients, laparoscopic reversal of Roux en Y gastric bypass have been recently increasingly reported. We herein present a case of laparoscopic reversal of Roux en Y gastric bypass with intraoperative challenge.

Presentation

A 60-year-old female had a laparoscopic Roux-en-Y gastric bypass 8 months ago. She lost 90 lb. since her surgery. However, she developed depression, change of taste of food, anorexia, persistent nausea and intermittent vomiting. Despite management with antiemetics and nutritional counseling, she insisted to proceed with reversal of her gastric bypass. Preoperative endoscopy showed post-gastric bypass changes with no marginal ulcer or hiatal hernia.

Procedure

After laparoscopic lysis of adhesions and transection of the Roux limb just distal to the gastrojejunostomy we proceeded with gastrogastric anastomosis using linear stapler. A rectangle area of the previous gastric pouch found to be ischemic. Decision was made to resect the ischemic area with clear demarcation. The defect was closed with linear stapler with buttressing material. Due to the fact that the Roux limb found to be short, we elected to resect the Roux limb. Postoperative course, the patient did well. Gastrographine study showed no leak and no obstruction. The patient went home on POD# 2.

Conclusion

Laparoscopic reversal of RYGB to normal anatomy is safe & feasible. However, as with redo bariatric surgeries, reversal procedure demands attention to vascularity of gastric tissue in relation to staple lines.

A522

Nissen Re-Fundoplication With Sleeve Gastrectomy

Theadore Hufford *Cleveland OH*
St. Johns Episcopal Hospital

The patient is a 44-year-old female who had previously undergone Nissen fundoplication twice before with severe reflux. History is significant for CAD, HTN, HLP, kidney stones, and OSA. The initial plan was to perform a sleeve gastrectomy below the previous Nissen but upon examination the fundus appeared to have slipped so revision of the fundoplication was necessary. The sleeve gastrectomy dissection was done in a normal fashion by dissecting the greater curvature of the stomach and separating the

omentum away from stomach. The proximal adhesions were carefully dissected in the area of the previous fundoplication and the gastro-gastric plication was noted to be loose. The slipped fundoplication was examined and the previous gastro-gastric plication was divided.

The redundant fundus was examined and resected using the endo-GIA stapler up to the proximal fundus at an area the would allow for re-fundoplication. The post-procedural upper GI was consistent with the post-operative anatomy. Overall, the did very well with improvement in her reflux disease, weight loss of 30 pounds and decrease in BMI from 38 to 34 at her 3 month follow-up. A few case series have shown that there is likely a role and positive clinical outcome for sleeve gastrectomy below previous Nissen fundoplication. In this case however the Nissen was noted to be slipped upon exploration and this video illustrates the possibility that in similar cases a re-fundoplication at the time of sleeve gastrectomy is possible and can lead to positive clinical outcome.

Video Abstract Session I - Edited Tuesday, November 13th, 2018 3:45pm-5:15pm

A226
Iatrogenic Esophageal Perforation and Stenting in a Patient with Gastro-Gastric Fistula

Gerardo Davalos *durham NC*[1], Alfredo Guerron *durhjam nc*[1], Dana Portenier *Durham NC*[1]
Duke health[1]

Introduction: Iatrogenic esophageal perforation is the most common cause of esophageal perforation and is associated with a high mortality rate of 19%. With increasing endoscopic techniques performed, this complication has become more common. Esophageal stent placement presents a safe and effective treatment option for this select group of patients.

Methods: we report a case of a 64-year-old Female, with a BMI of 25, who had previously undergone gastric bypass several years before. She presented with symptomatic reflux and was later diagnosed with a gastro-gastric fistula. While performing the endoscopic correction of the gastro-gastric fistula with the endoscope, an iatrogenic esophageal perforation was made. The decision was made to fix the perforation using a deployable covered stent.

Results: the stent placement went without complications. At the second post-operative week we removed the stent and the perforation had completely healed. She later went on to correct her gastro-gastric fistula

without complications.

Conclusions: iatrogenic esophageal perforations are potentially fatal complications of upper endoscopic gastro-gastric fistula repair. Esophageal stents remain important tools that have proven safe and efficient at controlling this complication.

A227

Laparoscopic managment of strangulated Petersen's hernia in pregnant female after LRYGBP

Arpit Patel *Brooklyn NY*[1], Alan Saber *Short Hills NJ*[2]
University of Washington[1] Newark Beth Israel[2]

Introduction: Management of abdominal pain in a pregnant patient with a history of Roux-en-Y gastric bypass presents unique challenges. Internal hernias are the most common cause of small bowel obstruction after LRYGBP. Internal hernia can result in closed loop obstruction, bowel necrosis, gastric perforation, and death.

Presentation: A 29-year-old female 30-week pregnancy with a history of laparoscopic Roux-en-Y gastric bypass 5 years ago. She had a 24 hours of LUQ pain with vomiting. Her pain was attributed initially to UTI. However her pain got worse and CT scan abdomen& pelvis ordered. The CT scan showed intrauterine gestation, swirling of mesenteric pedicle suspicious for internal hernia with concern for ischemia. Surgery was called and diagnostic laparoscopy was recommended.
Operative procedure: Diagnostic laparoscopy revealed enlarged uterus with distended bowel and collapsed bowel in the RUQ. Running the small bowel from the terminal ileum in a retrograde fashion facilitated reduction of the strangulated Petersen's hernia. The internal hernia was reduced. The patent Petersen space was closed with non-absorbable running suture.
Postoperative course: The patient tolerated the procedure well. The patient went home on POD# 2.
Conclusion: With increasing number of laparoscopic Roux en Y gastric bypass and improving fertility after weight loss, the number of pregnant women with history of RYGBP presenting with internal hernias will increase. Every surgeon should know how to diagnose and manage internal hernia as the risk is life long and misdiagnosis or delay in management can result in lethal maternal-fetal outcomes.

A228

Laparoscopic Gastrogastric anastomosis for a twisted Sleeve

Rana Pullatt *Mt Pleasant SC*[1], Karl Byrne *Charleston SC*[2], Shelby Allen *Charleston SC*[2], Nina Crowley *Charleston SC*[2]
Medical University of South Carolina[1] MUSC Charleston, SC[2]

Patient is a 40 y/o female with history of crohn's disease who had undergone a Sleeve Gastrectomy six months ago at an outside hospital. The patient had unrelenting emesis and failure to thrive since the Sleeve Gastrectomy. The patient had several endoscopies, pneumatic dilations and stent placement with no relief from the emesis. The patient was then referred to us for further management. We discussed options including conversion to a Roux en Y gastric bypass. However due to her history of Crohn's disease and her desire not to be converted to a gastric bypass we decided on sectioning the sleeve at the site of the twist and reanastomose thereby changing the axis of the sleeve. The procedure was completed as seen in the video and a 42 french bougie was used to calibrate the anastomosis which was performed in two layers. A feeding jejunostomy tube was also placed during the procedure. The patient was discharged on bariatric pureed diet. The patient presented two weeks later with increasing abdominal pain and tachycardia. Ct scan revealed anastomotic leak at the site of the gastrogastric anastomosis, a laparosocpic washout was performed with drain placement. An endoscopic stent was also placed and removed after 4 weeks with complete resolution of the leak. The patient is 6 months out with resolution of her symptoms and is doing well.

A229

Management of Stricture after VBG with Gastro-gastrostomy

Rena Moon *Orlando FL*[1], Muhammad Ghanem *Dallas TX*[1], Andre Teixeira *Orlando FL*[1], Muhammad Jawad *Orlando FL*[1]
Orlando Regional Medical Center[1]

Introduction- Vertical banded gastroplasty (VBG) is a historic bariatric procedure. Even though the procedure is no longer done nowadays, it is imperative for bariatric surgeons to have ample knowledge of the anatomy after the procedure, the potential complications and subsequently the operative treatment options, as the failure from this procedure can be as high as 70%.
Educational Objective- To discuss the endoscopic and surgical options for patients with obstructive symptoms after VBG.
Methods and Results- The case at hand is that of a 80 year female patient who had a VBG done in the past with success in terms of weight loss, however she was suffering from severe reflux, vomiting and obstructive symptoms. Upper endoscopy(EGD) revealed a stricture at the site of the silastic ring, and a stent was placed. The band eventually eroded on the stent and was removed with the stent a month later. Another EGD was done with dilation, however the patient continued to suffer from obstructive symptoms requiring admission with total parenteral nutrition. She was eventually taken to the operating room and a gastro-gastrostomy was done.

Postoperatively she did well and upper gastrointestinal studies showed no leak.
Discussion- The subject was an elderly lady, with adequate weight loss after the VBG, hence a high-risk patient for extensive surgery and in need for relief of the obstruction only. Performing a gastro-gastrostomy is ideal in these patients, although it is almost always accompanied by weight regain.

A523
GASTRO-COLO-BRONCHIAL FISTULA WITH FECULENT EXPECTORATION AFTER SLEEVE GASTRECTOMY LEAK.
Ravikanth Kongara *VIJAYAWADA*
Ravi bariatric clinic, endocare hospital

Laparoscopic sleeve gastrectomy(LSG) done on a 25 yr man BMI 47kg/m2 with uneventful discharge on 2nd Postoperative day(POD). On 35thPOD he presented with fever, left shoulder pain, cough with purullent expectoration and sepsis. On evaluation found to have sleeve leak with gastro-bronchial fistula, left basal atelectasis and a collection near Gastroesophageal junction. Other important findings are leucocytosis and hypoalbuminemia because of sepsis induced catabolisam and poor nutrition. Laparoscopy with drainage was planned but not successful because of hard inflammatory mass. Naso-jejunal tube placed to improve nutrition.
7days after IV antibiotics, resurgery and drainage of pus along with repair of the sleeve leak site done. During this process colon injured in view of inflammatory mass obscuring the anatomy, this was repaired and a feeding jejunostomy added. TPN started intraoperatively as his nutritional status was not good. Post operatively he developed colonic leak with 500ml feculent drain and cough with feculent expectoration after 6th POD suggestive of colo-bronchial fistula. He also complained of constipation and painful defecation. On rectal exam fissure in ano with fecal impaction noted. After adding anal sphincterotomy and rectal lavage his colonic leak improved remarkably. Post operative oral gastrograffin contrast study also showed small amount of oral contrast going into colon on 15th POD this suggested gastro-colo-bronchial fistula. His nutritional status improved after TPN and enteral feeds significantly and his leak subsided gradually and completely after about 2 months on gradual withdrawal of the drain tube and daily lavage through the drain.

A230
Laparoscopic Roux-en-Y Fistulojejunostomy for a Chronic sleeve leak with Bronchopleural fistula.
Rana Pullatt *Mt Pleasant SC*[1], Karl Byrne *Charleston SC*[2], Benjamin White *Charleston SC*[2], Shelby Allen *Charleston SC*[2], Nina Crowley *Charleston SC*[2], Diana Axiotis *Charleston SC*[2]

Medical University of South Carolina[1] MUSC Charleston, SC[2]

The patient is a 33 y/o Black female with multiple comorbidities who had a Sleeve gastrectomy done presented with a leak and an abscess 12 days after her sleeve. She was treated with IR drainage and abx. The patient was then managed with Pneumatic dilation of the sleeve. We also placed endoscopic pig tail drainage, however the patient over the next few months had high fevers with a bronchopleural fistula and destruction of the left hemidiaphragm. The patient would have violent coughing spells when she ingested anything per oral and she had a fistula through her posterior chest and was managed with a ostomy bag. A septotomy was also tried, however this did not manage the fistula. We then decided on a fistulo jejunostomy as the fistula had not healed for 6 months. Technical details of the surgery are described in the Video. The fistulojejunostomy tract was dilated with a TTS balloon 4 weeks after the Surgery. The patient was then followed closely with complete healing of the fistula and the thoracic collection with no recurrence of the fistula.

A231
Robot assisted takedown of gastrocutaneous fistula and conversion of sleeve gastrectomy to RNY gastric bypass
Crystal Alvarez *Redlands CA*, Juan Quispe *Loma Linda CA*, Esther Yung *Loma Linda CA*, Marcos Michelotti *Loma Linda CA*[1], Daniel Srikureja *Loma Linda CA*, Jeffrey Quigley *Redlands CA*[1], Keith Scharf *Loma Linda CA*[1], Aarthy Kannappan *Loma Linda CA*[1]
Loma linda university[1]

NONE

A232
Intussusception Post-Roux-en-Y Gastric Bypass: Laparoscopic Management Compilation
Gerardo Davalos *durham NC*[1], Sugong Chen *Durhem NC*[1], Dana Portenier *Durham NC*[1], Alfredo Guerron *durhjam nc*[1], Kunoor Jain-Spangler *Durham NC*[1]
Duke health[1]

Background: Intussusception is an uncommon and unclear complication that presents in 0.3% of cases after Roux-en-Y gastric bypass (RGYB). With the rapid increase of bariatric surgery its incidence is expected to increase in the coming years. However, broad consensus regarding management in these patients has not been reached.

Methods: We present a compilation describing 3 accepted methods to manage intussusceptions laparoscopicaly after RYGB. First case was managed by manual reduction only. Second case was managed with reduction and enteropexy. Third case was managed operatively, with

resection of the affected section and posterior anastomosis.

Results: all patients were discharged during the first operative day with no complications.

Conclusions: Although reportedly uncommon, with the increase of bariatric surgery procedures, intussusceptions might become more prevalent in the future. Awareness of this complication is critical for prompt diagnosis and treatment. With no universal agreement regarding its management; reduction, enteropexy and resection are currently proven techniques for this complication.

A524
Gastro-gastric Fistula, "Candy Cane" Roux Syndrome and Hiatal Hernia.
Napoleon Cieza *New York NY*[1],
Subhash Kini *New York NY*[1]
Mount Sinai - St. Luke's[1]

The patient is a 45-year-old female who in 2008 underwent a Roux en Y gastric bypass. Postoperatively she had remission of her HTN, OSA and adequate weight loss. She was lost to follow-up and returned nine years later with intermittent abdominal pain. Preoperative workup consisted of EGD and Upper GI contrast study which showed a proximal Gastrogastric fistula and an elongated non-functional roux limb. There were no ulcers or foreign bodies adjacent to the fistula.
Symptomatic GGF occurs in up to 6% of RYGB. Fistula can result from the incomplete division of the stomach during the creation of the pouch or by a leak with abscess formation adjacent to the staple line, which then drains into the remnant stomach.
Although GGF may be treated conservatively, patients with symptomatic GGF will require technically challenging revisional procedures.
Dissection was performed to identify the gastric pouch, the gastrojejunal anastomosis, and the gastric remnant. After exposure of these structures, a fibrous area was visualized between the gastric reservoir and the gastric remnant. After complete identification, the GGF was transected with a linear stapler.
The staple line was subsequently reinforced with continuous 3– 0 polypropylene sutures, and the integrity of the gastric pouch staple line was determined intraoperatively by a leak test.
There was also preferential entry of the endoscope into the "candy cane" roux limb. A 3×5 cm blind limb was resected with a linear cutting stapler.
The patient had complete relief of her symptoms immediately postoperative and at six month follow-up

A209

Complications of Roux-en-O gastric bypass

Pearl Ma *Fresno CA*[1], Ikemefuna Akusoba *Coopersburg PA*[2], Ariel Shuchleib *Clovis CA*[2], Daniel Swartz *Fresno CA*[2], Keith Boone *Fresno CA*[2], Kelvin Higa *Fresno CA*[2]
UCSF Fresno/ALSA[1] UCSF Fresno[2]

Introduction:

Roux-en-O anatomy after Roux-en-Y gastric bypass (RYGB) is a rare and infrequent complication from incorrect anatomical identification. Generally, the biliopancreatic limb is inadvertently anastomosed to the gastric pouch and patients may present as a partial small bowel obstruction with most frequent complaint of abdominal pain, nausea, and bilious emesis. Difficulty in diagnoses can delay adequate treatment.

Case Report:

We are presenting a 39 woman referred to our center 15 weeks after her robotic assisted RYGB performed at another facility with several weeks of severe nausea, bile reflux requiring several months of total parental nutrition. She had undergone multiple studies including upper endoscopy dilations of gastrojejunostomy with noted bile in gastric pouch, and CT scan imaging demonstrating dilated roux limb and duodenum. Post-operative explorations were negative and an entero-enterostomy was also performed. When explored at our facility, diagnosis of Roux-en-O anatomy was suspected based on symptoms and confirmed intraoperative with twisting of jejunal mesentery. In order to restore her to standard RYGB anatomy, the biliopancreatic limb required to be disconnected from gastrojejunostomy, jejunojejunostomy and entero-enterostomy divided and recreated completely. Patient was discharged on post-operative day 4 and off antacids at 2 month follow up.

Conclusion:

Roux-en-O Gastric Bypass is an uncommon occurrence however can lead to major complications. It requires a high degree of suspicion with post-operative RYGB patient presenting with bilious emesis. This can be difficult to diagnose with imaging studies and ultimately may require referral to tertiary bariatric center if patient symptoms are continually unexplained.

A210

Laparoscopic RYGB in a Patient with a History of an Angelchik Prosthesis Bradley Kushner MD., J.

Chris Eagon, MD. Washington University School of Medicine, Department of Surgery, Division of Minimally Invasive Surgery, St. Louis, MO.
Bradley Kushner *St. Louis MO*[1], J. Chris Eagon *St. Louis MO*[1]
Washington University in St. Louis[1]

The Angelchik prosthesis is a silicone-based elastomer shell approved by the FDA in 1979 for the surgical treatment of severe GERD. The device, fitted around the GE junction, was associated with numerous complications including immediate and long-term dysphagia rates of up to 70%, migration, and erosion, and the device was withdrawn from the market in the late 1980's.

We describe a case of a 68-year-old female with an Angelchik prosthesis who desired bariatric surgery. She had well-controlled heartburn and mild intermittent dysphagia and initially preferred a sleeve gastrectomy. Preoperative evaluation included EGD and barium swallow showing no erosion or migration but distal esophageal compression from the device. Esophageal manometry showed a hypertensive, poorly relaxing lower esophageal sphincter and impaired esophageal body motility. Fearing exacerbating her dysphagia postoperatively with a sleeve gastrectomy, removal of the Angelchik device and creation of a Roux-Y gastric bypass was recommended. Intra-op, we found that the Angelchik had formed a thick, calcified pericapsular rind that was densely adherent to the liver, stomach, and diaphragm requiring a three-hour adhesiolysis. Otherwise, we used a standard retrocolic, retrogastric Roux-limb with a circular stapled gastrojejunostomy. Postoperatively, dietary tolerance was normal, but her course was complicated by a self-limited bile leak.

To our knowledge, this is the first reported case of a bariatric surgery in a patient with a history of a prior Angelchik device. Recognition of motility effects and the intense fibrosis and scarring that the Angelchik prosthesis causes to surrounding structures is critical to surgically care for these patients.

A211
Robot-assisted Reversal of Biliopancreatic Diversion (BPD) due to severe malabsorption

Mario Masrur *Chicago IL*[1], Roberto Bustos *Chicago IL*[1], Gabriela Aguiluz *Chicago IL*[1], Alberto Mangano *Chicago IL*[1], Lisa Sanchez-Johnsen *Chicago Illinois*[1], Chandra Hassan *CHICAGO IL*[1], Pier Cristoforo Giulianotti *Chicago IL*[1]
UIC[1]

Introduction. BPD has a successful outcome achieving weight loss, attributed mainly to the malabsorptive effect. The reversal rate is 0.2%-7% which is necessary when there is excessive malabsorption. We present a

case of a 31-year-old female with BPD reversal.

Methods. The patient had an initial BMI of 50 and underwent BPD surgery 7 years previously outside of the U.S. Referring issues were persistent nausea, vomiting and diarrhea post-surgery and was currently experiencing BM 3-20 times/day. She had initial extreme weight loss (BMI= 11) and required a feeding tube. The patient was first seen in our center due to bowel obstruction that resolved with medical management. She was conservatively treated for malabsortive syndrome, clinical improvement was not completely achieved and had an additional 8.36lb weight loss. Considering the severe impact in her quality of life (QOL), with PO intolerance and frequent diarrhea episodes, she underwent BPD reversal 10 months after first presenting to our center. The patient's pre-operative BMI was 24.

Results. The gastric pouch was detached from the jejujum and reconnected to the excluded remnant stomach, then the jejunoileal anastomosis was undone by resecting the anastomosis. Two different anastomosis were created for the bowel: a jejunojejunal and a side to side ileoileal. Patient tolerated the surgery well, with adequate pain management, tolerating diet, no nausea/vomiting, discharged on POD 4 without complications.

Conclusions. BPD can produce severe malabsorption and greatly impact patients' QOL. In such situations where patients do not respond to conservative therapies, a reversal of BPD is pertinent.

A212

Chronic Marginal Ulceration and Gastrogastric Fistula: Complications From a 360 Degree Twist of the Roux Limb at the Gastrojejunostomy

Ikemefuna Akusoba *Coopersburg PA*[1], Ariel Shuchleib *Clovis CA*, Pearl Ma *Fresno CA*, Daniel Swartz *Fresno CA*, Keith Boone *Fresno CA*, Kelvin Higa *Fresno CA*
UCSF Fresno/ALSA[1]

Introduction: Gastrogastric fistula is a complication after bariatric surgery that has several etiologies including incomplete division of the stomach, marginal ulceration and anastomotic leak. Marginal ulceration may also arise after bariatric surgery secondary to tobacco or non-steroidal anti-inflammatory drugs. Here we present a patient with both complications secondary to a 360-degree twist of the roux limb at the gastrojejunostomy.

Presentation: The patient is a 46-year-old female with chronic abdominal pain, nausea/emesis, gastroesophageal reflux disease, diarrhea and weight recidivism. She underwent laparoscopic roux-en-y (LRYGB) in 1999 and stated she had these symptoms from the beginning. EGD demonstrated a stenotic gastrojejunostomy, chronic marginal

ulcers and a gastrogastric fistula. UGI series demonstrated a stenotic roux limb. She underwent an exploratory laparoscopy, lysis of adhesions, subtotal gastrectomy, revision of her gastric bypass, small bowel resection with two anastomosis and approximation of type 2 long limb bypass to affect resolution of her symptoms.

Outcomes/Results: The patient was discharged post-operative day 1 on a clear liquid diet. On post-operative day 30 she had lost 20 pounds and her BMI was 43 Kg/M^2 from 46 Kg/M^2 (14% excess weight loss). At post-operative day 120 she had lost 40 pounds and her BMI was 40 Kg/M^2 (27% excess weight loss). All her preoperative symptoms have resolved.

Conclusion: Unexplained pain and inability to tolerate a diet immediately after bariatric surgery should prompt investigation. A 360-degree twist of the roux limb at the gastrojejunostomy is an unusual cause of marginal ulceration and gastrogastric fistula but should be in the differential.

A213

Surgical Treatment of Paralyzed Left Hemi-diaphragm with Laparoscopic Sleeve Gastrectomy and Diaphragm Plication

Kellen Hayes *Cleveland Heights OH*[1], Ali Aminian *Pepper Pike OH*
Cleveland Clinic[1]

We are presenting a patient with morbid obesity who also has a complex cardiac and pulmonary surgery history including tetralogy of Fallot, pulmonary AVMs, pulmonary hypertension, Blalock-Taussig shunt, pulmonic valve replacement and trans-annular right ventricular patch, as well as an iatrogenic paralyzed left hemidiaphragm due to phrenic nerve injury. She required 6 liters of oxygen preoperatively and had significant dyspnea with exertion. Her preoperative BMI (body mass index) was 43. She underwent laparoscopic sleeve gastrectomy with plication of the left hemidiaphragm. The procedure was uncomplicated and her postoperative chest x-ray demonstrated a normal appearing left diaphragm as compared to her preoperative imaging. She was discharged to home on postoperative day 3 without incident. At her 1 month postoperative visit, her BMI had decreased to 39 and her oxygen requirements had decreased to 3 liters with exertion. She did not require any unplanned hospitalizations and did not need her rescue inhaler since surgery. At 6 month follow-up, her BMI had continued to decrease to 35. Similarly, her oxygen requirements had not increased over this time period. This case demonstrates that laparoscopic diaphragm plication can be successfully performed from an abdominal approach and may contribute to improvement in pulmonary function when combined with concomitant weight loss from bariatric surgery.

A214

Conversion of Laparoscopic Roux en Y Gastric Bypass to Single Anastomosis Duodenal Switch/SIPS: A technique to make a safer gastro-gastric anastomosis

Andrew Godwin *Oyster Bay NY*[1], Sarah Pearlstein *New York NY*[1], Mitchell Roslin *New York NY*[2]
Lenox Hill Hospital[1] Chief Bariatric surgery at Lenox Hill[2]

Introduction: Patients with recidivism following Roux-en-Y Gastric Bypass (RYGB) is a challenging and ever-increasing issue. Conversion to SADS/SIPS is an option that often results in significant weight loss. Ensuring adequate blood supply in this re-operation can be difficult, and complications can often be due to inadequate blood supply to the gastro-gastric anastomosis.
Case: We present the case of a 52 year old Female who originally underwent laparoscopic RYGB in 2004 at a weight of 280 pounds, postoperatively nadired to 130 and at presentation regained to 214 pounds (BMI 39) with return of diabetes and hypertension.
Methods: Antecolic roux limb was divided off the gastric remnant. The duodenum was divided 3cm post-pyloric. The pouch was divided just proximal to the gastrojejunal anastomosis with horizontal fire and 42 bougie placed to resize the pouch. The remnant stomach was mobilized preserving 6 to 8 branches of the right gastroepiploic. The posterior layer of the anastomosis done and the bougie is placed through the pouch into the remnant. The bougie is removed and replaced with an oral gastric tube. The anterior layer was then completed. ICG was used to ensure adequate blood supply of this anastomosis. The small bowel was then measured 300cm proximal to the ileocecal valve and a hand-sewn postpyloric anastomosis created in a loop configuration. The patient did well and was discharged on a diet with no complication.
Conclusion: The technique employed to preserve multiple branches of the gastroepiploics is highlighted with indocyanine green to view the gastro-gastric anastomosis

A215

Endoscopic Removal of an Eroded Gastric Band into the Colon

Mohammad Farukhi *San Antonio TX*[1], Michael Seger *San Antonio TX*[1]
BMI of Texas[1]

Laparoscopic adjustable gastric banding (LAGB) is not as common of an operation in the bariatric community as it once was but we continue to see patients with complications from previous gastric banding. Intraluminal erosion into the stomach is a rare, but well documented complication affecting up to 2% of patients in the literature. Intraluminal erosion into the stomach and colonic is even more rare, and is only reported in a few case reports. This is the first attempt at total endoscopic removal. Ourvideo illustrates a 68-year old female who

presented to us after a routine colonoscopy found band tubing intraluminally in the transverse colon. Our procedure began by removing her port and disconnecting the tubing. Endoscopically, we used a Soehendra lithotripsy device to divide the band and we used a snare to remove the entire band with the tubing still attached. There was no evidence of a fistula or leak in the postoperative period. The patient did very well with no complications.

A216
Robot-assisted laparoscopic gastrojejunostomy revision for chronic marginal ulcer
Peter Lundberg *Allentown PA*[1], Maher El Chaar *Allentown PA*
St Luke's Weight Management Center[1]

Background: Revisional procedures and robot-assisted laparoscopy are undergoing mutual growth in the field of bariatric surgery. Greater adhesions of the re-operative field as well as patient-specific anatomy may benefit from using robotic platforms, which enable finer laparoscopic dissection via three-dimensional movement of the robotic instruments and the elimination of surgeon tremor.

Patient: A 46 year-old woman presented to our practice with weight regain (BMI 38 kg/m^2) and a marginal ulcer following a roux-en-Y gastric bypass several years earlier. After a thorough work-up we recommended robot-assisted laparoscopic revision of the large gastric pouch and revision of the gastrojejunostomy.

Operation: The above surgery was performed without complication. There were extensive adhesions between the pouch, roux limb and remnant stomach, dissection of which was facilitated by the robotic platform. Full exposure of the anatomy confirmed a non-excluded fundus which was resected. Upon excision of the previous gastrojejunostomy, it was reconstructed via a two-layer hand-sewn technique.

Outcome: The patient was discharged on post-operative day 4. The patient was readmitted once 3 weeks later for dehydration following a viral illness unrelated to the bariatric procedure. There were no major 30-day complications.

A217
Robotic revision of gastric sleeve gastrocolic fistula to RYGB
Christopher De Jesus *New York NY*[1], Julio Teixeira *Scarsdale NY*[2]
Lenox Hill Hospital[1] Northwell Lenox Hill Hospital[2]

Robotic revision of gastric sleeve gastrocolic fistula to RYGB

This is the case of a 51 year old patient with a significant medical history of morbid obesity with severe diabetes mellitus requiring insulin pump with a past surgical history of a laparoscopic

adjustable band, with weight loss and regain, converted to a laparoscopic sleeve gastrectomy which was complicated by a large leak and intrabdominal sepsis requiring operative takeback with placement of a feeding jejunostomy and placement of a jp at the repair site. This was eventually complicated by a gastrocolic fistula noted on preoperative imaging. The patient presented to our outpatient clinic in seek of a revision as he was permanently placed nothing per os.

Video Abstract Session III - Wednesday, November 14th, 2018 1:30pm-3:00pm

A218

The application of intermittent splenic artery occlusion in iatrogenic splenic injury-A case of LSG

Xiaocheng Zhu *Xuzhou*
the Affiliated Hospital of Xuzhou Medic

Objective: To evaluate the feasibility and safety of intermittent splenic artery occlusion in iatrogenic splenic injury. **Methods:** The patient with obesity, female, 29 years old. Main complaint: The weight continued to gain for two years. Ht: 172cm, Wt: 115Kg, BMI: 38.8Kg/m2. BP:145/90mmHg. Biochemical indicators: Fasting blood-glucose: 5.53mmol/L, Triglyceride (TG): 1.24mmol/L, Cholesterol (CHOL): 4.2mmol/L. B-ultrasound: Fatty liver. Preoperative diagnosis: Hypertension, Fatty liver, Obesity. Operation plan: Laparoscopic sleeve gastrectomy. Iatrogenic splenic injury occurred when extracting the resected gastric specimen. We first used gauze compression of wound to stop bleeding for 20min and failed. Then the splenic artery was separated and occluded with the gauze compression of wound for 10min and got successful hemostasis. **Results:** The patient discharged 3 days after the operation. One month after the operation, the weight of the patient decreased from 115kg to 100kg, BMI from 38.8 to 33.8, BP: 120/70 mmHg. No other special was found at the first month after the surgery.
Conclusions: Intermittent splenic artery occlusion is a simple and effective therapeutic method to grade I-II iatrogenic splenic injury.

A219

Roux-en-y Gastric Bypass after Billroth II Gastrectomy

Kyle Leneweaver *Long Island City NY*[1], Darshak Shah *Plainview NY*[1], Sanjeev Rajpal *Valley Stream NY*[1]
Flushing Hospital Medical Center[1]

Intro: Various reconstructions have been described following distal gastrectomy for peptic ulcer disease,

with Billroth II being one of the most common. This creates a difficult scenario when these patients present to bariatric centers for management of morbid obesity later in life.
Procedure: 52 year old female referred for bariatric surgery for management of morbid obesity. Preoperative imaging demonstrated the distal gastrectomy with gastrojejunostomy reconstruction and gastritis with a small ulceration. Plan was for Roux-en-y reconstruction.
Results: In the operative suite port placement was consistent with our standard approach for a laparoscopic gastrectomy with the exception of the right subcostal port exchanged for a 15mm trocar. Extensive lysis of adhesions was needed for sufficient visualization and identification of the Billroth II gastrojejunostomy. The proximal limb was found to be 65cm and appropriate for primary use in Roux-en-y reconstruction. The gastric pouch and jejunojejunostomy were created in the standard fashion allowing resection of the remnant stomach and previous gastrojejunostomy. The formation of a new gastrojejunostomy was performed using a circular end-to-end stapling device with transorally inserted anvil. The mesenteric defect was closed completing the revision to a Roux-en-y revision. The patient recovered well and was discharged on postoperative day 4. At 30 day follow-up, the patient had lost 23 pounds and was tolerating her diet.
Conclusion: Billroth II reconstruction following distal gastrectomy is a classic option for treatment of peptic ulcer disease. Roux-en-y gastric bypass is an excellent solution for the management of morbid obesity in these patients.

A220

Laparoscopic Repair of Congenital Diaphragm Hernia with Gastric Bypass

Kellen Hayes *Cleveland Heights OH*[1], Philip Schauer *Cleveland OH*[1]
Cleveland Clinic[1]

We are presenting a 35 year old patient with morbid obesity as well as symptoms of severe gastroesophageal reflux disease who, with preoperative imaging, was diagnosed with a large paraesophageal hernia. He underwent laparoscopic repair of the hernia as well as gastric bypass and was found at the time of surgery to have a large primary diaphragmatic hernia instead of a paraesophageal hernia. The defect did not appear to be either a Morgagni or Bochdalek hernia as it was centrally located in the diaphragm, just lateral to the left crus. The hernia was repaired primarily and buttressed with mesh. This was followed by a gastric bypass procedure. The procedure was uncomplicated and he was discharged home on postoperative day 2, tolerating a liquid diet. At 1 month of follow-up, he was tolerating both liquid and solid food without difficulty. His reflux symptoms had resolved and his body mass index had decreased from 43 to 38. This case demonstrates the identification and repair of a large primary diaphragmatic hernia in

conjunction with gastric bypass for both weight loss as well as resolution of obesity-related comorbidities and reflux symptoms.

A221
Laparoscopic excision of anastomotic stricture and remnant gastrectomy with conversion to esophago-jejunostomy
Peter Lundberg *Allentown PA*[1], Maher El Chaar *Allentown PA*
St Luke's Weight Management Center[1]

Background: Complications at the gastro-jejunostomy following roux-en-Y gastric bypass (RYGB) are well characterized and include leak, bleeding, marginal ulcer, gastro-gastric fistula, and anastomotic stricture. While conservative therapies and even some re-operative options can preserve the gastric pouch, repeat interventions and recurrent disease may require conversion to esophago-jejunostomy.

Patient: A 57 year-old woman who underwent a RYGB in 2001 presented, initially, to our clinic with weight regain due to gastro-gastric fistula in 2016. Operative repair was complicated by a leak requiring prolonged parenteral nutrition. Her recovery was further hampered by the development of a marginal ulcer and subsequent anastomotic stricture that proved refractory to all pharmacologic and endoscopic therapies. With the patient suffering from chronic malnutrition and dependent on parenteral nutrition, re-operation was advised.

Operation: A laparoscopic excision of the gastric pouch, proximal roux limb, and proximal gastric remnant followed by esophago-jejunostomy was performed. The extent and density of the patient's adhesions, as well as her prior complications, prohibited preservation of the gastric pouch.

Outcome: An upper GI study on post-operative day 1 was negative, and the patient was discharged home on post-operative day 2. There were no 30-day complications. She remained NPO for 2 weeks before slow advancement to a clear liquid diet. Her parenteral nutrition was discontinued 1 month after discharge.

A222
Magnetic Sphincter Augmentation for Refractory Reflux Following Laparoscopic Sleeve Gastrectomy
Ryan Horsley *Scranton PA*[1], Gordian Ndubizu *Wilkes Barre PA*[1], Anthony Petrick *Danville PA*[1]
Geisinger[1]

Introduction: GERD can occur de novo in up to 30% of patients after Sleeve Gastrectomy (LSG). Most patients are successfully managed with lifestyle modifications and medical therapy. However, GERD refractory to medical therapy is difficult to manage with many patients requiring conversion Laparoscopic Roux En Y

Gastric Bypass (LRYGB). Recently, Magnetic Sphincter Augmentation (MSA) has been proposed as a less morbid alternative for the relief of GERD.

Case Report:A 37-year old female developed worsening GERD one year following LSG. Prior to LSG, the patient did not require acid suppression. She achieved 39.8 kgs of total body weight loss but experienced increasing atypical GERD symptoms, dysphagia, and odynophagia. Impedance-pH monitoring and High-Resolution Manometry confirmed pathologic acid reflux and demonstrated a type 1 hiatal hernia, with normal esophageal motility. Her symptoms were not controlled with a high dose PPI and H2-antagonist. Endoscopy, barium swallow, and CT-Abdomen-Pelvis confirmed a hiatal hernia without esophagitis or other pathology.

The patient's surgical history was notable for eight prior abdominal surgeries including ventral hernia repairs with mesh placement and significant adhesive disease. Risk of RYGB was significant, therefore "off-label" use of MSA was planned after appropriate consent.

One month post-operatively, the patient denied symptoms of GERD and tolerated a stage IV diet without further need of PPIs.

Conclusion:MSA should be considered in the management of refractory GERD following LSG in patients with normal esophageal motility. Special consideration should be given to those patients with a relative or absolute contraindication to conversion to LRYGB.

A223

Rescuing the Failed Sleeve Gastrectomy from Conversion to Gastric Bypass

William Stembridge *Annapolis MD*[1], Melissa Brooks *Annapolis MD*[1], Vivek Kumbhari *Baltimore MD*[2], Alejandro Gandsas *Lutherville MD*[1]
Anne Arundel Medical Center[1] Johns Hopkins GI[2]

The Roux-en-Y gastric bypass (RYGBP) is considered to be the gold standard surgical procedure for weight loss, as well as the default operation for patients suffering from complications following Sleeve Gastrectomy. Despite the universal recognition of its overall benefits, the RYGBP still carries a set of crippling potential complications.

This video demonstrates a compilation of different surgical techniques aimed to rescue a failed sleeve from being revised to a RYGBP. While short strictures or sharp angulation at the incisura can be managed with a Heineke-Mikulicz, like stricturoplasty, a relaxing seromyotomy, similar to that described by Heller, is always preferred for longer gastric stenosis. Weight regain

due to residual fundus or dilated sleeve can be addressed by fundectomy or re-sleeve gastrectomy, respectively.

Intractable gastro-esophageal reflux due to intra thoracic sleeve migration is addressed by conducting an aggressive dissection of the thoracic esophagus and posterior cruroplasty with esophagopexy. In addition, endoscopic methods are also described as a cost effective approach to help alleviate the symptoms of a failed sleeve gastrectomy.

While these video images represent a small cohort of patients, our experience and results in offering these "rescue" approaches to our patients has been encouraging. Multicenter studies are still needed to validate the safety and functionality of these procedures in hopes of sparing patients from unnecessary conversion to gastric bypass.

A224
Laparoscopic Distalization of Gastric Bypass

Christopher Taglia *Eastchester NY*[1], Sarah Langdon *Santa Barbara CA*[1], David Thoman *Santa Barbara CA*[1]
Santa Barbara Cottage Hospital[1]

The patient is a 37 year-old female with a history of super morbid obesity who had previously undergone a laparoscopic roux-en-Y gastric bypass 5 years ago with a 120cm roux limb. She initially experienced satisfactory weight loss, however subsequently had significant weight re-gain despite compliance with dietary advice and continued exercise. Her BMI was still 43 when she was seen in the outpatient setting. She was thus consented for distalization of her bypass. A three port technique was utilized. After obtaining entry into the abdomen with a 5mm optical port, a second 5mm port was placed in the left upper quadrant, and a third 12mm port was placed in the left lower quadrant. The roux limb was identified and traced back to the jejunojejunostomy. A 60mm stapler was then used to divide the roux limb just before it entered the anastomosis preserving as much length as possible. The terminal ileum was then identified and a point on the small intestine 250cm proximal to ileocecal valve was chosen for the new anastomosis. A 3-0 Vicryl "stay-suture" was placed and enterotomies made with electrocautery. The anastomosis was then created with another firing of the 60mm stapler. The common enterotomy was closed with a running 3-0 Vicryl in two layers. The patient tolerated the procedure well and recovered without complication. She was discharged on post-operative day #1 on a regular diet and has since followed up as an outpatient. Though still early, she has already experienced weight loss.

A225
Double trouble after gastric bypass – regurgitation and hypoglycemia

Stephan Axer *Torsby*
Torsby Hospital

A Background: Vomiting and regurgitation after laparoscopic gastric bypass (LGBP) are considered to be alarming signs after gastric bypass. These symptoms are often related to ileus, internal herniation or trocar site hernias requiring reoperation. Hypoglycemia is a metabolic complication observed in a subset of postbariatric patients.

Method:
Case-report based on operation video-sequences

Result:
A 48-year old woman who had undergone a LGBP in 2010 presented with morning regurgitations, postprandial hypoglycemia (treated with Arcabose) and weight regain. Laparoscopy revealed two distinct findings: Rotation of the gastro-entero anastomosis (GE) and kinking of the common channel (CC) close to the jejuno-jejunal anastomosis (JJ). The GE-anastomosis was derotated, the candy-cane was pexied to the fundus. Anticipating that the kinking of the CC generated a delayed emptying of the alimentary limb (AL) eventually contributing to hypoglycemia, the JJ-anastomosis was revised. The AL was divided close to the JJ-anastomosis and re-inserted to the CC 150 cm distally to the JJ. This migration resulted in a lengthening of the bilary limb (from 50 cm to 200 cm) and a corresponding shortening of the CC.
The patient was discharged from hospital after one day. After six weeks she had lost 8% of body weight, could discontinue treatment with Acarbose and did not have any episode of regurgitation or vomiting.

Conclusion:
Rotation of the GE-anastomosis ought to be considered in patients with regurgitation after LGBP. Kinking at the JJ-anastomosis might contribute to hypoglycemia. Revision of the anastomosis seems to be a therapeutic option.

Video Abstract Session II Edited Thursday, November 15th, 2018 1:30pm-3:00pm

A233
Laparoscopic Biliopancreatic Diversion with Duodenal Switch-Technical Considerations in the High BMI patient.
Rana Pullatt *Mt Pleasant SC*[1], Karl Byrne *Charleston SC*[1], Nina Crowley *Charleston SC*[2], Amanda Peterson *Johns Island SC*[2], Molly Jones *Mt. Pleasant SC*[2], Diana Axiotis *Charleston SC*[2], Benjamin White *Charleston SC*[2], Shelby Allen *Charleston SC*[2], Doris Kim *Charleston SC*[2]

Medical University of South Carolina[1] MUSC Charleston, SC[2]

The first part of the video describes the technical considerations of the Duodenal dissection and the performance of an omega loop to roux configuration. The second portion of the video describes technical modifications in the high BMI patient including a retrocolic approach and stapled technique of the duodenoileal anastomosis.

A234
Laparoscopic Single Anastomosis Duodenal Switch by Linear Triple Staple Technique Peter C. Ng, MD, Lindsey S. Sharp, MD, Dustin M Bermudez, MD, Erica M. McKearney, PA-C, Jillian M. Vari, PA-C, RD, John D. Ambrose, Sophia E. Menozzi
Peter Ng *Raleigh NC*[1], Lindsey Sharp *Raleigh NC*[2], Dustin Bermudez *Raleigh NC*[2], Erica McKearney *Raleigh NC*[2], Jillian Vari *Raleigh NC*[2], Sophia Menozzi *Raleigh NC*[3], John Ambrose Ambrose [3]

Rex Bariatric Specialist[1] Rex Bariatric Specialists[2] Research Assistant[3]

Single anastomosis duodenal switch continues to gain greater acceptance. The predominant technique focuses on a total greater curve moblization as well as hand sewn duodenoileostomy. We present a totally stapled linear technique that offers speed, reproducible results, and widely patent afferent and efferent limbs. We demonstrate the technique, touching base on the critical aspects of duodenal anastomotic stapling, important to consistent results.

A235
Conversions of Gastric Restrictive Procedures to Single Anastomosis Duodenal Switch (SADS/SIPS)
Varun Krishnan *New York NY*[1], Mitchell Roslin *New York NY*[1]
Lenox Hill Hospital[1]

This is a video detailing the conversion of adjustable gastric band or sleeve gastrectomy to single incision duodenal switch. We present 2 patients who underwent these conversions.

Integrated Health Abstract Sessions

IH Abstract Session Tuesday, November 13th, 2018 10:00am-12:00pm

A236

Avoidance of Diagnosis of Obesity in Patients Referred for Bariatric Surgery

Ann Rogers *Hershey PA*[1], Ashton Brooks *Hershey PA*[1], Myunghoon Kim *Hershey PA*[2]
Penn State Hershey Medical Center[1] Penn State College of Medicine[2]

ASMBS 2018 Obesity Diagnoses Abstract

Background

Obesity was recognized as a disease by the AMA in 2013. Despite this, literature suggests that primary care providers (PCPs) frequently fail to document patient weight status. Increased documentation of obesity is associated with increased behavioral treatment.

Methods

We reviewed electronic health records (EHRs) of all patients entering our surgical weight loss program (SWLP) between October 2013 and September 2015, screening for diagnoses mentioning obesity prior to entry. These included: morbid obesity, increased BMI, obesity, central obesity, mild obesity, obesity hypoventilation syndrome, metabolic syndrome, and even overweight. We identified patients with a PCP or obesity specialist within our health system, aware that some trainees were being counseled that such diagnoses were “insulting.” Patients with a PCP outside our system were excluded because of difficulty in review of scanned records.

Results

654 patients entered the SWLP during the study period. 313 patients were excluded either because they sought revision or because they had outside physicians, without access to our EHR. Of the 341 included patients, 120 (35%) came with a prior diagnosis referencing overweight or obesity. The remaining 221 (65%) had no such diagnosis.

Conclusion

The majority of patients referred for bariatric surgery within our own system still came without a stated diagnosis of obesity. We found “hint” diagnoses such as “weight gain” or “sedentary lifestyle” but the failure to specifically mention obesity by internists, family practitioners, endocrinologists, etc., was widespread. Patients with undiagnosed obesity are even less likely to be referred for treatment.

A237

Problematic Alcohol Use after Bariatric Surgery: Sleeve Gastrectomy versus Gastric Bypass

Lisa Miller-Matero *Detroit MI*[1], Julia Orlovskaia *Detroit MI*[1], Aaron Hamann *Detroit MI*[1], Kellie Martens *Beverly Hilld MI*[1], Aaron

Bonham *Ann Arbor MI*[2], Arthur Carlin *Detroit MI*[1]
Henry Ford Health System[1] University of Michigan[2]

Research suggests that patients may develop problematic alcohol use (AUD) after undergoing bariatric surgery. However, most of the research conducted has been with patients who underwent Roux-en-Y gastric bypass (RYGB) and less is known about alcohol use after sleeve gastrectomy (SG). The purpose of this study was to examine changes in AUD in the two years following bariatric surgery and to determine whether there is an influence of surgery type.

Patients who underwent SG (n= 7,679) or RYGB (n= 1,372) within a statewide clinical registry and completed the Alcohol Use Disorders Identification Test, assessing alcohol use pre-surgery and at 1 and 2 years post-surgery were included.

Patients had a mean age of 45 years, were predominantly female (79.7%) and Caucasian (70.2%), with an average preoperative Body Mass Index of 47.89. There was no change in the proportion of patients with AUD from baseline to 1-year post-surgery; however, there was a significant increase from baseline to 2 years (p= .01; 8% vs 13.7%). Of those without AUD at baseline, 4.2% had AUD 1-year post-surgery. Two years post-surgery, 9.5% had new onset AUD. Controlling for baseline AUD, a higher proportion of patients who underwent SG endorsed AUD at 1-year post-surgery compared to RYGB (p= .02; 9.8% vs 4.2%). However, there was a trend suggesting that patients who underwent RYGB had a higher proportion of AUD at year-2 post-surgery (p= .06; 21.1% vs 12.4%).

Patients may develop a new alcohol use disorder after bariatric surgery. Risk may vary across time and surgery type.

A238
Prevention of Nutrient Deficiencies following Sleeve Gastrectomy, Roux-en-Y Gastric Bypass and the Duodenal Switch

Ciara Lopez *Windermere FL*[1], Dennis Smith *Celebration FL*[1], Lauren Lapp *Celebration FL*[1], cynthia buffington *Celebration FL*[1]
Florida Hospital Celebration health[1]

Introduction. Micronutrient deficiencies are common following bariatric procedures. In this study, we examine the effectiveness of a program encouraging compliance to multivitamin/mineral (MVM) supplementation and postoperative MVM adjustment on micronutrient levels over the first postoperative year for 3 bariatric surgeries, laparoscopic sleeve gastrectomy (LSG), Roux-en-Y gastric bypass (RYGB) and duodenal switch (DS).
Methods. The study included 29 LSG,

29 RYGB, 29 DS patients similar in age, gender, and preoperative ASA scoring. Patients were advised to take MVM supplements at intakes ≥ those recommended for each procedure by the ASMBS Guidelines Committee (2016). Vitamin and minerals were monitored at 0, 3, 6, and 12 months postoperatively and supplement intakes were adjusted to treat low and deficient nutrients.

Results. The data show that patient adherence to the recommended MVM regimen and postoperative MVM adjustment following LSG and RYGB resulted over the first year in significant ($p<0.05$) increases in levels of Vitamins D, B12, B1 and stabilization of folate, calcium, iron, ferritin, hemoglobin, albumin and PTH. Following the DS, high patient compliance (96%) to the supplement program and MVM adjustments significantly improved early postoperative declines in folate, thiamin, albumin, iron, and ferritin. However, even with aggressive DS nutrient monitoring, calcium levels significantly decreased, vitamin D worsened (42% insufficiency/deficiency), and PTH increased (30% high).

Conclusions. Adherence to ASMBS recommended MVM intake coupled with postoperative replacement of low or deficient micronutrients, improves or normalizes vitamin and mineral levels following SG and RYGB and for most, but not all micronutrients, following DS.

A239

Bariatric surgery does not increase the ability to work – a Danish nationwide registry study

Claus Juhl *Esbjerg* [1], Rene Holst *Oslo* [2], Jon Michael Gran *Oslo* [2], Lene Hymøller Mundbjerg *Esbjerg* [1], Charlotte Røn Stolberg *6700* [1], Gert Frank Thomsen *Esbjerg* [1]
Hospital of South West Jutland[1] University of Oslo[2]

Background
Several factors affect a person's ability to work. These include factors associated with severe obesity such as physical and mental health. People with severe obesity may be expected to work less while surgery-induced weight loss may increase a person's ability to work.
Methods
We performed a nation-wide case-control register study. Four thousand nine hundred and twenty-seven cases who had undergone laparoscopic gastric bypass surgery (LGB) (Obese) were identified in the Danish National Patient Registry. By the Danish Civil Registry each person was matched with two controls with respect to age, gender and residence municipality (Control). Employment status from twelve months before to six years after the operation was extracted from The Danish National Labor Market Authority's Database which includes information on public transfer incomes. By logistic regression analysis, we assessed the effect of LGB on working ability

stratified by education level.
Results
At baseline, obese people worked less than controls (Obese 0.658, controls 0.775, Δ 0.117) (1.000 denotes the entire group working full-time). This accounted for people with lower education (Obese 0.669, controls 0.767, Δ 0.098), intermediate education (Obese 0.691, controls 0.850, Δ 0.159) and higher education (Obese 0.765, controls 0.823, Δ 0.058) (all $p<1e^{-5}$). The proportion at work declined over time presumably due to the financial recession. LGB had no impact on working proportion up to year six postoperative.
Conclusion
Obese people eligible for LGB work significantly less than matched controls. LGB does not diminish this difference nor do obese people seem more vulnerable during a period of recession.

A240
Slimming Down Medication Errors Through Pharmacist Specialist Integration into the Multidisciplinary Collaborative Care Team
Nicole Nguyen *San Francisco CA*
UCSF Medical Center

BACKGROUND: Bariatric surgery can have a profound effect on the absorption of medications and there is limited available evidence in published literature to guide therapy changes in post-surgical bariatric patients. High-medication burden coupled with bariatric surgery place these patients at high-risk for medication harm.

METHODS: As part of a pilot program, a pharmacist specialist was integrated into the ambulatory care setting within an academic teaching bariatric surgery center of excellence to provide comprehensive pharmacy consultative services pre-operatively. In our preliminary assessment, from a 4-month sample of cases January to April 2017, bariatric patients took an average of 7.2 (0 – 20) medications prior to admission. Per case, over half of the medications required an intervention by a clinical pharmacist (53%, average of 3.8 interventions per case). We identified an unsafe care gap for comprehensive medications reviews and patient education prior to surgery; patients were often unaware of necessary medication changes that occurred postoperatively. A large portion (35%) of the patients within the pilot were on high-risk medications (insulin, anticoagulants, sedative-hypnotics). Within our pilot group 100% of cases had errors in original medication lists with an average of 5.4 (1 – 19) medication errors reconciled by pharmacists. Key performance metrics collected included the number of interventions made for medically high-risk patients and total number of interventions (including change in agent, dose, formulation, discontinuation, and initiation of high-risk medication tapers).

CONCLUSION: Integration of a dedicated pharmacist specialist into the multidisciplinary collaborative care team pre-operatively can improve medication safety.

A241

An Examination of Chronic Pain in Patients undergoing Bariatric Surgery

Afton Koball *La Crosse WI*[1], Kara Kallies *La Crosse WI*[2], Andrew Borgert *La Crosse WI*[2]
Gundersen Health System[1] Gundersen Medical Foundation[2]

Background: Pain/disability are common in individuals seeking bariatric surgery. Research suggests that pain/physical function improves following bariatric surgery; however, this may stagnate after the first postoperative year. In contrast to evidence of pain-related improvements, there is also a growing body of literature suggesting that pain medication use increases post-surgery, indicating that chronic pain may continue to be a challenge after bariatric surgery despite weight loss. This study seeks to examine the relationship between individuals experiencing chronic pain and bariatric surgery outcomes.
Methods: Medical records of patients in this study who underwent bariatric surgery from September 2001 through December 2017 were reviewed. Prevalence of chronic pain diagnosis codes, number of visits with pain management and behavioral health, opiate prescriptions, and frequency of cancelled/no-show visits were assessed.
Results: Overall, 1859 patients underwent bariatric surgery during the study period. Mean age and BMI were 44.9±10.5 years and 47.2±6.2 kg/m^2; 81% were women. Patients with a chronic pain diagnosis had a higher number of behavioral health appointments, appointment no-shows or late cancellations, and longer duration of opiate use. Those with chronic pain diagnosis had higher %TWL at 1 year and 5 years postoperative. (Table).
Conclusions: Individuals with chronic pain histories had more problematic engagement with the healthcare system (now-shows/late cancels), more problematic medication use (long-term opiate use) and required more mental health treatment. Interestingly, individuals with chronic pain had better weight loss outcomes. Exercise improvements as a result of improved physical functioning and/or reduced appetite from opiates are possible explanations for this finding.

A242

Contemporary racial and ethnic disparities in bariatric surgery in the United States

Allison Bruff *Philadelphia PA*[1], Michael Mazzei *Philadelphia PA*[1], Satyajit Reddy *Philadelphia PA*[1], Riyaz Bashir *Mount Laurel NJ*[1], Michael Edwards *Philadelphia PA*[1]
Temple University Hospital[1]

Background
Obesity prevalence continues to increase and disproportionately impact ethnic minorities. Review of the bariatric literature highlights both the lack of representation of ethnic minorities in the published data and may represent a lack of access to an effective treatment option for those most severely impacted by obesity.

Study Aim
To evaluated current trends in bariatric surgery among ethnic groups in the U.S.

Methods
Using the 2005-2013 National Inpatient Sample (NIS) and the 2015-2016 Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBS-AQIP) database, we identified patients who had a bariatric operation. Descriptive statistics and regression analyses were performed.

Results
879,669 bariatric operations were performed between 2005 and 2013 (NIS database). Bariatric operations decreased 10% (76% to 66%, $p < 0.001$) among Caucasian and increased 5.5% (10.7% to 16.2%, $p < 0.001$) and 3.5% (9.1% to 12.6%, $p = 0.015$) among Black and Hispanic patients, respectively. 303,193 primary bariatric operations were identified from the MBS-AQIP database, primary sleeve gastrectomy (65.9%) and gastric bypass (27.3%). 69%, 18% and 13% were Caucasian, Black and Hispanic, respectively. Sleeve gastrectomy was performed equally among ethnic groups. Open gastric bypass was performed more commonly among Black and Hispanic (RR = 1.58 and 1.71, $p = 0.005$) patients. A higher proportion of Black patients (29.5% vs 21%, $p < 0.005$) had a BMI >50.

Conclusion
Despite improving trends in bariatric operations among ethnic minority patients, there remains significant disparity in access to bariatric surgery among those who are disproportionately impacted by the obesity epidemic.

Nutrition Abstracts

Nutrition I — Sunday, November 11th, 2018 8:00am-12:00pm

A255

Tryptophan and Bariatric Nutritional Metabolomics

carol wolin-riklin *Bellaire TX*[1], Shinil Shah *Houston TX*[1], Erik Wilson *Houston TX*[1]
McGovern Medical School at UT Health[1]

Introduction: Anatomic alterations in the gastrointestinal tract following bariatric surgery can have an adverse impact on the gut metabolome. Tryptophan (Trp) is an essential amino acid and a precursor of neurotransmitters,eniacin and has also been correlated with bowel integrity. Bariatric surgery may impact Trp absorption and/or degradation affecting the integrity of the bowel to absorb nutrients.

Case Presentation: Adult male presented to surgery clinic 15 months following a revision of roux-en-y gastric bypass (2004) to biliopancreatic diversion/duodenal switch (5/9/2016). He reported chronic diarrhea, bruising, skin changes, blood clots in the legs, fatigue and dizziness and up to four alcoholic drinks daily. TRP deficiency was noted at presentation to the clinic (Table1). He was started on pancreatic enzymes, Trp supplementation and parenteral nutrition.
As parenteral nutrition was weaned off, bariatric diet reinforcement, pancreatic enzymes, and oral Trp supplementation continued. Diarrhea, bruising, skin changes, fatigue and dizziness were resolving. Alcohol consumption continued to be an ongoing struggle.

Discussion: Trp is not synthesized in the body and can only be acquired through dietary intake. Trp deficiency has no defined characteristics to facilitate an isolated diagnosis but rather presents within a multifacted diagnostic enigma entangled within other nutrient deficiencies. Bariatric surgical changes can impact Trp absorption and increase Trp degradation due to inflammation and disease processes. Research is needed to assess Trp levels impact on gut homeostasis and gut integrity. Screening criteria after bariatric surgery needs to be developed if low/deficient Trp levels are identified as a risk factor negatively impacting the gut metabolome.

A256
Nutrition supplement after bariatric surgery: Does it really make difference?

Wah Yang *Guangzhou* [1], Songhao Hu *Guangzhou* [1], Pik Nga Cheung *Guangzhou* [1], Cunchuan Wang *Guangzhou Guangdong* [1]
The First Affiliated Hospital of Jinan University[1]

Background: Reliable information on the vitamins and micronutrients status is still unclear in preoperative and postoperative in Chinese bariatric patients, the necessity of nutrition supplement should have the clinical evidence.

Objective: To investigate the pre- and post-operation vitamins and

micronutrients status and analyze its relationship with surgical types (LRYGB and LSG).

Methods: Measurements of vitamins and micronutrients were obtained at baseline and 1, 3, 6 ,12 and 24 months after surgery. The data was analyzed and compared according to surgical types and with or without nutrition supplement.

Results: 414 of 668 patients had full medical record underwent bariatric surgery were involved in this study. Vitamins deficiencies were common in both pre- and post- operation, especially for vitamin B1 (25.1% pre), vitamin C (21.4% pre) and vitamin E (19.7% pre). Micronutrient parameters were also low in Zinc (29.1% pre) and transferrin (14.2% pre). Vitamin C and ferritin had significant improvement in patients with regular nutrition supplements ($P<0.05$). Vitamin B1 and Vitamin D were also improved significantly in 3 and 9 months with supplements after surgery ($P<0.05$). Higher level of ferritin found in LRYGB than that in LSG ($P<0.05$). No statistical significance found in gender and among surgical approaches 2 years postoperatively ($P<0.05$).

Conclusions: Vitamins and micronutrients deficiencies are very common in both pre- and post-operation among Chinese patients undergoing bariatric surgery. The nutrition supplement therapy truly makes a difference sometime in the follow-up, but no meaning results in long term (more than 2 year) follow up.

A257
10 years follow-up after Bariatric Surgery(BS): body composition, weight and diabetes
Andréa Z Pereira *S.Paulo*
UNIFESP

Introduction:BS is the best treatment for severe obesity and its associated co-morbid medical conditions, such as, diabetes. It results in greater weight loss for longer periods.**Objectives:**To evaluate weight, diabetes and body composition 10 years after BS.**Methods:**In 2008, we evaluated 19 patients (10 diabetic and 9 non-diabetic) undergone Y Roux gastric bypass , Obesity and Bariatric Surgery Department, UNIFESP, S.Paulo, Brazil. In 2018, 7 patients were re-evaluated by ultrasound, in a transversal plane, the lower limbs; fat-muscle measurements were performed at 15 cm from the superior pole of the patella in the proximal direction on the quadriceps muscle in the ventral, middle line of the thigh. Friedman and Pearson's statistical tests were used.**Results:**We evaluated 7 female patients were 54 (±20 years), 4 were diabetics in 2008, however none is diabetic nowadays. The baseline weight was 119 (±25kg) and after 10 years of BS was 79(± 16 kg). The right muscle and fat thickness in baseline was, respectively, 3,3(±0,7 cm) and 2,0(±0,6 cm), after 10 years was

2,2(±0,6 cm) and 1,2(±0,6 cm). In baseline, the left thigh muscle and fat thickness were 2,0(±0,6 cm) and after 10 years, respectively, 2,0(±0,6cm) and 0,5(±0,3cm). The reduction of muscle and fat thickness and weight 10 years after BS was significant compared to the baseline ($p<0,005$). We found a positive and significant ($p<0,005$) correlation between weight and muscle thickness after 10 years(r_p:0,8).**Conclusion:**After 10 years of follow-up all patients showed maintenance of their weight loss without recovering fat mass or muscle thickness and diabetes.

A258

Food Cravings after Bariatric Surgery: Sleeve Gastrectomy versus Roux-en-Y Gastric Bypass

Afton Koball *La Crosse WI*[1], Kara Kallies *La Crosse WI*[2], Luis Ramirez *La Crosse WI*[2]
Gundersen Health System[1] Gundersen Medical Foundation[2]

Background: Food preferences and cravings change following bariatric surgery; however, little research has examined differences by surgery type. While Roux-en-Y gastric bypass (RYGB) has long been considered the gold-standard in bariatric surgery, sleeve gastrectomy (SG) is increasing in popularity. The objective of this study was to examine changes in food cravings during the early postoperative period following bariatric surgery and identify any differences between SG and RYGB.
Methods: Patients scheduled to undergo either SG or RYGB were prospectively enrolled and completed the Food Craving Inventory-II (FCI) preoperatively and at 3 months postoperative. Inclusion criteria consisted of complete FCI data pre and postoperative. Food cravings were categorized as sweets, carbohydrates/starches, high fats, and fast-food fats. Level of craving was based on a 5 point likert scale. Statistical analysis included paired *t* tests, ANOVA, and Spearman Correlation.
Results: Forty-nine patients completed a preoperative and 3-month postoperative FCI; (28 RYGB and 21 SG). Overall, 84% were women; the mean age was 43.4±11.0 years. Preoperative and 3-month BMI were 46.1±5.9 and 39.9±4.8 kg/m^2, respectively. A significant decrease in food cravings was observed from pre to postoperative in both groups; however, no differences were noted when comparing RYGB to SG (Table). Early total weight loss was not correlated with changes in food cravings (r= -0.12; *P*=0.431).
Conclusions: Both RYGB and SG resulted in decreased frequencies of food cravings based on a prospective study using a validated survey. No differences were observed for RYGB

versus SG in the early postoperative period.

A259
MICRONUTRIENTS DEFICIENCIES AND HYPOVITAMINOSIS BEFORE AND AFTER LRYGB

Maximo Agustin Schiavone *Martinez* [1], Maximiliano Farinelli *Pilar, Bs As.* [2], Nicolas Paleari *Pilar* [1], Gabriel Menaldi *Pilar* [1], Maria Eugenia Garcia *Buenos Aires* [1], Marta Gomez Gottschalk *Buenos Aires* [1], Virginia Asti *Pilar, Buenos Aires* [1], Maria Gloria Linzoain *Buenos Aires* [1], PEDRO MARTINEZ DUARTEZ *Buenos Aires* [1]
Hospital Universitario Austral[1] Universidad Austral[2]

Objectives:
1- To analyze the pre-surgical and post-surgical prevalence of iron deficiency, vitamin-B12, vitamin-D and calcium.
2- Analyze if there are deficiencies that resolve with bariatric surgery.
3- Analyze if there are deficiencies that begin after bariatric surgery.
Materials and methods:
We analyzed 156 patients operated in year 2017. Exclusion criteria: acute or chronic pathologies that may affect the metabolism of micronutrients (metabolic, neoplastic, infectious, hematological), gastric sleeve, gastric band, incomplete laboratory data.
The variables were analyzed prior to surgery and 6 months after surgery.
Results:
A total of 123 patients were included. 10.2% of the sample presented iron deficiency prior to surgery. After surgery, the prevalence of iron deficit was 9.1%, showing a statistically significant difference ($p<0.0001$). 6.5% presented Vit.B12 deficit prior to surgery. After surgery, the prevalence of deficit was 4.3%, showing a statistically significant difference before and after surgery ($p=0.0098$). 79.1% of the sample presented a Vit.D deficit prior to surgery. After surgery, the prevalence of deficit was 46.5%, showing a statistically significant difference($p<0.0001$). Finally, the prevalence of pre-surgical hypocalcemia was 2.6%, while the postsurgical hypocalcemia was 3.9% ($p=0.1181$).
With bariatric surgery, 33.33% of iron deficit was resolved, 66.66% of hypovitaminosis-B12, 50% of hypovitaminosis D. However there was a 25% of new cases of iron deficit, 50% of vitamin B12 and 15% of hypovitaminosis-D after surgery.
Conclusions:
A majority of these deficiencies begin before surgery. There are also non-negligible percentages of micronutrient deficit and hypovitaminosis that resolve with surgery,

A260
INADEQUATE VITAMIN D does not interfere with body weight reduction in women of childbearing age after Roux-en-Y Gastric Bypass.

Jean-Marie Molasoko *LES MUREAUX CT* C H P EUROPE

Methodology: This is an analytical, longitudinal and retrospective study with 40 women of childbearing age underwent prior to RYGB. We calculated body mass index (BMI), weight loss (WL), overweight,% of weight loss and surgical success. To investigate the influence of serum vitamin D levels on body weight reduction, the variables were analyzed in the preoperative period (T0), first year (T1) and second year (T2) after surgery and stratified according to BMI obtained in the 1 st and 2 nd postoperative years. In addition, the participants were subdivided according to pre-operative vitamin D levels in adequacy (G1), deficiency (G2) and insufficiency (G3). Serum calcium and parathormone (PTH) concentrations were also evaluated.

Conclusion: The present study suggests that inadequate of vitamin D does not interfere in the reduction of body weight in the follow-up of two-year after RYGB and gives attention that vitamin D may present a differentiated response in the postoperative period, in detriment to the preoperative period.

Master Course in Behavioral Health Abstract Sessions

Masters of Behavioral Health Session I
Sunday, November 11th, 2018 1:30pm-5:30pm

A243
Prevalence and Correlates of Psychiatric Medication Discontinuation One Month After Bariatric Surgery

Kasey Goodpaster *Cleveland OH*[1], Leslie Heinberg *Cleveland OH*[2], Ninoska Peterson *Cleveland OH*[3]
Cleveland Clinic Bariatric & Metabolic Institute[1] Cleveland Clinic[2] Cleveland ClinicI[3]

Background: Approximately half of bariatric candidates take psychiatric medications. Sudden discontinuation can cause serious adverse effects, particularly amidst the stress of postsurgical changes. This study explored correlates of discontinuation one month post-surgery.

Methods: During the pre-surgical psychological evaluation, candidates completed the Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF) and a clinical interview. In a one-month postsurgical psychology group, patients completed a questionnaire assessing complications, benefits, pre-surgical psychiatric medication use, and whether medications were re-started post-surgically. Differences between patients who re-started medications

(*n* = 522) and discontinued (PSYMED-, *n* = 70) were analyzed using chi square and *t*-tests.

Results: Among patients taking psychiatric medication pre-surgery (N = 592, 49.3% female, 35.1% Caucasian, Mean intake BMI = 50.3), 11.8% discontinued post-surgery. PSYMED- was associated with race (p = .05), with a higher percentage of Latino/a (66.7%) and Asian (50.0%) patients discontinuing than Caucasians (14.1%) and African Americans (9.1%). PSYMED- was associated with younger age (p = 0.048) and being prescribed fewer psychiatric medications (p = 0.011). PSYMED- had lower mean MMPI-2-RF scores on infrequent responses (p = 0.012), social avoidance (p = 0.017), and introversion/low positive emotionality (p = 0.046) scales. PSYMED- was not associated with psychiatric diagnosis, post-surgical mood improvement, self-esteem, body image, or medical complications.

Conclusions: A significant minority of patients discontinue psychiatric medications post-surgery. Those who are younger, take fewer psychiatric medications, and endorse less emotional distress pre-surgery may see less value in ongoing treatment.Given the potential for rebound symptoms, education about medication adherence and appropriate tapering is vital.

A244

Health or Appearance? Factors Motivating the Decision to Seek Bariatric Surgery

Rebecca Pearl *Philadelphia PA*[1], Thomas Wadden *Philadelphia PA*, Kaylah Walton *Odenton MD*, Kelly Allison *Philadelphia PA*, Jena Tronieri *Philadelphia PA*, Noel Williams *Philadelphia PA*
Perelman School of Medicine at the University of Pennsylvani[1]

Background: Few studies have explored the factors and people who influence patients to seek bariatric surgery. Along with health benefits, patients may desire dramatic changes in appearance.
Methods: The Reasons for Bariatric Surgery survey was administered to patients seeking surgery at a university-based hospital. The survey included: (a) 15 potential reasons motivating surgery (rated 1-10; higher scores signify greater importance); (b) 7 potential people who influenced patients' decision to seek surgery (1-10); (c) dissatisfaction (1-7) with 11 body parts; and (d) desire for the surgery to change each body part (1-10).
Results: Informed consent and surveys were obtained from 208 patients seeking surgery (52.9% black, 77.9% female, M_{age}=42.0±12.3years, M_{BMI}=46.7±8.5kg/m^2). Factor analysis of the reasons for surgery yielded a five-factor solution: Work, Psychosocial, Longevity, Physical Health, and Quality of Life (QOL). Physical Health was the highest-rated factor (M=9.9±0.4), followed by Longevity

(9.7±0.9) and QOL (8.7±1.4). Paired comparisons showed significant differences between all factors. "Myself" was the highest-rated person influencing the decision to seek surgery (*M*=10.0±0.3), followed by healthcare practitioner (7.1±3.1), and someone who had surgery (6.9±3.3). Participants reported the greatest dissatisfaction with their stomach (6.5±1.1), thighs (5.4±1.7), and arms (4.9±1.8), and the greatest desire to change these body parts (*M*s=9.3±1.4, 7.4±2.7, and 6.8±2.8, respectively).
Conclusions: Health and longevity were the primary reasons motivating patients to seek bariatric surgery. Patients also reported strong body dissatisfaction and desire for surgery to change their appearance. Healthcare practitioners and patients who had bariatric surgery can play a significant role in patients' decision to seek surgery.

A245
Relationship between Depression, Weight, and Patient Satisfaction Two Years after Bariatric Surgery
Kellie Martens *Beverly Hilld MI*[1], Aaron Hamann *Detroit MI*[1], Lisa Miller-Matero *Detroit MI*[1], Chazlyn Miller *Detroit MI*, Aaron Bonham *Ann Arbor MI*, Arthur Carlin *Detroit MI*[1]
Henry Ford Health System[1]

Research suggests that depression improves in the first year after bariatric surgery. However, findings regarding longer term depressive symptoms and the impact of depression on outcomes such as weight loss and patient satisfaction, are mixed.

This study includes patients who underwent Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG) within a statewide clinical registry between 2015-2017. Participants self-reported depressive symptoms (Patient Health Questionnaire-8; PHQ-8), satisfaction with surgery, and weight pre-surgery, 1-year (N= 6664), and 2-years (N= 1991) post-surgery.

Participants had a mean age of 46, were predominantly female (78.9%), Caucasian (79.6%), and had a mean preoperative BMI of 47.4. Compared to baseline, fewer patients endorsed clinically significant depression (PHQ-8≥10) at 1-year (p<.0001; 13.9% vs 7.2%) and 2-years post-surgery (p<.0001; 9.5%). However, when including participants with both year 1 and 2 PHQ-8 scores, prevalence rates of depression were significantly higher at year 2 (p<.0001; 9.5% vs 5.3%). Higher PHQ-8 at baseline was related to less weight loss (percent total weight loss; %TWL) at 1-year post-surgery (r= -.11, p<.001) but not at 2 years (p=.06). Post-operative depression was related to lower %TWL at 1 year (r= -.11, p<.0001) and 2 years (r= -.14, p<.0001). Baseline depression was also associated with lower patient satisfaction after 1 and 2 years (r= -.08; p< .001).

This study suggests that preoperative

depression improves up to two years post-bariatric surgery, but the prevalence of depression may begin to increase after the first year. Depression, both pre- and post-bariatric surgery, may impact weight loss and patient satisfaction.

A246
Pain Perceptions in Bariatric Surgery Candidates: The Role of Pain Catastrophizing

Colleen Schreyer *Manchester MD*[1], Jesica Salwen-Deremer *Baltimore MD*[2], Amanda Montanari *Scituate MA*[2], Breanna Holloway *Baltimore MD*[2], Janelle Coughlin *Baltimore MD*[2]
Johns Hopkins University School of Medicine[1] Johns Hopkins School of Medicine[2]

Positive correlations between pain perception and pain catastrophizing have been observed across clinical populations. Higher levels of post-operative pain are associated with pain catastrophizing, anxiety, and morphine consumption. Bariatric surgery candidates frequently report chronic pain, and recent data demonstrate that higher pre-surgical pain ratings predict use of opioid-based analgesics in post-surgical candidates at long-term follow-up. This study examined the role of pain catastrophizing as a predictor of chronic pain grade, intensity and disability in bariatric surgery candidates. This study utilized a retrospective chart review (n=247) of patients (mean age=42.29, SD=11.34; mean BMI=47.61, SD=8.26) assessed at a pre-surgical psychological evaluation using the Graded Chronic Pain Scale (GCPS), Pain Catastrophizing Scale (PCS), and measures of depression and anxiety. Based on data from samples with chronic pain and obesity, a lower PCS cut-off score (>24) was used to indicate clinically significant pain catastrophizing. High-intensity pain was reported by 49.2% of participants, and elevated PCS scores occurred in 13.2% of patients. Participants with elevated PCS scores identified a higher number of body regions as painful; back, knee, and foot pain were most prevalent. Elevated PCS was also significantly associated with higher pain grade, intensity, and disability scores on the GCPS, controlling for age, gender, BMI, depression, and anxiety (ps<.001). Like other clinical populations, pain ratings are associated with pain catastrophizing in individuals seeking bariatric surgery. Clinical interventions targeted to improve pain-related coping skills may be indicated in bariatric patients who report elevated pain catastrophizing to potentially reduce the post-surgical initiation of opioid-based analgesics.

A247
The BARS Study: Patient Understanding and Use of Alcohol after Bariatric Surgery

Lisa Miller-Matero *Detroit MI*[1], Joseph Coleman *Detroit MI*[1], Leah LaLonde *Ypsilanti MI*[1], Kellie Martens *Beverly Hilld MI*[1], Aaron Hamann *Detroit MI*[1], Arthur Carlin *Detroit MI*[1]
Henry Ford Health System[1]

Patients who undergo bariatric surgery are at increased risk of developing alcohol problems, yet many patients consume alcohol after surgery. The purpose of this study was to evaluate whether patients who underwent bariatric surgery recalled receiving education about alcohol prior to having surgery and to investigate their alcohol use patterns.

Patients (N= 567) who underwent bariatric surgery from 2014-2017 completed a survey in March-April 2018 regarding their knowledge of risks associated with alcohol use and patterns of current alcohol consumption.

The majority of patients (93.1%, n= 528) recalled receiving education about the risks of alcohol use prior to having surgery. However, 36.4% (n= 194) were unsure how alcohol could impact the body differently post-surgery. More than half of patients consumed alcohol since undergoing bariatric surgery (57.7%, n= 325), of which 72.9% (n= 237) consumed alcohol within the past month. Of those who had alcohol in the past month, 9.7% (n= 23) had more than 6 drinks on at least one occasion. More than half of patients who consumed alcohol post-surgery did so within the first year after surgery (54.8%; n= 178). Neither receiving education prior to surgery nor understanding risks were related to alcohol consumption post-surgery (p> .05).

Although patients recall receiving education about not using alcohol after surgery, many patients do not appear to understand the risks involved with alcohol consumption. Despite receiving this education, many patients are still consuming alcohol after surgery. It appears that additional interventions are needed to decrease alcohol use after bariatric surgery.

A248
Alcohol Use Disorders and Psychiatric Hospitalizations After Bariatric Surgery

Wynne Lundblad *Pittsburgh PA*[1], Rachel Kolko *St. Louis MO*[1], Alexis Fertig *Pittsburgh PA*, michele levine *Pittsburgh PA*, Marsha D. Marcus *Pittsburgh PA*
University of Pittsburgh Medical Center[1]

Background: While bariatric surgery is a highly effective treatment for severe obesity, numerous studies demonstrate an increased risk of suicide and alcohol use disorder (AUD) in postsurgical patients. Presurgery psychological evaluation is challenging in part because of patients' tendency to underreport psychiatric symptoms and

substance use prior to surgery. Thus, clinical diagnoses and impairment severity are likely to be underappreciated at that time, preventing identification of and intervention for some high-risk candidates. Limited data exist on patients who present with serious psychiatric impairment after bariatric surgery.
Methods: Using a retrospective chart review, we characterized patients admitted to a psychiatric hospital between 2010-2014 with a history of bariatric surgery (*N*=81). Of the 47 patients with available presurgery psychological evaluations, 36 had presurgery psychiatric diagnoses.
Results: Depressive disorders (*n*=16, 34.0%) were the most common presurgery diagnoses. AUD was present in 2.1% (*n*=1) of patients presurgery and 27.7% (*n*=13) of patients postsurgery. Suicidality occurred in 67.9% (*n*=55) of postsurgery patients; 81.8% (*n*=18) of patients admitted with AUD also endorsed suicidality. All patients with AUD postsurgery had no documented AUD presurgery. It is unknown how many patients had undetected presurgical AUD versus those with *de novo* postsurgical AUD.
Discussion: This is the first study to examine AUD and suicidality in patients admitted to a psychiatric hospital post-bariatric surgery. As hospitalization is a rare and serious outcome, we recognize this represents a small subset of bariatric surgery patients. Future directions include comparing this group to bariatric surgery patients not requiring inpatient psychiatric care.

Masters of Behavioral Health Session II
Monday, November 12th, 2018 8:00am-12:00pm

A249
Insomnia and night eating syndrome in bariatric surgery patients
Jesica Salwen-Deremer *Baltimore MD*[1], Colleen Schreyer *Manchester MD*, Amanda Montanari *Scituate MA*, Breanna Holloway *Baltimore MD*, Janelle Coughlin *Baltimore MD*
Johns Hopkins School of Medicine[1]

Background: Sleep problems are associated with obesity and consumption of calorie dense foods, particularly in individuals seeking bariatric surgery. Sleep onset latency problems are also associated with poorer post-surgical weight loss. Factors in these relationships are not well understood; thus, we examined the impact of insomnia on weight-gain related eating behaviors.
Method: We conducted a retrospective chart review of 247 patients (mean age = 42.29, *SD*=11.34; mean BMI= 47.61, *SD*=8.26) participating in a pre-bariatric surgery psychological evaluation. Sleep, eating, and other psychosocial measures were abstracted from charts. A step-wise linear regression was conducted to evaluate

the association between insomnia and night eating.
Results: ~25% of participants had subthreshold insomnia, 16.3% had clinically significant insomnia, and 52.7% had general sleep disturbance; 17.5% reported binge eating and 5.3% reported night eating.
After controlling for age, gender, and BMI ($F(3, 227)=1.91$, $p=.13$), and impulsivity, general sleep disturbance, binge eating, anxiety, and depression (step 2, $F(8, 222)=16.67$, $p<.001$), insomnia significantly predicted night eating, $F(9,221)=16.67$, $p<.001$; Fchange $(1,221)=7.71$, beta=.27, $p=.006$). Worse insomnia was predictive of night eating, $F(2, 238)=34.17$, $p<.001$. Dimensions of sleep quality were probed and revealed that only sleep onset latency was predictive of night eating (beta=.16, $p=.009$).
Conclusions: The present study demonstrates an association between insomnia, particularly sleep onset latency, and night eating, even after controlling for covariates. Understanding other health behaviors that can contribute to disordered eating is critical, and sleep disturbance may be a treatable cause or maintaining factor in night eating. Assessment and treatment recommendations will be discussed.

A250
Patients with insufficient weight loss and with successful weigh loss: Differences in eating behavior one year after gastric bypass.

Verónica Vázquez-Velázquez *México* [1], Valeria Soto Fuentes *Mexico City SD*[1], Mauricio Sierra Salazar *MEXICO CITY* [1], Juan Pablo Pantoja *Mexico MEX*[1], Samuel Ordoñez Ortega *Ciudad de México* [2], Eduardo García García *MEXICO CITY* [1]
Inst. Nac. Ciencias Médicas y Nutrición[1] Zone 30 Medical Hospital[2]

Objective: To compare the eating behavior of patients with ≥50% of excess weight loss and those with <50% one year after gastric bypass.
Method: A total of 77 patients (52 women, 25 men) who completed one year follow-up after gastric bypass were included. The Three Factor Eating Questionnaire (TFEQ), which measures cognitive restraint (CR), disinhibition (D) and hunger (H), was applied before and after surgery. The percentage excess weight loss (%EWL) was obtained and patients were divided into two groups: <50%EWL as insufficient WL (IWL) and ≥50%EWL as successful WL (SWL).
Results: A 19.5% (n = 15) had IWL. The IWL had lost on average 39.9% against SWL patients who lost 70.5% of EW. The IWL had more feelings of hunger than SWL (H 4±2.9 vs. 2.2±1.9, $p<.001$), but the same CR (15.7±3.9 vs. 16±3.4, $p=.793$) and D (4.9±2.6 vs. 3.7±2.4, $p=.100$) after one year.
Conclusions. Feeling of hunger was greater in IWL patients, this can lead them to eat more, even when is expected that the surgery has the

greatest effect (within the first 12 months). Less favorable weight outcome underscores the importance of hunger as an indicator to be closely monitored, to evaluate the origin of the hunger (either by assessing the size of the pouch or aspects related to cravings or anxiety) and addressed over the long term following surgery. Replication of these findings would suggest potential targets for education and intervention to mitigate poor outcomes.

A252

The Relationship between Psychopathology, Disordered Eating, and Impulsivity in Patients Seeking Bariatric Surgery

Jacqueline Spitzer *Philadelphia PA*[1], David Sarwer *Philadelphia PA*[1], Kelly Allison *Philadelphia PA*[2], Rebecca Ashare *Philadelphia PA*[2], Thomas Wadden *Philadelphia PA*[2], Courtney McCuen-Wurst *Philadelphia PA*[2], Caitlin LaGrotte *Philadelphia PA*[1], Alberly Perez *Philadelphia PA*[1], Colleen Tewksbury *Glenside AL*[3], Noel Williams *Philadelphia PA*[3], Michael Edwards *Philadelphia PA*[4], Jingwei Wu *Philadelphia PA*[1]
Temple University[1] University of Pennsylvania[2] University of Pennsylvania Health System[3] Temple University School of Medicine[4]

Background: Approximately 20-30% of patients who undergo bariatric surgery experience suboptimal weight loss or significant weight regain, within the first few postoperative years. Preoperative psychosocial functioning, in particular mood and binge eating disorder, may contribute to suboptimal weight losses. Both conditions share the common psychological construct of impulsivity, which may impact the long-term results of bariatric surgery. Objective: Investigate the relationship between baseline psychopathology, disordered eating, and impulsivity in patients seeking bariatric surgery. Methods: A prospective cohort of 253 patients seeking bariatric surgery were assessed for psychopathology and disordered eating using the Structured Clinical Interview for DSM-5 (SCID-5), the Eating Disorder Examination Bariatric Surgery Version (EDE-BSV), and self-report questionnaires. Impulsivity was measured via the Stop Signal Task (SST), Stroop Test, and Delay Discounting Task (DDT). Results: Prior to surgery, 46% of the 228 patients who completed a SCID-5 interview had a current psychiatric diagnosis and 65% had a lifetime diagnosis. Presence of a current diagnosis was positively associated with DDT (i.e., greater impulsivity) and the disinhibition and hunger subscale scores of the Eating Inventory. Current and lifetime diagnoses were positively associated with the EDE global scores and the shape and weight concern subscales. Finally, higher EDE weight concern scores were associated with worse response inhibition measured via the SST (p-values <0.05). Conclusions: A current psychiatric diagnosis was associated with impulsivity. Both current and lifetime

diagnoses were associated with shape and weight concerns. Future work should focus on whether the relationship between these variables is associated with postoperative outcomes.

A253
Proposal for Masters in Behavioral Health session: Beyond Diagnosis: The Meaning and Function of Post-WLS Eating Disturbance

vanessa Snowdon-Carr *Taunton* [1], Stephanie Sogg *Boston MA*[2], Jacqueline Doyle *London NW1 2PG* [2], Allison Grupski *Washington DC*[2]
Bariatric Surgery Department, Musgrove Park Hospital, UK[1] clinical psychologist[2]

The aim of this symposium is to explore how we understand the function and impact of pathological eating behaviour following bariatric surgery. Whilst bariatric surgery teams are successful in identifying eating disturbance post-operatively, the function of such behaviour is often assumed to come from a desire either to modify weight or as a result of difficulty managing post-operative eating requirements. The actual picture can be more complex and has important implications for treatment recommendations. This panel will consist of four speakers who will consider different elements of post-operative eating pathology: eating disturbance rather than disorder, the meaning of eating disorders, triggers for eating disturbance and blurring lines between self-management and self-harm. The panellists will highlight the clinical relevance of these topics, summarize the available empirical data, provide, case examples and discuss ways of incorporating assessment and intervention for these issues into our consultations with post-operative patients.

Dr Vanessa Snowdon-Carr, D.Clin.Psy, Clinical Psychologist Bariatric Surgery Department, Musgrove Park Hospital, Taunton UK
Dr. Stephanie Sogg, PhD, Clinical Psychologist, MGH Weight Center, Massachusetts General Hospital, and Harvard Medical SchoolUSA
Dr Allison Grupski, PhD, Clinical Psychologist, National Center for Weight and Wellness, Washington DC, USA
Dr Jacqueline Doyle, Clinical Psychologist, UCLH Centre for Weight Management, Metabolic and Endocrine Surgery and Department of Child and Adolescent Psychological Medicine, UK

A254
Food insecurity is associated with lower rates of bariatric surgery and

longer timeframe to completing surgery

Lisa Nackers *Madison WI*[1], Yiwei Xu *Madison WI*, Luke Funk *Madison WI*, Sally Jolles *Madison WI*, Jacob Greenberg *Madison WI*, Anne Lidor *Madison WI*
University of Wisconsin School of Medicine and Public Health[1]

Background: Food insecurity, or the inability to acquire sufficient and nutritious foods, is associated with obesity. Bariatric surgery can effectively treat obesity; however, it remains unknown whether food insecurity impacts persons with obesity who pursue bariatric surgery. This study examined whether food insecurity was associated with difficulty obtaining surgery and time to surgery in patients entering a multidisciplinary bariatric surgery program. **Methods:** Patients who presented for bariatric surgery evaluation completed the validated 2012 USDA US Household Food Security Survey Module: Six-Item Short Form. Logistic regressions, adjusting for insurance, marital, and employment statuses, examined differences in surgery completion rates and t-tests described differences in length of time until surgery between High/Marginal (i.e., food secure) and Low/Very Low (i.e. food insecure) classifications. **Results:** Of the sample (N = 250, mean age = 47.6 years, 79.2% female), 13.6% were food insecure. Mean BMI was significantly higher in food insecure versus food secure patients (53.0 vs 48.1 kg/m^2, p = 0.002). Food insecure patients were less likely to undergo bariatric surgery compared to food secure patients (55.9% vs 29.6%, p = .008; OR = .37, p = .037). Of those completing surgery, food insecure compared to food secure patients took longer to undergo surgery (34.7 vs 27.1 weeks, p = .035). **Conclusions:** Food insecurity is associated with lower bariatric surgery completion rates and may contribute to slower progression to surgery. Future studies should explore barriers underlying these associations and resources to assist those patients most at need, but unable to successfully obtain bariatric surgery.

ASMBS Quickshots

ASMBS Quickshots Abstract Session I
Thursday, November 15th, 2018 8:00am-9:45am

A158

Comparison of robotic revisional weight loss surgery and laparoscopic revisional weight loss surgery using the MBSAQIP database.

Benjamin Clapp *El Paso TX*[1], Robert Jones *El Paso TX*[2], Alan Tyroch *El Paso TX*[2], Christopher Dodoo *El paso TX*[2], Evan Liggett [2]
Benjamin Clapp MD PA[1] TTUHSC Paul Foster School of Medicine[2]

INTRODUCTION: Bariatric surgery is the most effective treatment of morbid obesity, diabetes mellitus and many other diseases. The most common bariatric operations in the U.S. are the sleeve gastrectomy and gastric bypass, respectively. The third most common is revisional bariatric surgery.

The MBASQIP database was examined to determine the short term outcomes of the robotic approach to revisional weight loss surgery (RRWLS) versus the laparoscopic revisional weight loss surgery (LRWLS) technique. We hypothesized that there is no improvement in outcomes using RRWLS.

METHODS: Data was extracted from the MBASQIP database spanning the 2015-2016 years. 354,865 patients were included in this study. Using the specified CPT codes ("43644","43645","43659", "43770", "43775") there were 319,820 procedures identified. After applying the exclusion criteria (age >80 years, ASA 5, patients on dialysis and BMI less than 30 or greater than 70), there were a total of 24,072 that remained for the analysis.

RESULTS: There were 24,072 revisional bariatric cases, which was of 8% of total cases. Of these revisions 91% were laparoscopic, 6% were robotic and 3% were other (open, hand assist). LRWLS accounted for 22,547 and RRWLS for 1,525. RRWLS took longer (160 min vs. 108 min $p<0.001$), but there was no statistically significant difference in postoperative complications. The groups were similar in BMI, age and other demographic measures. Mortality was the stastically similar for both groups.

CONCLUSIONS: RRWLS shows no benefit over LRWLS in the MBSAQIP database regarding rates of complications or death. There is a prolonged OR time.

A159
PERIOPERATIVE OUTCOMES OF BARIATRIC SURGERY IN THE SETTING OF CHRONIC STEROID USE: A MBSAQIP DATABASE ANALYSIS

Michael Mazzei *Philadelphia PA*[1], Michael Edwards *Philadelphia PA*[1]
Temple University Hospital[1]

Introduction: Chronic steroids represent treatment options for many chronic diseases, but predispose to both weight gain and surgical complications. They therefore represent a unique interface between obesity, chronic disease, and surgical risk. As the benefits of bariatric surgery for

controlling metabolic disease become more apparent, patients with chronic illnesses on corticosteroids are increasingly being referred for surgery despite an unclear safety profile. The Metabolic and Bariatric Surgery Accreditation Quality Improvement Program (MBSAQIP) database represents the largest bariatric-specific clinical dataset for comparing outcomes in this complex patient population.
Methods: Using the MBSAQIP database, we identified patients on chronic corticosteroids who underwent LSG or LGB in 2015 or 2016. An unmatched cohort analysis, as well as a propensity-matched cohort analysis, was performed of patients on corticosteroid therapy compared to those without.
Results: Of the 302,140 patients who underwent LSG or LGB in 2015-2016, 4,947 (1.63%) were on chronic corticosteroids. Patients using steroids were older with significantly higher rates of comorbid conditions, except smoking. HLOS, unplanned ICU admission, reoperation, readmission, bleeding, leak, pulmonary and infectious complications were significantly higher in steroid users; however, in a matched analysis of 9,014 patients, steroids were not found to be independent risk factors for poorer outcomes except for an increased rate of leak (Table 1).
Conclusions: Steroid use does not independently predict poorer outcomes among bariatric surgery patients. With appropriate patient selection based on associated comorbid factors, primary bariatric surgery is safe in patients using corticosteroids, with an acceptable 30-day postoperative risk profile.

A160
Risk Factors and Predictors of Hypoglycemia after Bariatric Surgery in the LABS Consortium
Laura Fischer *Oklahoma City OK*[1], Jonathan Purnell *Portland OR*, Nora Fino *Portland OR*, Carrie Nielson *Portland OR*[2], Mary-Elizabeth Patti *Boston MA*, Bruce Wolfe *Portland OR*[2]
University of Oklahoma[1] Oregon Health and Science University[2]

Hypoglycemia is increasingly recognized as a bariatric surgery complication, and can be severe and disabling in some patients. Identification of risk factors and predictors of hypoglycemia, both before and after bariatric surgery, would allow insight into this potentially dangerous complication and guide preoperative identification of high-risk individuals. Methods: 1,959 participants who underwent Roux-en-Y gastric bypass (RYGB, n=1,448) or adjustable gastric banding (AGB, n=511) from the Longitudinal Assessment of Bariatric Surgery (LABS) consortium were included. Pre-operatively and at seven annual follow-up visits, patients completed hypoglycemia symptom surveys and clinical data were collected. Logistic

regression was used to calculate odds ratios for hypoglycemia during follow-up, in association with potential predictors. Results: Preoperatively, hypoglycemic symptoms were reported in 41.8% with diabetes (DM) but were uncommon (<10%) with prediabetes (PreDM) or without diabetes (NonDM). NonDM individuals who underwent RYGB had the highest incident hypoglycemia (31%). In multivariate analysis, preoperative hypoglycemia was the strongest predictor of postoperative symptoms ($p<0.0001$) (Table 1). In NonDM and PreDM RYGB patients, SSRI/SNRI use was significantly associated with incident hypoglycemia ($p=0.025$,$p=0.016$) (Figure 1). This association was also seen in the RYGB DM subgroup that had never used diabetes medications ($p=0.017$). SSRI/SNRI association was not significant in any AGB group. Non-DM RYGB patients had significantly lower weight loss at seven years when new hypoglycemia was experienced in the first post-operative year ($p=0.045$). Conclusion: Preoperative hypoglycemia is the strongest predictor of post-bariatric hypoglycemia. In RYGB patients not on diabetes medications, SSRI/SNRI use is associated with significantly increased risk of postoperative hypoglycemia.

A161
Perioperative Outcomes, Safety profile, and Factors affecting Mortality and Complications of Laparoscopic Sleeve Gastrectomy and Roux en Y Gastric Bypass in the Elderly Population

Onur Kutlu *Doral FL*[1], Grigoriy Klimovich *Miami FL*[1], Nestor de la Cruz-Munoz *Doral FL*[1]
University of Miami[1]

Introduction: Controversy remains for bariatric surgery in elderly patients. Due to growing morbidly obese elderly population, treatment outcomes need to be evaluated

Material and Methods: MBSAQIP database was utilized. Laparoscopic sleeve gastrectomy and gastric bypass cases performed in 2016 were included. Patients were divided in to two groups based on age (60> and under 60) and later de-novo and revisional surgery. We sought to identify the factors affecting mortality and post-operative complications (pneumonia, renal failure, ICU admission, intubation, DVT, Pulmonary embolism, leak, sepsis, transfusion, c. difficile, hospital stay, and death within 30 days). Possible confounders; age, sex, primary operation, revisional surgery, surgeon specialty, smoking, diabetes, hyperlipidemia, renal insufficiency, functional status, previous MI, previous cardiac surgery, DVT, hypertension, BMI, albumin level, hematocrit levels, operative time were corrected by binary logistic regression. The analyses were initially done for the entire cohort, later separating the cohorts for de-novo and revisional surgery. The effect of advancing age (>60), and other factors

affecting mortality and each complication were separately identified.

Results: 160,599 patients were identified, 17,610 were over 60 years. 7.1% underwent revisional surgery. Compared to younger patients, odds of death for age >60 was similar in the entire cohort(p=0.747) and in the de novo group (p=0.181). Advancing age was associated with almost twice the odds of death for revisional surgery (OR:1.842, 95%CI:1.223-2.773, p=0.003) and higher risk of complications.

Conclusion: Advancing age is not a risk factor for de-novo bariatric surgery. Age>60 was an independent risk factor for death and complications in revisions.

A162

Is Sleeve Gastrectomy Superior to Roux- en-Y Gastric bypass in patients with End Stage Renal Disease? Analysis of MBSAQIP Data

Adel Alhaj Saleh *Lubbock TX*[1], Grant Sorensen *Lubbock TX*[2], John Griswold *Lubbock TX*[1], Amir Aryaie *Lubbock TX*[1]
Department of Surgery/ Texas Tech University Health Sciences Center[1] School of Medicine, Texas Tech University Health Sciences Center[2]

Background:

Safety of weight loss procedures in patients with end stage renal disease (ESRD) had already been tested and many reports in the literature showed these procedures are safe in this patients' population. However, these studies didn't compare specifically the 2 most commonly performed weight loss procedures in the United States which are sleeve gastrectomy (SG) and gastric bypass (RYGB).

Objective:

The aim of this study is to determine whether there is a difference between (SG) and (RYGB), in ESRD patients, in terms of unfavorable outcomes in 30-day postop.

Methods:

We analyzed the data of Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) that included 186,772 patients. We looked up only patients with ESRD on dialysis, who underwent either laparoscopic SG or RYGB as a primary procedure. Univariate analysis, was done. T-test and Chi square were used for comparing continuous and categorical variables respectively and Fischer's exact test for significance, P value < 0.05 was considered significant

Results:

We identified 380 patients underwent SG, while only 80 underwent RYGB. Fifty six % female, mean BMI= 46 $kg/^{m2} \pm 7.5$, (table #1). No statistical

difference in most of compared variables in SG and RYGB groups (table#1). Only, readmission rate (22% RYGB versus 11% SG) and length of operation (142 ± 77 minutes RYGB versus 87± 41 minutes SG), were higher in RYGB. (P=0.04 and 0.0001 respectively).

Conclusion:

There are no differences between the SG and RYGB in terms of safety in the first 30-day postop.

A163

Comparative analysis of 30-days outcomes of single stage conversion of laparoscopic adjustable gastric band (LAGB) to sleeve gastrectomy (SG) or gastric bypass (GB): 2015-2016 PUF MBSAQIP data.

Sandra Wischmeyer *Ellicott City MD*[1], Anne Sill *Baltimore MD*[1], Andrew Averbach *Baltimore MD*[1]
Saint Agnes Hospital[1]

Background: Increasingly LAGB is converted to other bariatric procedures. Conversion to SG is often considered a safer choice while some authors believe GB produces better long-term outcomes despite higher initial morbidity.

Objectives: To compare the short term safety of single stage LAGB+SG and LAGB+GB as well as primary SG and GB.

Methods: MBSAQIP PUF 2015-2016 was queried for primary SG, GB, LAGB+SG or LAGB+GB conversions based on CPT codes. Binary and nominal variables were compared using Chi-square and Fisher exact test; continuous ones – using Student T-test. Bernoulli correction was applied by accepting significance at a 2-tailed $P < 0.01$.

Results: 9,122 patients underwent LAGB+SG (68.9%) or LAGB+GB (31.1%). Primary SG was performed in 199,898 and GB in 80,700 cases. Revision patients were older and had lower BMI. In primary and LAGB conversion groups, morbidity and mortality were statistically higher with GB. Comparison of primary GB and LAGB+GB outcomes demonstrated no significant difference with the exception of leak, while all parameters with exception of mortality and readmission were statistically worse in LAGB+SG compared to primary SG.

Conclusion: Single stage LAGB+SG and LABG+GB were both associated with acceptably low morbidity and mortality. LAGB+SG was significantly safer than LAGB+GB. With exception of leak, primary GB outcomes were not significantly different from LAGB+GB. Contrary to that, all variables except mortality and readmission were significantly worse for LAGB+SG compared to primary SG.

A164

First look at the Outcomes of the Different Sleeve Gastrectomy (SG) Surgical Techniques Reported in MBSAQIP: What Did We Learn?

Maher El Chaar *Allentown PA*[1], Jill Stoltzfus *Bethlehem PA*[2]
St Luke's University Hospital[1] st luke's University and Health Network[2]

Introduction:
Controversies exist regarding the most appropriate surgical technique in performig SG. The objective of this study is to compare the outcome of the various surgical techniques utilized in performing SG based on the MBSAQIP database.
Methods:
Using the MBSAQIP 2016 PUF we compared the four SG techniques (Staple Line Reinforcement [SLR] alone, SLR and Oversewing [OS], no SLR or OS, OS alone). Our primary outcomes were OSI (Organ Space Infection) including leak; and bleeding rates and our secondary outcomes were 30-day SAE (Serious Adverse Events) and readmission rates. First, we conducted separate chi square tests of association. Next, we created four separate direct multivariate logistic regression models for our primary and secondary outcomes.
Results:
SG with both SLR and OS resulted in the lowest incidence of bleeding and SAE compared to all the other techniques (0.3% and 1.9% for bleeding and SAE respectively, $p<0.05$). The following SG techniques significantly and independently predicted *less* likelihood of bleeding requiring transfusion: SLR alone [adjusted odds ratio (AOR) .70, 95% CI .54 - .90, p = .006) and both SLR and OS (AOR .50, 95% CI .33 - .77, p = .002). In addition, SLR and OS significantly and independently predicted *less* likelihood of SAE (AOR .76, 95% CI .64 - .91, p = .003).
Conclusion:
Based on the MBSAQIP database , our study demonstrated that SLR results in lower postoperative bleeding, but not leak rates. In addition, when combined with OS, SLR results in lower overall 30-day complication rates.

A165

Perioperative outcomes following robotic bariatric surgery: an MBSAQIP analysis

Rana Higgins *Milwaukee WI*[1], Melissa Helm *Milwaukee WI*[1], Tammy Kindel *Milwaukee WI*[1], Jon Gould *Fox Point WI*[1], Semeret Munie [1]
Medical College of Wisconsin[1]

Background: The majority of bariatric surgery is performed laparoscopically, with a gradually increasing utilization of robotics. The aim of this study was to compare 30-day post-operative outcomes in laparoscopic and robotic bariatric surgery procedures.

Methods: The Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) 2015 and 2016 datasets were queried for primary laparoscopic and robotic

bariatric procedures, Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG). Analyses were performed comparing 30-day post-operative outcomes of the robotic and laparoscopic approach.

Results: There were 282,214 primary minimally-invasive bariatric procedures, 93.3% laparoscopic and 6.7% robotic. There was no significant difference in overall complications for SG (5.3% laparoscopic, 5.4% robotic p=0.667) or RYGB (10.6% laparoscopic, 10.8% robotic, p=0.731). Operative time was longer robotically for SG (72.8 minutes laparoscopic, 101.2 minutes robotic, p<0.0001) and RYGB (116.9 minutes laparoscopic, 153.7 minutes robotic, p<0.0001). Readmission rates were higher for robotic SG (3.2% laparoscopic, 3.6% robotic, p=0.029), and RYGB (6.0% laparoscopic, 7.0% robotic, p=0.003). There was a longer length of stay for robotic SG (1.64 days laparoscopic, 1.75 days robotic, p<0.0001), but not for RYGB. There was no difference in reoperation or mortality for robotic SG or RYGB. (Table 1)

Conclusion: Robotic bariatric surgery has a similar overall complication and safety profile as laparoscopic bariatric surgery. Increased length of stay in robotic SG and readmission for both robotic SG and RYGB highlight potential quality initiatives that can be addressed. Longer operative times indicate a potential learning curve that must be overcome to increase efficiency.

A166

How safe are Laparoscopic Sleeve Gastrectomy and Laparoscopic Roux-en-Y Gastric Bypass in super-super-obese patients? An investigation from Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP).

Amlish Gondal *Tucson AZ*[1], Chiu-Hsieh Hsu *Tucson AZ*[1], Matthew Mobily *Tucson AZ*[1], Iman Ghaderi [2]
The University of Arizona[1] University of Arizona[2]

Introduction:

It is known that super-super-obesity (BMI>60 Kg/m^2) is associated with higher complication rates after bariatric· Surgery. Laparoscopic Sleeve Gastrectomy (LSG) has become the most commonly performed procedure in these patients but the choice of procedure remains controversial. Some studies show better weight loss results with Laparoscopic Roux-en-Y Gastric Bypass (RYGB) as compared to LSG. However, comparative safety of these procedures has not been studied at a large scale in this group of patients.

Methods:

Perioperative data for patients with BMI ≥ 60 who underwent primary LRYGB or LSG was obtained from Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program's (MBSAQIP)

participant use file 2016. The 30-day outcomes were compared.

Results:

A total of 7607 patients were studied with the majority of the patients undergoing LSG (68%). There were 2 deaths per 1000 operations in each group (p =0.86). When compared with LSG group, RYGB patients had higher rates of all cause morbidity (10.6% vs. 6.0%, p<0.001), reoperation (2.4% vs 0.9%, p<0.001), readmission (7.1% vs 4.4%, p<0.001), re-intervention (3.1% vs 1.2%, p<0.001) and return to emergency not requiring admission (7.0% vs 10.5%, p<0.001). LRYGB group had longer mean operative length and hospital length of stay (p<0.001 for both).

Conclusion:

Laparoscopic gastric bypass in patients with super-super-obesity has higher complication rates as compared to laparoscopic sleeve gastrectomy. However, these results should be interpreted in the context of long-term follow-up of clinical outcomes (weight loss, resolution of comorbidities and complications) after both procedures.

A167

DiaREM scores predict diabetes remission after bariatric surgery

Alfredo Guerron *durhjam nc*[1], Gerardo Davalos *durham NC*[1], Dana Portenier *Durham NC*[1], Hui-Jie Lee *Durham NC*[1], Leonor Corsino *Durham NC*[1]
Duke Health[1]

Objective: To determine if pre-operative DiaREM score predicts diabetes remission after 1-year post-bariatric surgery (Roux-en-Y Gastric Bypass (RYGB), Sleeve Gastrectomy (SG), Adjustable Gastric Band (AGB), Duodenal Switch (DS)) in a population with morbid obesity and type 2 diabetes.

Background: Bariatric surgery has been proven to be highly effective in controlling diabetes. However, not all patients who undergo the procedure achieve diabetes remission. The DiaREM score has been used to predict diabetes remission in patients with RYGB, but there are no studies that show its performance amongst the other bariatric surgery procedures.

Methods: Adult patients with Type 2 diabetes who underwent bariatric surgery at the Duke Metabolic and Weight Loss Center between 01/01/2000 and 04/10/2017 and with 1-year follow-up were included. Diabetes remission was defined as HbA1c < 6.5% and no diabetes medication. The association of pre-operative DiaREM scores on 1-year diabetes remission was assessed through logistic regression, controlling for age, gender, race, procedure type, pre-operative BMI, hypertension, and hyperlipidemia.

Results: 349 patients were included in the study. By increasing one-unit in pre-operative DiaREM scores, the odds

of 1-year remission decreases by about 19%(OR:0.81, 95%CI:0.77-0.85, p<0.001). In terms of outcomes by procedures, there was no significant difference in remission between RYGB and SG (OR:0.76, 95%CI:0.32-1.76, p=0.99). Compared to the Roux, ABG patients have decreased odds of remission (OR:0.19, 95%CI:0.07-0.54, p=0.001) while DS patients have an increased odds remission (OR:2.33, 95%CI:0.95-5.72, p=0.003).

Conclusion: Baseline DiaREM score is a strong predictor of diabetes remission at 1-year post-surgery independent of bariatric procedures.

A168

Dysphagia predicts greater weight regain after Roux-en-Y gastric bypass

Thomas Runge *Durham NC*[1], Pichamol Jirapinyo *Chestnut Hill MA*[2], Walter Chan *Boston MA*[2], Christopher Thompson *Boston MA*[2]
University of North Carolina[1] Brigham and Women's Hospital[2]

Background/Aims: A significant minority of patients complain of dysphagia following Roux-en-Y gastric bypass (RYGB). Our observations suggest some of these patients increase intake of calorie-dense liquid and soft foods. We therefore hypothesize that dysphagia may promote weight regain (WR) in this patient population.

Methods: This was a retrospective cohort study of patients who underwent gastric bypass at a tertiary care center. Cases were identified from a prospective database of patients receiving high resolution esophageal manometry (HRM) for dysphagia. Controls were randomly selected, using a randomization protocol, from all patients who underwent RYGB and did not have a diagnosis of dysphagia. Weight, BMI, symptoms, dietary logs, and HRM findings were assessed. Chi-squared t-test, and multiple logistic and linear regression calculations were used.

Results: 49 patients with dysphagia following RYGB were included, as were 115 controls. Groups had similar demographics. Mean WR was greater in cases than in controls (15.7 vs. 10.3 kg, respectively; p=0.01), as was percent WR as a fraction of lost weight (median 24.1% vs. 19.5%, p=0.03). Regain of 15% or more of nadir weight was more common in cases vs. controls (54% vs. 38%, respectively, p=0.034) when adjusting for baseline BMI, age at surgery, and race. Dietary histories suggested that, among those with dysphagia, patients with increased reliance on soft or liquid calories gained more weight.

Conclusion: More than half of patients with dysphagia following RYGB regain significant weight. Screening for and aggressively managing dysphagia in these patients is important to help limit weight regain.

A169

Predictors of Long Term Weight Loss after Bariatric Surgery

William Chang *Fort Gordon GA*[1], Devon Hawkins *Ft. Gordon GA*[1], Joel Brockmeyer *Evans GA*[1], Byron Faler *Evans GA*[1], Balakrishna Prasad *Fort Gordon GA*[1]
Eisenhower Army Medical Center[1]

Background: Bariatric surgery provides sustained weight loss and improves comorbidities. However, long term data has shown that patients gradually regain weight after 1 year. Several factors have been associated with poor weight loss after bariatric surgery. We investigated factors associated with poor weight loss following laparoscopic sleeve gastrectomy and Roux-en-Y gastric bypass.
Methods: Retrospective review of 247 patients who underwent laparoscopic sleeve gastrectomy or Roux-en-Y gastric bypass between 2010-2012 at Eisenhower Army Medical Center and followed for 5 years postoperatively. Factors of age, type of surgery, sex, hypertension, depression, and diabetes are analyzed in univariate and multivariate analysis with percent total weight loss (%TWL) and BMI change as primary endpoints measured at 3 and 5 years.
Results: Average BMI change increased until 1 year (11.9) and decreased to 10.3 and 9.0 at 3 and 5 years post-surgery. Age, diabetes, hypertension and type of surgery significantly influenced weight loss at 3 and 5 years on univariate analysis. However, patients with diabetes, hypertension and sleeve gastrectomy were significantly older than comparable control group. Multivariable analysis to control for the effects of age showed that only type of surgery but not diabetes or hypertension was still associated with poor %TWL and BMI change at 3 and 5 years.
Conclusion: While presence of hypertension and diabetes initially appeared to be associated with weight recidivism, their impacts were negligible on multivariable analysis. However, age and sleeve gastrectomy are independent risk factors. Caution should be given when performing laparoscopic sleeve gastrectomy on patients with advanced age.

A170

Endoscopic Sleeve Gastroplasty in Children and Adolescents with Obesity: Outcomes During the First Year

Aayed Alqahtani *Riyadh* [1], Yara Alqahtani [2], Abdullah Al-Darwish *Riyadh* [3], Mohamed Elahmedi *Riyadh Central Region*[2]
King Saud University[1] Obesity Chair, King Saud University[2] Obesity Chair, KSU[3]

Background
Endoscopic sleeve gastroplasty (ESG) utilizes full-thickness sutures that

restrict the stomach to a sleeve-like configuration. Herewith, we report our experience with pediatric patients who underwent Primary ESG.
Objectives
To report weight loss, morbidity, and revisions, during the first year in children and adolescents who underwent ESG.
Methods
Our prospective pediatric bariatric outcomes database was queried for data on pediatric patients who underwent ESG under our standardized protocol and clinical pathway. ESG was offered as day-case.
Results
The 55 patients in this study had a baseline body mass index (BMI) and age of 33.0 ± 5.0 and 17.3 ± 2.5 (range: 11-21) years, respectively. Fifty-one (92.7%) were females. Mean % excess weight loss at one (n=45), three (n=31), six (n=24), nine (n=13), and twelve months (n=5) was 46.7 ± 29.6%, 58.7 ± 39.2%, 66.0 ± 42.2%, 79.2 ± 49.5%, and 60.0 ± 48.3%, respectively. One patient (aged 19.8 years) requested removal of endoscopic stitches due to abdominal pain. During the first week, 30 (54.5%) required oral analgesia and antispasmodics for abdominal pain and nausea, and 18 (32.7%) visited the emergency room (ER). During the first, third, sixth, and ninth months, 53.3%, 38.7%, 33.3% and 15.4% reported taking oral analgesia.There were no ER visits after the first week. One patient had Redo-ESG after one year. There were no hospital admissions, mortality, or significant morbidity.
Conclusions
ESG is safe and effective in obese pediatric patients. Abdominal pain and nausea occur in half of patients during the first week.

A171

National Post-Bariatric Surgery Outcomes in Patients with Kidney Disease

Colleen Tewksbury *Glenside AL*[1], Jordana Cohen *Philadelphia PA*[2], Samuel Torres Landa *Philadelphia PA*[2], Octavia Pickett-Blakely *Philadelphia PA*[2], Noel Williams *Philadelphia PA*[2], Kristoffel Dumon *Philadelphia PA*[2]
University of Pennsylvania Health System[1] University of Pennsylvania[2]

Introduction: Limited evidence exists evaluating post-operative bariatric surgery outcomes in patients with pre-dialysis chronic kidney disease (CKD) or end stage renal disease (ESRD) requiring dialysis. The objective of this study was to compare post-bariatric surgery outcomes in patients with CKD or ESRD to patients without CKD.

Methods: We performed a retrospective cohort study using the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) dataset (2015-2016). Multivariable logistic regression models were used with and without propensity score matching to compare patients with CKD or ESRD to patients without

CKD regarding the risk of developing 30-day mortality, reoperation, intervention, and readmission.
Results: There were 323,034 non-CKD patients, 1,694 CKD patients, and 925 ESRD patients who underwent bariatric surgery. Compared to non-CKD patients, those with CKD or ESRD were older and had higher rates of hypertension, diabetes mellitus, hyperlipidemia, cardiac disease, obstructive sleep apnea, and ASA class ≥4 ($p<0.001$). After both adjusting and matching for important comorbidities and surgical risk factors, CKD and ESRD patients had a significantly increased risk of 30-day reoperation, intervention, and readmission rates, but no difference in mortality risk compared to non-CKD patients.

Conclusions: Bariatric surgery is a safe procedure for patients with kidney disease with regard to mortality risk. However, CKD patients do experience more reoperations, interventions, and readmissions compared to the general population. Providers should counsel CKD patients on the greater risk of these adverse outcomes following bariatric surgery. Future research should focus on potential interventions to reduce reoperation and readmissions in these patients.

A172
Hospital vs. Surgeon Volume and Bariatric Surgery Outcomes-What Matters Most?.

John Morton *Stanford CA*[1], Kristopher Huffman *Chicago IL*, Arielle Grieco *Chicago IL*, Stacy Brethauer *Cleveland OH*, Anthony Petrick *Danville PA*, David Provost , Wayne English *Nashville TN*, Matthew Hutter *Boston MA*, Teresa Fraker *Chicago IL*, Eric DeMaria *Richmond VA*, Samer Mattar *Seattle WA*, Cliff Ko
Stanford School of Medicine[1]

Background
The hospital volume and patient outcome relationship is well established in bariatric surgery; however, the impact of surgeon volume is not as well-defined.

Methods
Using MBSAQIP data registry for 2016, 30-day morbidity following primary laparoscopic sleeve (SG) and gastric bypass (GB) for ages 18-75 was examined. Utilizing nested regression models, the relationship between operative morbidity and surgeon and hospital volume for 2016 was examined, with adjustment for characteristics of the patients, surgeons, and hospitals.

Results
106,223 laparoscopic sleeve gastrectomy and 38,697 laparoscopic gastric bypass surgeries were reviewed. Within this population, there were 1819 and 1468 surgeons performing SG and GB respectively with 77.7 % of surgeons operating at a single hospital. Additionally, 776 and 694 hospitals

performed SG and GB respectively. Surgeon volume was divided into terciles for both procedures (SG, <20, 20-65, >65 and GB, <6, 6-26, >26). Hospital volume was divided into terciles for both procedures (SG, <66, 66-151, >151 and GB, <17, 17-56, >56). For Sleeve, unadjusted continuous surgeon volume and hospital volume were significant at p = .0003, p = 0.0626, respectively. For Bypass, unadjusted continuous surgeon volume and hospital volume were significant at p < .0001, p = 0.0184, respectively. The adjusted odds ratio for morbidity (low-volume vs. high-volume surgeon) was 1.336 for SG and 1.528 for bypass. Surgeon volume accounted for a large proportion of the apparent effect of the hospital volume, sleeve 71% and bypass 70%.

Conclusion: The association of hospital volume upon bariatric morbidity is explained partly by surgeon volume.

ASMBS Quickshots Abstract Session II
Thursday, November 15th, 2018 8:00am-9:45am

A173

Jejuno-ileal loop bipartition (JILB): a novel stand-alone or sleeve plus procedure

Xiong Zhang *Shanghai* [1], Peng Zhang *Shanghai* [1]
Shanghai Pudong Hospital[1]

Background: Clinical outcome of sleeve gastrectomy (SG) can be leveraged by addition of intestinal manipulations, i.e. duodeno-jejunal bypass (Sleeve+DJB) or duodeno-ileal bypass (SADI-S). We designed a novel jejuno-ileal loop bipartition (JILB) procedure as shown in Figure 1, which can be potentially added to SG too. The purpose of present study was to investigate the efficacy of JILB on weight loss and diabetes remission.

Methods: High fat diet-induced obese mice with typical diabetic phenotypes were randomly divided into 2 groups, receiving either JILB (n=8) or Sham (n=8) procedure. JILB was performed as Figure 1. Age-matched naïve mice served as normal controls. Body weight, food intake, fasting plasma glucose (FPG), fasting plasma insulin (FPI) and oral glucose tolerance test (OGTT) were measured *in vivo* before and 2, 4, and 8 weeks after the surgery. GLP-1 was measured before and 15 min after oral glucose challenge at the 9th week postoperatively.

Results: Comparing with sham animals, JILB did not affect food intake, but led to significant lower body weight, lower FPG, lower FPI and improved glucose tolerance at all measuring time points postoperatively. In addition, GLP-1 level in JILB group was significantly higher than sham group after oral glucose challenge.

Conclusion: JILB is a promising procedure that leads to excellent weight loss and diabetes remission. JILB reduces effective length of intestine finabsorption, but without excluding any portion of intestine from food passage or causing blind loop syndrome. It can be either a reversible stand-alone procedure for children and adolescents, or a sleeve plus procedure.

A174

Longer Common Channels In Duodenal Switch Improves Vitamin A Absorption And Albumin Levels, But Can Negatively Impact Weight Loss In The Super Obese Patient: Implications For The Single Anastomosis Duodenal Switch.

Lindsey Sharp *Raleigh NC*[1], Dustin Bermudez *Raleigh NC*[1], Tricia Burns *Raleigh NC*[1], Krista Herrell *Raleigh NC*[1], Erica McKearney *Raleigh NC*[1], Peter Ng *Raleigh NC*[1], Jillian Vari *Raleigh NC*[1]
UNC/Rex Healthcare[1]

Introduction: The impact of common channel (CC) length on vitamin absorption, albumin levels, and overall weight loss is not fully known.

Hypothesis: Longer CC lengths performed in lower BMI patients should result in lower risk of vitamin A deficiency and improved albumin levels, without negatively impacting overall weight loss.

Study Design: A retrospective analysis of 511 consecutive DS procedures performed between June 1st, 2015 and December 31st, 2016 at a single institution. The primary endpoints in patients having either a 100 cm, 150 cm, or 200 cm CC were: percent excess weight loss (%EWL) at 6, 12, 18, and 24 months; vitamin A levels at 6, 12, and 24 months; and albumin levels at 6, 12, 18, and 24 months postoperatively.

Results: For patients with pBMI >50, %EWL for the 100cm and 150 cm length CC groups at 18 months was 68% vs. 58%, respectively ($p<0.05$). Patients with pBMI<50 had %EWL of 79% and 90% in the 100cm and 150 cm CC groups, respectively ($p>0.1$). Rates of vitamin A deficiency were also lower in the longer CC groups (12% vs. 23% at 12 months postop) ($p<0.05$). At 12 and 24 months, the albumin levels (g/dl) were 3.9 in the longer CC length groups and 3.6 in the 100cm CC length group ($p<0.05$).

Conclusions: Longer CC lengths do not seem to negatively impact overall weight loss in short term follow-up, except in patients with pBMI > 50. Vitamin A and albumin levels are also higher in patients with longer CC limbs.

A175

Preoperative Intragastric Balloon for reduction of surgical risk in 273 patients with BMI > 50kg/m²

Afonso Sallet *São Paulo* [1], Carlos Pizani *São Paulo* [1], Thomaz MONCLARO *São Paulo* [1], Ana Caroline Fontinele *São Paulo* [1], Dirceu Santos *São Paulo* [1], Marcelo CARNEIRO *Sao Paulo* [1], Eduardo Sticca *São Paulo* [1], Sansiro de Brito *São Paulo* [1], Carlos De Souza Filho *São Paulo* [1], PAULO SALLET *SAO PAULO SP*[1]
Instituto de Medicina Sallet[1]

Patients with BMI > 50kg/m² usually has a higher surgical risk, complications and risk of mortality. In addition, they frequently present difficulty managing associated diseases. The use of the intragastric balloon (BIB) is well established in the literature as an alternative for acute weight loss of patients with clinically severe obesity associated with control of decompensated comorbidities.
The objective was to analyze the use of BIB as a preoperative procedure aiming an initial weight loss and reduction of surgical risk.
From November 2000 to December 2017, 273 patients with superobesity(mean BMI=55) were treated with the BIB for at least four months before surgical treatment. Associated severe grade diseases were arterial hypertension (40%), diabetes (15%), sleep apnea (32%) and osteoarthrosis (25%).
The mean percent excess weight loss was 26,7%, mean weight loss was 14.4kg and mean BMI reduction was 9,1 kg/m2. BIB group had only minor complications (nauseas, vomits, gastroesophageal reflux) and one case of early balloon withdrawal (within 2 months) due to patient intolerance. We found that 88% of patients showed satisfactory results with improvement in hypertension, diabetes, sleep apnea and with surgical risk reduction from ASA III/IV to ASA II. All these patients were submitted to bariatric surgery (RYGB 82%, LAGB 10% or BPD 8%) without major complications. There was no mortality. Only 12% of patients needed a two-stage surgery. BIB is an effective non-surgical technique to prepare BMI > 50 patients, reducing the severity of major complications and changing surgical risk.

A176

REVISIONAL SURGERY AFTER SLEEVE GASTRECTOMY: GASTRIC BYPASS OR DUODENAL SWITCH?

Ainitze Ibarzabal *Barcelona Barcelona*[1], Amanda Jimenez *Barcelona* [2], Dulce Momblan *Barcelona* [2], Gabriela Chullo Llerena *Barcelona* [2], Ana de Hollanda *Barcelona* [2], Violeta Moizé *Barcelona* [1], Víctor Turrado-Rodríguez *Barcelona* [2], Julio Jimenez-Lillo *Barcelona* , Josep Vidal *Barcelona* [2], Antonio M. Lacy *Barcelona* [2]

Hospital Clínic de Barcelona[1] Hospital Clinic Barcelona[2]

Introduction: Sleeve Gastrectomy (SG) is one of the most performed surgical techniques. However in case of weight loss failure (WLF) there are controversies about which technique should be performed.

Objectives: The aim is to compare the mid- and long-term results of patients undergoing revisional surgery (RS), Duodenal Switch (DS) or a Roux-en-Y Gastric Bypass (RYGB).

Methods: We included seventy-four subjects with RS from SG to RYGB or to DS due to weight loss failure between 2005 and 2016. A paired *t* test was used to evaluate changes between baseline and last follow-up time points within a particular group. Longitudinal changes on BMI, lipid profile, blood pressure, fasting plasmatic glucose and HbA1c were compared between groups using linear mixed-effects models with the Maximum Likelihood method.

Results: Seventy-four subjects were included (DS: 41/RYGB: 33). No significant differences between-groups in age, sex, BMI, EWL (%) or metabolic co-morbidities prevalence were found prior RS. Mean follow-up after RS was similar between groups (DS: 59.2±32.4 months vs. RYGB: 47.2±36.9, p=0.144). At last follow-up DS was related to a significant pre-conversion BMI reduction (41.6±5.7 Kg/m^2 vs. 31.8±5.1 Kg/m^2, p=0.002). Effect of RYGB on pre-conversion BMI not reached statistical significance (41.3±4.4 Kg/m^2 vs. 39.2±6.4 Kg/m^2, p=0.141). DS effect on HbA1c, fasting plasmatic glucose, lipid profile and blood pressure was significantly greater than RYGB ($p<0.05$ for all comparisons).

Conclusions: DS after SG is more effective to treat weight loss failure and obese-related comorbidities than RYGB. In the mid-long term RYGB have limited impact on BMI.

A177

Disparity in peri-operative outcomes among ethnic minority compared to caucasian patients following bariatric surgery

Allison Bruff *Philadelphia PA*[1], Michael Mazzei *Philadelphia PA*[1], Michael Edwards *Philadelphia PA*[1]
Temple University Hospital[1]

Background

Bariatric surgery remains a safe and effective treatment for severe obesity. Ethnic minorities are disproportionately impacted by obesity, but are less likely to undergo bariatric surgery. There remain controversies about whether there is disparity in outcomes among ethnic minorities following bariatric surgery.

Study Aim
To examined perioperative outcomes among ethnic groups following primary bariatric surgery.

Methods
Patients who had a primary bariatric operation in 2015-2016 were identified from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBS-AQIP) database. Descriptive and multivariate regression analyses were performed.

Results
Over 303,000 patients had a primary bariatric operation. Only 18% and 12.7% were Black and Hispanic patients, respectively. Mean age, body mass index (BMI) and length of stay (HLOS) were 45.1±11.9 years, 45.1±8.4 kg/$m^2$and 1.79 ±1.9 days. Mean BMI and HLOS were significantly higher for Black patients ($p< 0.001$). Overall mortality was 0.11%. Black patients had a significantly higher rate of mortality, unplanned ICU admission, reoperation, readmission, intervention and other complications, compared to White patients (Table 1). Hispanic patients were overall younger, smaller and healthier, and had significantly lower complication rates compared to White patients.

Conclusion
Black patients had a higher rate of mortality and other complications following bariatric surgery, compared to other ethnic groups. Overall complication rates were lower among Hispanic patients compare to White and Black patients. Selection bias may have contributed to these findings as Black patients were older and had a higher BMI and preoperative rates of hypertension and renal disease. Further studies are needed.

A178
Metabolic and Bariatric Surgery 30 day Post-op Readmission Reduction
Gwendolyn Crispell *Gainesville FL*[1], Jeffrey Friedman *Gainesville FL*[1]
UF Health Shands[1]

Background: In 2013, the Centers for Medicare and Medicaid Services began tying reimbursement for Metabolic and Bariatric surgery to readmission rates. September of 2016 the need to improve our readmission rates was evident by a rate of 19-21%. Patients were frequently presenting to the Emergency Room (ER) seeking medical care post-operatively.
Objectives: The overall goal was to decrease the observed readmission rate by 15% in 12 months. The second goal was to improve patient understanding of discharge instructions and compliance.
Setting: University Hospital, United States
Methods: PDSA (Plan, Do, Study and Action) A drill down for common cause of readmission was identified as PO intolerance (nausea, vomiting or dehydration). The plan to improve the rate were multiple initiatives over a

period of 6 months. The initiatives included education, protocols and culture change in three settings, outpatient, inpatient and clinic.
Results: The observed 30 day readmission rate in a total of 269 patients went from 18% to 5% over a period of 15 months. The observed rate of ER presentations also decreased from 32% to 15%. The number of outpatient IVF infusions increased slightly from an average of 2-3 patients per quarter to 3-4 per quarter. Patients are able to provided explanation of how to keep hydrated after surgery, where to seek medical assistant for rehydration and signs and symptoms of dehydration both verbally and written.
Conclusions: This quality improvement project decreased use of intensive resources for hydration and standardized efforts to improve hydration resulting in reduced patient readmission.

A179

Revisional surgery results after sleeve gastrectomy. A retrospective cohort study comparing gastric bypass to re-sleeving

Zvi Perry *Cote Saint Luc, Quebec H4W 2E4 YT*[1], Mohammed Al Abri *Montreal QC*[2], Amin Andalib *Westmount QC*[2], Olivier Court *Montreal Quebec*[2], Sebastian Demyttenaere *Westmount* [2]
McGill University Hospital - Montreal general[1] McGill University Hospital[2]

Introduction: Sleeve gastrectomy is becoming the most popular bariatric procedure in the world. However, there is ongoing debate as to what the appropriate surgical procedure is for a failed sleeve gastrectomy. In this study, we aimed to compare revisional surgery in patients who underwent prior sleeve surgery using a gastric bypass versus re-sleeving.
Methods: A retrospective analysis of a prospectively maintained database of laparoscopic
sleeve gastrectomies (LSG) was performed between January 2006 and March 2017. Data analyzed included age, weight loss, postoperative complications and long-term outcomes.
Results: 40 patients who had LSG and then revisional surgery were included, of which 32 (80%) were female. 24 had their revisional operation with a gastric bypass (60%). Mean body mass index (BMI) was 48.5 (±11.1) kg/m2. Basic demographics were the same, and other long-term results were similar between the groups. BMI in the primary sleeve was similar in both groups (47.92 in the bypass group vs. 49.3 in the re-sleeve group, p=0.703), as was BMI before revision (40.6 in the bypass group vs. 41.2 in the re-sleeve group, p=0.842), and the same was true about the BMI after revisional surgery (35.7 vs. 36.9, p=0.609).
Discussion and Conclusions: Controversy exists regarding technical aspects of revisional LSG. In our study, re-sleeving and gastric bypass post sleeve showed similar results in weight

loss and BMI post-surgery. There was no impact on short or long-term results and complications. Longer follow up is needed to determine if this small improvement in excess weight loss remains significant.

A180

Variables Associated with Weight Loss after Laparoscopic Sleeve Gastrectomy: A 10-year follow-up and 8800 BMI Statistical Model Analysis.

Federico Perez Quirante *Weston Florida*[1], Lisandro Montorfano *Weston Florida*[1], David Gutierrez Blanco *Weston FL*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

Introduction

Laparoscopic Sleeve Gastrectomy is the most performed bariatric surgery in the US. Variables that can predict the amount of surgical weight loss at long-term follow-up are still not well understood. The aim of our study is to analyze the preoperative factors that could predict weight loss after LSG.

Methods

We retrospectively reviewed all patients that underwent LSG from 2012 to 2016. A statistical model was created to determine the effect of multiple preoperative variables on weight loss. The statistical model to predict %Estimated BMI Loss(EBMIL) and %Estimated Weight Loss(%EWL) were fit using generalized least squares techniques with an autoregressive-type correlation structure assumed.

Results

A total of 8815 BMI readings from 1166 patients were included in our model with up to 10-year follow. The mean age was 47 years with a preoperative BMI 42.3kg/m2. Younger age, Males, African Americans, Diagnosis of Essential Hypertension, Sleep Apnea and Preoperative BMI (Table 1) were found to have a significant independent impact on weight loss over time, this impact being variable depending on the time of the BMI measurement. Figure 1 exemplifies the predicted impact of one of the multiple measured variables on our statistical model(Gender) on the overall weight-loss up to 10 years of follow-up with the other preoperative variables held fixed.

Conclusion

Our data suggest that multiple preoperative variables can be used to predict surgical weight loss after Laparoscopic Sleeve Gastrectomy. Further prospective studies are needed to be done in order to validate our findings.

A181

Patients undergoing intra-gastric balloon achieve approximately 50% of their target weight loss in the first

month postoperatively: a Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program analysis.

Priscila Armijo *Omaha NE*[1], Dietric Hennings *Omaha NE*[2], Melissa Leon *Omaha NE*[1], Dmitry Oleynikov *Omaha NE*[2], Vishal Kothari *Omaha NE*[2]
Unviersity of Nebraska Medical Center[1] University of Nebraska Medical Center[2]

Introduction

Intra-gastric balloon placement can provide a mean percent total body weight loss (%TBWL) of 10.2% at six-month follow-up. We aimed to evaluate 30-day outcomes and safety of patients undergoing intra-gastric balloon placement.

Methods

The Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP®) was queried for adult patients who underwent primary intra-gastric balloon placement in 2016. Demographics, and preoperative risk factors were collected. Postoperative outcomes included %TBWL, complications, readmission, reoperation, and intervention rates. Statistical analysis were performed using SPSS 23.0.

Results

564 patients were included, with majority being female (79.4%), Caucasian (89.9%), mean age of 48±11.6 years, and mean preoperative BMI of 33±12.5 kg/m^2. 4.3% of patients were smokers, and preoperative diagnosis rates of GERD and diabetes were 21.5% and 12.2%, respectively. 98.2% of patients were discharged within 24 hours of the procedure. One patient was admitted to the ICU, and 7.3% received postoperative treatment for dehydration. Reoperation and readmission rates were 1.1% and 2.7%, respectively, mainly due to nausea, vomiting, and poor nutritional status (N=12). Intervention rate was 3.4%. Patients in this cohort achieved a mean %TBWL of 5.5% (SD: 4.1%), and mean TBWL of 5.6kg within 30-days postoperatively (N=66; 24-30days).

Conclusion

Our data shows that patients met approximately 50% of their target weight loss 30 days after intra-gastric balloon placement. We hypothesize this to be due to increased nausea, vomiting and dehydration. The rapid degree of weight loss in the first 30 days is likely due to intolerance of oral nutrition, not physiologic or behavioral changes.

A182

Ultrasonographic regression of Hepatic Steatosis after Bariatric Surgery

Camila Ortiz Gomez *Weston* [1], David Romero Funes *Weston FL*[1], Mauricio Sarmiento-Cobos *Weston* [1], Rene Aleman [1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

INTRODUCTION
Obesity remains the major risk factor for developing non-alcoholic fatty liver disease (NAFLD), and. bariatric surgery has widely demonstrated a beneficial effect on it. We report our data on NAFLD ultrasonographic regression after bariatric surgery.
METHODS
We retrospectively reviewed all patients who underwent bariatric surgery between 2010 and2017 at our institution. Patients with preoperative and at least one-month postoperative abdominal ultrasound were included. Data collected included baseline demographics, BMI, ALT/AST ratio, and comorbidities. R version 3.3.1 statistical software was used to apply Paired t-test and chi-square in order to determine statistical significance. A binary logistic regression model was used to predict the probability of bariatric surgery improving fatty liver infiltration.
RESULTS
Of the 3020 Patients reviewed, 95(3.14%) patients met inclusion criteria. We observed a predominantly female distribution 81%(n=75), with a mean age of 52.44±13.16 years, and a mean BMI pre-operatively of 45.37±8.71 kg/m2. Gastric bypass was the most prevalent procedure 73.96%(n=71), and the post-operative BMI was 31.34±6.63 kg/ m2.The mean ALT/AST ratio was 1.17±0.39 and 0.98±0.31 preoperative and postoperative respectively (p=0.0169). Preoperative and Postoperative ultrasounds were done at an average of 0.13±0.06 and 2.15±2.16 years respectively. Pre-operative ultrasounds of 51%(n=49) patients, reported hepatic Steatosis, compared to 30%(n=29) postoperatively (p=0.0058). A binary logistic regression model comparing the pre-operative and post-operative presence of fatty infiltration in ultrasound of patients undergoing bariatric surgery determined an OR=1.7 with statistical significance (p=0.031).

CONCLUSIONS
Similarly to other studies, our findings suggest that bariatric surgery regresses ultrasound signs of fatty liver infiltration.

A526
Use of Non-invasive Positive Pressure Ventilation in Patients with Severe Obesity Undergoing Upper Endoscopy Procedures
Makram Gedeon *Hartford CT*
Bristol Hospital

Background: Patients being evaluated for bariatric surgery often undergo preoperative upper endoscopy. Patients with obesity are at increased risk for sedation related adverse events during endoscopy.

Objectives: The study evaluated the effect of non-invasive positive pressure ventilation (NIPPV) in patients with severe obesity undergoing upper endoscopy.

Setting: Community hospital

endoscopy suite, Bristol Hospital, CT.

Methods: Randomized controlled trial assessed the effectiveness of NIPPV in patients undergoing upper endoscopy. Patients were randomized into experimental group NIPPV or control group. Primary endpoints were desaturation events (SpO2 <=94%) and desaturation events requiring intervention (SpO2<=90%). A secondary endpoint was the use of NIPPV as a rescue maneuver in patients who developed a clinically significant desaturation event.

Results: 56 patients with a BMI 40-60 were randomized (N=28 treatment and N=28 control). The relative risk of a desaturation event for the control group compared to the experimental group was 4.00 (95% CI=1.53, 10.07). There was a statistically significant difference in the risk of a desaturation event requiring intervention between the two groups (9 total patients 16.1%, 1 patient 3.6% in the experimental group and 8 patients 28.6% in the control group, p=0.029). All of the patients in the control group who developed a desaturation event requiring intervention were rescued using NIPPV.

Discussion: This study demonstrated the effective use of NIPPV as an adjunct to decrease the incidence of adverse events in patients with severe obesity undergoing upper endoscopy.

A183

The impact of staple line reinforcement on perioperative staple line leak and bleeding rates following sleeve gastrectomy: An analysis of MBSAQIP data registry

Matthew Cunningham-Hill *Philadelphia PA*[1], Michael Mazzei *Philadelphia PA*[1], Michael Edwards *Philadelphia PA*[1]
Temple University Hospital[1]

Introduction: Staple line reinforcement (SLR) is a common technique perceived to decrease leak and bleeding rates after sleeve gastrectomy (SG) for morbid obesity. There is currently no consensus SLR method, nor is its clinical efficacy truly known. SLR use and method is left to each surgeon.

Study Aim
To determine if staple line reinforcement reduces leak and bleeding rates after sleeve gastrectomy.

Methods: Using the MBSQIP database, we identified patients who underwent a SG with and without SLR in 2015 and 2016. Univariate analysis using Wilcoxon rank-sum and chi-square tests of unmatched and 1:1 propensity-matched data was performed to compare outcomes between these cohorts.

Results: 212,538 SG cases were identified, among which SLR was used in 143,563 (67.5%). In unmatched analysis, bleeding and reoperation rates were significantly higher in the no-SLR

cohort ($p < 0.001$; $p = 0.005$). In analysis of cohorts matched by age, BMI, and common preoperative comorbidities, bleeding and reoperation rates remained significantly higher in those without SLR utilization ($p = 0.003$; $p < 0.001$). Readmission, mortality, leak and SSI rates were lower in the SLR cohort, but not statistically significantly so (Table 1).

Conclusions: Staple line reinforcement appears to significantly reduce bleeding and reoperation rates following sleeve gastrectomy and has no significant impact on staple line leak rates and other complications. While further prospective studies factoring in SLR method and staple characteristics are needed, this large database analysis supports the use of SLR during SG to reduce the risk of perioperative bleeding.

A184

How Many Pills are Enough? Opioid Use and Postoperative Pain Levels in Bariatric Surgery Patients.

Melissa DeSouza *Portland OR*[1], Tarin Worrest *Portland OR*[1], Elizabeth Dewey *Portland OR*[1], Vanessa Shay *Portland OR*[1], Farah Husain *Portland OR*[1]
Oregon Health and Science University[1]

Background:

Bariatric patients are at risk for postoperative chronic opioid use. We studied opioid use following bariatric procedures to determine if patient preoperative pain expectations influence acute postoperative opioid needs.

Methods:

A single institution, prospective survey-based study of initial sleeve gastrectomy (SG) or Roux-en-Y gastric bypass (RYGB) patients between September 2017 and February 2018 was completed. Patients underwent standardized preoperative teaching. Surveys were administered preoperatively, at 1-week and 1-month postoperatively assessing pain level, expectations, and medication use.

Results:

Seventy-two patients were studied. The median age was 43 years (IQR 35-53), and median BMI was 43.6 (IQR 40.3-48.9). 81% underwent SG while 19% underwent RYGB. Preoperative pain expectations were as follows: 8.8% expected a 0-2 pain level, 32.5% a 3-4 pain level, 37.5% a 5-6 pain level, and 21.3% a 7-10 pain level. Patient-predicted expected pain did not correlate with reported postoperative pain ($p=0.11$, Table 1). Time to opioid discontinuation is shown in Figure 1. For patients that received the median opioid prescription, 450mg morphine equivalent, 50% had 20 or more pills remaining after a week, and 32% had 20 or more pills remaining after a month. Patient accuracy in predicting postoperative pain was not

associated with amount of opioid used (p=0.16).

Conclusions:

Despite standardized preoperative teaching, bariatric surgery patients cannot accurately predict their postoperative pain. Patients were mostly able to stop opioids after a week, however, most patients had excess medication, indicating over-prescription of opioids. Studies on preoperative teaching and appropriate opioid prescribing are arranted in this patient population

A185

Effects of a New Procedurless Intragastric Balloon (Elipse®)on Metabolic Syndrome and Pre-diabetes: Italian Group's Experience on 324 patients with overweight and obesity

ALFREDO Genco *Rome* [1], Cristiano Giardiello *Napoli Caserta*[2], MARCELLO LUCCHESE *FIRENZE* [3], Michele Rosa *MODICA* [4], Marco Rovati *Milano* [5], Samir Giuseppe Sukkar *Genova* [6], Andrea Formiga *Monza* [7], Ilaria Ernesti *Rome* [8], marco zappa *MONZA* [9]
Department of Surgical Sciences, Sapienza University of Rome, Italy[1] Chief of General Surgery dept., "Pineta Grande Clinic", Caserta, Italy[2] Chief of Bariatric Surgery dept., "Fondazione Poliambulanza", Brescia, Italy[3] "Micros Clinic" Ragusa, Italy[4] Dept. Of General Surgery, University of Milan, Milan, Italy[5] Chief of Dietetics and Clinical Nutrition Unit, "San Martino University", Genova, Italy[6] Dept. Of General Surgery, "Istituti clinici Zucchi" San Donato Group, Monza, Italy[7]Department of Experimental Medicine-Medical Physiopathology, Food Science and Endocrinology Section, Sapienza University of Rome, Rome, Italy.[8] Chief of General Surgery dept., "FateBeneFratelli Hospital", Erba, Italy[9]

Introduction: Elipse® Balloon(Allurio n Technologies, Natick, MA USA) is a novel weight loss device that does not require endoscopy or sedation for either placement or removal. Our aim was to assess the effects of Elipse® on metabolic outcomes associated with obesity.

Methods: Elipse® is swallowed inside a dissolvable vegetarian capsule and filled with 550 mL of fluid. It remains in the stomach for 4 months and then, after opening spontaneously, is naturally excreted. Data were collected from the Italian Elipse Group.

Results: 324patients (59%female) with mean age of 45.77±11.1 years, mean weight 103.99±23.6kg and mean BMI of 36.8±6.15 (27-45 kg/m^2) were included. The baseline metabolic data are shown in Table 1. After 16 weeks, the mean weight loss was 14.3 kg, total body weight loss was 13.75%,mean

percent excess weight loss was 51.3% and the mean BMI reduction was 4.98kg/m^2. Four balloons (1.3%)were removed early due to intolerance. One emptied balloon (0.3%) was naturally excreted early after 90 days. There were no bowel obstructions or any other serious adverse events. There was a statistically significant improvement for some components of metabolic syndrome and a positive effect on glucose metabolism (Table 2).

Conclusion: Elipse®,a procedureless intragastric balloon, is safe and effective in inducing weight loss and results in a significant reduction in obesity-related metabolic diseases including metabolic syndrome and pre-diabetes.

A186

Comparison of peri-operative bariatric complications using two large databases: does the data add up?

Benjamin Clapp *El Paso TX*[1], Robert Cullen [2], Christopher Dodoo *El paso TX*[2], Carl Devemark *El Paso TX*[2], Elizabeth De La Rosa *El Paso TX*[2], Jesus Gamez [2], Alan Tyroch *El Paso TX*[2]

Benjamin Clapp MD PA[1] TTUHSC Paul Foster School of Medicine[2]

Introduction: MBSAQIP database is a prospective database that looks at short term (30 day outcomes) of bariatric surgery. Every ACS verified Center of Excellence (COE) in the U.S. submits data to this database. This database theoretically captures adverse events of bariatric surgery at U.S. COEs.

An alternative method to track complications is to use payor databases which collect billing data and ICD-9 diagnoses. The Texas Inpatient Public Use Data File (PUDF) uses hospital discharge information to compile data on admission and discharge diagnoses. There were over 700,000 records included in 2015. We hyopothesize that complications rates will be different comparing the two databases.

Methods: The Texas Inpatient PUDF and MBSAQIP were queried for patients undergoing bariatric surgery in the year 2015. Admission diagnoses of morbid obesity with a discharge diagnosis of bariatric surgery status and also the ICD-9CM and CPT codes for bariatric surgeries were queried. Common postoperative complication codes were also included (leak, sepsis, hemorrhage, skin and soft tissue infection, DVT/PE, pneumonia, prolonged ventilation).

Results: There were 137,291 patients in MBSAQIP and 9474 patients in the PUDF that underwent bariatric surgery. Although the patient populations were similar, patients in the PUDF had greater adjusted and unadjusted Odds Ratio (OR) for common complications. There was no significant difference in mortality rates.

Conclusion: There is a significant

difference in the rates of perioperative complications of bariatric surgery when different databases are used. The patients in the claims based database had statistically significant higher rates of complications.

ASMBS Quickshots Abstract Session III
Thursday, November 15th, 2018 8:am-9:45am

A187
Impact of Bariatric Surgery on Thyroid Function and Medication use in Patients with Hypothyroidism

Cristian Milla Matute *Davie FL*[1], Maria Fonseca Mora *Weston FL*[1], David Romero Funes *Weston FL*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

INTRODUCTION
Obesity is associated with multiple comorbidities including hypothyroidism. The correlation between obesity and hypothyroidism revolves around several mechanisms, including adipokines which impact thyroid function, a hypothalamic-pituitary-adipose axis, and the stimulatory effect of leptin on thyroid activity. The aim of this study is to describe the effects of rapid weight loss on hypothyroid patients and their medication use.

METHODS
We retrospectively reviewed all patients who underwent bariatric surgery between 2010 and 2016. Charts were reviewed to identify patients with an active diagnosis of hypothyroidism before bariatric surgery, demographic variables and perioperative data were analyzed on a 12 month after surgery period. SPSS software was used to apply chi-square.

RESULTS:

Of the 1,581 patients reviewed, 35 (2.2%) had an active diagnosis of hypothyroidism. The patient population was predominantly 82% (n=29) female and white 80% (n=28), with a mean age of 47.70±12.45 years. The most prevalent procedure was RNYGB 88% (n=31), followed by LSG 12% (n=4).

At 12 months the BMI decreased by 13.15kg/m2 ($p<0.0001$), with a percentage of estimated BMI loss (%EBMIL) of 75.30±23.34%. The mean thyroid stimulating hormone measurement preoperatively was 3.01±2.52 (u/dl) versus 2.5±2.3 ($p= 0.153$). The mean Thyroxine measurement preoperatively was 1.43±1.38 versus 1.29±1.24 postoperatively measurement ($p= 0.021$). Regarding thyroid replacement hormone therapy, preoperatively the mean dosage was 86.73±65.9 (mcg) versus 73.52±60.04 postoperatively ($p= 0.071$).

CONCLUSIONS
Thyroid function seems to improve 12-month post-bariatric surgery. Further larger studies are needed to corroborate these conclusions.

A188

Glycemic metabolism and enterohormonal evaluation in early postoperative Roux-en-Y gastric bypass in morbidly diabetic obese patients: comparison the oral and gastrostomy route

Marco Santo *Sao Paulo* , Gustavo Fernandes , Filippe Mota *São Paulo* [1], GABRIELA ZANDONADI GONCALVES *SAO PAULO* , Andrea Bastos , Daniel Riccioppo *Sao Paulo Sao Paulo*, Denis Pajecki , roberto de Cleva *São Paulo*
University of São Paulo[1]

INTRODUCTION: Type 2 diabetes mellitus is a disease correlated with obesity. Obese patients has suppressed incretin effect and inbalance of glycemic homeostasis. Studies have shown improvement in DM2 after Roux-en-Y gastric bypass (RYGB). The mechanisms of glycemic control may be long-term and short-term. The mechanisms of early action are linked to caloric restriction, improvement of insulin resistance, pancreatic beta cell function and return of the incretin effect through the increase of GLP1 and GIP, but data are conflicting. METHODS: Eleven diabetic obese patients underwent RYGB with gastrostomy in gastric remnant after initial 10% weight loss. Patients were submitted to assessment of enterohormones, glycemic profile and Oral Glucose Tolerance Test(OGTT) in the preoperative period in a time curve that was compared to the postoperative period by Oral Via and Gastrostomy Via up to 7 days after the procedure. RESULTS: Mean preoperative weight was 120.97 ± 17.02 kilograms, mean BMI 44.06 ± 6, 59 kg/m2, mean fasting blood glucose 194.55 ± 62.45 mg/dl and glycated hemoglobin 8.74 ± 1.64%. 77.7% of the patients presented remission of DM2 evaluated by the OGTT. Significant decrease in glycemia, insulinemia and HOMA-IR was also observed, regardless of the route of administration. There was a significant increase in GLP1 and reduction of GIP by the postoperative

oral route. Ghrelin did not change. CONCLUSION: A reduction in glycemia and peripheral insulinal resistance
was observed in early postoperative days of RYGB, independent of the food route. The change in entero-hormones was only observed in the postoperative oral route.

A189

The Relationship between the Frequency and Duration of the Preoperative Assessment Process and Early Postoperative Weight Loss

Colleen Tewksbury *Glenside AL*[1], Jingwei Wu *Philadelphia PA*[2], Kelly Allison *Philadelphia PA*[3], Heather Gardiner *Philadelphia PA*[2], Kristoffel Dumon *Philadelphia PA*[3], Noel Williams *Philadelphia PA*[3], David Sarwer *Philadelphia PA*[2]
University of Pennsylvania Health System[1] Temple University[2] University of Pennsylvania[3]

Background: The frequency of clinical visits and duration of the preoperative assessment process prior to bariatric surgery is often dictated by third party payers. Few studies have investigated if these encounters are associated with greater postoperative weight loss or promote postoperative follow up with the bariatric surgery program.

Methods: Fifteen hundred bariatric surgery cases from 2009-2014 from a single institution were analyzed. Preoperative encounters were abstracted from the electronic medical record and categorized by type. The relationship between the frequency of preoperative contacts and the duration of the preoperative assessment period with postoperative weight and follow up were assessed by mixed models and logistic regression over the first 24 postoperative months.

Results: The preoperative frequency of encounters and duration of the preoperative assessment process were not associated with postoperative percent weight loss or postoperative follow up in the first two years. A greater number of individual visits with the bariatric surgery team (-0.26%, 95% CI -0.47%, -0.05%; P = 0.02) and more frequent visits with the psychologist (-1.46%, 95% CI -2.79%, -0.12%; P = 0.03) were associated with smaller weight loss.
Conclusion: These results suggest that the intensity and length of the preoperative assessment period, which is often mandated by third party payers, is unrelated to early postoperative weight loss. Additional individual visits with clinical team members were associated with smaller weight losses. These professionals may be using their clinical experience to identify potential issues with patients and recommending additional preoperative care in an effort to optimize outcomes.

A190

Mobile Health Interventions are Ineffective in the Bariatric Surgery Population

Patricia Cherasard *Garden City NY*[1], Collin Brathwaite *Patchogue NY*[1], Alexander Barkan [1], Keneth Hall *Garden city NY*[1], Barbara Brathwaite *Mineola NY*[1], Melissa Fazzari *Mineola NY*[1], Donald Brand *Mineola NY*[1], Borivoje-Boris Djokic *Fort Lauderdale FL*[2], Mary Granoff [2], Jeff Ritter [2], Mary Schaefer *Garden City NY*[1], Omodolapo Familusi *Garden City NY*[1], Karen Norowski *Mineola NY*[1], Gerald Dessart *Smithtown NY*[3]
NYU Winthrop Hospital[1] Keiser University[2] RevAscent[3]

Background: Telehealth interventions have been found to be efficacious in managing chronic diseases. Prior teleconferencing research of our postoperative bariatric patients was equivocal. We hypothesized that utilizing mobile health (mHealth) wearable devices with a Clinical Decision Support (CDS) system would enhance weight-loss outcomes.

Methods: A seven-month prospective randomized clinical pilot study was conducted at our MBSAQIP Center of Excellence. Forty patients received mHealth devices after Laparoscopic Sleeve Gastrectomy (LSG), and were randomized into two groups: intervention (A) and control (B). Patients were monitored monthly for 16 to 20 weeks. The CDS system provided weekly updates on Group A, leading to interventions using the Trans Theoretical Model (TTM). They were compared to a historical group (C) of LSG patients without mHealth interventions. Data was analyzed by descriptive statistics. Multiple linear regression analysis was used to compare outcomes. The primary outcome variable was BMI.

Results: Baseline BMI: group A (n=20) 43.0±4.6 kg/m^2; group B (n=20) 46.0±9.0 kg/m^2; group C (n=40) 43.7±5.1 kg/m^2. Final BMI values were 34.9±4.6 kg/m^2, 36.6±7.5 kg/m^2, and 35.5±4.7 kg/m^2 in groups A, B and C respectively after 4.1±0.86, 4.2±0.82, and 4.4±0.71 months. BMI change was 8.2 kg/m^2 (2.4 kg/m^2/month) in group A, 9.5 kg/m^2 (2.3 kg/m^2/month) in group B and 8.1 kg/m^2 (2.3 kg/m^2/month) in group C. Change was insignificant between Groups A and B (p=0.07).

Conclusion: mHealth monitoring with wearable devices does not appear to influence weight-loss after bariatric surgery. Results highlight the need for further research and development of targeted interventions.Further study is warranted.

A191

Revisiting COI: A Comparison of Public Open Payments Data and Financial Disclosures for Obesity Week 2016

Tara McGraw *Wilkes-Barre PA*[1], Ryan Horsley *Scranton PA*[1], Jai Prasad *Danville PA*[1], Jacob

Petrosky *Danvillle PA*[1], James Dove *Danville PA*[1], Marcus Fluck *Danville PA*[1], Anthony Petrick *Danville PA*[1]
Geisinger[1]

Introduction: The website openpaymentsdata.cms.gov was established by the Affordable Care Act. It has made payments from industry to physicians and hospitals publicly available since 2013. The purpose of our study was to compare speaker financial disclosures at Obesity Week 2016 (OW2016) to the publicly available Open Payments database.

Methods: The title of all presentations and the names of all moderators, speakers and discussants at ASMBS or joint ASMBS Speaker sessions were obtained from the OW2016 conference schedule. Disclosure forms for all speakers were then compared to Open Payments data for 2016. Taxable income was considered as potential for conflict of interest (COI) but not food and travel reimbursements.

Results: A total of 370 speakers were identified (45% Potential COI; Disclosed 22%, Undisclosed 23%) who were associated with 721 presentations (72% Potential COI; Disclosed 33%, Undisclosed 39%). (Table 1). A total of 109 companies made payments to speakers totaling $3,000,000. (Table 2)

Conclusions: Open Payments data has been available to the public for 3 years with 2016 being the most recent year published. This study reveals a significant potential for COI at OW2016, particularly in consensus panels and peer-reviewed talks and videos. The study suggests ASMBS should consider redesigning the disclosure process for scientific meetings. There is an opportunity to better educate speakers and inform attendees about potential COI. Otherwise, it is inevitable that investigative use of the Open Payments database will lead to such efforts by "watch dog" groups or government agencies.

A192

Men and women differ in body composition: using bioelectric impedance technology to challenge the status quo why Fat-Mass-Index should replace Body-Mass-Index

Erika La Vella *Corvallis OR*[1], Michael Saleh *Portland OR*[2], Kirsti Troyer *Corvallis OR*[1], Olivia Pipitone *Corvallis OR*[1], Donald Yarbrough *Corvallis OR*[2]
Samaritan Health Services[1] Western University-COMPNW[2]

Background: BMI does not differentiate lean mass from fat mass and is confounded by age, race, morphology, and sex. Bioelectric impedance analysis (BIA) distinguishes lean from fat mass in convenient clinical settings.
Objective: Establish body composition norms before and after bariatric surgery

Methods: 561 persons with obesity ages 18-72 presented between May 2015 and December 2017. BIA was performed with the SECA mBCA preoperatively and several time points postoperatively. BMI, FFMI (fat-free mass/height squared) and FMI (fat-mass/height squared) were calculated. Percentage of excess FMI loss and percentage of excess FFMI loss were calculated and compared.
Results: There were significant differences across gender for both FMI ($p<0.001$) and FFMI ($p<0.001$). Men had lower estimated FMI and higher estimated FFMI compared to women. No significant difference in the rate of weight loss by BMI, FMI, and FFMI decrease between men and women. Women had an average loss of excess fat mass index 61.2% and 73.1% at 6 months and 1 year respectively and an average loss of fat free mass index 41.8% and 77.1% at 6 months and 1 year respectively. Men had an average loss of fat mass index 62.1% at 6 months and an average loss of fat free mass index 58.4% at 6 months. Data for men beyond 6 months not available.
Conclusions: Body composition between men and women is different but the trajectory of weight loss is similar. BIA is convenient technology for office use. Fat Mass Index has potential to replace BMI having qualification for surgery implications.

A193

When should endoscopy and 24h pH-test be done before bariatric surgery?

Guilherme Mazzini *Richmond* [1], Daniel Navarini *Passo Fundo NM*[2], Guilherme Campos *Richmond VA*[1], Jad Khoraki *Richmond VA*[1], Fabio Barão *Passo Fundo* [2], Carlos Madalosso *Passo Fundo - RS BRAZIL* [2], Richard Gurski *Porto Alegre* [3]
Virginia Commonwealth University[1] Gastrobese[2] Federal University of Rio Grande do Sul[3]

Background: The presence of gastroesophageal reflux disease (GERD) has an impact on the choice and outcomes of bariatric surgery. However, GERD diagnosis based solely on clinical evaluation has been proven to yield poor results in individuals with and without obesity. We studied the factors associated with abnormal 24h pH-test and the impact on diagnostic approach in patients with severe obesity.
Methods: 93 consecutive patients (BMI>35) were prospectively assessed for GERD symptoms in addition to body composition, upper gastrointestinal endoscopy, esophageal manometry and 24h pH-test.
Results: 50 patients (54%) had GERD symptoms, and 33 (34.5%) had an abnormal 24h pH-test.There were no significant differences between patients with abnormal or normal 24h pH-test in BMI, body composition, the presence of a hiatal hernia, and the proportion of grade A esophagitis (Table 1).

Abnormal 24h pH-test group had higher proportion of defective lower esophageal sphincter (60% vs 36.7%, p=0.03) and grade B esophagitis (33.3% vs 8.3%, p=0.004). Relevant to diagnostic approach, grade C/D esophagitis was only present in the abnormal 24h pH-test group, and the absence of both symptoms and esophagitis was a significant predictor of normal 24h pH-test (likelihood ratio 5.12, p<0.001).
Conclusions: Bariatric patients should have a thorough evaluation for GERD before surgery. The initial approach may rely at least on symptoms and upper endoscopy, but patients with GERD symptoms or grade A esophagitis should have a 24h pH-test, especially if deciding between sleeve gastrectomy and gastric bypass. Prospective studies may define the best approach to predict GERD outcomes after surgery.

A194
First Assistant Impact on Early Morbidity and Mortality in Bariatric Surgery
Mark Mahan *Wilkes Barre PA*[1], Marcus Fluck *Danville PA*[1], David Parker *Danville PA*[1], Jon Gabrielsen *Danville PA*[1], Anthony Petrick *Danville PA*[2], Ryan Horsley *Scranton PA*[1]
Geisinger[1] Geisinger.edu[2]

Background:

The future of bariatric surgery depends largely upon how effectively residents and fellows are trained. The challenge is to assure patient safety during training. Our study compares the impact of first assistants on patient outcomes following Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG).

Methods:

A retrospective review of elective SG and RYGB procedures performed in 2015 and 2016 from the MBSAQIP participant user files was performed. Patient cohorts were categorized by the level of training of the surgical first assistant(FA). Multivariate regression models were developed to determine the impact of the FA level on patient outcomes, adjusting for patient demographics and comorbid conditions.

Results:

Compared to an attending weight loss surgeon as FA, minimally invasive surgery(MIS) fellows and general surgery residents were more likely to have an unplanned admission to the ICU within 30 days (OR1.422 95%CI 1.196,1.691; OR1.206 95%CI 1.034,1.406, respectively, p <0.0001) and were more likely to have a 30-day readmission (OR1.143 95%CI 1.056,1.236; OR1.127 95%CI 1.055,1.204, respectively, p<0.0001). Compared to having a weight loss surgeon as FA, operative duration was significantly longer for all

other assistant levels, or no assistant. ($p<0.0001$)

Conclusion:

The training level of the FA does not impact early patient mortality or reoperation rates following SG or RYGB. However, unplanned ICU admissions and readmissions within 30 days were significantly associated with surgical resident or MIS fellow FAs. Further analysis is needed to understand the cause/effect, but this data provides direction as we redesign residency and fellowship training.

A195

An Evaluation of the Utility of Routine Pathological Examination of the Gastric Remnant Post-Sleeve Gastrectomy.

Kejal Shah *Columbus OH*[1], Emily Benham *Columbus OH*[2], Munyaradzi Chimukangara *Columbus OH*[2], Bradley Needleman *Columbus OH*[2], Sabrena Noria *Columbus OH*[2]
The Ohio State University[1] OSU Wexner Medical Center[2]

Background: Post-laparoscopic sleeve gastrectomy (LSG) resected specimens are routinely sent for pathologic evaluation. In our program where patients undergo pre-operative endoscopy (EGD) with biopsies, we questioned the utility of sending all specimens to pathology if we additionally examined specimens on the backtable post-LSG. We hypothesized a similar incidence of microscopic findings between endoscopic and surgical specimens, and gross findings between specimens examined by surgeons and pathologists.

Methods: A retrospective review was conducted on patients who underwent LSG from 05/2017–03/2018 at a single academic institution. Included patients underwent screening endoscopy with biopsies, post-operative gross evaluation of the remnant, and post-operative pathologic evaluation. Data on demographics, upper endoscopy and endoscopic/surgical pathology were collected.

Results: 116 patients met the inclusion criteria, and were characterized as 84% female, 75% Caucasian, with an average BMI=46.90 $\pm$ 7.27 kg/m^2. Post-EGD and post-LSG biopsies demonstrated pathology in 86% and 88% of patients, respectively. Treatable findings included H.pylori (5.2% vs 2.6%), and active gastritis (8.6% vs 4.3%). Gross examination of the specimen by surgeons and pathologists demonstrated pathology in 12.9% and 8.6%, respectively, and included benign polyps (12.1% vs 7.8%), and a serosal mass diagnosed as a 0.6cm GIST at pathology.

Conclusion: Our study demonstrates similar pathologic diagnoses post-EGD and post-LSG. Differences in treatable pathology were likely related to treatment effect after diagnosis post-EGD. Additionally, gross backtable evaluation yielded comparable results to that of pathology, suggesting backtable examination may be used to identify specimens that need further examination, obviating the need to send all specimens to pathology.

A196

Analysis of Self vs Peer Ratings of Surgical Skill with Bariatric Surgery

Oliver Varban *Ann Arbor MI*[1], Jyothi Thumma *Ann Arbor MI*[2], Arthur Carlin *Detroit MI*[3], Jonathan Finks *Ann Arbor MI*[2], Amir Ghaferi *Ann Arbor MI*[2], Justin Dimick *Ann Arbor MI*[2]
University of Michigan Health System[1] University of Michigan[2] Henry Ford Health System[3]

Background: Prior studies have demonstrated a correlation between peer-reviewed ratings of surgical skill and complications after bariatric surgery. However, the association between self-assessment of surgical skill and postoperative outcomes is unknown.
Methods: Bariatric surgeons (n=23) participating in a statewide quality improvement collaborative submitted a representative video of a sleeve gastrectomy. Videos were self-rated and peer-rated using a validated instrument based on a 5-point Likert scale (5=“master surgeon” and 1=“surgeon-in-training”). Perceived difficulty of case was also rated (1=”low difficulty” vs 5=”high difficulty”). Risk-adjusted 30-day complication rates were compared between surgeons in the top and bottom quartiles according to self- vs peer-rating based on data from 16,886 cases.
Results: Overall mean self-rating of surgical skill varied from 2.5 to 5 and mean self-rating of case difficulty varied from 1 to 4. There was no correlation between self-rating of skill vs peer rating of skill (Pearson 0.10, p=0.672). Surgeons in the top quartile for self-rating of skill had significantly higher rates of leak (0.37% vs 0.06%, p=0.05) when compared to surgeons in the bottom quartile, however there were no differences in outcomes when comparing self vs peer ratings. Surgeons who perceived cases to be more difficult than their peers had higher rates of leak (0.33% vs 0.21%, p=0.025) as well as infection (1.73% vs 1.01%, p=0.48).
Conclusions: Self-assessment of surgical skill varied widely. Surgeons with high self-ratings or who perceived cases to be harder than their peers had higher complication rates. Identifying perception gaps in skill may have an impact on surgical outcomes.

A197

Non-Alcoholic Steatohepatitis - The Hidden Comorbidity: No Referral for Bariatric Surgery

Tripurari Mishra [1], Leroy Trombetta [2], Kara Kallies *La Crosse WI*[1], Shanu Kothari *La Crosse WI*[2]
Gundersen Medical Foundation[1] Gundersen Health System[2]

Background: Non-alcoholic fatty liver disease (NAFLD), including nonalcoholic steatohepatitis (NASH), has the potential to develop into cirrhosis and subsequent liver failure. NASH is quickly becoming the most common indication for liver transplantation. Important risk factors in the development of NAFLD include obesity, insulin resistance, type 2 diabetes, and dyslipidemia. The objective of this study was to determine the frequency of referral to weight management in patients with biopsy-proven NAFLD.
Methods: A retrospective review of the medical records of patients with biopsy-proven NAFLD or NASH from 2004-2014 was completed from two community hospitals. Patients without weight documentation or biopsy results, and those with negative biopsies were excluded. Referrals to weight management providers, including nutrition therapy or bariatric surgical services, were documented.
Results: Overall, 147 patients were included; 62% were women. The mean age was 50.5±13.3 years. Over a mean follow-up duration of 2.5±1.5 years from biopsy to last documented weight, the mean weight decreased by 2.6±19.4 kg and BMI decreased 0.8±6.2 kg/m^2. Twenty (14%) patients' providers recommended weight reduction; however, referrals to weight management occurred in five patients (Table). Three patients had liver biopsies performed at the time of bariatric surgery; two of whom were self-referred for surgery. One patient was referred to bariatric surgery after liver biopsy but lacked insurance coverage. Fourteen (10%) patients had cirrhosis identified on biopsy.
Conclusions: Comprehensive weight management is under-utilized in patients with NAFLD and NASH. Referring providers need more education about the positive impact of metabolic bariatric surgery on NAFLD.

A198
State Variation in Obesity, Bariatric Surgery, and Economic Ranks: A Tale of Two Americas

Eric DeMaria *Richmond VA*[1], Wayne English *Nashville TN*[2], Samer Mattar *Seattle WA*[3], Stacy Brethauer *Cleveland OH*[4], Matthew Hutter *Boston MA*[5], John Morton *Stanford CA*[6]
Bon Secours St Mary's Hospital[1] Vanderbilt University[2] Swedish[3] Cleveland Clinic[4] Harvard Unviersity[5] Stanford University[6]

Introduction. Bariatric surgery (BariSurg) is the most effective treatment strategy for extreme obesity. BariSurg coverage varies by state. The study aim is to determine if either obesity rates or economic rank

were correlated to penetrance of BariSurg by state.
Methods. Data from MBSAQIP, Behavioral Risk Factor Surveillance System, and US News and World Report were utilized to determine BariSurg, obesity, and economic ranks by state. BariSurg case volumes *per capita* were compared to the reported prevalence of obesity and the comparative economic ranking of each state in order to determine if surgical treatment resources were attainable and appropriately applied across the U.S. Economic rank is a marker for BariSurg coverage. In addition, each state's Essential Health Benefit (EHB) was analyzed to determine BariSurg coverage.
Results. Top and bottom 5 ranking states in terms of obesity prevalence are in Table. States highest in obesity prevalence demonstrate low economic ranking, low penetrance of BariSurg and 4 of the 5 states did not have BariSurg as an EHB. In contrast, lowest obesity states were of much higher economic status, demonstrated higher penetration of BariSurg and were more likely to have an EHB for BariSurg coverage.
Discussion. These data demonstrate that there are two Americas: most affluent / low obesity vs. least affluent / high obesity. Without systematic coverage for obesity treatment, less affluent /high obesity states will have little opportunity to improve those circumstances. BariSurg continues to be poorly applied across the U.S. with low application in the states with the greatest need.

A199
Multimodal pain management with liposomal bupivicaine and intravenous acetaminophen in a post-operative bariatric population
Richard Ing *Bryn Mawr PA*[1], Michele Radaszewski *Bryn Mawr PA*[2], Stephanie Rozick *Bryn Mawr PA*[2]
Main Line Health Bryn Mawr Hospital[1] Main Line Health[2]

Multi-modal pain management has become an integral part of early recovery after surgery (ERAS) protocols. We performed a prospective double blinded study of 150 patients undergoing laparoscopic vertical sleeve gastrectomy (83) and laparoscopic roux-en-Y gastric bypass (62). Patients were randomized into 3 groups: control group 1 (CG) receiving intravenous narcotics only, group 2 receiving liposomal bupivicaine (ExparelTM) only (Ex) and group 3 receiving liposomal bupivicaine (ExparelTM) and intravenous acetaminophen (Ex/Ac).

Early pain scores, first recorded pain and pain at 1 hour, were significantly reduced for both treatment groups. Early pain scores were equivalent for groups 2 and 3. Pain scores for Group 2 (Ex) at 2 hours remained significantly reduced as compared to controls. Pain scores for all 3 groups were equivalent by 48 hours. Group 2 (Ex) had fewer

patient controlled analgesia (PCA) attempts than the control group. There were no differences in length of stay, complications, pain scores at 1 or 2 weeks or amount or length of time of nausea or vomiting.

Both analgesia regimens produced statistically significant reductions in early pain as compared to PCA narcotic medication. There was no additional benefit to parenteral acetaminophen and by 48 hours there were no differences from control. Benefits of multimodal pain management occur in the early post-operative period.

Statistical analysis done by ANOVA and Tukey HSD multiple comparison test.

A200

Impact of a low calorie diet before bariatric surgery on reducing the histologic appearance of liver steatosis

Risa Wolf *Baltimore MD*[1], Kiyoko Oshima [2], Kimberley Steele *Baltimore MD*[3]

The Johns Hopkins University SOM (Endocrinology)[1] Johns Hopkins University SOM (Pathology)[2] Johns Hopkins University SOM (Surgery)[3]

Background: The value of a low calorie diet (LCD) prior to bariatric surgery is uncertain. Studies have shown that a LCD reduces liver volume and may facilitate ease of operation. It is estimated that 75 to 100% of obese individuals undergoing bariatric surgery have non-alcoholic fatty liver disease (NAFLD). We aimed to investigate how a LCD affects liver histology in the setting of NAFLD.

Methods: Forty intraoperative liver specimens were analyzed histologically: twenty without and 20 with a two-week, 1200kcal/day LCD. Body weight was measured pre-diet and at surgery. NAFLD activity score (NAS) was used to grade liver histology. The NAS scores steatosis, lobular inflammation, hepatocellular ballooning and fibrosis, defining nonalcoholic steatohepatitis (NASH) when NAS $\geq$5.

Results: Sixteen females and 4 males (age 37.9 ± 9y) with initial weight at surgery of 135.3 ± 23.7kg comprised the non-LCD group. Nineteen females and 1 male (age 45 ± 11y) with initial weight 131.1 ± 24.4kg comprised the LCD group. Average pre-surgical weight loss was 2.44kg (range 0.3-11.7kg) in the LCD group. 5% of the LCD group had NASH on liver histology, compared to 25% in the non-LCD group (p=0.001). The LCD group had significantly less steatosis (p=0.01), fewer foci of lobular inflammation (P=0.008), and less hepatocellular ballooning (p=0.01) compared to the non-LCD group; there was no noticeable difference in degree of fibrosis.

Conclusions: A two-week LCD prior to bariatric surgery significantly improves steatosis, inflammation and hepatocellular ballooning in NAFLD. Future research should investigate the metabolic correlates of these histologic changes.

A201

Decision Regret up to Four Years after Gastric Bypass and Gastric Banding

Christina Wee *Boston MA*[1], Aaron Fleishman *Boston MA*[1], Ashley McCarthy *Boston MA*[2], Donald Hess *Boston MA*[2], Caroline Apovian [2], Daniel Jones *Boston MA*[1]
Beth Israel Deaconess Medical Center[1] Boston Medical Center[2]

Background: Weight loss surgery (WLS) is neither risk-free nor universally effective. Few studies have examined what proportion of patients regret having undergone WLS.

Methods: We interviewed patients at 2 WLS centers before and after WLS about weight loss, quality of life/QOL (Impact of Weight on QOL-lite), and decision regret (modified Brehaut Regret scale; scores of 0-100, higher =greater regret). We conducted separate multivariable logistic regression models to examine the association between weight loss and ΔQOL scores and having decision regret (score >50).

Results: Of 205 RYGB patients, only 2.2% (year 1) to 5.1% (year 4) reported regret scores>50 over 4 years; 2.0-4.5% did not think they made the right decision; 2.0-4.5% would not undergo WLS again. In contrast, of 188 gastric banding patients, 8.2-20.3% had regret scores >50; 5.9-19.5% did not think they made the right decision; 7.1-19.5% would not undergo WLS again. Weight loss and ΔQOL scores were significant correlates of decision regret after banding although weight loss was a stronger correlate with higher model quasi-likelihood under the independence model criterion score. Four years after banding, mean weight loss for patients with regret scores>50 was 7.4% vs. 21.1% for those with scores <50; the AOR for regret score>50 was 0.90 (95% CI 0.87-0.94) for every 1% greater weight loss. Poor sexual function, but not weight loss or other QOL factors, was significantly correlated with decision regret after RYGB.

Conclusion: Few patients regret undergoing RYGB but 1 in 5 regret undergoing gastric banding with weight loss being a major driver.

ASMBS Brazil Quickshots Abstract Session
Thursday, November 15th, 2018 3:00pm-4:00pm

A264

CORRELATION OF 25-HIDROXYVITAMIN D LEVELS WITH NON-ALCOHOLIC FATTY LIVER DISEASE AND LEVELS OF INFLAMMATORY AND BIOCHEMICAL MARKERS OF METABOLIC SYNDROME IN PRE-OPERATIVE PATIENTS FOR BARIATRIC SURGERY

Carolina Ribeiro *Rio de Janeiro* [1], Loraine Ferraz *Rio de Janeiro* [1], Andressa Gaudencio *Rio de Janeiro* [1], Guilherme Pinheiro *Rio de Janeiro* [1], Gisele Noronha *Rio de Janeiro* , Paula Perricelli [1]
Hospital Federal do Andaraí[1]

OBJECTIVES: To investigate the correlation of 25-hydroxyvitamin D with age, gender, body mass index (BMI), inflammatory markers, like reactive C-protein (RCP) and ferritin (FER), and biochemical markers of metabolic syndrome, like total cholesterol (CHOL) and fractions (LDL and HDL), triglycerides (TG), insulin, glycated hemoglobin (HbA1c), insulin resistance index (HOMA-IR), glucose (GLU), as well as to compare their levels in two patient groups: with and without nonalcoholic fatty liver disease (NAFLD).
METHODOLOGY: Retrospective study with patient charts in preparation for bariatric surgery. NAFLD was diagnosed by an abdominal ultrasonography and confirmed by liver biopsy performed during the batriatric surgery. Variables analyzed: age, sex, body mass index (BMI), 25-hidroxyvitamin D, insulin, GLU, HOMA-IR, HbA1c, HDL, LDL and CHOL, reactive C-RCP and FER. Patients who reported use of alcoholic beverages or who had hepatitis were excluded. Statistical analysis were done using Student's t-test, Mann Whitney, Pearson and Spearman correlation coefficient; p-value <0.05 as statistical significance.
RESULTS: 164 patients (141F / 23M) were studied: 72 with NAFLD and 92 without NAFLD. There was a statistically significant difference on the 25-hidroxyvitamin D levels between the two groups (24.9 ± 9.1 in the non-NAFLD group and 21.3 ± 7.6 with the NAFLD, p= 0.02) and between vitamin D and insulin (r= -0.159, p = 0.043), HOMA-IR (r= -0.162, p= 0.039) and FER (r= -0.162, p = 0.042).
CONCLUSION: The NAFLD group in this study had lower levels of 25-hidroxyvitamin D. A significant correlation was also found comparing vitamin D levels with insulin, HOMA-IR and FER.

A265

Brazilian National Bariatric Surgery Registry – Pilot Study

Lyz Silva *Recife* [1], Luiz Gustavo de Quadros *Sao Jose do Rio Preto Sao Paulo*, CAETANO MARCHESINI *CURITIBA* , Victor Cabral da Costa *Recife* , Gabriel Simplicio *Recife* [1], Eduardo

Godoy *Recife* , Manoel Galvao Neto *Doral FL*, Almino Ramos *Sao Paulo FL*, JOSEMBERG Campos *Recife* [2]
Federal University of Pernambuco[1] Hospital Santa Joana[2]

Introduction: Brazil is estimated to be the second place in the number of bariatric surgeries worldwide, although the country doesn't have a national registry yet. Hence, the creation of a registry is imperative, for we need to verify and supervise the quality of the assistance for the candidates to bariatric surgery. **Objective:** The Brazilian National Bariatric Surgery Registry (BNBSR) aims to provide a precise overview of the patients' profile, surgeries' financing and of the number and results of the procedures performed, leading to better healthcare planning. Moreover, it will be a database for research about each kind of procedure's participation, their success rate, and complications. **Methodology:** Data on preoperative and postoperative periods and the surgical technique details will be uploaded on an online software already validated in other countries. The pilot study will be developed in eight reference centers in the surgical treatment of obesity, selected by the Brazilian Society of Bariatric and Metabolic Surgery (SBCBM) based on their surgery number and commitment with the data upload and aiming to have data from all the country's regions. **Results:** The pilot project started officially in July/2017. Until the present moment, the Registry accounts approximately six hundred patient records. **Conclusions:** The BNBSR will allow the SBCBM and the world to have a detailed report on the Bariatric Surgery's situation in Brazil. It is expected that in the following years the registry will be expanded to more centers, eventually reaching all the surgeons associated to the SBCBM.

A266

Safety of early discharge in 605 patients submitted to bariatric surgery in a SRC Bariatric Center

Thomaz MONCLARO *São Paulo* [1], Carlos Pizani *São Paulo* [1], Ana Caroline Fontinele *São Paulo* [1], Dirceu Santos *São Paulo* [1], Marcelo CARNEIRO *Sao Paulo* [1], Eduardo Sticca *São Paulo* [1], Sansiro de Brito *São Paulo* [1], Carlos De Souza Filho *São Paulo* [1], PAULO SALLET *SAO PAULO SP*[1], Afonso Sallet *São Paulo* [1]
Instituto de Medicina Sallet[1]

There are still in the world several surgeons who have doubts about the safety of early discharge. After establishing protocols such as ERAS, recent scientific evidence shows that early discharge can be performed safely without compromising the patient. We analyze our discharge protocol and his safety in relation to the hospital readmission rate in 30 days in 605 patients submitted to Laparoscopic RYGB and SG in a SRC credited

center in 2017. We evaluate discharge day, cause of not-early discharge, complications and 30-day readmission rate. Our early discharge rate was 96.5%. Of the remaining 3,5%, 21 patients, 17 were discharged on the 2nd day, 1 on the 3rd, 2 on the 4th and 1 on the 10th postoperative day. The reasons for non-early discharge were: 6 (29%) patients with bleeding, 5 (24%) with difficulty accepting diet or PONV, 4 (19%) due to technical difficulty of surgery, 4 (19%) who needed ICU admission and 2 (9%) due to respiratory diseases. Of the 4 patients (0.7%) who needed ICU, 2 were due to sleep apnea and 2 with cardiological reasons.
With the exception of patients who were not discharged solely for observation (need for ICU or technical difficulties of surgery), the others were classified through Clavien-Dindo grade (CD): 9 (1,5%) had CD I, 2 (0,3%) CD II and 2 (0,3%) CD IVA. 30-day readmissions was 3,5% and there was no mortality. Early discharge is feasible and safe keeping hospital readmission rates low compared to literature.

A267

IMPACT OF LOSS OF LEAN MASS IN THE RESTING METABOLIC RATE IN OBESES UNDERGOING GASTRIC BYPASS SURGERY – a pilot study

Marcos de Oliveira *São Paulo* [1], Ana Beatriz Guiesser *São Paulo* [1], Margaretth Arruda *São Paulo* [2], Thomaz MONCLARO *São Paulo* [2], Afonso Sallet *São Paulo* [2], PAULO SALLET *SAO PAULO SP*
Obesimed[1] Instituto de Medicina Sallet[2]

Introduction: Total energetic expenditure decreases after bariatric surgery due to a
reduction in the resting metabolic rate caused by the loss of lean and fat masses.
Objective: To analyze the impact of lean mass loss in resting metabolic rate 30 days
after gastric bypass surgery.
Method: The research constituted a sample size of 11 patients between 25 and 50
year, all meeting the inclusion criteria established by the Brazilian Society of Bariatric
and Metabolic Surgery. To analyse the level of physical fitness we performed evaluations using the International Physical Activity Questionnaire (IPAQ). To assess
the body composition we used the bioimpedance test (InBody) in the same two
encounters. The differences in physical fitness and body composition were compared
and analysed.
Results: The results show significant loss of adipose tissue (8.2 +/- 2.9k) and reduction in resting metabolic rate (7%) after surgery when compared to pre-surgery.
Despite losing a small amount of lean mass (3.6 +/- 1.1kg) it was enough to promote

a reduction in the basic metabolic rate (115.6 +/- 42k cal/day).
Conclusion: The present study demonstrated the impact of reduction of lean mass
in the resting metabolic rates in patients shortly after undergoing bariatric surgery.

These findings bring to light the fact that patients with a lower percentage of lean
mass will face a reduction in the rate of weight loss and will be more susceptible to
regaining weight.

Pediatrics and Obesity Surgery Abstract Session
Thursday, November 15th, 2018 10:30am-12:00pm

A261
CAN CHILDREN WITH GENETIC SYNDROME BE OFFERED BARIATRIC SURGERY?
MAHENDRA
NARWARIA *ahmedabad*
ASIAN BARIATRICS HOSPITAL

Background Obesity-related complication is one of the leading causes of mortality in children with genetic syndrome. Most syndromic forms of obesity are associated with mild to severe cognitive deficits and unusual behaviors. While many other syndromes affecting cognition such as Down syndrome are also associated with a higher incidence of obesity.
Objective To assess the effects of laparoscopic sleeve gastrectomy (LSG) for treating obesity and co-existing conditions in children with genetic syndrome.
Methods Data were analyzed from children with genetic syndrome retrospectively from one surgeon at a single private institution. Six children; each with Prader-Willi syndrome or Down syndrome or leptin receptor mutation underwent LSG
from 2011 through 2017 and were followed-up for one to four years.
Results Six children with identified for the analysis. The mean age and body mass index percentile(BMI) were 7.8 ± 1year (range, 3- 12 years) and 95^{th} - 98^{th} percentile(51.2 ± 6 kg/m^2), respectively. The preoperative co-existing conditions include obstructive sleeve apnea (66.6%), dyslipidemia (0%), and diabetes mellitus (DM) (16.6%). Postoperatively, at 1.5 to 2 years, the patients achieved 85%EWL. Similarly DM remission

rates 100%, respectively. Also, the OSA and DM improvement rates were 75% and 100%, respectively. The health-related QOF improved dramatically in early follow-ups.
Conclusion LSG is a safe procedure for children with genetic syndrome. The patients achieved significant weight loss and remission of co-existing conditions along with improvement in the health-related QOF following LSG.Long term results are. needed for the final conclusion

A262

Intra-Gastric balloon surgery as an alternative to surgery in adolescents

Derman Ozdemir *HOLBROOK NY*[1], Robert Dabek *Boston MA*[2]
Saba University School of Medicine[1] Division of Plastic and Reconstructive Surgery, Massachusetts General Hospital and Harvard Medical School[2]

Background: As the eating habits of kids and adolescents trend negatively, obesity has become a significant problem which has not shown any indication of a decrease in prevalence. The question of whether bariatric surgery is the method of choice for adolescents still remains unanswered. The less invasive intra-gastric balloon (IGB) could be a safe and effective method of weight loss for appropriately selected adolescents. The expanding volume of literature needs to be reviewed to evaluate evidence concerning patient selection, procedure, efficacy, and safety.
Methods: Search of the PubMed database was performed for original studies using IGBs as a weight loss option in adolescents from 1998-present. Relevant studies were analyzed for level of evidence, outcomes, and complications.
Results: 5 studies consisting of 91 patients under the age of 18 and BMI > 30 kg/m^2 were identified and reviewed. Studies included non-randomized retrospective and prospective analyses with follow-up time between 3 and 62.6 months. Patients were evaluated for mean body weight loss (5.74–12.2kg), decrease in BMI (2.25–10kg/m^2), excess weight loss (20.1–68%) and successful improvement of co-morbidities. Complication rate ranged from 5.6% to 91.6%.
Discussion: The use of IGBs have been well documented in adults and review of the literature has demonstrated their safety and effectiveness in treatment of obesity. IGBs may fill the therapeutic gap between pharmacotherapy and surgery, allowing adolescent populations with obesity to achieve good weight loss, better control of co-morbidities, and better quality of life compared to baseline.

A263

The Prevalence of Co-Morbidities in Adults and Adolescents Seeking Sleeve Gastrectomy Julie Liu BS1, Mireya Montalvan-Panzer MS1, Ilene Fennoy MD MPH1, Jennifer

Woo Baidal MD MPH1, Lori Lynch CPNP1, Elizabeth Ranish RD1, Robyn Sysko PHD2, Jeffrey L. Zitsman MD1 1Center for Adolescent Bariatric Surgery Columbia University Medical Center New York, New York 2Eating and Weight Disorders Program Icahn School of Medicine at Mt. Sinai New York, New York
Julie Liu *New York NY*[1], Mireya Montalvan-Panzer , Ilene Fennoy *New York NY*, Jennifer Woo Baidal *New York NY*, Lori Lynch *New York NY*, Elizabeth Ranish *New York NJ*, Robyn Sysko *New York NY*, Jeffrey Zitsman *New York NY*
Columbia University[1]

Background: Individuals with morbid obesity may undergo surgical treatments such as sleeve gastrectomy for effective and sustainable weight loss. Little is known about the prevalence of obesity-related co-morbidities among populations of adolescents and adults seeking weight loss surgery.

Methods: A retrospective cohort study matched 100 adolescents (ages 12-18 years) from the Center for Adolescent Bariatric Surgery database and 100 adults (mean age 42.7 years) from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program database (January 2010 to December 2017 for each).
Subjects were matched for gender and body mass index (BMI). Using Chi Square Test with a significant *p*-Value of .05, we compared the prevalence co-morbidities of hypertension, diabetes mellitus, dyslipidemia, obstructed sleep apnea, and gastroesophageal reflux disease between the two groups.

Results: Adults seeking weight loss surgery had a significantly higher prevalence of 5 common obesity-related co-morbid conditions compared to adolescents of similar BMI. The differences in the prevalence of these obesity-related co-morbid conditions between adults and adolescents were statistically significant (Table 1).

Conclusion: Adults seeking weight loss surgery had a significantly higher prevalence of all examined obesity-related co-morbid conditions compared to adolescents of similar BMI. Earlier intervention with weight loss surgery may preclude these serious conditions from developing.

A521
Slipped capital femoral epiphysis (SCFE) and Blount's disease as indicators for early metabolic surgery

Cornelia Griggs *Boston MA*[1], Numa Perez *Boston MA*[2], Janey Pratt *Stanford CA*[3]
Massachusetts General Hospital[1] MGH[2] Stanford, MGH[3]

BACKGROUND: Prior literature has shown the benefit of weight/BMI reduction to prevent disease

progression in patients with SCFE and Blount's but has also shown that traditional weight loss programs are ineffective. SCFE and Blount's diagnoses have become indications for referral to bariatric surgery programs per 2018 guidelines. This study examines national trends in patients with SCFE and Blount's disease as part of a case series following pediatric patients post MBS.

METHODS: The Kids' Inpatient Database (KID) and the National Inpatient Sample (NIS) were used to identify pediatric patients (<20 years old) with SCFE and/or Blount's disease from 2005-2014. Patients were identified using ICD-9-CM diagnosis codes with a confirmatory diagnosis code for obesity.

RESULTS: The national prevalence of SCFE/Blount's among all children ≤ 20 years old is 0.05% (33,875 pts). The overall difference between the rate of SCFE/Blount's in obese vs non-obese children is over 25 fold: 1.05% vs 0.04% ($p<0.001$). The mean age of children with SCFE/Blount's disease was 12.31 ± 0.04 whereas the mean age of obese children with SCFE/Blount's who underwent MBS was 16.69 ± 0.55 ($p<0.001$).

CONCLUSION: Orthopedic complications remain a persistent problem in the pediatric population with a diagnosis of obesity, yet no literature has shown an effective intervention for weight loss. Despite being diagnosed at a young age, patient's with SCFE/Blount's undergo MBS in their later teenage years, potentially leading to unnecessary disease progression. Therefore, SCFE and Blount's disease should be considered indications for early MBS surgery in pediatric patients.

Students, Residents, Fellows Abstract Session
Monday, November 12th, 2018 8:00am-12:00pm

A148

Early Indicators of Long Term Weight Regain After Gastric Bypass in a Veteran Population

Andrew Taitano *Bay Pines FL*[1], Candis Cornell *Saint Petersburg FL*[2], Lynne Olson *Bay Pines FL*[2]
CW Bill Young VA Medical Cer[1] CW Bill Young VA Medical Center[2]

Background

Morbid obesity is prevalent in the veteran population and treatment is difficult. Early clinical indicators for weight regain after roux-en-Y gastric bypass (RYGB) have not been defined for this population.

Methods

138 veterans underwent RYGB at our institution between 1999-2016 and had suitable follow-up. Demographics, medical history, and body mass index (BMI) at multiple time points were extrapolated from electronic patient

records. Predictors of weight regain were investigated.

Results

Median age was 54 years, median BMI was 47.3, and 24% were women. Mean weight loss (WL) was 32.4% at 2 years, 29.5% at 5 years, and 28.8% at 10 years. Mean weight regain was 8.6% at 5 years, and 8.3% at 10 years. Patients with a weight loss velocity (WLV) <1 pound/week between month 3 and 6 after surgery (14.7%) had significantly lower mean WL at all follow up times ($p<0.01$). Patients who experienced their post-surgical nadir weight earlier than 1 year (19.6%) had significantly lower mean WL at 2 years, 5 years, and at last follow up ($p<0.01$). As a screening test to predict weight loss failure, “low WLV” had sensitivity 33-100% and specificity 87-96%. Similarly, “early weight nadir” had sensitivity 23-67% and specificity 83-92%.

Conclusions

After RYGB, veterans with low WLV during month 3-6 are at risk for initial and long-term WL failure. Veterans who reach a nadir weight prior to 1 year are at risk for long-term increased weight regain. Patients with these weight-loss patterns should be targeted for intervention to improve WL outcomes.

A149

Gastric bypass surgery in patients with psychiatric diagnoses – risk of reoperation and length of hospital stay

Ylva Lagerros *Stockholm* [1], Lena Brandt *STOCKHOLM* , Jakob Hedberg *Uppsala* , Magnus Sundbom , Robert Bodén *Uppsala*
Karolinska University Hospital[1]

Gastric bypass surgery (GBP) is considered a safe method with few complications. Nonetheless, few studies have focused on the risk of post-surgery complications in patients with pre-surgery psychiatric diagnoses, compared to those without. This is a nationwide cohort study encompassing 22,539 patients undergoing GBP in Sweden, 2008-2012. They were identified through the National Patient Register and/or the Prescribed Drug Register. GBP patients with a prior diagnosis of schizophrenia (n=40), bipolar disorder (n=335), depression (n=2100), attention deficit hyperactivity disorder (n=314), substance use disorder (n=971), mental retardation (n=54), eating disorder(n=285), personality disorder (n=551) or self-harm (n=1169), since 1997, or a prescription of antidepressants (n=5,345) since 2005, were not at a higher risk of reoperation before discharge, than patients without these diagnoses (odds ratio 1.75, confidence interval 0.73-4.20 adjusted for age, gender and calendar year). Neither did we find an increased risk for reoperation within the first 30 days among patients with any of these diagnoses prior to GBP vs patients without these diagnoses; 0,1% (n=18) were admitted to psychiatric inpatient care post-surgery, while 5.6%

(n=1,259) were readmitted to surgery inpatient care. Of those, 121 went through reoperation due to bleeding, 142 due to infection and 259 due to anastomosis insufficiency. Length of hospital stay did not differ between patients with previous psychiatric diagnoses compared to those without. In summary, in patients selected suitable for and having undergone GBP, prior psychiatric diagnoses were not associated with increased risk for reoperation or longer hospital stay post GBP, compared to patients without previous psychiatric diagnoses.

A150

Transversus abdominis plane (TAP) block significantly improves opioid use and length of stay in bariatric surgery patients

Laurel Mulder *Chicago IL*[1], Emily Ramirez *Chicago IL*[2], Jennifer Poirier *Chicago IL*[1], Alfonso Torquati [1], Philip Omotosho *Chicago IL*[1]

Rush University Medical Center[1] Rush University Medical Cent4er[2]

Background: The TAP block is a well-known method for administering perioperative analgesia for abdominal surgeries. Pre-operative TAP blocks were integrated into the enhanced recovery after surgery (ERAS) protocol at our institution for patients undergoing bariatric surgery.

Methods: A retrospective chart review was performed on patients undergoing bariatric surgery between February 2017 to February 2018. Patients were divided by whether they had their procedure before or after the implementation of TAP blocks (intent-to-treat analysis). Factors analyzed included length of stay (LOS), morphine milligram equivalents (MME) received 72 hours post-operatively, nausea complaints, and post-operative diet adherence.

Results: There were 243 patients that met inclusion criteria with 84 patients who were in the pre-intended group and 159 patients in the post-intended group. The mean BMI of the two groups were 47.37 and 46.7 respectively ($p = .259$) and the mean number of co-morbidities were 5.96 and 5.04 ($p = .056$). The median LOS for the pre-intended group was 2 days compared to 1 day ($p = 0.008$) for the post-intended group. The median MME for the pre-intended group was 24 mg and 0 mg for the post-intended group ($p < 0.001$). In addition, patients had significantly less nausea complaints and a higher diet adherence after the protocol change ($p < 0.001$).

Conclusion:

The implementation of TAP blocks at our institution has led to a significant decrease in length of stay, post-operative opioid usage and an increase in diet adherence emphasizing the effectiveness of TAP blocks as a pre-operative analgesic method in improving post-operative outcomes.

A151

Who really decides? Surgeon preference trumps patient factors in predicting whether patients receive a sleeve or bypass.

Brooks Udelsman *Boston MA*[1], Ginger Jin *Boston MA*[2], David Chang *Boston MA*[1], Matthew Hutter *Boston MA*[1], Elan Witkowski *Boston MA*[1]
Massachusetts General Hospital, Department of Surgery[1] Brigham and Women's Hospital, Department of Surgery[2]

Background: Laparoscopic sleeve gastrectomy (LSG) has replaced gastric bypass (LRYGB) as the most common bariatric operation. Both offer similar weight loss, but confer different benefits and risks. While many factors determine the choice of procedure, we hypothesized that the primary driver is the surgeon's preference and experience rather than patient-related factors.

Methods: Retrospective cohort study using the Public Discharge Data file (2004-2014) of the Statewide Planning and Research Cooperative System (SPARCS) for New York State. We identified surgeons performing bariatric operations. Logistic regression was performed to determine impact of surgeon, patient, and hospital factors on receiving LRYGB. We used logistic regression and pseudo-R^2analysis to determine which factors had a greater influence on procedure choice.

Results: Among 142 surgeons who performed >5 bariatric cases/year, 32 (22.5%) performed LSG in 95% or more of their bariatric cases in year 2014. In logistic regression, a diagnosis of diabetes (OR 1.45; $p<0.001$) or gastroesophageal reflux disease (OR 1.36; $p<0.001$) were associated with receiving LRYGB. However, the most predictive factor was whether the surgeon performed mostly LRYGB in the preceding year (OR 33.8; $p<0.001$). In pseudo-R^2analysis 83% of the predictive power of the regression could be explained by surgeon-factors alone.

Conclusions: While the percentage of LRYGB vs. LSG in this cohort mirrors the national average, there is wide variation at the surgeon level. While surgeons may offer several procedures, in practice many perform a single procedure--a trend which is increasing. Surgeon choice is the predominant factor in determining which procedure patients receive.

A152

Google Trends as a Resource for Bariatric Education: What do Patients Want to know?

Cristian Milla Matute *Davie FL*[1], Maria Fonseca Mora *Weston FL*[1], Camila Ortiz Gomez *Weston* [1], David Gutierrez Blanco *Weston FL*[1], Emanuele Menzo *Weston FL*[1], Samuel

Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

BACKGROUND
Bariatric Surgery(BS) is an effective treatment for the morbidly obese patient and it is one of the most frequently performed surgical procedures in the United States(US). It is difficult to determine BS levels of interest through traditional approaches. The aim of this study is to use Google Trends(GT) as a tool to analyze the US general population interest in BS.
METHODS
Google Trends was used to access data for the searched term "Bariatric Surgery". Information was gathered from 2008 to 2018, on English language and US location. Search frequency, time-intervals, specific locations, frequent topics of interest and related searches were analyzed. GT reports search frequency on means, a value of 100 represents peak popularity for the term. Microsoft Excel Version 15.41.0 was used to analyze data.
RESULTS
From 2008 to 2018, US leads in Google search interest on BS. Interest has gradually increased from the year 2008 with a mean 67% interest to a 94% on the year 2017. Regarding interest by sub-region, Michigan State leads the frequency of searches for BS, followed by Indiana, Delaware, West-Virginia, and Tennessee. Top searched terms by frequency are; Patient eligibility for BS, what is the BS, what are the complications of BS, financial costs of BS, and what insurance companies cover BS. Of all these interests, traditional websites, like ASMBS, only address a few.

CONCLUSIONS
GT could supplement understanding about interest in bariatric surgery. Utilizing these trends can help educate patients more effectively, and tailor specific official websites to the general interest

A154
The Impact of Revision Bariatric Surgery on Comorbidities
Varun Krishnan *New York NY*[1], Andrew Godwin *Oyster Bay NY*, Kevin Hutchings , Julio Teixeira *Scarsdale NY*
Lenox Hill Hospital[1]

INTRODUCTION
Revision bariatric surgery is being increasingly performed for weight regain, but little is known about its impact on comorbidities. The purpose of this study was to evaluate the impact of revision surgery on comorbidities.

METHODS
A retrospective review of patients from 2014-2017 was performed. Demographics, type of revision, weight loss data, complications, and comorbidity data were analyzed.

RESULTS

67 patients between 2014-2017 was analyzed. The average age was 47.82, average BMI 42.84, and incidence of DM 19.40%, HTN 34.32%, HL 14.93%. 61.54% were noted to have complete remission or reduction in the dose of anti-hyperglycemic medication (53.8% complete remission). Average change of HbA1c was 1.34 over 1-3 years. 17.39% were noted to have either stopped or reduced their antihypertensives after surgery. LDL delta 20mg/dL over 3mo to a year. HDL increased by 9mg/dL. Average Cholesterol/HDL ratio decreased by 1.94. BMI change was 5.48kg/m2.

In comparing DM versus no DM, there was no difference between BMI (41.35 vs 41.13; p=0.928) or %EBWL (42.65% vs 19.39%; p=0.1746). In comparing complete remission of DM versus no remission, there was no difference in %EBWL (45.83% vs 37.57%; p=0.713).

A subgroup analysis excluding gastric banding as the original index case: 66.67% of patients had either complete remission or improvement in patient's diabetes. The mean change in HbA1c was 1.34. 14.28% stopped or reduced anti-hypertensive medications.

CONCLUSION
Revisional surgery is effective in reducing comorbidities. Remission of DM appears to be independent of weight loss. Recurrence of comorbidities could be considered an indication for revisional surgery.

A155
Bariatric surgery with Vertical Sleeve Gastrectomy (VSG) or Modified Duodenal Switch (MDS) modified peripheral gene expression associated with coronary artery disease and inflammation
Sarah Sabrudin *New York NY*
Northwell Health

Introduction:
Obesity reduces life expectancy and increases the probability of coronary artery disease (CAD).Weight loss effects on peripheral blood gene expression that relate to ischemic heart disease are less well described
Objective:
To determine the impact of bariatric surgery and weight loss on a previously validated blood-based test incorporating age, sex, and gene expression (ASGES) for the assessment of obstructive CAD, in a cohort of morbid obese individuals.
Methods:
Prospective study, 48 patients underwent bariatric surgery with either VSG (n=24) or MDS (n=24). Blood samples were taken at baseline as well as 24-hour, 3 month,and 6-12 month post-op time points. The ASGES and individual gene expression components were determined in the clinical lab.Paired T-Test was used to compare ASGES and gene expression changes.
Results:
The study had mean age of 49(SD=10.5),mean BMI of

47.4(SD=8.7),and 33% were female.Post-op ASGES scores showed a significant increase vs baseline(14.86 vs. 16.02, p=0.026, n=44)and a non-significant decrease from baseline at 3 month and 6-12 month follow-up.Evaluation of the underlying ASGES gene expression components showed significant alterations in lymphocyte and neutrophil associated gene expression.Neutrophil/Lymphocyte (N/L) ratio is associated with inflammatory conditions and poorer cardiac outcomes: calculation of a N/L gene expression ratio showed a significant increase at 24 hr post-op ($p<0.001$) and significant decrease at 6-12 months follow-up periods (p=0.017, n=14)
Conclusion:
Bariatric surgery altered the levels of gene expression associated with circulating neutrophils and lymphocytes, previously shown to be associated with the presence of CAD.

A156
Detailed Analysis of Venous Thromboembolism within 180 days of Bariatric Surgery: A 6-Year Retrospective Single Center Review
Beata Lobel *Farmington CT*[1], Andrea Stone *Glastonbury CT*[1], Richard Seip *Glastonbury CT*[1], Ilene Staff *Hartford CT*[1], Darren Tishler *Glastonbury CT*[1], Pavlos Papasavas *Hartford CT*[1]
Hartford Hospital[1]

Introduction: Venous thromboembolism (VTE), including pulmonary embolism, is a rare but burdensome complication of bariatric surgery. We identified and analyzed all VTE occurrences in our patient population.

Methods: Patients 18-80 yo from a single surgical center, diagnosed with VTE, meeting MBSAQIP criteria ≤180 days following bariatric surgery (or revision thereof) were included. Descriptive analysis was applied to retrospectively gathered data.

Results: During the study time frame, 2,719 patients were treated. VTE occurred in 19 (0.69%). The thromboembolus was abdominal (mesenteric, hepatic, portal, or splenic vein) in twelve, pulmonary in four, extremity in one, and three patients had multiple thrombus locations. Median time to discovery was 14 days (range 5-145). All patients were readmitted. Two patients required invasive procedures, and 13/19 (68%) received therapeutic heparin infusions prior to oral anticoagulation, on which all were discharged. Sixteen patients (84%) underwent hematologic testing. Five were diagnosed with a hypercoagulable disorders (3=homozygous Factor V Leiden; 1=alpha thalassemia trait; 1=multiple mutations). On admission for initial surgery, mean Caprini score was 4.6. Five patients (26%) experienced an interruption in routine chemical VTE prophylaxis

administration, defined as missed preoperative dose, skipped postoperative dose, or delay >4 hours in administration. VTE distribution by gender, procedure, anatomic location, and association with specific risk factors is displayed in Table 1.

Conclusion: Detailed analysis of occurrence often reveals an unsurprising narrative for development of VTE despite standard prophylaxis. Understanding these rare cases may help direct appropriate screening and reinforce patient-appropriate perioperative prophylaxis with a goal of eradicating postoperative venous thromboembolism.

A157

Title: Safety of Bariatric Surgery in Patient Older than 65

Iliya Goldberg *Commack NY*[1], Andrew Bates *Locust Valley NY*[1], Salvatore Docimo *Stony Brook NY*[1], Tyler Cohn *Stony Brook NY*[1], Aurora Pryor *Stony Brook NY*[1], Konstantinos Spaniolas *Stony Brook NY*[1]
Stony Brook University Hospital[1]

Background: With the increase in life expectancy together with the obesity epidemic, there has been an increase in older patients undergoing bariatric surgery. There are conflicting opinions regarding the safety of performing bariatric procedures on older patients. The purpose of this study was to compare the safety of laparoscopic sleeve gastrectomy (SG) and Roux-en-Y-gastric bypass (RYGB) for older patients.

Methods: The MBSAQIP 2015 database was used to identify non-revisional laparoscopic RYGB and SG procedures. Comparisons were made based on patients' age. Clinical outcomes included post-operative events and mortality.

Results: There were 37388 and 85776 RYGB and SG performed in patients under the age of 65, respectively, and 2474 and 5027 RYGB and SG performed in older patients, respectively. In older patients, both RYGB and SG were associated with a higher rate of post-operative events (12.8% vs 10.5%, and 7.1% vs 5.1%, respectively, $p<0.001$). Mortality rate was higher for both procedures in older patients (RYGB: 0.6% vs 0.1%: SG: 0.3% vs 0.1%, $p<0.001$). The leak rate was higher in patients over 65 undergoing RYGB compared to younger patients (0.9% vs 0.5%, $p=0.026$) but not for SG (0.4% vs 0.3%, $p=0.636$). After adjusting for baseline characteristics, the effect of age on leak rate following RYGB persisted (OR 1.74, 95% CI 1.12-2.71, $p=0.014$).

Conclusions: Older patients undergoing bariatric surgery are at higher risk for overall events including mortality. The effect of age on leak rate is only seen in RYGB procedures. Laparoscopic SG appears to have a favorable safety profile in older patients.

A272

Conversion to Diabetes 5 Years Post Bariatric Surgery in Individuals with Obesity and Pre-Diabetes

Rachel Golan *Beer Sheva* [1], Doron Comaneshter , Shlomo Vinker *Ashdod* , Dror Dicker *Petah-Tikva*
Ben-Gurion University of the Negev[1]

Background: We assessed rates of conversion to diabetes in individuals with prediabetes 5 years after undergoing three types of bariatric surgery, and examined predictors of diabetes development.
Methods: Patients with prediabetes, defined as fasting-glucose (FG) 100-125 mg% or HbA1c 5.7%-6.4% at baseline, who underwent bariatric surgeries were accessed. The main outcome was conversion to diabetes, 5 years postoperatively.
Results: Of 13,099 bariatric surgeries performed in the Clalit-Health-Services during years 2002-2011, 1,756(13.4%) were performed in patients with prediabetes: 819 gastric-banding (GB), 845 Sleeve-gastrectomy (SG) and 92 roux-en-Y gastric-bypass (RYGB). Patients were 41.6 years old and 73.5% were women. In a multiple-logistic-regression model, predictors of diabetes development five years postoperatively were age; change in weight during the first year postoperatively and elevated baseline FG. Neither baseline weight nor number of visits to a dietitian post-surgery, predicted conversion to diabetes. We stratified our study population by weight-loss 1 year postoperatively (>25%;15%-25%;<15% weight loss). Those who lost the most weight during the first year postoperatively, where those who presented the lowest rates of conversion to diabetes at one (1.4%,p=.11), two (2.8%,p=.002) and five (4.7%,p<.001) years postoperatively. Development of diabetes 5 years postoperatively were 14.4%, 6.3%, and 6.5%, for GB, SG and RYGB respectively (p<.001). Conversion to diabetes was observed more rapidly among those who underwent GB compared to those who underwent SG or RYGB (HR=.53, p>.001)
Conclusions: Our findings emphasis the importance of 1 year weight loss and baseline FG as factors in long-term prevention of diabetes development in bariatric-surgery patients with prediabetes.

A273

C-peptide fails to improve the utility of the DiaRem algorithm in predicting non-remission of type II diabetes after bariatric surgery

Madison O'Brien *South Windsor CT*[1], Andrea Stone *Glastonbury CT*[1], Aashish Samat *New Britian CT*[1], Tara McLaughlin *Hartford CT*[1], Ilene Staff *Hartford CT*[1], Richard Seip *Glastonbury CT*[2], Darren Tishler *Glastonbury CT*[1], Pavlos Papasavas *Hartford CT*[1]
Hartford Hospital[1] Hartford Hospital Metabolic and Bariatric Surgery Center[2]

Introduction

The DiaRem algorithm is a significant predictor of type II diabetes (T2D) remission at one year after bariatric surgery. We sought to determine whether the addition of fasting pre-surgery C-peptide levels would improve its effectiveness towards this end.

Methods

We conducted a retrospective chart review to identify patients who underwent primary gastric banding, sleeve gastrectomy, or Roux-en-Y gastric bypass between January 2008 and April 2017, with a diagnosis of T2D pre-surgery and at least 12 month follow-up data. Remission of diabetes was defined as fasting glucose < 5.6 mmol/l and HbA1c < 6.0% during the first year post surgery, in the absence of any diabetic medication. First, receiver operating characteristic (ROC) curves were generated for DiaRem and C-peptide levels, and the curves compared. Then, logistic regression was used to evaluate the utility of C-peptide as a predictor of T2D non-remission one year post surgery while controlling for DiaRem score.

Results

A total of 416 patients met inclusion criteria; pre-operative C-peptide levels were available for 175 (42%). Of these, 59 % experienced remission of diabetes at 1yr post-surgery. Characteristics of the sample are presented in Table 1. Both DiaRem and C-peptide significantly predicted T2D remission with DiaRem outperforming C-peptide (Table 2). After controlling for DiaRem score, C-peptide was not a significant predictor of T2D non-remission at 1 year after surgery (Table 2). This result held even when gastric band cases were excluded.

Discussion

These results do not support the addition of C-peptide to the DiaRem algorithm.

A274

Factors related to morbidity after laparoscopic sleeve gastrectomy and laparoscopic Roux-en-Y gastric bypass for morbid obesity at the tertiary hospital.

Sung Jin Oh *Busan* [1], Farah Husain *Portland OR*[2], In Ho Jeong [3], Amy Douglas *Portland OR*[2], Andrea Stroud *Portland OR*[2], Donn Spight *Portland OR*[2], Samer Mattar *Seattle WA*[4], Bruce Wolfe *Portland OR*[2]
Inje University Haeundae Paik Hospital[1] Oregon Health & Science University[2] Jeju National University Hospital[3] Swedish Medical Center[4]

Backgrounds: The aim of this study was to evaluate the risk factors of postoperative complications after laparoscopic sleeve gastrectomy (LSG) and laparoscopic Roux-en-Y gastric bypass (LRYGB) for morbid obesity.
Methods: A total of 994 obese patients underwent bariatric surgery in the department of bariatric services at the Oregon Health & Science University between January 2011 and December 2015. Of the 994 obese patients, 699 consecutives obese patients undergoing LSG (n=357) and LRYGB (n=342) were retrospectively reviewed from a prospectively collected database.
Results: Preoperative comorbidities regarding hypertension, hyperlipidemia, sleep apnea and gastroesophageal reflux disease (GERD) were more prevalent in LRYGB group. Statistically significant differences were found between LSG and LRYGB in operative time (83 vs. 193 min. p< 0.001), surgical site infection (1.4% vs 4.5% p=0.014), and urinary tract infection (0.8% vs 3.2%, p=0.030). There were no differences regarding major complications, readmission, reoperation and mortality. The percentage of excess weight loss (%EWL) at 6 months was lower in LSG (35% vs 43%, p<0.001) and %EWL at 1 year was similar in both groups (55% vs 62%, p=0.105). postoperative morbidity was significantly associated with high American society of anesthesiologists (ASA) score, LRYGB, GERD, pulmonary embolism, deep vein thrombosis, low hematocrit (<32%) and limited ambulation. Multivariate analysis showed that LRYGB and limited ambulation were important risk factors involved with postoperative complications in laparoscopic bariatric surgery.
Conclusion: Although minor complication was higher in LRYGB compared with LSG, limited ambulation of obese patients was significant risk factors in LSG and LRYGB for morbid obesity.

A275
TOTALLY INTRAVENOUS ANESTHESIA (TIVA) IN THE MINI-GASTRIC BYPASS PATIENTS: EXPERIENCE IN 3,743 PATIENTS TREATED OVER NINE YEARS

Robert Rutledge *La Quinta CA*[1], KS Kular
Center for Laparoscopic Obesity Surgery[1]

Anesthesia is known to be a high risk factor in the morbidly obese. Different techniques have been suggested as a means to decrease the anesthetic risks in bariatric surgery. This retrospective survey study reports on the perceived recovery profiles in morbidly obese patients who received anesthesia by protocol for Total Intravenous Anesthesia (TIVA).

Morbidly obese patients underwent laparoscopic Mini-Gastric Bypass surgery managed by an anesthetic protocol using Bispectral index (BIS) guided TIVA. Postoperative, anesthetic complications and postoperative nausea and vomiting (PONV) were evaluated.

During a 9-year period, 3,743 patients underwent MGB per the TIVA protocol. Follow-up was completed in 2,310 patients (61%). There were 85% females with a mean preoperative age of 39 years (range, 12-81 years). The preoperative weight and body mass index were 134 kgs and 49.1 kg/m2. The mean operative time was 37 minutes + 10 and the median hospital stay was 1 day. Patients awoke quickly and rarely showed serious hypoxemia during the PACU stay (<1%). The incidence of PONV was low compared to rates reported in patients treated with inhalational agents (4% in the PACU and 27% overall.)

The TIVA protocol resulted in excellent, rapid and safe recovery from anesthesia of the morbidly obese MGB patients. PONV is low in the PACU and overall.

A276

Surgeon Performed Transversus Abdominis Plane Block in the Setting of Bariatric Surgery

Shaina Eckhouse *St. Louis MO*[1], Jeannette Wong-Siegel *Saint Louis MO*[2], J. Chris Eagon *St. Louis MO*[2], Dawn Freeman *Fairview Heights IL*[3]
Washington University in St. Louis School of Medicine[1] Washington University in St. Louis[2] Barnes Jewish Hospital[3]

Background: Multimodal pain management protocols demonstrate decreased opioid consumption after bariatric surgery. However, limited data exists regarding the efficacy of transversus abdominis plane (TAP) blocks as an adjunctive analgesic method. The present study aimed to demonstrate the efficacy of a surgeon-performed TAP block when compared to local infiltration of bupivacaine in laparoscopic bariatric surgery.

Methods: From February 2017 to December 2017, 148 patients underwent laparoscopic gastric bypass (GB) or sleeve gastrectomy (SG) and were assigned to either received 1) a TAP block (n=74) with 0.25% bupivacaine without epinephrine or 2) local anesthesia infiltration at each incision (no TAP block, n=74). Data collected included patient demographics, other comorbidities, and

complications. The primary outcome of the study measured inpatient use of opioid medications as measured by morphine equivalent dose (MED).

Results: Patients with and without TAP blocks had similar MED scores (Figure 1). Post-operative MED scores were also not significantly different between types of bariatric procedures. When stratified by BMI less than or greater than 50, MED scores were no different in patients with and without TAP blocks.

Conclusions: The present study further reinforces the limited effectiveness of a TAP block alone on overall pain control. Local anesthesia infiltration remains an adequate adjunctive method in the post-operative pain management.

A277

Intra-Gastric balloon surgery as a safe, effective, and less invasive method of weight loss surgery

Derman Ozdemir *HOLBROOK NY*[1], Robert Dabek *Boston MA*[2]
Saba University School of Medicine[1] Division of Plastic and Reconstructive Surgery, Massachusetts General Hospital and Harvard Medical School[2]

Background: Obesity has become a significant problem which has not shown any indication of a decrease in prevalence. There are a multitude of surgical options for weight loss which have shown positive results, however there are accompanying risks associated with each procedure. The less invasive intra-gastric balloon (IGB) looks to be a safe and effective method of weight loss for appropriately selected patients. The expanding volume of literature needs to be reviewed to evaluate evidence concerning patient selection, procedure, efficacy, and safety.
Methods: Search of the PubMed database was performed for original studies using the Elipse, ReShape, LexBal, Orbera, Obalon, or End-Ball IGBs as a weight loss option from 2013-present. Relevant studies were analyzed for level of evidence, outcomes, and complications.
Results: 24 studies consisting of 45,678 patients with BMI>25 kg/m^2 were identified and reviewed. Studies included randomized controlled, retrospective and prospective analyses with follow-up time between 3 and 76 months. Patients were evaluated for mean body weight loss (5.74–25.2kg), total body weight loss (7.6–18.9%), decrease in BMI ($2.7–8.9kg/m^2$), excess weight loss (12.4–60.1%) and successful weight loss (>10%) seen in 60-85% of patients. Complication rate ranged from 0.2 to 86.9%.
Discussion: The use of IGBs are well accepted by patients and review of the literature has demonstrated their safety and effectiveness in treatment of obesity. IGBs may fill the therapeutic gap between pharmacotherapy and surgery allowing patients with obesity

to achieve good weight loss, better control of co-morbidities, and better quality of life compared to baseline.

A278

Expanding the Reach of Intragastric Balloons: First Multicenter Results of Elipse Balloon in Non-Core User Groups

Roberta Ienca *Rome* [1], Michele Rosa *MODICA* , Corrado Selvaggio , Carmen Zafra , Galen Shi , Carmen Alfaro , Mante Aldaguer , Jose Maria Alvarez
Sapienza University[1]

Background: Surgeons and endoscopists constitute the core user groups placing Intragastric Balloons (IGB) for weight loss. Aim of this study was to evaluate the safety and efficacy of Elipse™, an IGB not requiring endoscopy or sedation, in 6 internists-lead European obesity centres.
Methods: Data was collected from 6 internists-lead obesity centres in Italy and Spain. Elipse™ Intragastric balloons were placed, without anaesthesia or endoscopy, as outpatient and filled with 550 ml of fluid. Patients received the same dietary, exercise and other advice usually given at these centres. Follow up was performed utilizing a wireless scale with smartphone app and visits every other week until the end of the treatment; Elipse™ self-emptied and passed the GI-tract after 4 months.
Results: From February 2017 to December 2017, 64 pts (25M/39F; mean age: 45.1±10.7; mean BMI: 35±4.6 Kg/m^2; mean weight:101.4±19.6Kg) completed 4 months follow up. After 4 months, at the time of excretion, mean BMI-Loss was 5.7±2.6Kg/m^2, %EWL was 64±53 and %TBL was 16±6. Mean Triglycerides and LDL decreased from 158.4±84 mmol/L and 128.8±43.6 to 121.1±41.3 and 114.3±32.4 respectively. Balloon removal for intolerance was required only in one patient. There were no serious adverse events and typical early nausea and vomiting were easily managed.
Conclusions: This study demonstrates for the first time that Elipse™ Intragastric Balloon administrated by internists is safe and effective; The results from these non-core user groups appear superior to most published data from core user groups; Internists' motivation of patients may have been a factor.

A279

Efficacy of intragastric ballons: A comparison of gas-filled versus saline-filled balloons

Josiah Billing *Shoreline WA*[1], Peter Billing *Seattle WA*[1], Kurtis Stewart *Shoreline WA*[1], Pui Lam Adriana Ho *Shoreline WA*[1], Eric Harris *Edmonds WA*[1], Jedediah Kaufman *Shoreline WA*[1]
Eviva[1]

Background: Intragastric Balloons (IGBs) are rapidly gaining interest as a non-surgical treatment for obesity. There are currently two types of IGBs implanted in the United States (gas-filled and saline-filled). We present our experience implanting both types of IGBs in a free-standing ambulatory surgical center (ASC).
Methods: Data was collected retrospectively for all patients undergoing IGBs placement n=80. Patients were excluded from the study if they were non-compliant with IGBs protocol or if they were currently participating in another research study. After exclusion, 59 patients were included. There were 32 gas-filled and 27 saline-filled IGBs placed. IGBs were placed according to the manufacturer's protocols and were removed at 6 months.
Results: Average body mass index (BMI) for gas-filled and saline-filled respectively was 36.0 and 34.6, average percent total weight loss (TWL) was 11.0% and 13.0% and weight loss was 24.4 pounds and 27.1 pounds at 6 months. Early removals rates for intolerance of the balloons were 3.1% and 11.1% for gas-filled and saline-filled respectively. Upon removal, 3 small ulcers (9.4%) were seen in gas-filled IGBs and 1 small ulcer (3.7%) in the saline-filled IGBs.
Conclusion: Patient tolerance of IGBs varies between both types; although gas-filled was better tolerated overall. Ulcers were a common adverse event of both types but were asymptomatic. Both types of IGBs provided significant and similar weight loss at 6 months. IGBs prove to be a valuable tool for patients that do not qualify for or are not ready for a bariatric surgery.

A280
Obesity in Veterans with Spinal Cord Injury and Variation in Rates of Mandated Annual BMI Screening
Dan Eisenberg *Palo Alto CA*[1], Shalini Gupta *Menlo Park CA*[2], Thomas Bowe *Menlo Park CA*[2], Alexander Harris *Palo Alto CA*[3]
Stanford-Surgical Policy Improvement Research and Education Center, Stanford School of Medicine; Palo Alto VA HCS[1] VA Program Evaluation Resource Center; Center for Innovation to Implementation[2] Stanford-Surgical Policy Improvement Research and Education Center, Stanford School of Medicine; VA Center for Innovation to Implementation[3]

Background: The prevalence of obesity is high among patients of U.S. Veterans Health Administration (VHA). Veterans with spinal cord injury (SCI) are particularly susceptible to obesity and its related co-morbid conditions. Appropriate detection and management of obesity in Veterans with SCI relies on consistent measurement of body mass index (BMI). Despite a VA mandate for annual universal BMI screening, obtaining height and weight measurements can be challenging. The

goal of this study is to understand the burden of obesity in this vulnerable population and to describe system-wide variation in BMI assessment of SCI patients within VHA.

Methods: National VHA fiscal year 2017 data were used to identify Veterans with an SCI diagnosis. Vital statistics data were used to assess clinical documentation of BMI or height and weight, within 6 months before or after the index SCI encounter.

Results: There were 31,700 Veterans with a diagnosis of SCI in 130 VHA facilities, 29.3% had diabetes and 54.1% hypertension. BMI data was available in 67.5% of Veterans with SCI; of whom 70% were overweight or obese (table 1). Among facilities, the median rate of BMI assessment was 65.1% (25.5%-91.9%); median rates of height and weight assessment were 66.7% (25.5%-96.4%) and 89.8% (66.7%-100%) (figure1).

Conclusion: Nearly 1/3 of Veterans with SCI had no documented annual BMI screening, with large variation among facilities for BMI assessment rates. Efforts should be made to improve rates of annual BMI screening among SCI patients, so that obesity in this vulnerable population is adequately detected and treated.

A281

PHARMACOLOGICAL TREATMENT OF CARDIOMETABOLIC DISEASE ASOCIATED TO OBESITY BEFORE AND AFTER BARIATRIC SURGERY: 5 YEAR FOLLOW-UP

Maximo Agustin Schiavone *Martinez* [1], Nicolas Paleari *Pilar* [1], Gabriel Menaldi *Pilar* [1], Maria Eugenia Garcia *Buenos Aires* [1], Virginia Asti *Pilar*, *Buenos Aires* [1], Marta Gomez Gottschalk *Buenos Aires* [1], Maria Gloria Linzoain *Buenos Aires* [1], PEDRO MARTINEZ DUARTEZ *Buenos Aires* [1]
Hospital Universitario Austral[1]

Aims:
1- To analyze the prevalence of pharmacological treatment for hypertension, diabetes, dyslipidemia and depression before undergoing bariatric surgery
2- Compare the pre-surgical prevalence with the postsurgical prevalence

Material and methods:
A follow-up survey was conducted on patients operated from the year 2010 until 2017 inclusive. We evaluated regarding the pharmacological treatment that these patients are currently using. The following variables were analyzed, prior to the surgery and then at the time of the survey: age, weight, body mass index (BMI), treatment for high blood pressure, treatment for diabetes (including the type of treatment), treatment for the dyslipidemia, treatment for depression or mood and

time of follow-up. The follow-up time was determined according to the number of years elapsed between the date of surgery and the date of the survey.

Results:

A total of 506 patients were included.The average follow-up time was 4.65±3 years.Regarding the treatment for diabetes, prior to surgery, 26%were under treatment. However, after surgery, only 3.5% persist today with treatment for diabetes ($p<0.0001$). In antihypertensive treatment, 66.4% of patients used antihypertensive drugs before surgery. Currently, only 30.8% still use antihypertensive treatment ($p<0.0001$). For dyslipidemia, 19.4% used some type of lipid-lowering medication prior to surgery, 5.5% of patients are still under treatment ($p<0.0001$). Finally, regarding treatment for depression or mood, 15.8% took some treatment prior to surgery. Currently, 14.8% use treatment ($p=0,72$).

Conclusions:

In the 5-year follow-up of our patients, we found a significant decrease in farmacological treatment for hypertension, diabetes and dyslidemia, except for depression.

A282

Single Anastomosis Duodeno-ileal Bypass with Sleeve Gastrectomy (SADI-S): Safety, Preliminary Outcomes from a Single Institution Prospective Cohort Study.

Philippe Bouchard *Montreal* [1], Alexandre Bougie *Montréal* [1], Mohammed Al Abri *Montreal QC*[1], Zvi Perry *Cote Saint Luc, Quebec H4W 2E4 YT*[1], Sebastian Demyttenaere *Westmount* [1], Olivier Court *Montreal Quebec*[1], Amin Andalib *Westmount QC*[1]
McGill University[1]

Background: The single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) is a modification of the conventional biliopancreatic diversion with duodenal switch (BPD-DS) directed to simplify the procedure and reduce the risk of malnutrition. Safety and outcomes of SADI-S need to be further evaluated.

Methods: We present short-term outcomes from a single institution prospective cohort study of SADI-S compared to conventional BPD-DS. Data are depicted as count(percentage) and median(interquartile range).

Results: 39 patients were eligible for the study since June 2016. 27 were planned for SADI-S and 12 for BPD-DS. 23 underwent SADI-S (17 one-stage; 6 second-stage). 12 had BPD-DS (4 one-stage; 8 second-stage). Both groups had similar sex distributions but higher age, BMI and obesity-related comorbidity trends in SADI-S group

[50(16) vs. 41(12) years], [48.0(5.7) vs. 44.5(9.4) Kg/m^2] and [18(78%) vs. 6(50%)], respectively. Procedure times for both one and second-stage SADI-S were significantly shorter (–39 minutes, p=0.04; –33 minutes, p=0.02), respectively. There were no conversion to laparotomy or 30-day mortality. In SADI-S group, there were 2 complications (negative laparoscopy for abdominal pain and stenosis requiring dilation). Median follow-up time was 7.0(9.4) months [8.0(8.1) vs. 3.8(11.3) months]. For both one and second-stage procedures, BMI changes were similar [–16.6(8.7) vs. –14.7(8.6); –7.0(4.2) vs. –4.2(4.6)], respectively.

Conclusions: These preliminary results indicate that SADI-S is a safe procedure with encouraging short-term outcomes comparable to conventional BPD-DS. SADI-S has promising potential as a second-stage procedure following SG, which is the most performed surgery worldwide. However, long-term follow-up is required to support its adoption.

A283

Effect of Bariatric Surgery on Exocrine Pancreatic Function

Mahir Ozmen *Ankara* [1], EMRE GUNDOGDU [2], Emir Güldogan *Ankara* [2], Fusun OZMEN *Ankara* [3]
Department of Surgery, Medical School, Istinye University, ISTANBUL-TURKEY[1] Department of Surgery, Medical School, Istinye University[2] Department of Basic Oncology, Cancer Institute, Hacettepe University, ANKARA-TURKEY[3]

Background and Aim: Although excess weight loss is the targeted end-point of the successfull procedure, many patients might suffer from disturbed bowel habits and vitamin deficiencies. We aimed to evaluate exocrine pancreatic function after different procedures.
Methods: 60(21M)patients aged 43(21-62)years who underwent bariatric surgery (*sleeve gastrectomy(SG), mini-gastric bypass(MGB) or single anastomosis duodenal switch(SADS*)) and 20(6M)healthy controls aged 33(22-56)y were included. Stool samples were collected for fecal elastase-1(FE1) levels (mg/g stool). 10 patients from each group were given pancreatic enzyme replacement therapy(PERT). Excess weight loss(EWL,%) and serum vitamin D levels were also measured.

Results: FE1 levels in control group was found as 518,2(351,6-691)mg/g which were 642,35(566,3-711,4); 378,52(183,5-561,1); 458,88(252,5-593,5)mg/g after SG, MGB and SADS respectively. Although levels remained unchanged after sleeve gastrectomy, significant decrease were observed after malabsorbtive procedures. After 3 months of PERT, levels were normalized (683.39(615,5-720) in MGB and 691.57(643,1-720) in SADS group. Vit D Levels(pg/ml) were found

to be decreased in almost 60% of the patients which were 17.8(3-46.5), 19.04(9-30), 15.1(8.4-23.6) after SG, MGB and SADS respectively. EWL in one year were 58%, 65% and 71% respectively. PERT did not effect the weight loss but serum vit D levels were significantly increased both in MGB and SADS.

Conclusion: Almost every patients are suffering from malabsorbtion after MGB or SADS whereas functions are kept normal after SG. PERT corrects the pancreatic function which results in normal serum vit-D levels without affecting the weight loss. We conclude that PERT should be in the treatment algoritm especially after malabsorbtive procedures.

A284

Perioperative Transversus Abdominis Plane (TAP) Block for Bariatric Surgery to Reduce the Use of Opioid Analgesics

Rena Moon *Orlando FL*[1], Linda Lastrapes *Orlando FL*[1], Andre Teixeira *Orlando FL*[1], Muhammad Jawad *Orlando FL*[1]
Orlando Regional Medical Center[1]

Introduction: Overuse of opioid analgesics is a public health in the U.S. Postoperative pain remains the most common challenges following inpatient and outpatient surgeries, and therefore opioid analgesics are widely used during the perioperative period. Several studies have reported the use of transversus abdominis plane (TAP) block for perioperative pain management.
Objectives: The aim of this study is to examine the efficiency of TAP block in reducing the use of opioid analgesics during the perioperative period of bariatric procedures.
Material and Methods:A retrospective chart review was performed on 174 patients who underwent a laparoscopic bariatric procedure between April 1st, 2017 and March 31st, 2018. A total of 92 patients received TAP block, while 82 patients did not receive TAP block.
Results: Baseline patient characteristics were comparable between the two groups. The mean age was 44.0±11.0 years vs. 43.1±10.0 years, and the mean preoperative body mass index(BMI) was 45.6±8.5 kg/m^{2}and 45.5±8.8 kg/m^{2}in TAP and non-TAP groups, respectively. In the TAP group, 2 patients(2.2%) received intravenous(IV) morphine while 2(2.4%) did in the non-TAP group(p=0.94). In the TAP group, 54(58.7%) received oral opioid analgesic while 66(78.6%) did in the non-TAP group(p=0.02). In the TAP group, 83(90.2%) received oral non-steroidal anti-inflammatory drugs while 14(16.7%) did in the non-TAP group(p<0.001).
Conclusion: The use of TAP did not affect the use of IV morphine, but significantly decreased the use of opioid analgesics by mouth. A larger prospective study may be needed to

further validate the use of TAP block for perioperative pain management.

A285
Preoperative Diabetes and Early Postoperative Weight Loss Can Predict 1-year Weight Loss Success after Sleeve Gastrectomy

Christopher Buchholz *Hackensack NJ*[1], Melissa Blatt *Hackensack NJ*[1], Hans Schmidt *Paramus NJ*[1], Douglas Ewing *Paramus NJ*[1], Toghrul Talishinskiy *Paramus NJ*[1]
Hackensack University Medical Center[1]

Introduction:

The sleeve gastrectomy is effective for weight loss and resolution of obesity-related comorbidities. However, not all patients achieve the same level of success. The purpose of this study is to determine if preoperative and postoperative markers predict successful weight loss.

Methods:

Of 3059 sleeve gastrectomies performed between 2012 and 2016, 472 patients met inclusion criteria of post-operative follow-up at 1 month, 3 months, and 1 year. A retrospective chart review was conducted, involving collection of patients' baseline demographics, medical history, and postoperative markers. Wilcoxon rank-sum and chi-square tests were used to perform statistical analyses. Successful weight loss was defined as > = 50 % excess weight loss (EWL) at 1 year.

Results:

Sixty-four percent of patients achieved successful weight loss. Younger age, male gender, greater height, and lower baseline excess weight and body mass index were significantly associated with success; while diabetes was significantly associated with failure. Among the patients that succeeded, the mean 1-month and 3-month EWL was 20.1% and 37.2% respectively. This is higher than 16.3% EWL at 1 month and 28.4% EWL at 3 months among patients that failed ($p < 0.001$). Of the 356 patients that followed up at 6 months and succeeded, the mean EWL was 52.6%, versus 36.6% among those that failed ($p < 0.001$).

Conclusion:

Preoperative and postoperative markers can predict a successful outcome. Knowing baseline demographics, diabetes history, and early weight loss can identify those individuals who are predicted to fail, thus enabling a more rigorous treatment plan to achieve success.

A286
Single Incision Laparoscopic Surgery as a Safe and Effective Technique for Sleeve Gastrectomy

Sherard Chiu *Fairfield CT*[1], Shawn Garber *Roslyn Heights NY*[1]
New York Bariatric Group[1]

In the United States, approximately 216,000 bariatric procedures were performed in 2016 with 58.1% being sleeve gastrectomies. The majority of these procedures were performed using the conventional laparoscopic (multiport) manner. Since the introduction of single incision laparoscopic surgery (SILS), there has been an increase in sleeve gastrectomies performed using this technique. This study aims to investigate our single surgeon's experience with SILS versus conventional laparoscopic sleeve gastrectomy in terms of leak rate, hernia occurrence, excess body weight loss, and operative time. This study includes 411 (44.3%) patients that underwent conventional laparoscopic as compared to 516 (55.7%) patients that underwent SILS sleeve gastrectomy by a single surgeon from our institution. The leak rate of the conventional laparoscopic group was 0.49% (n=2) verses 0.19% (n=1) in the SILS group. Hernia occurence in the conventional group was 2.68% (n=11) as compared to 2.71% (n=13) in the SILS group. An average of 61% excess body weight loss after 1 year was achieved in the conventional group versus 75% excess body weight loss after SILS gastrectomy. Average surgical time for the conventional group was 33.64 minutes and 32.58 minutes for the SILS group. None of the SILS cases required conversion to another technique. In our experience, the SILS sleeve gastrectomy is a safe and effective operation as compared to the conventional laparoscopic procedure and can be performed using the same surgical principles.

A287
MBSAQIP National Registry Study of Sleeve Gastrectomy Outcomes in Patients Age 70 and Older

Richard Seip *Glastonbury CT*[1], Andrea Stone *Glastonbury CT*[1], Tara McLaughlin *Hartford CT*[1], Darren Tishler *Glastonbury CT*[1], Pavlos Papasavas *Hartford CT*[1]
Hartford Hospital[1]

Introduction: The number of patients over age 70 undergoing bariatric surgery is increasing. We investigated whether age>70 affects the safety of sleeve gastrectomy (SG) performed as the primary bariatric procedure.

Methods: Using MBSAQIP 2015-16 registries, we compared characteristics and outcomes in 96,663 patients under age 70 (**U70**) to 961 patients age 70 and older (≥**70**). All underwent laparoscopic SG surgery with CPT 43775 as principal code. Cases that were converted from laparoscopic to open were included. Excluded were patients who underwent previous abdominal surgery; whose surgery represented revision or conversion;

and emergent cases. Our initial analysis excluded cases with other or concurrent CPT codes; a secondary analysis added back selected groups.

Results: Initial analysis: The 30d mortality rate was marginally higher in ≥**70** vs. **U70** (0.31% vs. 0.07%, p=0.03) as was the rate of unplanned ICU admissions (1.35% vs. 0.49%, p=0.0001). However, many 30 day outcomes were unaffected (see **Table**). In ≥**70** vs. **U70**, ASA class was higher (p<1e-6) and the number of comorbidities (diabetes, GERD, sleep apnea, hyperlipidemia, hypertension) per patient was greater (2.9±1.2 vs. 1.5±0.8, p<1e-6). Secondary analysis: Incorporation of 77,206 additional patients with simultaneous procedures (paraesophageal hernia repair, enterolysis, cholecystectomy, liver biopsy) did not alter results (see **Table**).

Conclusion: Despite a greater number of comorbidities, patients over the age of 70 have similar 30 day outcomes from SG. The risk of 30 day perioperative mortality is higher in the over 70 cohort, however, this risk still remains very low especially considering the comorbidities present.

A288
The Effect of Laparoscopic Sleeve Gastrectomy on Gastroesophageal Reflux Disease

Christina Poa *Rolling Hills Estates CA*[1], Collin Creange *New York NY*[1], Matthew Pergamo *Port washington NY*[1], Christine Ren-Fielding [1], George Fielding *New York NY*[1], Bradley Schwack *New York NY*[1]
New York University[1]

BACKGROUND:
Gastroesophageal reflux disease (GERD) is a common condition in adults, affecting both quality of life and risk of developing esophageal cancer. Laparoscopic sleeve gastrectomy (LSG) has become a popular option for patients seeking operative management of morbid obesity, however it is unclear whether it may potentially worsen GERD symptoms.
METHODS:
290 patients with morbid obesity completed a pre-operative Gastroesophageal Reflux Disease-Health Related Quality of Life (GERD-HQL including odynophagia/dysphagia, relation of symptoms to position/meals, etc with a score range of 0-50) questionnaire before undergoing elective LSG. 191 patients completed a post-operative GERD-HQL questionnaire (66%, with a mean follow-up time of 20.4 months).
RESULTS:
Mean weight loss, % body weight loss (BWL), and reduction in BMI were 79 pounds, 28.1%, and 12.7 respectively. Within the overall cohort there was not a significant change in mean GERD-HQL scores (pre-op 6.1, post-op 6.1, p=0.981). However in subgroup analysis, patients without GERD pre-

operatively demonstrated a significant worsening in mean GERD-HQL scores (pre-op 2.4, post-op 4.5, p=0.0020). There was not a significant change in usage of GERD medication pre- vs. post-operatively (pre-op 37%, post-op 32%, p=0.233). The percent of patients satisfied with their condition post-operatively was significantly increased in those with pre-op GERD, older age, hiatal hernia repair intra-operatively, and in those with the highest BWL.
CONCLUSIONS:
Our results suggest that while overall, LSG does not significantly affect GERD symptoms, patients without GERD pre-operatively may be at risk for developing new or worsening GERD symptoms after LSG.

A289

Sleeve gastrectomy improves abdominal fat on computerized tomography after surgery.

Marco Castillo Rodriguez *Miramar FL*[1], Mauricio Sarmiento-Cobos *Weston* [1], Elliot Wasser *Weston FL*[1], Rama Rao Ganga *Columbia MO*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

Background
The visceral fat in obese population is linked to insulin resistance and metabolic syndrome. Sleeve gastrectomy (SG) is an effective method for the management of obesity and its comorbidities.The effect of SG on visceral fat has not been described. We intend to study the changes of visceral fat after SG.

Methods
A retrospective review of the SG procedures between 2010 and 2017 was conducted. All the patients with a preoperative and postoperative CT scan were included in the study. Abdominal 3D volumetric computerized tomography (CT) measurement of visceral and subcutaneous abdominal fat was performed.

Results:
Of the 1700 patients reviewed, 23 (1.35%) SG met inclusion criteria. There was a preponderance of female sex (n=1183,69.6%), with a mean age of 54.02 +13.04 years. Diabetes mellitus was present in 1256(73.9%) of patients. The preoperative CT was done 0.17 + 0.39 years before surgery, and the postoperative one 1.54 + 1.02 years after surgery.The mean volume of abdominal subcutaneous fat was 18,348 ml preoperative and 12,287ml postoperative (p = 0.001), with a decrease of 6,060.86 ml. The mean total abdominal fat was 5,844.86ml preoperative and 17,826 ml postoperative (p = 0.002). The visceral fat improved from a mean of 5,844 ml to 5,538ml (p = 0.752) after sleeve gastrectomy. Glucose and lipid metabolisms improved postoperatively.

Conclusions:
Sleeve gastrectomy decreases total abdominal fat and subcutaneous fat postoperatively.. In spite of a not significant change in visceral fat after sleeve gastrectomy, patients presented improvement of cholesterol values and insulin resistance

A290

Bioabsorbable staple line reinforcement in laparoscopic sleeve gastrectomy in the prevention of post-operative haemorrhage and staple line leak – Does it make a difference?

Sabin Warner-Smith *Pimlico*
Mater Hospital

Introduction:
Staple line leak and haemorrhage remain two important complications post laparoscopic sleeve gastrectomy (LSG). Currently, evidence suggests staple line reinforcement reduces the incidence of postoperative haemorrahge and staple line leak. However, there is no consensus to the best method for staple line reinforcement. The purpose of this study was to evaluate the effectiveness of bioabsorbable staple line reinforcement in preventing staple line leak or haemorrhage in patients undergoing LSG.
Method:
A retrospective analysis was undertaken incorporating 462 patients with a BMI>30 who underwent LSG at an Australian surgical centre between 2014 to 2017. Patients were randomized using their hospital identification numbers. Patients in the intervention group received bioabsorable reinforcement along the entire staple line. All patients underwent a postoperative gastrograffin swallow to assess for leak. Patient notes were reviewed and any incidence of staple line leak or haemorrhage was recorded.
Results:
Of the 462 patients who underwent LSG, 204 (44%) received no reinforcement whilst 258 (56%) patients received bioabsorbable reinforcement. Of the entire population, 9 patients experienced a staple line leak (2%) and 3 suffered post-operative haemorrrhage (0.6%). Of the patients with staple line leak, 4 received bioabsorable staple line reinforcement compared with 5 who had no reinforcement. All patients with postoperative haemorrhage had no staple line reinforcement, however this was found to not be statistically significant.
Conclusion:
Overall, we found no statistical difference in the incidence of postoperative staple line leak or haemorrhage in patients receiving bioabsorbable staple line reinforcement compared with no reinforcement.

A291

Comparison between endoscopic and laparoscopic evaluation of hiatus

hernia in patients undergoing weight loss surgery

Sabin Warner-Smith *Pimlico*
Mater Hospital

Introduction:

Currently, the advantages of pre-operative upper endoscopy in patients undergoing weight loss surgery remains controversial. Data suggests that patients with obesity have a high incidence of gastro-oesophageal reflux, oesophagitis and hiatus hernia (HH). Upper endoscopy findings may play an important role in operative planning. Currently, little evidence exists regarding the diagnostic sensitivity of upper endoscopy in detecting hiatus hernia.

Method:

A retrospective analysis was undertaken incorporating 514 patients with a BMI>30 who underwent weight loss surgery at an Australian surgical centre between 2014 to 2017. All patients underwent upper gastrointestinal endoscopy as part of their preoperative workup. Endoscopic reports were reviewed and compared with laparoscopic findings for each patient to determine the sensitivity of endoscopy in detecting HH.

Results:

Of the 514 patients who underwent weight loss surgery, 334 had no evidence of HH on both upper endoscopy and laparoscopy. Of the 406 patients with no evidence of HH on endoscopy, 72 had a HH seen during laparoscopy (specificity = 87.2%, negative predictive value 82.3%). Of the 108 patients with HH seen on upper endoscopy, 59 had corresponding findings on laparoscopy (sensitivity 45%, positive predictive value 54.6%).

Conclusion:

Overall, we found upper endoscopy to have a higher specificity and negative predictive value than sensitivity and positive predictive value in the evaluation of hiatus hernia compared with laparoscopic findings.

A292

The Effects of Aprepitant on Postoperative Nausea and Vomiting with Bariatric Surgery

Ciara Lopez *Windermere FL*[1], Dennis Smith *Celebration FL*[1], Sharon Krzyzanowski *Harmony FL*[1], Keith Kim *Celebration FL*[1], cynthia buffington *Celebration FL*[1]
Florida Hospital Celebration health[1]

Introduction. Postoperative nausea and vomiting (PONV) following bariatric surgeries may hinder recovery and extend the length of hospital stay (LOS). In this study, we examine the effects of aprepitant on: 1) the incidence and severity of PONV and 2) LOS and associated costs.

Methods. The study population

involved 135 bariatric patients (15 DS, 60 RYGB, 60 LSG), half of whom received an oral dose of aprepitant (80 mg) two hours preoperatively. All patients were on an antiemetic protocol consisting of 10 mg IV Dexamethasone (during and 8 hours following surgery) and 4 mg ondansetron administered prior to admission to the post-anesthesia care unit (PACU). PONV incidence and severity were determined by the need for antiemetic rescue medications in the PACU and on the hospital unit.

Results. Aprepitant did not influence the incidence of PONV early postoperatively (PACU) but did improve PONV following discharge from PACU to the hospital unit. With aprepitant, fewer patients experienced severe PONV (≥4 rescue medications) and a greater percentage had no PONV (59% vs. 40% aprepitant vs. non-aprepitant, $\chi 2$ $p \geq 0.05$). The number of PONV rescue medications while on the unit averaged 1.13 with aprepitant vs. 1.86 without. Patients' self-reported perceptions of PONV severity were also significantly ($\chi 2$ $p=0.02$) less with aprepitant. Along with improvement in PONV, LOS declined with aprepitant, i.e. 1.56 vs. 1.85 days ($p=0.01$), for a cost savings of $172.18/person.

Conclusion. Aprepitant added to an antiemetic prophylactic regimen improves PONV and significantly reduces the duration of the hospital stay.

A293

An Aggressive Program for Prevention of Nutrient Deficiencies with the Duodenal Switch

Dennis Smith *Celebration FL*[1], Ciara Lopez *Windermere FL*[1], Lauren Lapp *Celebration FL*[1], cynthia buffington *Celebration FL*[1]
Florida Hospital Celebration Health[1]

Introduction. The duodenal switch (DS) is a malabsorptive surgery that increases the risk for nutrient deficiencies. In this study, we examine the effectiveness of an aggressive program for prevention and treatment of early DS micronutrient deficiencies.

Methods. DS patients were advised to take daily multivitamin/mineral (MVM) supplements at amounts ≥ those recommended by ASMBS Guidelines (2016). Vitamin and mineral levels were closely monitored at 3, 6 and 12 months post-surgery and supplement intakes adjusted to treat low and deficient nutrients.

Results. Nearly all micronutrients declined early post-surgery (3, 6 months) despite 96% MVM compliance at daily intakes ≥ ASMBS recommendations. With early laboratory assessment and supplementation adjustment, most micronutrients returned to, or toward, baseline values by one year postoperatively. Deficiency rates at one year were 0% for ferritin, iron, selenium, Vitamin A, Vitamin K, Vitamin B12, and only one case each for vitamins B1 and folate. In contrast, copper and zinc levels declined

progressively, with deficiency rates of 25% and 35%, respectively, at 12 months. Vitamin D improved at 3 and 6 months but returned to preoperative values and preoperative deficiency and insufficiency rates, 9% and 41%, respectively. Serum calcium levels, although within the normal range, declined progressively and PTH increased (30% elevated).
Conclusions. Patient compliance to recommended supplementation coupled with MVM adjustment is effective in the prevention of most, but not all, early DS nutrient deficiencies. More frequent monitoring and an even closer surveillance of specific vitamin/minerals is necessary to reduce the risk for nutrient complications.

A294
Psychometric Measures Associated with Clinical Outcomes after Bariatric Surgery
Anahita Jalilvand *Hilliard OH*[1], Jane Dewire *Columbus OH*[2], Andrew Detty *Columbus OH*[2], Bradley Needleman *Columbus OH*[2], Sabrena Noria *Columbus OH*[2]
The Ohio State Wexner Medical College[1] The Ohio State Wexner Medical Center[2]

INTRODUCTION: Psychiatric evaluations prior to bariatric surgery (BS) vary by institution. This study evaluates the association between psychometric factors, readmission rates, and weight-loss after BS.

METHODS: All primary BS patients were reviewed between 2014-2016 at a single institution (n=589). Demographic, surgical, and psychiatric data (depression, anxiety and/or bipolar diagnoses (DAB), binge eating scale (BES), three factor eating questionnaire (TFEQ), and Shipley-2) were obtained through chart review. Readmissions were documented within 30-days of discharge (30-R), prior to the first post-operative clinic visit (PC-R), and for non-urgent causes (nausea/vomiting/pain) (NU-R). Six and 12-month weight-loss was reported as %excess body weight-loss (%EBWL).

RESULTS: The incidence of DAB was 56% (n=326) in this cohort. Compared to controls, DAB patients had higher 30-R (9% vs 4%, p=0.02) and trended towards increased PC-R (8% vs 4%, p=0.06) and NU-R (62% vs 30%, p=0.14). Patients at highest risk for binge eating (BES-2) trended towards higher 30-R (17% vs 6%, p=0.11), PC-R (11% vs 5%, p=0.2), and NU-R (100% vs 50%, p=0.2) compared to lower BES scores. TFEQ and Shipley-2 were not associated with early readmissions. Compared to low scores, BES-2 was associated with higher 6 and 12-month %EBWL for sleeve gastrectomy patients (51% vs 38% p = 0.02; 63% vs 41%, p=0.06). TFEQ, Shipley-2, and DAB were not associated with any %EBWL.

CONCLUSION: DAB and high BES

were associated with early, non-urgent readmissions after BS. While no psychometric factor was associated with decreasing %EBWL, patients at highest risk for binge eating had increased weight loss.

A295

Early Postoperative Visit Intervention to Reduce ED Visits after Bariatric Surgery

Wendy Miller *Royal Oak MI*[1], Kerstyn Zalesin *Birmingham MI*[1], Montgomery Wendy [1], Kathryn Ziegler *Royal Oak MI*[1]
William Beaumont Hospital[1]

Background: In order to reduce postoperative emergency department (ED) visits within 30 days post-bariatric surgery, we added an earlier visit with our Weight Control Center physician and dietitian. In January 2016, we included visits at postoperative day 5 (early), as opposed to the first visit at postoperative day 10 (standard).
Methods: Preoperative, perioperative, and postoperative data were collected prospectively from September 2014-December 2015, and January 2016-April 2017. Patients presenting to the ED in each time period were compared to patients not presenting to the ED.
Results: 475 patients with standard visits were compared with 440 patients with early visits (9.2 vs. 4.9 days, p=<0.0001). There was no difference between the groups in the rate of ED visits, 9.9% vs. 9.1% (p=0.7). There was also no difference in time to postsurgical presentation to the ED (15.3 vs. 13.7 days). The most common reason for presentation in both groups was "symptoms without a diagnosis," with nausea, vomiting, and/or abdominal pain. Overall, the rate of ED visits was higher in gastric bypass patients (14% vs. 8%, p=0.04), those with underlying GERD (13% vs 6%, p<0.0005), history of frequent ED visits (53% vs. 9%, p<0.0001), and those requiring outpatient IV fluids following discharge (25% vs. 5%, p<0.0001).
Conclusion: Earlier postoperative outpatient visits did not result in a significant reduction in 30-day ED visits. Focusing more efforts on patients with history of GERD, history of frequent ED visits prior to surgery, and dehydration requiring outpatient IV hydration may decrease early post-bariatric surgery ED visits.

A296

Incidence and Management of Gastric Stenosis after Laparoscopic Sleeve Gastrectomy: A Single Institution Experience.

Maria Fonseca Mora *Weston FL*[1], Cristian Milla Matute *Davie FL*[1], David Gutierrez Blanco *Weston FL*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

BACKGROUND:
Gastric Stenosis (GS) has a reported incidence of 4% after Laparoscopic sleeve gastrectomy (LSG). The objective of this study is to describe incidence and management of GS after LSG at our institution.
METHODS:
We retrospectively queried our prospectively maintained database for GS after LSG, between January 2005 and March 2018. We included all patients requiring intervention for symptoms of GS, whereas patients who recovered without any intervention where excluded. Statistical analysis of Categorical and nominal variables was conducted with Chi-square and Independent T-test respectively.
RESULTS:

A total of 1,878 patients underwent LSG. Post-operatively 10 patients underwent management for GS; among those, 6(60%) had LSG at our institution and 4(40%) at other hospitals. Our LSG GS stenosis rate was 0.31%(n=6). The mean time of diagnosis was 6.67±9.1 months, as one patient was diagnosed 24 months postoperatively. GS was located in the distal 2/3 of the sleeve in 83.3%(n=5) of patients. Among 6 patients, the endoscopic dilatations required was 2.17 ± 0.75, a 10 mm and 12 mm TTS balloon was used in 50% of patients during first and second attempt respectively, in the third attempt 2(33.3%) patients required a 12mm balloon. Among those, 33.3%(n=2) underwent RNYGB, of whom 6.7%(1) previously had myotomy. Of the 10 patients, 80% were successfully managed by EGD and 100% recovered successfully.

CONCLUSION:

In this study, the incidence of GS after LSG was very low. Endoscopic balloon dilation is an effective treatment method for GS. Non-responders benefit from conversion to RYGB.

A297

A step in the right direction: trends over time in bariatric procedures for patients with GERD

Zaina Naeem *Stony Brook NY*[1], Jie Yang *STONY BROOK NY*[2], Jihye Park *Stony Brook NY*[2], Andrew Bates *Locust Valley NY*[1], Salvatore Docimo *Stony Brook NY*[1], Aurora Pryor *Stony Brook NY*[1], Konstantinos Spaniolas *Stony Brook NY*[1]
Stony Brook University School of Medicine[1] Stony Brook University[2]

Introduction: While sleeve gastrectomy (SG) has increased in popularity compared to gastric bypass (RYGB), even for the subset of patients with GERD, recent literature suggests that RYGB may be more effective in alleviating GERD symptoms and normalizing gastroesophageal physiology. This study explored practice patterns over time for patients

with GERD undergoing bariatric surgery.

Methods: Data for SG and RYGB were extracted from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) datasets for 2015 and 2016. Multivariable logistic regression analyses were performed to determine effects of pre-existing GERD on the choice of surgery type, as well as the association between hiatal hernia repair (HHR) and surgery type.

Results: 130,772 patients underwent RYGB (30.5%) or SG (69.5%) in 2015; the number increased to 145,783 patients in 2016 (72.85% SG). 37.8% of RYGB patients had pre-existing GERD compared to 28.4% of SG patients. Patients with pre-existing GERD were significantly more likely to undergo RYGB compared to those without pre-operative GERD in 2015 (OR=1.21, 95% CI 1.17-1.24); this likelihood strengthened in 2016 (OR=1.31, 95% CI 1.27-1.34) ($p<0.0001$). Concomitant HHR was less common amongst RYGB patients; this was more pronounced over time (OR=0.43, 95% CI 0.42-0.45 for 2015; OR=0.4, 95% CI 0.39-0.42 for 2016, p=0.0032 for between-year comparison).

Discussion: Even though SG predominates the bariatric surgery practice nationally, patients with pre-existing GERD are increasingly likely to undergo RYGB, a trend which is reflective of recent literature. Despite this improvement, a significant discrepancy persists in hiatal hernia management per bariatric procedure type.

A298

Personalized medicine for outcomes and expectations following bariatric surgery: using bioelectric impedance technology to build prediction models in the bariatric patient population

Erika La Vella *Corvallis OR*[1], Kirsti Troyer *Corvallis OR*[1], Olivia Pipitone *Corvallis OR*[1], Donald Yarbrough *Corvallis OR*[2]
Samaritan Health Services[1] Western University-COMPNW[2]

Background: The pattern and composition of weight loss following bariatric surgery is variable and patients compare themselves to others in their cohort to gauge their success. We developed an algorithm using bioelectric impedance (BIA) technology to determine the composition of weight loss.
Methods: Anthropometric measurements were performed on 290 persons with obesity (249 female and 41 male) ages 18-72 between May 2015 and December 2017. BIA was performed with the SECA mBCA preoperatively and regular intervals postoperatively. BMI, FFMI (fat-free mass/height squared) and FMI (fat-mass/height squared) were calculated. Linear regression models were created

to predict post-operative BMI, FMI, and FFMI values based on baseline measurements, age (<50 or 50+), sex, diabetes, and surgery (sleeve or gastric bypass).
Results: Adjusted R-squared values ranging from .60 to .64 and plots of actual vs fitted values indicate appropriate model fit. Model predictions were run for each possible combination of demographic and baseline characteristics. These predictions can now be used by providers with minimal effort within patient encounters to discuss expected outcomes post operatively.
Conclusion: BIA is a useful and convenient method of measuring body composition in obese persons. Regression models can provide a better understanding of postoperative outcomes and can aid in personalizing weight loss expectations.

A299

Metabolic Syndrome Remission after Bariatric Surgery: A Single Institution Experience.

Cristian Milla Matute *Davie FL*[1], Maria Fonseca Mora *Weston FL*[1], David Gutierrez Blanco *Weston FL*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

INTRODUCTION:
Metabolic syndrome (MS) is a conglomeration of risk factors associated with obesity and cardiovascular disease. Bariatric surgery is an effective treatment for obesity and its comorbidities. The aim of this study is to evaluate the remission rates of metabolic syndrome after bariatric surgery.

METHODS:
We retrospectively studied our bariatric population between 2005 and 2018. We analyzed patients who met the WHO Criteria for MS and determined the effects of bariatric surgery at 12 months on MS and its individual components. SPSS software was used to apply t-test for means.

RESULTS:
Among the 1785 number of patients reviewed, 1491(83.5%) met WHO criteria for MS. Predominant procedure was LSG 62.9%(N=939), RYGB 22 %(N: 331), and gastric band(LAGB) conversions 14 %(N: 221). Mean BMI before surgery was 47±15.8 kg/m2. In post RNYGB patients, including conversions from LAGB, mean BMI preoperatively was 44.8±10kg/m2 versus postoperatively 31.5±5kg/m2 (P< 0.0001), preoperative glycemia 152.5±49mg/dL versus postoperative 102±23(P<0.0001), preoperative triglycerides 176±66 versus postoperative 102.7±33(P<0.0001), preoperative HDL 37.7±11 versus postoperative 57±12(P<0.0001) and MS remission rate at 12 months of 29%. In the post LSG patients, including conversions from LAGB,

mean BMI preoperative was 48.2±17kg/m2 versus postoperative 32.1±14kg/m2(P< 0.0001), preoperative glycemia 149±45mg/dL versus postoperative 101±16mg/dL (P<0.0001), preoperative triglycerides 176±69mg/dL versus postoperative 105±37mg/dL(P<0.0001), preoperative HDL 38.8±12mg/dL versus postoperative 57±10mg/dL(<P= 0.0001) and the MS remission rate at 12 months of 28.4%

Conclusions
Bariatric Surgery is an effective method for reversing and controlling MS and its individual components. No difference in LSG and RYGB was noted.

A300
The incidence of undiagnosed obstructive sleep apnoea (OSA) within an Australian bariatric population
Sabin Warner-Smith *Pimlico*
Mater Hospital

It is established that a strong correlation exists between morbid obesity and obstructive sleep apnea (OSA). OSA has been shown to be associated with increased incidence of stroke, hypertension and coronary artery disease. Current evidence suggests that a large number of patients with OSA deny experiencing symptoms. Despite these findings, there is a lack of data regarding the incidence of undiagnosed OSA in patients with obesity.
Method:
A retrospective analysis was undertaken incorporating 527 patients with a BMI>30 who had undergone sleeve gastrectomy or gastric banding at an Australian surgical centre between 2014 to 2017. All patients underwent a preoperative sleep study. Patients with no previous diagnosis of OSA were included in the study. Patients with pre-existing OSA were excluded from the study.
Results:
Of the 527 patients who underwent weight loss surgery, 56 had pre-existing OSA and were excluded from the study. Of the 471 included patients, 110 (23.4%) had no OSA whilst 361(76.6%) had OSA on sleep study. Within the group of patients with OSA: 161 (34.2%) had mild OSA, 13 (2.8%) had mild/moderate OSA, 85 (18%) had moderate OSA, 13 (2.8%) had moderate/severe OSA, 59 (12.5%) had severe OSA and 30 (6.4%) had very severe OSA.
Conclusion:
Of concern, 76.6% of patients in the study were found to have undiagnosed OSA. This is higher than the general population average which studies have suggested as being between 37-50%. Furthermore, approximately 18% of patients had severe/very severe disease with immediate continuous positive airway pressure (CPAP) therapy recommended

A301

Potential Bile reflux ten years after One Anastomosis Gastric Bypass : low incidence in clinical and experimental data .

JEAN MARC CHEVALLIER *PARIS* [1], Matthieu BRUZZI *Paris Paris 15*[1], Tigran POGHOSYAN *Paris* [1], Richard DOUARD *Paris* [1]
Hopital Européen Georges Pompidou[1]

One anastomosis Gastric Bypass (OAGB) is a safe and efficient bariatric procedure but there is still a controversy on the potential bile reflux risk. In our University Hospital performing bariatric surgery since twenty five years we collected clinical and experimental data: patients after 10 years and experimental data on rats exposed to prolonged bile reflux.

From October 2006 to December 2017, 1585 patients underwent OAGB: a long and narrow gastric tube calibrated on a 32 Fr bougie; with a linear stapled gastroenterostomy 150 cm to 200 cm down from the Treitz Ligament. Complete follow-up was available in 64/106 at ten years. Diet-induced obese rats were subjected to OAGB (n=10) or sham (n=4) surgery and followed up to 16 weeks (equivalent to 16 years in humans). Evolution of weight, glucose tolerance, Bile acid concentration measurement, histological and qRT-PCR analysis were studied.

There were 999 women (63%).Mean age was 43.5 years (15.5-62.4). Mean preoperative weight was 131.9 kg ± 23.9, mean BMI 47.03 kg/m^2 (± 7.07).After ten years 17 intractable bile reflux (1.1%) had to be converted into RYGB, mean EWL was 76.5 % ±12.3. In the experimental study, weight loss was significant, mean bile acid concentration was 4.2 times higher in the esogastric segments of OAGB rats. qRT-PCR analysis showed no differences between OAGB and sham mRNA levels of Barrett's esophagus or esogastric carcinogenic-specific genes.

The rate of intractable bile reflux after OAGB is low and OAGB rats had not developed any pre-cancerous or cancerous lesions after 16 weeks.

A302

Changes in HOMA-IR Index After Bariatric Surgery: Comparison of SADS-p and MGB-OAGB

Mahir Ozmen *Ankara* [1], Emir GULDOGAN *Ankara* [2], Emre Gündoğdu *ankara* [2]
Istinye University Medical School[1] Istinye University[2]

Backround and Aim: Bariatric surgery plays a major role to ameliorate metabolic abnormalities of type 2 diabetes. The aim of study was to evaluate the early effects of "Single Anastomosis Duodenal Switch-proximal approach" (SADS-p) and "Mini Gastric Bypass" (MGB-OAGB) on the "homeostasis model assessment of insulin resistance" (HOMA-IR) index levels in morbidly obese patients with type 2 diabetes mellitus (T2DM).

Methods: 260(37M) patients with median (range) BMI of 48(35-73)kg/m^2 who underwent surgery for morbid obesity were included in the study. All procedures were performed by same surgeon either laparoscopically or robotically. Groups were compared by changes of HOMA-IR index levels. Patients were evaluated before surgery and 1, 3, 9, 12 months after surgery.
Results: SADS-p was performed in 60(10M) patients and remaining 200(27M) patients underwent MGB-OAGB. 46(77%) patients in SADS-p group and 125 (63%) patients in MGB group had T2DM. Both procedures had effective excess weight loss in one year(76% after SADI-s and 69% after MGB).In both groups, HOMA-IR index levels decreased significantly after surgery ($p<0.05$) and both procedures markedly improved glycemic control. All patients with T2DM have normalized HOMA-IR index levels latest at the 9th postoperative month with both procedures.
Conclusion: Both procedures are promising as they offer not only effective weight loss but also excellent glisemic control.

A303
Promoting safety through technology: Implementation of EHR "Bariatric Banner" Alert

Jane Cauley *Rockwall TX*[1], Nicole Forryan *Denton TX*[2], sharon hillgartner *Flower Mound TX*[3], Jennifer Peterson [4], Tiffany Norris *Fort Worth TX*[5], Katherine Wardlaw *Bedford TX*[6], Toya White *Dalas TX*[7]
Texas Health Presbyterian Rockwall[1] Texas Health Presbyterian Denton[2] Texas Health Presbeterian Flower Mound[3] Texas Health Presbyterian Plano[4] Texas Health Harris Methodist Ft. Worth[5] Texas Health Harris Methodist H.E.B.[6] Texas Health Presbyterian Dallas[7]

Background: Bariatric surgery program leaders from a large hospital system identified near misses/injuries to the post-bariatric surgery patient while receiving care outside the specialty of bariatric surgery. It became evident bedside caregivers and providers often lacked general knowledge of specific tests or provisions of certain treatment modalities which can cause injury or delay diagnosis/treatment for post-bariatric surgery patients.
Objective: The purpose of the project is to promote safety by identifying all post-bariatric surgery patients, regardless of facility or admitting diagnosis, and provide basic recommendations specific to this patient population.
Method: An interdisciplinary approach was implemented to develop an alert banner to populate in the Electronic Health Record (EHR) when bariatric surgery history is documented. Team members represented: Information

Technology (IT), Pharmacy, Radiology, Nursing, Nutrition and Medical Staff, and sponsored by facility Executive Leadership.

Results: The system-wide EHR features a clickable "Bariatric Precautions" banner alerting all caregivers/providers of the patient's bariatric surgery history and approved recommendations for pharmaceutical, radiology, nursing, nutritional and general care. At the facility level, screenable reports are generated by the EHR listing all current patients with a documented history of bariatric surgery.

Conclusion: Bedside caregivers and providers report the alert banner has heightened awareness of safety needs specific to the post-bariatric surgery population; knowledge gaps are easier to identify by bariatric specialists, which are addressed expeditiously. Most importantly, the alert banner has promoted conversation, awareness and accountability of those providing healthcare within the system, promoting safety and improving outcomes.

A304

Mathematical Model for Predicting the Increase in Office Visits Realized after Bariatric Surgery when 100% Compliance with ASMBS Post-Operative Follow-Up Guidelines is Achieved

Amit Trivedi *Paramus NJ*[1], Sarah Wong *Hackensack NJ*[1]

Hackensack University Medical Center[1]

Nationally, long-term and short-term patient follow up after bariatric surgery is exceedingly low. Per ASMBS guidelines, routine follow-up should be at month 1, 3, 6, 12 and yearly thereafter.

We created a mathematical model of the expected growth in office visits per month if 100% compliance with ASMBS follow-up guidelines is achieved.

In Figure 1, we extrapolate to 6 years the increase in office visits of a bariatric practice that operates on 15 patients per month, or 180 cases per year. We assume no increase in case volume. The practice will be seeing 60 patients per month by the end of Year 1 and 135 patients per month by the end of Year 6.

In Figure 2, the model allows for modest growth per year of 5 monthly cases. This results in a volume increase of 60 additional cases each year. By the end of Year 6, the total case volume will be 480 annually and monthly patient visits will have increased to 285.

Our model shows significant increases in monthly office visits to growing bariatric surgery practices as they strive to meet 100% ASMBS follow-up guidelines. Our model does not factor in the extensive pre-operative screening process and often low conversion rate, which only further taxes resources and potentially limits growth.

Alternative screening and follow-up

options need to be further developed. Shifting the pre-operative workup and post-operative follow-up to dedicated teams exclusively focused on bariatric care may decrease the burden on growing bariatric practices and increase ASMBS compliance rate.

A305

Alcohol after laparoscopic sleeve gastrectomy: high blood ethanol level or fast metabolism?

Angelo Iossa *Latina* [1], Maria Chiara Ciccioriccio *Rome* [2], Anna Guida *Latina* [2], Gianfranco Silecchia *Rome* [2]
University of Rome[1] University of Rome "La Sapienza"[2]

Background: Several questions remains unresolved about the post-operative impact of single bariatric procedures on alcohol metabolism and effects. While is largerly established that bypass surgery causes an heightened peak blood alcohol concentration (BAC), results on the effects of LSG on alcohol pharmacokinetics are conflicting. We reports our metabolic study on alcohol effect at 1 year after LSG.
Methods: Exclusion criteria were: alcohol use disorders (AUD) or teetotalers (evaluated with AUDIT test), decompensated type II diabetes, chronic liver pathology, previous gastric or intestinal resective surgery. Twenty-five patients (18 female/7 male) were prospectively enrolled and evaluated pre- and post-operatively (1 year) with BAC blood test at 0,15,30,60,90 minutes after the administration of a standard alcoholic drink (red wine-14%). Standard drink was established based on the total amount of water. An urine sample was also collected after the drink intake to evaluate the alcohol metabolism.Symptoms were evaluated with a personal score looking at euphoria, anxiety, sweating, nausea/vomiting and facial skin flushing.
Results: Post-operative BAC peak increased faster ($p<0.01$) but the BAC peak wasn't significant different with the pre-operative levels ($p=0.9$). After 90 minutes the BAC return to 0 pre and post-operatively. Regarding the symptoms we registered an high level of nausea/vomiting,skin flushing and sweating in the post-operative period ($p<0.01$). The urine analysis showed a 2-fold higher level of acetaldehyde ($p<0.01$)
Conclusions: LSG change the metabolism of alcohol in terms of amount of volume fastest metabolized by the liver (fast gastric emptying) and the "drunk" symptoms are related to alcohol toxicity.

A306

Self-compassion as a protective pathway in the link between mental health symptoms and emotional eating in a pre-bariatric sample

Tosca Braun [1], Andrea Stone *Glastonbury CT*[2], Jennifer Ferrand *Hartford CT*[3], Amy

Gorin *Storrs CT*[1], Diane Quinn *Storrs CT*[1], Rebecca Puhl *Hartford CT*[1], Gina Sensale [1], Darren Tishler *Glastonbury CT*[2], Pavlos Papasavas *Hartford CT*[2] University of Connecticut[1] Hartford Hospital[2] Hartford Hospital, Institute of Living[3]

Introduction: Attempts to regulate negative affect (e.g., anxiety, depression) through emotional eating have been implicated as risk factors for post-operative weight regain. Identifying protective factors that disrupt this pathway might inform psychosocial interventions. The current study tested whether self-compassion, an affect regulation strategy linked to psychosocial and behavioral health, mediates the association between depressive/anxiety symptoms and emotional eating.

Method: Bariatric surgery candidates (BSC) recruited from a clinic (*N* = 152, 61.4% women, 62.8% White, 43 ±12 years, mean BMI: 49±9kg/m^2) completed the Generalized Anxiety Scale-7 (GAD-7), Beck Depression Inventory-2 (BDI-2), Emotional Eating subscale of the TFEQ-R18 (EE), and Self-Compassion Scale (SCS) pre-surgery. PROCESS bootstrapping estimates tested our hypothesis that depressive/anxiety symptoms -> self-compassion -> emotional eating after controlling for sex, age, ethnicity, race, and insurance (Medicaid/Medicare vs. private) as proxy of SES.

Results: Total effects of anxiety (β=.27, p<.001) and depressive symptoms (β=.27, p<.001) on emotional eating were significant. With self-compassion, the direct effect of anxiety (β=.10, p=.175) and depressive symptoms (β=.11, p=.120) on emotional eating became non-significant, indicating full mediation. Bootstrapping results estimated indirect effects of anxiety (β=.27, 95% CI [.12, .41]) and depression (β=.16, 95% CI [.09, .41]) on less emotional eating through self-compassion.

Discussion: Self-compassion appears to protect against the association of depressive/anxiety symptoms with emotional eating in bariatric surgery candidates. Future research incorporating causal/longitudinal designs should examine whether self-compassion is a modifiable protective factor that can disrupt the link between psychopathology and maladaptive eating behaviors.

A307

Effects of increased intra-abdominal and thoracic pressure in vasopressin release and kidney Function during Laparoscopic Sleeve Gastrectomy

David Romero Funes *Weston FL*[1], David Gutierrez Blanco *Weston FL*[1], Giulio Giambartolomei *Weston* [1], Lisandro Montorfano *Weston Florida*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Fernando Dip *Weston Florida*[1], Raul Rosenthal *miami FL*[2]

Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

Background
There is no data describing the pathophysiological changes of intra-abdominal pressure (IAP) and intrathoracic pressure (ITP) on vasopressin and kidney function. The aim of this study is to describe this relationship through a controlled elevation in IAP and ITP (PEEP) while concurrently assessing vasopressin and urine output during Laparoscopic sleeve gastrectomy(LSG).
Methods
After IRB approval, a prospective observational study involving patients undergoing elective LSG was conducted. The Measured variables were: serum and urine osmolality, serum vasopressin, and urine output. All measurements were collected at baseline, right after the establishment of pneumoperitoneum (15 mmHg), positive end-expiratory pressure(PEEP) of 10 mmHg, and at the end of the procedure.
Results
A total of 10 patients were enrolled at the time of the analysis. Our patient population was predominantly white females(n=7)70%, mean age of 44.66±12.24, pre-operative BMI of 40.82±4.11 kg/m2. Serum Vasopressin was 40 fold higher than baseline when measured during pneumoperitoneum and 55%(n=5) of our patients had a vasopressin level >65pg/mL when measured at an elevated PEEP. At the end of the procedure, the vasopressin remained high.
Consequently, urine output showed a considerable and sustained decrease at Pneumoperitoneum and at the end of surgery when compared to baseline. Data are presented in Table 1.
Conclusion
Increase IAP and ITP demonstrate a significant effect on vasopressin release and urine output. Our finds suggest that IAP and ITP may affect the kidney function and urinary output through its effect on vasopressin.

A308
Management of Gastro-Gastric Fistulas in Post-Reux-en-Y Gastric Bypass Patients
Gerardo Davalos *durham NC*[1], Alfredo Guerron *durhjam nc*[1], Dana Portenier *Durham NC*[1]
Duke health[1]

Background: Gastro-gastric fistula (GGF), a communication between the gastric pouch and gastric remnant, is a rare but important complication of Roux-en-Y gastric bypass (RYGB) that can lead to weight gain and marginal ulcers. Multiple approaches have been developed to manage this infrequent complication, however, few studies provide guidelines that show what is the best way and moment to use them.

Methods: in this video compilation we present 3 different options to manage gastro-gastric fistulas after Roux-en-Y

bypass and how and when they are best used. The first case describes fistula closure endoscopically using an endosuture device. The second case describes a trans-gastric approach using percutaneous ports and an endosuture device. The third case describes an operative technique using a stapler device.

Conclusion: gastro-gastric fistulas are an uncommon but well-recognized complication following Roux-en-Y gastric bypass. Endoscopic, trans-gastric and operative approaches, when used appropriately, help solve some of the challenges attached to this problem and improve patient outcomes.

A309

COMPARATIVE RESULTS OF BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH AND TRANSIT BIPARTITION IN THE TREATMENT OF SUPEROBESITY

Philippe Topart *Angers* [1], Guillaume Becouarn *Angers CEDEX 01*[1]
Clinique de l'Anjou[1]

Transit bipartition (TBP) was compared with biliopancreatic diversion with duodenal switch (BPD-DS) it replaced early 2017 for patients whose initial body mass index (BMI) was ≥ 50 kg/m^2. Sixty three consecutive primary BPT were compared to the 63 most recent primary BPD-DS. TBP used the same landmarks as BPD-DS : sleeve gastrectomy over a 50 Fr bougie, 250 cm distal ileum alimentary channel sutured to the gastric antrum with a 100 cm common channel. Unlike the BPD-DS, the duodenum was not transected to allow the food to pass through the 250 cm alimentary limb or the rest of the small bowel. 9-month follow-up was available for 24 of the TBPs and 62 of the BPD-DS. Although not heavier BPD-DS patients had a higher BMI. The main difference concerned the side effects with 50% and 78% of the TBP patients having 1 and 2 bowel movements respectively. After BPD-DS these figures were 10% and 32%. While no TBP patient had an albumin < 35 g/L, this occured for 12 of the 62 BPD-DS and 55% of the BPD-DS had a prealbumin below the normal value of 200 mg/L while this was observed in 13% of the 23 TBPs. 6 BPD-DS patients had a surgical revision/correction because of protein manutrition. In patients with BMI ≥ 50, transit bipartition is a quicker procedure without an impact on the complication rate. The most benefits appear to be on side effects and malnutrition.

A310

TWO YEARS HEALTH RELATED QUALITY OF LIFE IN GASTRIC SLEEVE PATIENTS

Valerie Monpellier *Huis ter Heide* [1], Vera Voorwinde *Den Haag* [1], Luella Smith *Amsterdam* [2], Maartje Straalen [3], Ignace Janssen *heteren* [4]

Nederlandse Obesitas Kliniek[1] Vu University, Faculty of Science[2] Vu University, Faculty of Science,[3] Nederlandse Obesitas Kliniek, QURO[4]

Background:
The gastric sleeve (GS) is currently the most popular type of bariatric surgery. Complication-rate, weight loss and effect on comorbidities have been frequently studied and show promising results. Health related quality of life (HRQoL) is also one of the key outcomes after bariatric surgery, but has been sparsely studied in GS patients.

Objective:
To study the change in HRQoL after GS using an obesity specific and a generic HRQoL questionnaire.

Methods
Patients who underwent a GS in 2012 and 2013 were selected from a prospective database if? HRQoL assessment was available (n=203). HRQoL was assessed before surgery and 15 and 24 months after surgery with the RAND-36 (generic questionnaire) and IWQOL-lite (obesity-specific questionnaire).

Results
Mean BMI before surgery was 48.0, Total weight loss was 30.3% at 15 months and 29.5% at 24 months. All RAND-36 scores significantly improved from BL to 15 months ($p<0.001$ in all) and to 24 months follow-up ($p<0.001$) except the "emotional role functioning" subscale at 24 months ($p=0.07$). All IWQOL-lite scales significantly improvement from BL to 15 and 24 month follow-up ($p<0.001$ in all). From 15 months to 24 months follow-up RAND-36 scores decreased significantly for social functioning, vitality, mental health and health change scale ($p\leq0.005$ in all). IWQOL-lite scores did not significantly change between 15 ad 24 month follow-up.

Conclusion
HRQoL significantly improves after GS. After 15 months, when weight stabilises, HRQoL also stabilizes and even decreases in some subscales. HRQoL after GS should be considered in surgical decision making.

A311
Risk factors of intraoperative difficulties during Laparoscopic Sleeve Gastrectomy
Tomasz Stefura *Kraków* [1], Magdalena Pisarska *Kraków* [2], Michal Wysocki *Kraków* [3], Michal Pedziwiatr *Kraków* [3], Piotr Malczak *Kraków* [3], Marcin Dembinski *Krakow* [2], Jakub Dros *Krakow* [1], Artur Kacprzyk *Krakow* [1], Katarzyna Chlopas *Krakow* [1], Andrzej Budzynski *Kraków* [3], Piotr Major *Poland* [3]
Jagiellonian University Medical College, Students' Scientific Group at

2nd Department of General Surgery[1] Jagiellonian University Medical College, 2nd Department of General Surgery[2] 1. Jagiellonian University Medical College, 2nd Department of General Surgery 2. Center for Research, Training and Innovation in Surgery (CERTAIN Surgery)[3]

Introduction: Laparoscopic Sleeve Gastrectomy (LSG) is one of the most frequently performed bariatric procedures worldwide. Preoperative knowledge concerning risk factors of potential intraoperative difficulties may help to predict outcomes and influence the operative approach.
Purpose: Our purpose was to identify potential risk factors of intraoperative difficulties during LSG.
Methods: The analysis included consecutive patients who underwent LSG between December 2009 and April 2017. Patients with intraoperative difficulties were submitted to Group 1, patients without intraoperative difficulties to Group 2. Demographic parameters were assessed for potential risk factors of intraoperative difficulties. Length of stay (LOS) and complication rate were also analysed.
Results: Group 1 consisted of 37 (11.71%) and Group 2 of 279 (88.29%) patients. Besides rates of diabetes, pulmonary disease and sleep apnea, which were higher in group 1, there were no statistical differences between the groups based on demographic parameters. Univariate logistic regression found that risk factors affecting intraoperative difficulties included BMI >45 kg/m2 (OR 2.15, 95% CI 1.05-4.39, p=0.0362), experience of operating surgeon (OR 9.22, 95% CI 4.31-19.72, p=0.0058), incidence of diabetes (OR 2.44, 95% CI 1.19-4.98, p=0.0146) or pulmonary disease (OR 12.22, 95% CI 1.97-75.75, p<0.0001). In the multivariate logistic regression model only experience of operating surgeon (OR 8.61, 95% CI 3.75-19.72, p<0.0001) remained significant factor affecting intraoperative difficulties.
Conclusions: The only significant factor contributing to the incidence of intraoperative difficulties is the experience of the surgeon.

A312

Redefining Staple Loading Pressures for Adequate Tissue Apposition in Laparoscopic Sleeve Gastrectomy

Vikrom Dhar *Cincinnati OH*[1], Eujin Yeo *Cincinnati OH*[1], Tiffany Lee *Cincinnati OH*[1], Jonathan Thompson *Cincinnati OH*[1], Erica Langan *Cincinnati OH*, Caleb Hayward *Blue Ash OH*, Adam Dunki-Jacobs *Cincinnati OH*, Ben Thompson , Tayyab Diwan *Cincinnati Ohio*[1] University of Cincinnati[1]

Introduction: Stomach tissue thickness (TT) and surgeon-selected closed staple height (CSH) are important factors in the formation of an adequate staple line during laparoscopic sleeve gastrectomy (LSG). Staples need to have a CSH that is

appropriate for a given TT in order to avoid staple malformation that may lead to leak or bleeding. Prior studies characterizing compressed stomach TT have used a loading pressure of $8g/mm^2$ to mimic stapling conditions. We hypothesize that $8g/mm^2$ is an inadequate loading pressure for measuring stomach TT.

Methods: Excised stomach specimens from 39 consecutive patients undergoing LSG were collected. Staple line length, cartridge zone locations, and TT at sequential compression pressures were recorded. Median pressure to achieve CSH was evaluated and stomach TT maps at both $8g/mm^2$ and the median loading pressure were compared.

Results: Median pressure to achieve closed staple height was $15g/mm^2$. The new tissue thickness map at $15g/mm^2$ produced mean TT of 1.9mm at the antrum, 1.7mm at the body, and 1.3mm at the fundus. Tissue thickness at each of the 26 locations along the staple line were significantly smaller at a pressure of $15g/mm^2$ when compared to at $8g/mm^2$.

Conclusions: The median pressure required to compress stomach tissue to obtain CSH was $15g/mm^2$. This was significantly greater than previously reported data. Our results indicate that the use of smaller staple heights is biomechanically acceptable in LSG and a higher loading pressure should be used when developing new stapling devices.

A313

Where are sleeves performed? An analysis of inpatient versus outpatient databases in a large state.

Benjamin Clapp *El Paso TX*[1], Robert Jones *El Paso TX*[2], Ellen Wicker *El paso TX*[2], Mallory Schenk *El Paso TX*[2], Ira Swinney *El Paso TX*[2], Elizabeth De La Rosa *El Paso TX*[2], Alan Tyroch *El Paso TX*[2]

Benjamin Clapp MD PA[1] TTUHSC Paul Foster School of Medicine[2]

Background: The sleeve gastrectomy (SG) is the most common bariatric surgery in the United States today. There is a trend towards doing SG as an outpatient procedure. This can mean either in an ambulatory setting, or as an outpatient at a larger hospital. The designation "outpatient" is essentially any patient without an inpatient order.There remain safety concerns regarding this operation in an outpatient setting. Texas maintains the Texas Public Use Data File (PUDF) databases, both for inpatient and outpatient settings. This is a claims based database with data on over 700,000 patients per year. We used the Texas Inpatient and Outpatient PUDF for 2016 to evaluate where SGs are performed and what were the patient characteristics.

Methods: Both the Inpatient and Outpatient PUDF for 2016 were

queried for patients undergoing SG. These populations were then examined for patient characteristics and the most common ICD-10 diagnosis codes. Patients under the age of 18 were excluded.

Results: There were 16,855 SG performed in Texas in 2016. 5227 (31%) of these were performed under outpatient status. The most common age range in both groups was 40-44 years. The most common ICD-10 code in the inpatient group was E66.01 (morbid obesity), followed by I10 (essential hypertension), K21.9 (GERD), then E11.9 (diabetes mellitus). In the outpatient group the most common code was obesity followed by K44.9 (diaphragmatic hernia), then GERD and hypertension.

Conclusion: A third of SGs in Texas are preformed under outpatient status. Further study is needed to determine the safety of this practice.

A314

Routine Hiatal Dissection and Repair Does Not Improve Short-Term Reflux After Vertical Sleeve Gastrectomy

Mohan Mallipeddi *Los Angeles CA*[1], Emma Gillette *Los Angeles CA*[2], Harveen Sekhon *Brentwood CA*[2], Desmond Huynh *los angeles CA*[1], Miguel Burch *Los Angeles CA*[1], Scott Cunneen *Los Angeles CA*[1], Edward Phillips *Los Angeles CA*[1], Daniel Shouhed *Los Angeles CA*[1]

Cedars-Sinai Medical Center[1] UCLA Medical School[2]

Background: Gastroesophageal reflux disease (GERD) can be exacerbated or incited by VSG, potentially even leading to Barrett's esophagus. There is limited data regarding the impact of selective versus routine hiatal dissection and repair on GERD after VSG.

Methods: A retrospective, single-center analysis of patients undergoing primary VSG for morbid obesity between 2015 and 2017. GERD was evaluated by the GERD-HRQL questionnaire.

Results: We assessed 290 consecutive patients (median age 43 years; 71% female). Among the 276 (95%) who underwent preoperative endoscopy, 39% were found to have a hiatal hernia. There were 246 (85%) who underwent concurrent hiatal hernia repair. One surgeon performed routine hiatal dissection in 97% of his cases, whereas the other three surgeons in the group performed selective dissection in 66% of their cases. Baseline BMI, rate of preoperative endoscopy, and prevalence of hiatal hernia on endoscopy between the routine and selective groups were statistically similar. The median HRQL score for the routine and selective groups preoperatively, 1 month postop, and 3 months postop were 4 vs 3, 2 vs 3, and 2 vs 2 (p=NS), respectively. At 3 months, 7 (4%) patients within the routine group and 6 (5%) in the selective group had a HRQL score ≥

15.
Conclusions: There is no difference in reflux 3 months after VSG as measured by a validated questionnaire in patients undergoing routine versus selective concurrent hiatal hernia repair. A properly designed randomized controlled trial should be performed to assess the true value of hiatal interrogation during VSG.

A315
Chylous Ascites Associated With Internal Hernia Following Roux-en-y Gastric Bypass for Morbid Obesity
Ann Defnet *New York NY*[1], Andrea Bedrosian *New York NY*, Marina Kurian *New York NY*
NYU Langone Health[1]

We present a video outlining the interesting case of a 39 year-old female with internal hernia at Peterson's defect after laparoscopic roux-en-y gastric bypass for morbid obesity associated with the presence of chylous ascites. Internal hernia is one of the most common complications after laparoscopic roux-en-y gastric bypass, and its incidence has been found in the literature to be decreased with antecolic/antegastric roux limb positioning and closure of all mesenteric defects. Chylous ascites is a very rare finding during exploration for internal hernia or small bowel strangulation from any cause. Chylous ascites is thought to be secondary to chronic obstruction of the low flow lymphatic channels with subsequent leakage of chyle into the peritoneum without obstruction of high flow venous and arterial vessels.

A316
Intraoperative blood pressure lability in patients requiring blood transfusions after bariatric surgery
Lee Ying *new haven CT*[1], Matthew Hubbard *New Haven CT*[1], Saber Ghiassi *Fairfield CT*[1], Kurt Roberts *New Haven CT*[1], Andrew Duffy *New Haven CT*[1], Geoffrey Nadzam *New Haven CT*[1]
Yale School of Medicine[1]

Introduction: Postoperative hemorrhage requiring transfusion in patients with minimal operative blood loss is a rare, but frustrating, complication after bariatric surgery. In this retrospective case control analysis, we determine whether perioperative blood pressure lability, anticoagulantion or Ketorolac administration is associated with postoperative blood transfusion in patients with minimal blood loss reported intraoperatively.

Methods: This is a retrospective case control study of patients who received either a laparoscopic gastric bypass or sleeve gastrectomy at an academic medical center from 2014-2017. Of 1,564 bariatric cases, we identified 9 patients who experienced a significant postoperative hemorrhage requiring blood transfusion. Controls for each of these patients were identified based on: age, gender, ethnicity, procedure, and

baseline blood pressure.

Results: When comparing patients who required transfusion postoperatively to those who did not, the transfusion group was found to have a statistically significant difference in mean arterial pressure (MAP) from baseline to the morning of surgery. In addition, patients who received transfusions displayed a wider range in intraoperative blood pressure and a significantly lower MAP just prior to closure. No differences were noted between the two groups with respect to anticoagulation or Ketorolac administration.

Conclusion: Increased intraoperative blood pressure lability is associated with postoperative hemorrhage requiring blood transfusion in patients with minimal intraoperative blood loss during bariatric surgery. Patients who bled were relatively hypotensive during a critical window of the surgery in which intraoperative inspection for bleeding prior to closure occurs.

A317

Bariatric Surgery in Patients with a History of Venous Thromboembolism and Concurrent Anticoagulation Therapy

Raelina S. Howell *Mineola NY*[1], Keneth Hall *Garden city NY*[1], Alexander Barkan [1], Patrizio Petrone *Mineola NY*[1], Collin Brathwaite *Patchogue NY*[1], Barbara Brathwaite *Mineola NY*
NYU Winthrop Hospital[1]

Introduction: Optimal perioperative anticoagulation and the resulting occurrence of postoperative bleeding or venous thromboembolic events (VTEs) in patients with a history of VTE has not been well established.
Methods: Our prospective database was retrospectively reviewed for patients with a VTE history undergoing primary and secondary bariatric procedures from January 2008-December 2017. Factors assessed included: demographics (age, gender, weight, body mass index [BMI], co-morbidities), surgical details (procedure, modality, presence of inferior vena cava filter [IVCF], perioperative anticoagulation), and outcomes (length of stay [LOS], 30-day readmission, 30-day reoperation, 30-day and 90-day VTEs, mortality).
Results: Sixty-five bariatric surgery patients with a history of VTEs underwent 76 surgical procedures. Forty-six patients were female (71%); mean age 51 years (range 26-73), mean weight 284 pounds (range 110-550), and mean BMI 45 (range 19-87). Co-morbidities included: hypertension (60%), gastroesophageal reflux disease (54%), osteoarthritis (49%), obstructive sleep apnea (45%), and diabetes mellitus (37%). Operations performed: 22 general surgery procedures (29%; e.g. herniorrhaphy, adhesiolysis, cholecystectomy), 20 sleeve gastrectomies (26%), 12

revisions/conversions (16%), 12 Roux-en-y gastric bypasses (16%), and 10 gastric bands (13%). Operative modalities: 67% laparoscopic, 28% robotic, and 5% open. Twenty-two patients (34%) had a preoperative IVCF with no IVCF-related complications. Mean LOS was 4.4 days (range 1-31). Thirty-day complications included seven readmissions (9%) and one reoperation (1%). No mortalities or bleeding events occurred. Thirty-day and 90-day VTEs were zero and two, respectively.
Conclusions: Bariatric surgery can be performed safely with a low incidence of postoperative thromboembolisms or bleeding complications in patients with a history of VTE.

A318
Preoperative Gait Speed is Associated with Increased Length of Stay after Bariatric Surgery
Benjamin Schneider *Dallas TX*[1], Rui-Min Mao *Dallas TX*[1], Tjasa Hranjec *Hollywood FL*[2], Sara Hennessy *Dallas TX*[1]
UT Southwestern Medical Center[1] Memorial Physician Group[2]

Introduction: Gait speed (GS) has been used to predict patient's physical performance, as well as morbidity and mortality. It is infrequently used in bariatric surgery, but has the potential to predict postoperative complications as it may be used as a marker of preoperative frailty. We hypothesized that patients with a slow gait speed (<0.8m/s) have a longer hospital length of stay and worse outcomes after bariatric surgery.

Methods: A retrospective review at a single institution was performed on bariatric surgery patients from February 2017-April 2018. Bariatric patients deemed high risk(baseline comorbidities/functional status) were enrolled in a prehabilition program. Patients with normal GS(>0.8 m/s) were compared to patients with slow GS(<0.8m/s) using univariate analysis: Wilcoxon rank sum, Chi-square, and Fisher's exact tests where appropriate.

Results: There were 48 high-risk patients enrolled in the prehabilition program. Of these, 35 patients had normal GS and 13 patients had slow GS. There was no significant difference between with regards to patients on demographics, comorbidities, or operation. Patients with slow GS had a significantly increased length of stay(4.1d vs. 2.3d,p=0.002). Readmission rate(30.8% vs. 8.6%,p=0.07) and ICU admission rate(23% vs. 0%,p=0.02) were higher in patients with slow GS.

Conclusion: Slow gait speed prior to bariatric surgery is associated with increased hospital length of stay. Gait speed is a quick and measureable metric to identify patients at risk for complications after bariatric surgery. Future studies on risk factors for frailty are necessary and may help determine whether a prehabilition program will

improve outcomes after bariatric surgery.

A319

Early oral feeding following bariatric surgery does not result in improved outcomes.

Lisa Parker *Dallas TX*[1], Joshua Parker *Ft Hood TX*, John Harris *Dallas TX*[1], Daniel Davis *Dallas TX*[1]
Baylor University Medical Center[1]

Background:

Early oral feeding in lower GI surgery has been shown to be safe and result in shorter hospital lengths of stay. Data showing improved outcomes with early oral feeding has also been found for gastric resections for oncologic purposes. However, there are few studies investigating early oral feeding after bariatric surgeries, although early results have been encouraging with decreased length of stay and no significant difference in complications.

Methods:

A group of 621 patients who underwent bariatric surgery at Baylor University Medical Center from 2012 to 2017 was included in this study. The patients were divided into the early oral feeding group, defined as post-op day 0, or the late oral feeding group, defined as post-op day 1 or later. This retrospective chart review looked at length of stay, readmission rates, and complication rates.

Results:

The average length of admission was shorter for those who underwent earl oral feeding, but this was not significantly different. There was a statistically significant difference between complications in the early versus late oral feeding group (8.9% vs. 4.4%). The early feeding group also had more than twice the rate of readmissions (5.5% vs. 2.2%).

Conclusion:

Although previous studies have pointed to the safety of early oral feeding, our study showed higher complication and readmission rates with no significant decrease in length of admission.

A320

Decreasing Program Cycle Time: A Lean Approach

Kimberly Wilkes *Indianapolis IN*[1], William Hilgendorf *Carmel IN*[1], Myesha Morrissette-Johnson *Carmel IN*[1]
Indiana University Health[1]

As organizations continue to refine cost of care and seek to remain competitive in both quality of care and patient experience, we recognize that Bariatric Surgery is costly and the process for the patient is long and complex. Resources are limited, and we are challenged to do more with the same or fewer resources. In December of 2016, our team sensed a call to action with the addition of 3 surgeons over the

prior 18 months and no additional programmatic support.
We set out to ameliorate our pre-operative program process with three improvement aims: 1) Increase value add activity for patients, 2) Decrease overall pre-operative program cycle time, and 3) Promote throughput of high quality surgical candidates. Using Lean tools for improvement, we evaluated our current process and gaps, identified root causes and potential solutions, and began the year long journey to implement a number of changes. We tracked quarterly throughput data along with patient surveys to evaluate our success, recognizing the average throughput for a patient requiring 6 months of nutritional counseling was 341 days at baseline. With focused improvements, we saw little to no change in patient satisfaction; however, we successfully removed 50 days from the pre-operative program cycle time at 9 months, and at 12 months we improved further to 60 days, an 18% overall reduction.
We aim to share how we used these tools to refine our service to patients and how they can be used to drive improvement work in other programs.

A321
ENHANCED RECOVERY AFTER BARIATRIC SURGERY (ERABS): HIGH VOLUME SINGLE SITE PROTOCOL

Ragui Sadek *New Brunswick NJ*[1], Lora Melman *Somerset NJ*[2], Andrew Wassef *New Brunswick NJ*[3]
Robert Wood Johnson Barnabas University Hospital[1] Advanced Surgical & Bariatrics of NJ[2] Rutgers RWJ Medical School[3]

Background:
With the astronomical tripled growth of obesity in just 30 years time, consideration for more invasive treatments such as surgical management of obesity, has become more readily available. As such, many surgical specialties have made significant strides in operative recovery with the implementation of enhanced recovery after surgery (ERAS) protocols. Naturally protocols have been developed for bariatric surgery that differ from program to program.

Objective:
The aim of the following study is to evaluate patient outcomes (adverse events, hospital stay length, and readmission rate) following the implementation of our unique ERABS protocol in comparison to the MBSAQIP national rate.

Methods:
The following study is a retrospective review of all patients who underwent primary bariatric procedures after ERABS implementation at RWJ Barnabas bariatric center of excellence from March 2016 to January 2018. Revisional and endoscopic procedures were excluded from the study. The

program's adverse events, hospital length of stay, and 30-day readmission rates were compared to MBSAQIP national database for programs with implemented ERAS protocols.

Results:
There was a total of 1,004 patients; 406 (40.4%) Male, 598 (59.5%), 209 (20.8%) Roux-en-y Gastric Bypass, 795 (79.1%) Gastric Sleeve patients who received bariatric surgery with our ERABS protocol. Adverse events, hospital length of stay, and readmission rates were all trended over time. Adverse events with implemented ERABS protocol were significantly lower (3.2%) that the national average (4.6%). Readmission within 30 days of procedure significantly reduced (2.1%) as opposed to the national average (4.3%). The average length of hospital stay for gastric sleeve and gastric bypass respectively are (22.8hr, 23hr) compared to the national average (24hr, 48hr). Narcotic use was nearly eliminated (.01%), while the average time to ambulation after surgery was 6.1hrs.

Conclusion:
The implementation of our unique ERABS protocol has shown to reduce adverse events and improve patient outcomes with greater efficacy, while effectively eliminating narcotic use by promoting early ambulation postoperatively.

A322

Validation of the modified Frailty Index as a predictor of outcomes after bariatric surgery

Jakub Dros *Krakow* [1], Tomasz Stefura *Kraków* [1], Artur Kacprzyk *Krakow* [1], Katarzyna Chlopas *Krakow* [1], Michal Pedziwiatr *Kraków* [2], Andrzej Budzynski *Kraków* [2], Piotr Major *Poland* [2]
Jagiellonian University Medical College, Students' Scientific Group at 2nd Department of General Surgery[1] 1. Jagiellonian University Medical College, 2nd Department of General Surgery 2. Center for Research, Training and Innovation in Surgery (CERTAIN Surgery)[2]

Introduction: Obesity and aging are associated with declines in organ functions and constitute a marker of frailty. The modified frailty index (MFI) is a tool for predicting postoperative outcomes, usually assessed among geriatric patients. Its usefulness in the field of bariatric surgery has not been sufficiently investigated. As the population ages, more elderly patients seek bariatric procedures. It is essential to evaluate utility of this method, which may potentially improve the quality of the treatment.
Purpose: To assess the usefulness of MFI as a predictor of the outcomes of bariatric surgery.
Methods: This retrospective analysis was conducted among 731 patients who underwent laparoscopic bariatric

surgery. MFI was calculated using 11 variables defined in the National Surgical Quality Improvement Program of the American College of Surgeons. Endpoints of the study include perioperative parameters and long-term effects of bariatric treatment after one-year follow-up.
Results: Increasing MFI was not significantly associated with longer operative time (p=0.41 for sleeve gastrectomy, p=0.88 for Roux-and-Y gastric bypass), higher rates of intraoperative adverse events (p=0.36), postoperative complications (p=0.08), reoperations (p=0.16), readmissions (p=0.21) and longer hospital stay (p=0.25). Increasing MFI was negatively correlated with effects of bariatric treatment in terms of percentage of weight loss (p=0.02) and percentage of excessive weight loss (p<0.01), but not percentage of excessive body-mass index loss (p=0.09).
Conclusions: Estimation of MFI in bariatric patients should not constitute a method for predicting intra- and postoperative outcomes of the surgery. However, high MFI may help to predict inferior weight-loss effects of bariatric treatment.

A323
LIVER REDUCTION DIET AN EFFECTIVE ALTERNATIVE FOR INSURANCE-MANDATED MEDICALLY-SUPERVISED WEIGHT MANAGEMENT IN BARIATRIC PATIENTS

Olga Garcia *Ventura CA*[1], Helmuth Billy *Ventura CA*[2]
Community Memorial Hospital[1] Advanced Surgical Associates[2]

Medically-supervised weight management (MSWM) has remained an insurance-mandated pre-requisite before approval of bariatric surgery for treatment of morbid obesity. This imposes a deleterious effect on access to care increasing cost, frustration, and drop-out rates and delays life-altering intervention. All published studies to date have confirmed that insurance-mandated MSWM programs confer no additional benefit compared with standard evaluation and education protocols.
We reviewed MSWM policy and found no standardized educational curriculum, evidence-based milestones to be documented, and only vaguely-described guidelines for lifestyle changes. Instead requirements were focused on monthly weigh-ins and notations that participation was ongoing. In some cases weight loss had to be demonstrated for authorization; in others, it was grounds for disqualification.
We hypothesized that a standardized two-week liver reduction diet (LRD) consisting of meal replacement shakes supplemented by low-calorie clear liquids would produce weight loss results more consistently than time-based insurance-mandated MSWM program with scheduled RD visits. We performed a retrospective review of

104 patients who underwent bariatric surgery in 2017 by one surgeon. All patients completed insurance-mandated MSWM of 3-6 months duration, were approved for surgery and then completed two weeks LRD. 49.4% experienced a net weight loss during MSWM vs. 96.5% with LRD. Mean weight loss during MSWL was 2.2 kg vs. 12.4 kg with LRD.
Our results demonstrate that pre-operative weight loss achieved with efficient, reproducible, and safe two-week LRD. If pre-operative weight loss is a significant indicator of improved surgical outcome implementation of LRD can be accomplished alongside pre-operative education.

A324

Is there a Correlation Between Length of Preoperative Diet and Weight loss After Bariatric Surgery?

Mauricio Sarmiento-Cobos *Weston* [1], David Gutierrez Blanco *Weston FL*[1], David Romero Funes *Weston FL*[1], Emanuele Menzo *Weston FL*[1], Rama Rao Ganga *Columbia MO*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

BACKGROUND
It remains undetermined whether the duration of diet before surgery influences outcomes after bariatric surgery. The aim of this study is to determine the difference in short-term weight loss after bariatric surgery based on 1 week or 2 weeks pre operative diet.
METHODS
We retrospectively reviewed all bariatric surgeries between 2010 and 2016. We divided the patients into two groups, Group 1, patients that had one-week pre operative diet and Group 2 which had two weeks pre-operative diet. We selected and matched patients based on common demographics and comorbidities and measured outcomes at 3, 6 and 12 months after surgery.
RESULTS
Among 1399 bariatric patients, 904(64.61%) patients were included. We identified 302 patients in Group 1 and 602 in Group 2. In Group 1, 72.18% (N=218) were females versus 71.59%(N=431) in Group 2. The %EBMIL at 3 months in Group 1 was 31.71±14.61%(N=302) versus 43.34±6.48% (N=601)in Group 2(p=0.0001) and at 6 months, Group 1 had an %EBMIL of 56.14±19.35% and Group 2 , 60.34±20.65%(P=0.04).
At 12 months, follow-up was available for 54 patients in Group 1 and 254 patients in Group 2 with females composing 70.37%(N=38) and 72.44%(N=184) respectively. Patients were matched separately from the initial group(Table 1). The %EBMIL at 12 months was 56.08±21.81% in Group 1 vs 66.89±24.60% in Group 2 (p=0.003).

CONCLUSION
Our results suggest that two weeks pre-operative diet regimen is associated

with a significantly higher weight loss up to 12 months follow-up. Further prospective studies may be needed to better assess these findings.

A325

Early decline in resting energy expenditure and its impact on body composition changes 3 months after bariatric surgery

DePrenger Molly [1], Asante Brown *Chicago IL*[1], Christy Tangney *Chicago IL*[1], Jonathan Myers [1], Philip Omotosho *Chicago IL*[1], Alfonso Torquati [1], Sandra Gomez-Perez *Chicago IL*[1]
Rush University Medical Center[1]

Background: Weight-loss and body composition (BC) changes post-bariatric surgery (BS) influence resting energy expenditure (REE); however early changes have not been well characterized.
Objective: To describe the effect of BS on REE and BC from pre-op to 3 months post-op and identify differences in BC between patients above and below median decline in REE at 3 months.
Methods: A prospective study included 16 BS patients >18 years old. BC was evaluated by bioelectrical impedance analysis and REE by indirect calorimetry. The sample was dichotomized by median decline in REE(≥500 or <500 kcal/day) to explore if patients with considerable drops in REE consequentially had less fat-free mass (FFM) preservation.
Results: Sample was 88% female and 81% had sleeve gastrectomy. Median age was 43.5 years(IQR:35.6, 53.3) and body mass index of 48.1 kg/m^2(IQR:40.9, 54.3). Weight (-20.1 kg, IQR:-18.7, -23.6), FFM(-4.0 kg, IQR:-2.9, -7.0), and REE(-500 kcal/day, IQR:-150, -652) decreased between visits (P<0.05). However, patients (n=8) with a decline of REE ≥500 kcal/day at 3 months had a higher baseline weight and REE (P<0.001). Additionally, patients with REE declines of ≥500 had greater weight-loss(-22.3 kg, IQR: 20.4, 24.1, P<0.001). However, there was no difference between the ratio of change in FFM/change in weight between group (P=0.57).
Conclusion: Patients with substantial decreases in weight at 3 months ultimately showed greater declines in REE. A consequence of greater weight-loss may be larger declines in REE; however additional research is necessary to describe if early drops in REE impacts total achievable weight-loss or preservation of FFM.

A326

Bariatric Surgery in Medicare Patients Younger than 65 is Safe and Effective

Jacob Petrosky *Danvillle PA*[1], Robert Cunnigham *Danville PA*, Jai Prasad *Danville PA*[1], Jason Kuhn *Danville PA*, G. Craig Wood *Danville PA*, James Dove *Danville PA*, Marcus

Fluck *Danville PA*, David Parker *Danville PA*, Jon Gabrielsen *Danville PA*, Christopher Still *Danville PA*, Anthony Petrick *Danville PA*
Geisinger Medical Center[1]

Introduction: Worldwide, the safety and efficacy of bariatric surgery is well documented. However, there is less information about the outcomes in Medicare patients in the U.S. The purpose of this study was to evaluate the safety and efficacy of bariatric surgery in patients younger than 65 on Medicare (CMS<65) compared to other payers.
Methods: A prospectively maintained database of all patients who underwent bariatric surgery between January 2007 and December 2017 was utilized. 3146 patients, aged <65, who underwent Laparoscopic sleeve gastrectomy (LSG) or Roux-en-Y gastric bypass (RYGB) were evaluated.
Results (Table): CMS<65 were older with a higher Charlson co-morbidity index than bariatric patients with other payers (p<0.0001). CMS<65 also had a significantly higher DiaRem score (p=0.001).
The TBWL for the entire cohort at 6-months, 1-year, 2-years, and 3-years was 28.1% (SD=6.6), 34.1% (SD=8.5), 34.1% (SD=10.4), and 31.8% (SD=11.0), respectively. The difference in %TBWL was not significant when comparing Medicare to Medicaid (p=0.088) or Commercial payers (p=0.310).
Complication and readmission data were available for 2770 patients (88%). Minor complications and LOS >2 days were significantly greater in the Medicare population. Mortality, major complications and readmissions were not different between the groups.
After adjusting for DiaRem score and surgery type, the odds ratio (OR) for complete diabetes remission was not different between payers.
Conclusions: The safety of bariatric surgery in CMS<65 patients is similar to other payers with equivalent weight loss and complete remission of diabetes despite being older with a higher comorbidity index.

A327
The Impact of Endoscopic Bariatric Therapies on Diabetes and Weight Loss Outcomes: a Systematic Review and Meta-analysis Comparing Small Bowel and Gastric Devices
Violeta Popov *New York NY*[1], Benjamin Noor *New York NY*, Amy Ou *New York NY*, Christopher Thompson *Boston MA*
NYU School of Medicine[1]

Endoscopic bariatric therapies (EBTs) can be grouped into gastric (balloons, aspiration therapy, endoscopic gastroplasty) or small bowel EBTs (duodenal bypass liner, jejuno-ileal diversion, mucosal resurfacing). Data suggests that small bowel EBTs may be more effective at improving diabetes but it is unclear if this is related to weight loss or other factors.

Aim: To compare the effect of small bowel (sbEBTS) vs. gastric (gEBTS) on diabetes and weight loss parameters. **Methods:** MEDLINE, Embase, and Cochrane were searched through 2018 for trials of EBTs reporting diabetic outcomes. Primary outcomes included pooled mean differences(MD) in baseline-final values in fasting blood glucose (FBG), HGA1C, excess weight loss (EWL); % total weight loss (TWL), using subgroup analyses and meta-regression to assessbetweengroupsdifferences. **Results:** 1222 citations, 65 studies including 8,186 subjects were analyzed. Weight loss outcomes were similar: 39 %(sbEBT) vs. 32.5 %(gEBT) for EWL($p=0.05$); 12 % vs. 11.2% for TWL ($p=0.7$). SbEBTs led to greater improvement than gEBTs for diabetic parameters: FBG decreased by 25.8 mg/dL with sbEBTs, and by 10.9mg/dL with gEBTs ($p<0.001$). SbEBTs reduced HBA1C by 1.1%, and gEBTS, by 0.3%, $p<0.05$. By meta- regression, weight loss did not predict differences in FBG and HGA1C. The strongest predictor of improvement in HGA1C and FBG was high baseline FBG(Figure 1). Heterogeneity was high but mostly due to variations in baseline parameters. **Conclusion:** SbEBTS were more effective than gEBTs in improving diabetic parameters. The difference could be explained by higher baseline FBG, and sbEBT trials had included more subjects with diabetes.

A329

Changes In Gastric Emptying With The Spatz3 Adjustable Intragastric Balloon Are Associated With Increased Weight Loss: A Prospective Study

Eric Vargas *Rochester MN*[1], Monika Rizk *Rochester MN*[1], Fateh Bazerbachi *Rochester MN*[1], Andres Acosta *Rochester MN*[1], Barham Abu Dayyeh *Rochester MN*[1]
Mayo Clinic[1]

Introduction: Intragastric balloons (IGBs) promote weight loss through complex changes in gastrointestinal physiology such as gastric emptying (GE). Adjustable IGBs are unique as they can be volume-adjusted for intolerance or inadequate weight loss.Our major aim was to investigate the effects of the adjustable IGB (Spatz 3) upward volume adjustment on gastric emptying and weight loss.**Methods:**Subjects receiving the Spatz3 adjustable IGB plus lifestyle interventions (LI) underwent GE assessment using a 4-hr (mixed meal) nuclear scintigraphy at baseline, and 3 months and 5 months into IGB therapy.The balloon's volume was upward-adjusted at 4 months and removed at 8months. Paired *t*-tests were used to compare changes in GE and weight loss.**Results:**13 female subjects with a mean age of 38.2±11.2 years and BMI of 34.9±2.7 kg/m^2 were enrolled (balloon=10;control=3).The initial mean balloon filling volume was 515 mL ± 47mL and all balloons were upwardly-adjusted to a mean volume of

770 ml ± 103ml. T1/2 (minutes) was increasingly delayed from baseline through post-adjustment (115 min vs. 177.8 min vs. 204 min; p<0.03). The 3 LI controls had no change in GE at baseline and 3 months. Percent total body weight loss (%TBWL) increased throughout 3, 5 and 8 months with IGB therapy (6.9% vs 8.8% vs. 10.7% p<0.005). Change in T1/2 after balloon adjustment was significantly associated with post-adjustment %TBWL (R^2 = 0.60; p=0.009). **Conclusion:**The ability to volume-adjust IGBs has physiologic and clinical implications that can minimize balloon intolerance maximizing weight loss by managing weight loss plateaus that are commonly observed with non-adjustable IGBs.

A330

Effect of Bariatric Surgery on Cardiovascular Risk Factors: Single Institution Retrospective Study

Ali Al Montashery *Montreal QC*
KING ABDULLAH MEDICAL CITY

Background: The study aims to describe bariatric surgeries' effect on cardiovascular risk factors including glycemic control, blood pressure, lipid profile and body weight for patients treated in a tertiary center in Makkah, Saudi Arabia.
Methods: This is a retrospective cohort study including all obese patients who underwent bariatric surgery at King Abdullah Medical City (KAMC) between 2013 and February 2016.
Results:A total of 566 patients were reviewed. The mean age at operation was 34.8±10.2 years and 58.1% were females. Almost all patients underwent laparoscopic gastric sleeve (95.9%). Diabetes and hypertension were on the top of comorbidities (24.8% and 18.9% respectively). At 24 months of follow up there was significant reduction in the mean Body Mass Index (BMI) in Glycosylated Hemoglobin (HbA1c). Baseline High Density Lipoprotein(HDL) (44.4mg/dl), non-HDL cholesterol (147.1 mg/dl) and Triglyceride (TAG)(123.6 mg/dl) also showed significant improvement to reach 52.3 mg/dl, 137.7 mg/dl and 78.5 mg/dl respectively at 12 months of post-operative follow up (p<0.001 for all parameters). Seventy one (18.8%) patients had complete remission and 21 (5.6%) had partial remission from diabetes at last follow up. The predicted 10-years risk of Cardiovascular disease (CVD) decreased significantly from 7.4% to 5.5% (p<0.001).
Conclusion: Bariatric surgeries were significantly effective for controlling obesity related cardiovascular risk factors and decreasing the 10-years predicted cardiovascular disease risk within a short period of follow up.

A331

Does systemic inflammation inhibit weight loss and diabetes remission following bariatric surgery?

John Morton *Stanford CA*[1], Dan Azagury *Stanford CA*, Luis

Garcia *Fargo ND*, Homero Rivas *Stanford CA*
Stanford School of Medicine[1]

Background: Previous studies demonstrate that inflammation worsens insulin resistance and decreases insulin secretion. We hypothesized that patients with greater levels of C-Reactive Protein (CRP), a marker of systemic inflammation, would experience less favorable weight loss and metabolic changes after surgery.

Methods: Data were collected from patients who underwent bariatric surgery. Diabetes was defined as a preoperative Hemoglobin A1c ≥ 6.5%, and diabetes resolution was defined as an A1c < 6.5% without medication. CRP was classified into quartiles. Associations between continuous measures and CRP quartiles were assessed using one-way ANOVA.

Results: Patients (n=1228) in this study had a mean preoperative body mass index (BMI) of 46.7 ±7.3 kg/m^2. Before surgery, 28% of patients were diabetic, compared to 8% after surgery. Patients in third (7.4–13.7 mg/L) and fourth (13.8–17 mg/L) quartiles of CRP had greater average measures of insulin than patients in first (0.1 – 3.8 mg/L) and second (3.9–7.3 mg/L) quartiles ($p<0.05$), respectively 30.3 and 32.8 vs. 24.7 and 25.8 mIU/L. After surgery, patients in the third and fourth quartiles of CRP had worse percent excess weight loss (70.5 ±22.6% and 69.4 ±23.8%, respectively) relative to patients in the first and second quartiles (75.3 ± 24.2% and 73.3 ±21.8%, respectively, $p<0.05$). Patients in the third and fourth quartiles of CRP had greater average BMIs preoperatively ($p<0.0001$) and 12 months postoperatively ($p<0.0001$).

Conclusion: The results of this study suggest that bariatric patients with greater systemic inflammation experience less favorable weight loss and greater insulin resistance.

A332
Does weight related abuse vary by ethnicity?
Genna Hymowitz *Centereach NY*[1], Yvette Karvay *Oceanside NY*[1]
Stony Brook University[1]

Weight related verbal abuse (WRVA) is linked to negative effects in adulthood (Grilo et al., 2005; Rosenberger et al., 2007; Salwen et al., 2013). Individuals with obesity experience higher rates of weight related teasing (van den Berg et al., 2012). The Hispanic population has the second highest rate of obesity in America (Flegal et al., 2012). Little is known regarding WRVA in Hispanic Americans. This study investigated relationships between ethnicity and WRVA in individuals with morbid obesity.
Methods: 106 participants were recruited from a bariatric weight loss center. Ages ranged from 18 to 72 (*M* = 41.82, *SD* = 13.57), BMI ranged from

33.75 to 72.34 (*M* = 47.57, *SD* = 9.18). 79.7% of the sample was women and 20% of the sample identified as Hispanic. WRVA was evaluated using the Weight Related Abuse Questionnaire. Weights, and demographics were obtained from medical records.
Results: 66% of the sample endorsed WRVA. 67.5% of the sample identifying as non-Hispanic and 61.9% of individuals identifying as Hispanic endorsed WRVA. The percentage of individuals endorsing WRVA did not differ by ethnicity, $C^2(2, N = 106) = .465$, p = . 792. Differences between groups with regard to frequency of abuse, F (1,106) =.63, p =.43, or emotional impact of WRVA, F (1, 106) = .30, p =.59, were not statistically significant.
Conclusions: These data suggest that WRVA occurs at high rates in individuals with morbid obesity across ethnicities. Future studies should evaluate the impact of WRVA in a non-English speaking Hispanic population.

A333
Resting energy expenditure and metabolic adaptation in adolescents at 6 and 12 months following bariatric surgery
Lisa Chu *Toronto* [1], Alissa Steinberg *Toronto OH*[1], Carley O'Kane *Toronto* , Alene Toulany *Toronto* [1], Jill Hamilton *Toronto* [1]
The Hospital for Sick Children[1]

BACKGROUND: Evidence suggests change in weight and body composition after bariatric surgery impacts resting energy expenditure (REE) and metabolic adaptation in adults. Metabolic adaptation refers to the physiological changes during weight loss that reduce REE more than REE determined by predictive equations. Little is known about REE and metabolic adaptation among adolescents who have undergone bariatric surgery.

OBJECTIVE: To examine changes in REE and metabolic adaptation among adolescents at 6 (6M) and 12 months (12M) post-bariatric surgery.

METHODS: Adolescents from the SickKids Team Obesity Management Program (STOMP) clinic who underwent gastric bypass (bypass) or sleeve gastrectomy (sleeve) surgery were followed. Bioelectrical impedance analysis (BIA) and indirect calorimetry to measure REE were completed, and predicted REE was calculated using the Mifflin equation pre- and post-bariatric surgery at 6M and 12M.

RESULTS: Among 17 patients (12 females), age and BMI at time of surgery were 17.4+/-0.8 y and 48.3+/-4.3 kg/m^2, respectively. Percent of total weight loss was 25.0+/-10.4% at 6M. REE decreased by 435.8 kcal/day (p<0.001). Metabolic adaptation was -102.9+/-250.6 kcal/day. When stratified by surgery type, change in REE at 6M was not significantly different (bypass:

-402.1+/-200.7 kcal/day, n=8; sleeve: -465.8+/-206.9 kcal/day, n=9; p=0.53). Among 11 patients with completed REE at 12M, no difference in REE at 6M and 12M was found (p=0.57).

DISCUSSION: Predicted REE was 15% lower at 6M, whereas measured REE was 20% lower, irrespective of bariatric surgery type. Metabolic adaptation may predispose adolescents to weight regain post-bariatric surgery and warrants vigilant nutritional management.

A334

Does Coexistence of Non-alcoholic Fatty Liver Disease and Type-2 Diabetes Impact Weight Loss or Remission of Type 2 Diabetes after Gastric Bypass?

Jad Khoraki *Richmond VA*[1], Guilherme Mazzini *Richmond* [1], Matthew Browning *Richmond VA*[1], Martin Mangino *Richmond VA*[1], Dayanjan Wijesinghe [1], Gretchen Aquilina *Richmond VA*[1], Jennifer Salluzzo *richmond VA*[1], Guilherme Campos *Richmond VA*[1]
Virginia Commonwealth University[1]

Background: Obesity and type-2 diabetes (T2D) are risk factors for non-alcoholic fatty liver disease (NAFLD), and Gastric Bypass (RYGB) is an effective treatment for obesity, T2D and NAFLD. While 78% of patients of white race with obesity and T2D have coexisting NAFLD, individuals of black race have been found to have a significantly lower prevalence of NALFD (34%, p<.01), independent of T2D status. The impact of the presence of NAFLD and race on T2D pathophysiology and remission rates after RYGB is under scrutiny. We investigated the possible effect of NAFLD or race on percentage of excess weight loss (%EWL) and T2D remission after RYGB.
Methods: Liver biopsies from a racially diverse group of patients with T2D undergoing RYGB were evaluated for NAFLD. Patients with and without NAFLD were compared at baseline and 1-year post-operatively. Outcomes included %EWL and T2D remission.
Results: 66 patients (44 whites, 22 blacks) with T2D had RYGB and liver biopsy, mean was BMI 46.7$\pm$6.3kg/m^2. Compared to whites, blacks had higher baseline BMI (51.1vs44.5,p<.01), lower prevalence of NAFLD (46%vs75%,p=.03), but comparable age, prevalence of comorbidities and insulin use. At 1-year, blacks had lower %EWL (47.2vs64.6,p<.01) but similar T2D remission rates(70%vs76%,p=.76). Patients with and without NAFLD had similar %EWL and T2D remission in both race groups (Table).
Conclusions: %EWL was lower for patients of black race, however T2D remission was independent of NAFLD and race. Larger studies are needed to understand the possible differences in the pathophysiology of obesity, T2D, interaction with NAFLD and outcomes of RYGB.

A335

Identification of bacterial and fungal Pathogens in patients with post Laparoscopic Sleeve Gastrectomy leakage

Saad Althuwaini *Riyadh*
king khalid university hospital

Background:
Post-laparoscopic sleeve gastrectomy (LSG) leak leads to serious complications, and death may occur. The infection route should be established in order to plan empirical antimicrobial therapy. The cultures of post-LSG leaks were reviewed.

Methods:
Microbial cultures collected from all post-sleeve leakage cases managed at King Khalid University Hospital (KKUH) from May 2011 until April 2016 were reviewed

Results:
A total of 42 patients with positive leak post-LSG were found. Eleven cases were excluded due to no culture results or no procedural drainage. The mean presentation time was postoperative day 12. Computed tomography (CT) was done for all 31 patients on presentation with CT-guided drainage the next day on average postoperative day 13. The drain was kept in place, and samples from collection were sent for culture and sensitivity.

A total of 28 patients (90.3%) had positive culture results either for bacteria, *Candida* species or both. *Candida* species were the most common organism isolated 19 patients (61.2%), among them 10 (32.2%) were positive for Candida species only while 9(29%) had mixed candida and bacterial mixed culture. Pure positive bacterial cultures were found in 18 patients (58%).
Klebsiella pneumoniae was the most frequent [8 patients (44.4%)] isolated bacteria. *Candida albicans* was the most common *Candida* species isolated [13 patients (68.4%)].

Conclusion: Post-LSG fungal infections are common and could be considered in the primary empirical therapy. The antibiotic choice for the leak should
cover *Klebsiella*, *Streptococcus*, and *Pseudomonas* until definitive culture results are obtained.

A336

Internal hernia after duodenal switch

Saif Al-Tai *Torsby* [1], Stephan Axer *Torsby* [1], Leif Hoffmann *Torsby Sweden*[1]
Torsby hospital[1]

Background:

Routine closure of mesenteric defects in laparoscopic gastric bypass has dramatically decreased the incidence of internal hernia (IH). Duodenal switch (DS) is the most effective bariatric operation both in terms of weight loss and effect on comorbidity. The

opinions about the need to close the mesenteric defects in DS are still split.

Objectives:

To analyze the incidence of IH after DS regarding different DS-techniques: Single Anastomosis Duodeno-Ileostomy (SADI), standard DS and SOFY-DS (Started as Omega-loop, Finished as Roux-en-y DS - a technical modification described in SOARD Feb 2016)

Method:

Review of an internal prospective database including DS-operations performed between 2010 and 2018.

Results:

121 DS-operations were included with 96% follow-up (between 1 and 95 months). 9 operations were performed primarily open. 24% of the 112 laparoscopic DS were operated as SADI, the remaining were performed as standard DS (starting January 2015 as SOFY-DS).
Defects were closed in 70 of 121 operations (100% in open surgery, 100% in laparoscopic SADI-DS and 40% in laparoscopic standard DS). Non-resorbable clips were used as closure material in 57%, non-resorbable suture in the remaining cases.
During the follow-up, 6 patients were operated for IH (5% of DS) with 83% conversion from laparoscopic to open surgery. All those patients had undergone a standard DS before January 2015 with primarily open defects.

Conclusion:

IH after DS is an operational challenge with high risk of conversion to open surgery. Mesenteric defects at DS-operations should be closed. The technical modification SOFY-DS decreases the risk for IH.

A337
Weight Loss Success with New Gastric Balloon System McCoy K, Durgan D, Sekhar N, Holover S, Angstadt J, Chiao J, Sommer E
Kristin McCoy *Stamford CT*[1], Diane Durgan *Stamford CT*, Shawn Garber *Roslyn Heights NY*, Nikhilesh Sekhar *Roslyn NY*
Stamford Hospital[1]

Background: With obesity rates rising, patients and physicians have an increasing interest in non-surgical weight-loss options. Endoscopic gastric balloons have shown success to date and new devices are continually developing. Of current interest is the FDA-approved Obalon system, comprised of 3 nitrogen filled balloons swallowed in a staged fashion and removed after 6 months. We aimed to evaluate the safety profile and success of this balloon system.

Methods: Sixty-three patients from a

multicenter bariatric practice were studied prospectively between January 2017 and April 2018. Patient data collected included age, gender, starting weight, BMI, treatment duration and adverse events. Statistical analysis was performed for excess weight loss(EWL), total body weight-loss(TBWL), and BMI change.

Results: The cohort was predominantly female with an average age of 42. Average starting weight was 225lbs and BMI 36.1. Average weight loss was 21lbs, TBWL 9.3%, and EWL 34.2%. BMI decreased by 3.2. Over 65% of patients achieved >5 % TBWL. There was a significant difference between patients who completed the 150-day course(82.5%) versus patients who had early balloon retrieval in terms of weight reduction(p=0.022), TBWL(p =0.019), EWL(p =0.015), and BMI(p=0.015). No major adverse events occurred. Minor complications occurred in 22.2 % of patients: gagging(9.5%), gastric ulcers(3.2%), nausea(3.2%), abdominal pain(3.2%), vomiting(1.6%), dyspepsia(1.6%), and device intolerance(1.6%).

Conclusion: From our experience the Obalon balloon is a safe and effective non-surgical weight loss option. There were no serious complications and the majority of patients experienced weight reductions. Future studies will focus on determining optimal treatment duration.

A338

Accuracy of Bariatric surgery patients' estimations of pre-operative weight and shape

Andrea Stone *Glastonbury CT*[1], Janet Ng *Corvallis OR*[1], Richard Seip *Glastonbury CT*[1], Madison O'Brien *South Windsor CT*[1], Emma Tishler *Glastonbury CT*[1], Nick Dugan *Farmington CT*[2], Pavlos Papasavas *Hartford CT*[1], Darren Tishler *Glastonbury CT*[1]
Hartford Hospital[1] University of Connecticut[2]

The accuracy of self-reported (SR) weights across all segments of the population, including the bariatric population, is not clear. Previous research suggests that women and those with overweight/obesity are most likely to underreport weight. We explored the accuracy of SR weight as well as body shape via pictograms in bariatric surgery patients using the Weight and Lifestyle Inventory (WALI)

163 pre-surgical bariatric patients completed the WALI, including self-reported body weight and body shape using established pictograms (scaled 1 to 9, Figure 1). SR weights together with measured height were used to derive SR BMI and SR obesity class (I, II, or III). Estimates were compared to actual measured weight, BMI, and obesity class.

SR weight (280.6±54.3 lbs) was significantly higher than actual weight (276±51 lbs), mean difference: 4±19 lbs, p<0.01, and SR BMI (45.5±6

kg/m^2) was significantly higher than measured BMI (44±6 kg/m^2), mean difference: 0.65 ±3.03 kg/m^2, p<0.01. Despite overestimating weight, 73% of patients placed themselves in the correct obesity class, 20% underestimated, and 8% overestimated (Figure 2a). Men and women differed in their ability to self-assess measured weight (p=0.03), but not BMI or obesity class (p=0.70, p=0.98, respectively). Pictogram ratings for all patients ranged from 5-9 (median=8; Figure 2b), with no significant differences between men and women (p<0.59).

Although patients overestimated weight by 4.2 lbs, with a slightly greater overestimation among women, the difference was not large enough to alter obesity classification. These data add to the literature on SR weight across different populations.

A339

Preoperative Asymptomatic Bacteriuria in Bariatric Surgery Patients

Katherine Blevins *Stanford CA*[1], Dimitri Augustin *Palo Alto CA*[2], Dan Azagury *Stanford CA*[3], John Morton *Stanford CA*[3]
Stanford University, Department of Surgery, Division of General Surgery[1] Stanford University, Department of Medicine, Division of Nephrology[2] Stanford University, Department of Surgery, Division of General Surgery, Bariatric and Minimally Invasive Surgery[3]

Introduction:
Asymptomatic bacteriuria is the isolation of bacteria from urine in people without symptoms or signs. Patients with obesity are at increased risk for asymptomatic bacteriuria, and patients undergoing bariatric surgery are at increased risk for hospitalization due to urinary tract infection (UTI) after surgery. Understanding the prevalence of asymptomatic bacteriuria in patients undergoing bariatric surgery is of increasing importance.

Methods:
Patients undergoing bariatric surgery at Stanford from August 2017 to February 2018 were identified. Previously, an increase in UTI was noted in review of our MBSAQIP data. To determine if these UTIs were Present on Admission, a policy of preoperative UA in holding area was begun. With IRB approval, results from preoperative urinalysis on clean-catch voided urine samples were reviewed. Reflex culture was performed according to hospital criteria.

Results:
One-hundred fifty-four patients (125 women, 29 men) underwent bariatric surgery during the study period. One-hundred fifteen completed UA (95 women, 20 men). Twenty-one patients (18.2%) had positive UAs (20 women, 1 man), and eight (6.9%) had positive cultures (all women). Two patients

were treated for developed symptoms or significant risk factors.

Conclusion:
The prevalence of asymptomatic bacteriuria in healthy, pre-menopausal women is reported to be 1-6%. We observed the prevalence in patients undergoing bariatric surgery was found to be 7%; 8.4% in women only. Positive culture resulted in <40% of positive UAs. These data indicate preoperative UAs help determine if postoperative UTI was Present on Admission or a de novo UTI, which is important in quality reporting and improvement.

A340
Bariatric Surgery as a bridge to Cardiac transplantation in patients with LVAD
Rana Pullatt *Mt Pleasant SC*[1], Nina Crowley *Charleston SC*[2], Karl Byrne *Charleston SC*[2], Diana Axiotis *Charleston SC*[2]
Medical University of South Carolina[1] MUSC Charleston, SC[2]

Background: People with advanced heart failure who have BMI>35 are considered unacceptable candidates for heart transplant due to increased operative risk and technical challenges. Some of these patients who get an LVAD have a poor chance of getting a heart transplant. Bariatric surgery is a viable option for these patients.
Methods: Patients with end stage heart failure with LVAD as destination therapy secondary to obesity underwent bariatric surgery in our institution with a goal to lose weight and have heart transplant. Demographic information, comorbidities, operative time, weight, weight loss, and postop complications are reviewed in this high-risk patient population.
Results: Five patients (4 men) implanted with Heartmate II LVAD had bariatric surgery (2 gastric bypass, 3 sleeve gastrectomy). Mean age was 46 (23-64) years, and mean operative time was 128 minutes. There were no 30-day mortalities. Average pre-operative BMI was 45 kg/m^2, BMI Post op was 40 (1 mo), 37 (3 mo), 35 (6 mo), 32 (9 mo), and 31 (12 mo). Four lost sufficient weight to be transplanted about 1 year later. One patient who had a transplant at another center died 12 days post-transplant due to transplant complications, and one is currently only 6-months post-op and has not lost sufficient weight to be listed.
Conclusion: Bariatric surgery is an important treatment option for patients with heart failure currently with LVAD as a bridge to transplant. Demographics, surgical and weight loss outcomes are similar to other high-risk patient popu

A341
Safety of Bariatric Surgery in Patients with Congestive Heart Failure
Barbara Brathwaite *Mineola NY*[1], Raelina S. Howell *Mineola NY*[2], Keneth Hall *Garden city NY*[2],

Alexander Barkan [2], Patrizio Petrone *Mineola NY*[3], Collin Brathwaite *Patchogue NY*[2]
Stony Brook University School of Nursing, NYU Winthrop Hospital[1] NYU Winthrop Hospital[2] NYU Winthrop[3]

Introduction: Congestive heart failure (CHF) is a known risk factor for increased postoperative morbidity. However, the safety of bariatric surgery in patients with CHF has not been well established.
Methods: Our prospective database was retrospectively reviewed for patients with known CHF undergoing primary bariatric procedures at our center over a 10-year period ending in December 2017. We assessed patient demographics (age, gender, weight, body mass index [BMI], co-morbidities), surgical details (procedure, modality), and outcomes (length of stay [LOS], 30-day readmissions, 30-day re-operations, complications, mortality). Non-bariatric and revision bariatric procedures were excluded.
Results: Over the 10-year period, 3,948 total bariatric surgeries were performed, of which 39 (1%) patients had known CHF and were included in the analysis. Twenty-one patients were male (54%) with a mean age of 55.4 years (range 33-71) and mean BMI of 52 (range 38-80). Co-morbidities included: hypertension (90%), obstructive sleep apnea (82%), osteoarthritis (61%), gastroesophageal reflux disease (56%), and diabetes mellitus (54%). Surgical procedures included: 16 sleeve gastrectomies (41%), 12 Roux-en-y gastric bypasses (31%), and 11 gastric bands (28%), All cases were performed minimally-invasively (74% laparoscopic, 26% robotic). Mean LOS was 2.6 days (range 1-13). Thirty-day complications included two readmissions (5%; one small bowel obstruction and one subcutaneous abscess/pulmonary edema) and one reoperation (3%; for small bowel obstruction). There was one mortality (3%) on postoperative day 29 of unclear etiology unrelated to the surgery.
Conclusions: Bariatric surgery can be safely performed minimally-invasively in patients with known CHF. Laparoscopy should not be restricted in these patients.

A342
Reciprocal responses of plasma cystatin C and cathepsin S among diabetic subjects after bariatric surgery

Chih-Yen Chen *Taipei*
Taipei Veterans General Hospital

Background and aims: Cathepsin S deletion was shown to induce a robust reduction in blood sugar in knockout mice, whereas cystatin C is the most abundant and potent endogenous inhibitor of cathepsin S. We explored the roles of cystatin C and cathepsin S in patients with type 2 diabetes mellitus (T2DM) receiving either gastric bypass

(GB) or sleeve gastrectomy (SG).
Methods: T2DM patients undergone laparoscopic GB or SG were enrolled into this prospective study. Remission of T2DM was defined as fasting glucose ≤125 mg/dL with HbA1c value <6.5% in the absence of pharmacotherapy (remitters). Plasma concentrations of cystatin C and cathepsin S were measured before and after surgery.
Results: GB and SG significantly lowered fasting blood sugar and induced weight loss one year after surgery. Significant increase in cystatin C levels and decrease in cathepsin S concentrations were found among diabetics after GB, but not SG. Pre-operative levels of cathepsin S positively correlated with those of cystatin C in the GB group but not in the SG group. One year after GB, post-operative concentrations of cathepsin S positively correlated with those of cystatin C, while post-operative cathepsin S and cystatin C levels correlated with post-operative HbA1c. Moreover, in the GB group, the remitters exhibited significantly lower levels of cathepsin S than the non-remitters one year after surgery.
Conclusion: GB, rather than SG, demonstrated reciprocal responses of plasma cystatin C and cathepsin S among Asian patients with T2DM after surgery. Cystatin C and cathepsin S play roles in diabetes remission.

A343

Laparoscopic conversion of sleeve Gastrectomy to mini gastric bypass one-anastomosis gastric bypass

Maud Neuberg *Lyon* [1], Marie-Cécile Blanchet *LYON*
Clinique de la Sauvegarde[1]

The aim of this study is confirm the efficacy, safety and side effects of mini gastric bypass-one anastomosis gastric bypass (MGB-OAGB) as a revisional surgery for Sleeve Gastrectomy (SG) patients with weight loss failure or complications.

We reviewed the files of 38 patients who underwent conversion from SG to MGB-OAGB from October 2013 to October 2017.
Mean age was 38 years (range 23-59).
Mean pre-operatively BMI was 37,7 kg/m^2 (range 26,6-52,3 Kg/m^2).
Vast majority of patients underwent conversion surgery due to weight loss failure (n=34). Four patients underwent a revision due to sleeve gastrectomy complications (a stenosis for 3 patients and recurent heartburn for 1 patient)
The mean time interval from SG surgery was 43 months (range 1-108 months).
Residual gastric volume was measured preoperatively and at 1-month post surgery.

After a mean follow-up of 26 months (range 1-48), the mean BMI was 31 Kg/m2 (range 21,5-43,4) SD 5,9. Mean Excess Body Weight loss was 59,9%. The mean length of hospital stay was

1,2 days (range 1-4).
The mean gastric volume was 299mL (range 130-950) before conversion and failed to 87mL (10-200) at one month. Mean size of gastrojejunal anastomosis was 16,4mm (range 10-26). Early complications were encountered in 3 patients (7%), including perforated ulcer and hemorrhage, all requiring surgery.
Conversion to Roux-en-Y gastric bypass for biliary reflux occurred in 2 patients (5%) at 6 and 9 months.

MGB-OAG as a revisional procedure of failed SG is feasible and safe.

A344
FUNCTIONAL AND ELICTRICAL CARDIAC CHANGES AFTER BARIATRIC SURGERY
Ali Al Montashery *Montreal QC*
KING ABDULLAH MEDICAL CITY

Background: Bariatric surgery is an effective way for long-term weight loss success. Recent studies have found that weight loss is significantly associated with improved metabolic parameters in addition to overall decrease in cardiovascular morbidity and mortality. Conversely, some studies have observed the development of unexplained sinus bradycardia after significant weight loss.
We conducted a retrospective study to evaluate the electrical and functional cardiac changes on morbidly obese patients who underwent bariatric surgery and to demonstrate the incidence of arrhythmia.
Methods: A retrospective chart review of all patients who underwent bariatric surgery at King Abdullah Medical City (KAMC) to evaluate changes in echocardiographs and ECG. Myocardia performance index (MPI), ejection fraction (EF), automated EF, end diastolic volume (EDV), end systolic volume (ESV), automated global longitudinal strain (GLS), and pericardial fat, heart rate, PR, QRS, QT, QTc, BMI, total cholesterol, LDL, HDL, triglycerides and glycated hemoglobin (Hg) were compared before and after at least one year postoperatively.
Results: 800 consecutive patients were identified, 99 had ECG and Echo pre and post operatively. (Table I)
Conclusion:
There is significant improvement in cardiac structure, function and ECG. These findings underscore the role of bariatric surgery heart health.

A345
Mechanisms of Developmental Obesogen Exposure as Possible Drivers of Persistent Obesity Phenotypes in Adults.
Demetri Spyropoulos *Charleston SC*
Medical University of South Carolina

Studies increasingly implicate chemical 'obesogens' as drivers of adiposity, hunger and reduced metabolism, and thereby contribute to the obesity epidemic. Dioctyl sodium

sulfosuccinate (DOSS; CAS #577-11-7) is a widely used lipid emulsifier in processed foods and drinks, stool softeners and personal care products/cosmetics. To test a developmental origins of adult obesity model in a previous study, we administered DOSS to pregnant C57BL/6 mice in timing and dosage relevant to stool softener use during human pregnancy. In that study we observed that adult offspring of DOSS treated dams showed significant increases in adiposity, body mass, and inguinal/epididymal fat masses. These adult offspring also showed a significant decrease in plasma adiponectin and increases in leptin and IL-6, dyslipidemia akin to long-term high fat diet induced obesity in C57BL/6 mice, glucose intolerance and hyperinsulinemia. These results were striking because the phenotypes persisted well into adulthood while the offspring were maintained on a regular chow diet. In the current study, we seek to better elucidate the molecular mechanism(s) driving these persistent adult changes. Data will be presented comparing nongenomic, metagenomic and epigenomic mechanisms of DOSS exposure that might contribute to persistent obesity. Collectively, these studies suggest that DOSS exposure during pregnancy might be a contributor to long-term obesity, metabolic and inflammatory health concerns.

A346

Reversing Fate: NLR and the role of Bariatric Surgery to Prevent Morbidity

Sarah Pearlstein *New York NY*[1], Ali Shayesteh *New York NY*, Deborah Allis *Mount Kisco NY*, Mitch Roslin *New York NY*
Lenox Hill Hospital Northwell Health[1]

Introduction: In addition to increased risk of death from cardiovascular disease, obesity is a risk factor for many cancers and decreases tumor related survival. As a result, aggressive bariatric treatment may become an important cancer therapy adjunct. The neutrophil to lymphocyte ratio (NLR) is as a marker of poor prognosis for heart disease and cancer. The purpose of our study is investigate the impact of bariatric surgery on NLR in a bariatric surgery cohort.
Method: We retrospectively analyzed a cohort of patients undergoing laparoscopic sleeve gastrectomy and compared pre-op and post-op WBC and NLR values using paired t-tests for analysis.
Results: 34 patients were analyzed. At 3 months, 26 patients had a mean pre-op NLR of 2.81 reduced to 2.35, not statistically significant ($p=.052$), however WBC decreased from 8.235 to 6.36 ($p<.01$). 6-12 months postop, 14 patients had NLR decreased from 2.39 pre op to 1.78 postop ($p= .04$), and WBC decreased from 7.31 to 5.84 ($p <.01$).
Conclusions: From our study, we found that after 6 months postop, patients had

a decreased NLR and WBC. Discussion Although the association of obesity and certain deadly diseases such as cancer have become clearer, whether outcomes of patients with malignancies can be improved with bariatric surgery is unknown. To best determine, a marker of risk and subsequent improvement would be helpful. NLR may be a potential target. Further investigation will target high risk patients with obesity, active disease, and elevated NLR and correlate the NLR to eventual clinical results.

A347

Pilot testing a mindfulness-based weight loss maintenance intervention to enhance outcomes after bariatric surgery

Janet Ng *Corvallis OR*[1], Andrea Stone *Glastonbury CT*[1], Pavlos Papasavas *Hartford CT*[1], Darren Tishler *Glastonbury CT*[1], Godfrey Pearlson *Hartford CT*[2], Ilene Staff *Hartford CT*[1], Tara McLaughlin *Hartford CT*[1], Jennifer Ferrand *Hartford CT*[2], Sally Strange *Hartford CT*[1]
Hartford Hospital[1] Hartford Hospital, Institute of Living[2]

Weight regain is a problem for many patients after bariatric surgery. We randomly assigned 79 patients undergoing sleeve gastrectomy (SG) to either treatment as usual (TAU; n = 39) or to six weekly sessions of a mindfulness intervention (MI; n = 40), beginning 5- 8 months after SG. The mindfulness approach, originally developed to help prevent substance abuse relapse, was designed to address challenges in weight maintenance.Six validated self-report instruments (Tables 1, 2) were assessed at study baseline and 6 weeks later (end of the intervention). Percent total weight loss (%TWL) was calculated at study baseline and 6- and 18-month follow-up (12 and 24 months post-op). No significant group differences were found for %TWL at 12 months (mean %TWL for MI = 21.69%, SD=8.04; for TAU = 21.05%, SD=9.70, t (71) =.307, p =.76) or for weight regain at 6-month follow up. Several significant correlations were noted between mindfulness measures and %TWL at various time points (Tables 1 and 2), including a relationship between baseline craving levels and %TWL. Despite adequate power, we failed to observe a group effect on weight regain. A limitation of the study is that half of the MI participants missed half of the sessions and only 8/40 participants attended all six MI sessions. Participant feedback was overwhelmingly positive. We feel that further interventions post bariatric surgery should focus on food cravings and emotional regulation, possibly targeting a more narrowly defined group of patients struggling with weight regain at an earlier time point after surgery.

A348

Reducing Excess Staple Cartridge Use During Sleeve Gastrectomy

Vikrom Dhar *Cincinnati OH*[1], Tiffany Lee *Cincinnati OH*[1], Jonathan Thompson *Cincinnati OH*[1], Tayyab Diwan *Cincinnati Ohio*[1]
University of Cincinnati[1]

Background: Variability in staple line creation during laparoscopic sleeve gastrectomy (LSG) may be associated with complications including leak, bleeding, and reflux. The objective of this study was to assess the impact of using a gastric clamp on stapling efficiency and pouch quality.

Methods: Thirty-nine patients undergoing LSG were enrolled in a prospective, single-center, randomized controlled study. Patients were randomized to LSG performed with a gastric clamp (n=21) versus traditional bougie (n=18). Outcomes included excess staple cartridge use and expert rating of intraoperative sleeve appearance. Number of wasted staple cartridges was determined by subtracting the ideal number of staple cartridges required based on sleeve length from the total number of staple cartridges used.

Results: No significant differences were found between groups with regard to patient demographics or preoperative BMI ($p>0.05$). Similarly, there were no differences in operative time or time for sleeve creation ($p>0.05$). When evaluating excess staple cartridge waste, use of the gastric clamp resulted in significantly fewer cartridges wasted compared to traditional bougie (1 vs. 2, $p<0.01$). With respect to expert assessment of intraoperative sleeve appearance, ratings were significantly higher for the clamp group regarding optimal shape and volume, avoidance of retained fundus, appropriate distance from anatomic landmarks, and lack of kinks, spirals, or twists in the staple line (all $p<0.05$).

Conclusion: Use of a gastric clamp during LSG resulted in fewer staple cartridges wasted and improved expert rating of intraoperative sleeve appearance. Standardizing operative technique using a gastric clamp may result in improved outcomes for patients undergoing LSG.

A349

Sleeve Gastrectomy in Low BMI Diabetic patients

Nandakishore Dukkipati *Hyderabad* [1], DEEPTI THAKKAR *HYDERABAD* [1]
CONSULTANT[1]

Bariatric/metabolic surgery is already accepted as a treatment option for type 2 diabetes mellitus (T2DM) in patients with body mass index (BMI)□□□□□35□kg/m^2. BMI based guidelines were established and are being followed since 1991. However, after more than 25years, we know the inadequacy of planning surgery only based on BMI criteria. We now know that the risk of diabetes and/or

metabolic syndrome is determined more by ethnicity, waist circumference, fat distribution, hepatic steatosis etc. Recently, International Diabetes Federation has released its position statement which mentions that bariatric surgery for T2DM be considered a reasonable therapeutic alternative for low BMI (<35 kg/m^2) patients with T2DM who do not respond to standard medical therapy.
T2DM remission after metabolic surgery is based on 2 Hypotheses. According to foregut theory, nutrients directly entering distal part of the small bowel results in increased secretion of incretins such as GLP-1. Hindgut theory states that bypassing the foregut decreases release of Diabetogenic factors. In addition, Insulin resistance decreases with Surgery induced weight loss.
The regular Bariatric procedures have also not caused a dramatic BMI decrease in low-BMI patients. However, low preoperative BMI and severe T2DM also showed low long term remission with recurrence of Diabetes after a few years. Which means that the timing of intervention is also important. More long term, randomised and prospective studies are needed to determine feasibility and durability of Bariatric surgery in Diabetic patients with BMI < 35kg/m2.

A350
Money and motivation: A comparison of excess weight loss (EWL) in insured and uninsured patients undergoing laparoscopic sleeve gastrectomy (LSG)
Sabin Warner-Smith *Pimlico*
Mater Hospital

Introduction:
Patients with obesity undergoing laparoscopic sleeve gastrectomy (LSG) have been shown to experience significant post-operative weight loss. In Australia, the majority of bariatric surgery is performed within private hospitals as few public facilities offer bariatric services. Consequently, the cost of the operation can be high for patients who are not privately insured. The purpose of the study was to compare excess weight loss (EWL) in insured and uninsured patients 6 months post undergoing LSG.
Method:
A retrospective analysis was undertaken incorporating 276 patients with a BMI>30 who had undergone sleeve gastrectomy at an Australian surgical centre between 2014 to 2017. The insurance status for each patient was reviewed. The EWL for each patient obtained at their 6-month postoperative visit was documented and the results were then compared.
Results:
Of the 276 patients who underwent LSG at our facility, 58 (21%) were uninsured whilst 218 (79%) had private health insurance. The mean and median EWL was found to be 67.28% and 68.25% in patients with no private health insurance compared with 71.06% and 68.8% in patients with private insurance.

Conclusion:
Overall, we found that patients with private health insurance had both a higher mean and median EWL 6 months post LSG compared with uninsured patients. Reasons behind this difference may include both lifestyle and socioeconomic factors, however further research is indicated.

A351
Will I Still Be Obese Following Sleeve Gastrectomy?
Sarah Pearlstein *New York NY*[1], Ali Shayesteh *New York NY*, Deborah Allis *Mount Kisco NY*, Mitch Roslin *New York NY*
Lenox Hill Hospital Northwell Health[1]

Introduction: Average weight loss statistics quoted to patients undergoing sleeve gastrectomy are around 60% of excess body weight. However, this average is not geared toward specific patient factors. Patients desire to know if they will be non-obese following the operation. The purpose of our investigation is to elucidate factors that can indicate the probability of a patient becoming non-obese following surgery; as well as to evaluate whether various factors played a role on amount of weight loss.
Methods: Retrospectively retrieved data of 447 sleeve gastrectomies performed at two related bariatric centers by 4 surgeons. We looked at differences in weight loss based on age, sex, BMI class, surgeon and center.
Results: There was no statistical difference in weight loss between surgeons centers or gender. There was a statistically significant difference between different age groups and percent weight loss. There was no statistically significant difference in percent loss by weight class, but patients with BMI up to 40 had a 94.7% chance of becoming non-obese, BMI 40-45 at 65.4%, 45-50 31.9%, and >50 BMI at 4.3%.
Discussion: The surgeon, center, gender or BMI class made no difference in percentage weight loss. Age had a parabolic relationship with those on either end of the spectrum losing a higher percentage. Because the percentage weight loss was comparable despite BMI class, sleeve gastrectomy is not effective with super-obese patients to become non-obese
Conclusion: The results of sleeve gastrectomy are consistent and replicable however is consistently ineffective at helping more obese patients become non-obese.

A352
Robotic gastric bypass is getting better: first results from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program
Peter Lundberg *Allentown PA*[1], Jacqueline Seoane *Bethlehem PA*, Samantha Wolfe *Bethlehem PA*, Maher El Chaar *Allentown PA*
St Luke's Weight Management Center[1]

Background The use of robotic platforms in performing laparoscopic roux-en-Y gastric bypass (LRYGB) is increasing, though their safety compared to the conventional laparoscopic approach remains unclear.
Objective The objective of this study was to evaluate peri-operative data and 30-day outcomes of conventional and robot-assisted LRYGB using the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) data registry.
Setting University health network, United States.
Methods We reviewed all conventional and robot-assisted LRYGB cases entered between January 1 and December 31, 2016 in the MBSAQIP data registry. Demographic characteristics and 30-day outcomes were analyzed based on separate Mann-Whitney rank sums tests, $\chi 2$, or Fisher's exact tests as appropriate, with $p < 0.05$ denoting statistical significance with no adjustment for multiple testing.
Results Of the 39,425 patients who underwent LRYGB, 2,822 were robot-assisted. The robot-assisted approach required significantly more time (138 minutes versus 108 minutes, $p < 0.0001$). Rates of organ space infection, bleeding, and other significant adverse events following the conventional and robot-assisted approaches were 0.3% versus 0.5% ($p = 0.13$), 1.1% versus 0.8% ($p = 0.11$), and 2.3% versus 2.3% ($p = 0.96$), respectively. There were also no significant differences in the rates of mortality, length of stay, re-operation, or readmission between the two groups.
Conclusions Robot-assisted LRYGB is an increasingly popular alternative to the conventional laparoscopic approach. According to the MBSAQIP database, the early safety of these two techniques are equal, although the robotic approach requires more operative time.

A354

The effects of bariatric surgery on knee outcomes in patients eligible for total knee arthroplasty. Early results from the SWIFT Trial.

Christopher Still *Danville PA*, Shawnee Lutcher *Danville PA*[1], G. Craig Wood *Danville PA*[1], Jamie Seiler *Danville PA*, Christopher Seiler *Danville PA*, Scott Jamieson *Danville PA*, Brian Irving *Baton Rouge LA*, Peter Benotti Geisinger Health System[1]

Introduction: Patients eligible for total knee arthroplasty (TKA) with severe obesity (BMI≥40 kg/m^2) are increasingly required to lose weight prior to TKA. The benefits of bariatric surgery on knee outcomes are unknown. The purpose of this study is to evaluate changes in knee outcomes after bariatric surgery in patients eligible for TKA.

Methods: The SWIFT trial is an ongoing, multi-site, prospective trial that compares knee and physical function outcomes in patients receiving

bariatric surgery prior to TKA versus patients that have TKA only. Knee outcomes for this analysis included Visual Analog Scale for knee pain, Timed Up and Go, 30-second Chair Stand, and 40-meter fast paced walk. Changes from baseline to 6-months after bariatric surgery were compared using paired t-tests.

Results: Preliminary results of the ongoing SWIFT Trial included six patients that had bariatric surgery and completed 6-month follow-up after bariatric surgery. These patients had a mean age of 49.7 years (SD=5.4), 83% were female, and had a mean BMI of 45.7 kg/m^2 (SD=5.7). At 6-months after bariatric surgery, there were small but non-significant improvements in knee pain (33 vs 31, p=0.625), Timed Up and Go (7.5 vs 7.0, p=0.843), Chair Stand (12.5 vs 10.5, p=0.999), and 40-meter walk (22.9 vs 21.8, p=0.438).

Conclusion: Bariatric surgery may result in modest improvements in knee outcomes in patients that are eligible for TKA and may eventually delay or negate the need for a TKA.

A355

Comparison of a Novel Plication Technique to Suturing for Endoscopic Outlet Reduction for the Treatment of Weight Regain after Roux-en-Y Gastric Bypass

Pichamol Jirapinyo *Chestnut Hill MA*[1], Christopher Thompson *Boston MA*[1]
Brigham and Women's Hospital[1]

Background: Transoral outlet reduction (TORe) is an effective treatment for weight regain after Roux-en-Y gastric bypass (RYGB) which may be performed via suturing or plication. Restorative Obesity Surgery Endoluminal (ROSE) is a plication form of TORe.

Aim: To assess the efficacy of a novel ROSE technique combining argon plasma coagulation (APC) and plications to treat weight regain.

Methods: The gastrojejunal anastomosis (GJA) was ablated with APC (forced, 0.8 L/min, 80W). Endoscopic plications were placed in the ablated area and pouch. **Part I**: Technical feasibility, safety and efficacy of ROSE were assessed. **Part II**: Patients who underwent ROSE were matched 1:2 based on age, sex, GJA and pouch sizes, and follow-up time to those who underwent suturing. Weight loss of the two procedures were compared.

Results: 14 RYGB patients underwent the novel ROSE procedure. Patients weighed 92.5±14.2 kg and regained 32.4±18.0% of maximal weight loss. Average GJA and pouch sizes were 18±9 mm and 5±1 cm. **Part I**: Technical success was 100%. At 3-months, weight loss was 10.2±5.6 kg (p=0.0003), corresponding to %total weight loss (TWL) of 10.7±5.9%. **Part II**: 14 ROSE patients were matched to

28 sutured reductions. The amount of weight loss was similar between the two procedures (TWL of 8.6±3.5% for suturing versus 10.7±5.9% for ROSE, p=0.30). Stenosis rate was 21% for ROSE, all of which were amenable to endoscopic treatment, versus 0% for suturing (p<0.0001).

Conclusion: A novel ROSE technique combining APC with plications appears to be safe and effective at treating weight regain after RYGB.

A356

Intragastric balloon therapy for obese and overweight patients, over last 15 years

Marcos Berry *Santiago* [1], Lionel Urrutia , Giselle Muñoz , Daniela Ghiardo *Santiago de Chile Region Metropolitana*, Rodrigo Javier Anacona Cocio *Talca - VII Región de Chile* , Karen Rojas
Clinica Las Condes[1]

BACKGROUND:

Indication for intra-gastric balloon (IGB) is weight reduction for mild obesity. Currently this indication has also included overweight patients with multidisciplinary approach at our Center

OBJECTIVES:

Evaluation of safety and efficacy of the IGB.

METHODS:

From January 2002 to September 2017, IGB was placed endoscopically, in 424 patients under iv sedation, with a mean BMI 30.1 kg/m^2 (26-60). It was filled with 600 ml of saline solution. Removal was done 6-7 months after balloon insertion, under general anesthesia with OT intubation for airway protection. Insertion and removal were done ambulatory.

RESULTS:

Strictly followed up by a team of dietitians, 360 female (85 %) and 64 male (15 %) underwent IGB placement, that was uneventful. Mean age 34 (14-67). Mean time for insertion and extraction was 20 minutes. 29 (6,8%) patients did not complete the 6 months, mainly for intolerance and vomits or complications that required early removal, majority within the first 6 weeks. There was 1 gastric perforation (0.5 %), 2 days after IGB placement, in a patient with previous anti-reflux procedure during childhood, required emergency surgery, repair and successful recovery. Median weight loss 11.1 kg (0.2-28.5 kg.). mean BMI loss 3,5 points. Mean EWL was 49 % over 6 months.

CONCLUSIONS:

The IGB appears to be safe and effective. It is an absolute contraindication in patients with prior gastric surgery. Its efficacy to reduce weight with a well-supervised nutritional guidance might be a good indication for the mildly obese patient and even for the overweight patient.

A357

A Multicenter Study of Outpatient Revision of Adjustable Gastric Banding to Sleeve Gastrectomy

Amit Surve *Salt Lake City UT*[1], Hinali Zaveri *Salt Lake City UT*[1], Daniel Cottam *Salt Lake City UT*[2], Walter Medlin *Salt Lake City UT*[1], Christina Richards *Salt Lake City UT*[1], Legrand Belnap *Salt Lake City UT*[1], Austin Cottam *Salt lake City UT*[1], Samuel Cottam *Salt Lake City UT*[1], Benjamin Horsley *Salt Lake City UT*[1], Thomas Umbach [3], Matthew Apel *Las Vegas NV*[3], Michael Williams *Alpharetta GA*[4], Christopher Hart *Atlanta GA*[4], Williiam Johnson [4], Christy Lee *Johns Creek GA*[4], Ciara Lee *Johns Creek GA*[4], John DeBarros *Tempe AZ*[5], Michael Orris *Tempe AZ*[5]

Bariatric Medicine Institute[1] Bariatric Medical Institute[2] Blossom Bariatrics[3] Atlanta General & Bariatric Surgery Cent[4] East Valley Surgery Center[5]

Background Laparoscopic sleeve gastrectomy (LSG) is a safe and effective procedure that can be performed as an outpatient procedure.
Aim To determine whether outpatient LSG is safe in patients with previous adjustable gastric banding (AGB).
Methods The medical records of 53 patients who underwent revision LSG from previous AGB at five outpatient surgery centers from September 2013 through July 2017 were retrospectively reviewed.
Results Fifty-three patients (one stage: 51 and two-stage: 2) were included in this analysis. Demographic and anthropometric characteristics of the patients can be seen in Table 1. A simultaneous hiatal hernia repair was performed in 32% patients. The mean total operative and operating room times were 74.9 ± 24 mins and 96.6 ± 24.3 mins, respectively. One intra-operative complication (1.8%) occurred. The mean total blood loss was 40 ± 35.1 cc. The mean patient emergence, post-anesthesia care unit, and recovery room times were 92 ± 38.8 mins, 90.5 ± 42.4 mins, and 256 ± 93.5 mins, respectively. The mean length of stay was 7 ± 2.5 hrs. None of the patients required unplanned returns to surgery, overnight hospitalization, or transfer from outpatient to inpatient setting within the first 24 hours of surgery. The 30-day follow-up rate was 98.1%. The 30-day reoperation, readmission, emergency department visit, and mortality rates were 3.7%, 0%, 0%, and 0%, respectively. The total short-term complication rate was 7.5%.
Conclusion Same-day discharge when removing the lap band and converting to LSG appears safe when performed as an outpatient procedure.

A358

RETENTION AND ATTRITION IN BARIATRIC SURGERY RESEARCH: A QUALITATIVE STUDY

William Gourash *Pittsburgh PA*[1], Melissa Kalarchian *Pittsburgh PA*[2],

Joan Such Lockhart *Pgh PA*[2], Lenore Resick [2], Anita Courcoulas *Pittsburgh PA*[3]
Magee Womens Hopital-University of Pittsburgh Medical Center[1] Duquesne University[2] University of Pittsburgh Medical Center[3]

Longitudinal bariatric surgical research studies often lack information on retention and attrition of participants and the strategies utilized to optimize these. The potential for attrition with adverse effects on validity increases over time.
To explore research participants' perceptions, motivations, and attitudes concerning participation in the Longitudinal Assessment of Bariatric Surgery (LABS) study.
A qualitative study with content analysis of individual patient interviews from a sample stratified by prior research participation.
Thirty-six interviews were completed to reach analytic saturation. Fifteen *motivational themes* were identified. The 3 most frequently cited were:*Sharing one's own experiences to help others*, *study participation was helpful to my own goals*, and *desire to support research*. Motivation changed over time and did not appear related to prior participation. A majority (22) responded that they would return to annual research visits with poor weight loss, but with ambivalence. Extensive questionnaire completion was perceived as a significant barrier (23). A sizable subgroup (15) perceived distance and travel time as barriers. Study participants perceived strategies that better enabled them to manage their time and availability, and study measure progress reports as beneficial (27). A majority (19) viewed an honorarium and travel reimbursement positively (31) and supportive to their participation.
Altruism was an important motivation, but over time usefulness to the participants' goals increased in importance. These motivations, barriers, and facilitators to research retention provide an evidence-base from which to further develop retention strategies. Further research should focus on evaluating the effectiveness of retention strategies and developing an optimal strategy selection process.

A359
Abdominal pain before and after Roux-en-Y gastric bypass.
Monica Chahal-Kummen *Oslo* [1], Ingvild Blom-Høgestøl *Oslo* [1], Inger Eribe *Oslo* [1], Jon Kristinsson *Oslo* [1], Tom Mala *Oslo* [1]
Oslo University Hospital[1]

Introduction
We aimed to study the prevalence and characteristics of chronic abdominal pain (CAP) before and two years after Roux-en-Y gastric bypass (RYGB). We also evaluated other abdominal and psychological symptoms, as well as quality of life (QoL).

Method

We performed a cohort study and included patients with morbid obesity planned for RYGB. Before and after RYGB, patients were presented with a set of questionnaires including Gastrointestinal Symptom Rating Scale (GSRS), Hospital Anxiety And Depression Scale (HADS), Short-Form 36 version 2 (SF-36v2) and a non-validated abdominal pain questionnaire, followed by consultation with a physician and retrieval of medical history, including comorbidities.

Results

236 patients were included and 209 (88.6%) attended the two year follow-up. 169/236 (71.6%) were females. Mean (SD) age and BMI at baseline were 44 (9.2) years and 43.2 (5.9) kg/m^2. Mean BMI (SD) at follow-up was 29.3 (4.7) kg/m^2. Surgical complications were seen in 26/209 (12.4%) patients. At baseline 28/236 (11.8 %) and at follow-up 60/209 (28.7%) patients reported CAP ($p=0.001$). For the entire cohort, we observed significant increases in all GSRS syndrome scores, in anxiety symptoms and in QoL domains at two years. As presented by Figure 1; when compared to those without CAP, patients with CAP two years after RYGB had higher GSRS abdominal pain syndrome scores, which negatively affected their QoL ($p<0.001$).

Conclusion

We found a significant increased prevalence of CAP two years after RYGB. Careful evaluation of CAP before and after RYGB is recommended.

A360

Is There a Correlation Between Comorbidities and Post Laparoscopic Sleeve Gastrectomy Gastric Stenosis?

Maria Fonseca Mora *Weston FL*[1], Cristian Milla Matute *Davie FL*[1], David Romero Funes *Weston FL*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

Background

Gastric Stenosis(GS) has been reported in 4% of Laparoscopic sleeve gastrectomy(LSG) cases. No studies have been suggested a possible correlation between the incidences of post LSG stricture and preoperative comorbidities. The aim of this study is to analyze the possible association between preoperative comorbidities and LSG stenosis in our bariatric population.

Methods

All patients who underwent primary or secondary LSG from January 2005 to March 2018 at our institution were retrospectively analyzed. The patient who developed GS postoperatively were matched with a controlled group for demographics and comorbidities. Categorical and nominal variables were analyzed with Chi-square and

Independent T-test respectively.
Results
Of the 1878 patients reviewed, 10(0.53%) developed GS after LSG. These patients were matched with a control group in a 1:1 ratio. The mean age was 56.85±9.59 years, all females, and predominantly white (85%). After matching, BMI was found to be not statistically significant for GS (0.856). Preoperative diagnosis of T2DM, HTN and dyslipidemia were significant risks factors for GS, OR: 9(CI:0.809-100 and P=0.051), OR 13(CI: 1.19-152 and P=0.019) and OR 9(CI: 0.809-100 and P=0.051) respectively. Active smokers had increased risk for GS OR 5(0.655-38.15) when compared to never smokers. No statistical significance was found among patients with preoperative diagnosis of CKD, CAD, GERD or history of GI bleed, P=1.00, P= 0.305, P=0.639 and P=0.136 respectively (Table1).
Conclusion
Active and former smokers, T2DM, HTN, and dyslipidemia seems to be related to the incidence of post-LSG Gastric stenosis. Larger studies are necessary to corroborate these findings.

A361
Resident involvement in robotic bariatric surgery: A MBSAQIP analysis

Tarin Worrest *Portland OR*[1], Elizabeth Dewey *Portland OR*[2], Farah Husain *Portland OR*[2], Stephanie Wood *Portland OR*[1]

Oregon Health and Science University[1] Oregon Health and Sciences University[2]

Introduction:
As robotic bariatric surgery becomes more common, it is important to assess complications as trainees become more involved in these procedures. The Metabolic and Bariatric Surgical Association Quality Improvement Program (MBSAQIP) records bariatric surgery-specific complications for all procedures at member institutions. Our hypothesis was that resident involvement in robotic bariatric surgery does not increase complications.
Methods:
All robotic sleeve gastrectomy (SG) and roux-en-y gastric bypass (RYGB) cases reported in 2015-2016 MBSAQIP database were included. Complications were compared across assistant types: resident, no assistant/surgical technician (NA), fellow, nurse practitioner/physician assistant/nurse first assist (NP/PA/RNFA), and attending. Propensity score weights were added to all analysis to account for non-random patient assignment to different assistant types.
Results:
For SG, there was no difference in complications across assistant types (Figure 1). Compared to a resident, NP/PA/RNFA were 3.5 times more likely (CI 1.8-6.9) to require conversion to another operative technique. For RYGB, NP/PA/RNFA were 1.29 times more likely (CI 1.02-1.63) to have complications compared

to residents. There was no difference in complications between the other groups compared to residents for RYGB (Figure 1). Operative length for SG was significantly longer for residents compared to other assistant groups (p=0.02). For RYGB, residents had longer operative times compared to NA or NP/PA/RNFA, but shorter than fellows (Table 2).

Conclusion:

Resident involvement in robotic bariatric surgery increases operative times, but does not lead to an increased complication rate. Bariatric surgery may be an appropriate model to teach residents the essentials of robotic surgical techniques.

A362

Effect of selected antidepressant drugs on weight loss post-bariatric surgery: a single-center, retrospective chart review

Devika Umashanker *Glastonbury CT*[1], Madison O'Brien *South Windsor CT*[1], Tara McLaughlin *Hartford CT*[2], Andrea Stone *Glastonbury CT*[1], Mirjana Domakonda *Hartford CT*[3], Richard Seip *Glastonbury CT*[2], Darren Tishler *Glastonbury CT*[1], Pavlos Papasavas *Hartford CT*[1]

Hartford Hospital - Metabolic and Bariat[1] Hartford Hospital[2] Hartford Hospital Institute of Living[3]

Introduction

Anxiety and depression are common in obesity. Antidepressants, as a first line treatment, may cause weight gain, Their impact on weight loss following bariatric surgery is not well studied. We compared effects of the selected antidepressants fluoxetine, paroxetine, and bupropion on weight loss at 6 months and 1 year post bariatric surgery.

Methods

We scanned pre-operative prescription records of 4857 patients who underwent primary gastric banding (GB), sleeve gastrectomy (SG) or Roux en Y gastric bypass (RYGB) at our institution from 3/1/2008 through 4/15/2018 for antidepressant medications, and found 428 were prescribed bupropion, fluoxetine, or paroxetine <1yr prior to surgery (Table 1). Post-surgery weights were compared using ANCOVA to test for the effect of drug on % total weight loss at 6 months (%TWL-6m) and one year (%TWL-1y), alone and with adjustment for surgery type, age, pre-surgery BMI, and sex (Table 2).

Results

We excluded 9 patients taking more than one drug. The unadjusted mean %TWL (±sem) for fluoxetine, paroxetine, and bupropion were, at 6m: 17.1±1.4, 19.3±1.0, and 19.9±0.7, respectively (p=0.25, NS), and at 1yr: 20.0±2.0, 22.9±1.5, and 24.8±1.0 (p=0.16, NS). Means (±sem) adjusted for surgery type using ANCOVA were, at 6m: 18.1±1.1, 18.3±0.7, and 20.2±0.5 (F=2.64, p=0.064, NS), respectively, and at 1yr: 22.3±2.1, 21.9±1.3, and 24.8±0.9 (F=1.91, p=0.152, NS).

Conclusion

Weight loss following surgery, after adjustment, tended to be greater in patients taking bupropion compared to fluoxetine or paroxetine. More research will better elucidate psychotropic drug effects on bariatric weight loss.

A363

Laparoscopic Sleeve Gastrectomy Impact on Remission of Type 2 Diabetes

Saad Althuwaini *Riyadh*
king khalid university hospital

Background: Obesity is a major risk factor for type II diabetes. Mal-absorptive procedures believed to have better outcome. Relatively newer restrictive procedures like laparoscopic sleeve gastrectomy (LSG) is being performed more often to these type of patients.
Objective: To determine the achievement rate of diabetes remission and glycemic improvement post (LSG) in type 2 diabetes.
Material and Methods: This was a retrospective cohort study conducted on 80 patients with type 2 diabetes who underwent LSG from 2009-2016. Diabetes remission was considered if FBS (<7mmol/L), HbA1c (<6.5%) with cessation of all diabetic medications. Glycemia was considered to improve if HbA1c decreased by ≥1% and FBS by 1 mmol/l.
Result: 64 (80%) patients achieved complete remission of diabetes, and 16 (20%) with glycemic improvement post-LSG. The mean time of diabetes remission was 2.91 months post-LSG. The BMI mean ± SD dropped from 45.48 ± 8.84 kg/$m^2$to 33.06 ± 6.63 kg/m^2 post-LSG (P<0.0001). Of 80 patients, 72 (90%) patients are on a healthy diet and discontinued diabetes treatment post-LSG due to remission of diabetes or significant glycemic improvement.
According to our results, duration of diabetes pre-LSG and lower pre-op HbA1c and FBG associated with higher remission rate with a significant p-value (0.0019, 0.0004, <0.0001). Pre-op BMI does not predict remission of diabetes post-op.
Conclusion: Type II diabetes remission post LSG is significant with a mean time of 2.9 months post-op. LSG could be considered as a choice of treatment for patients with obesity and type II DM.

A364

Assessment of acid exposure in the stomach in gastric bypass patients with anastomotic ulcer: insights into pathologic acid exposure

Pei-Wen Lim *Worcester MA*[1], Richard Perugini *Worcester MA*[1]
University of Massachusetts Medical School[1]

Introduction: Anastomotic ulcer following Roux-en-Y gastric bypass affects 16% of patients. Risk factors such as cigarette smoking and

NSAIDs/steroids use do not fully account for all cases. We postulate excessive acid exposure to be a culprit. We studied the acid exposure of gastric pouch in patients presenting with recurrent ulcer disease following gastric bypass.

Method: A 24 hour ambulatory pH monitoring was performed in three patients with recurrent ulcer disease without cigarettes or NSAIDSs/steroids use. We utilized a dual pH probe (Medtronic), with one channel positioned in the lower esophagus, and the other in the stomach, off acid suppression therapy. As a control, we used a similar study performed in a patient with primary esophageal dysmotility who has no evidence of ulcer disease.

Results: Average age of patients were 47 $\pm$ 10 years and average BMI was 42 $\pm$ 5 kg/m2. Anastomotic ulcer occurred at 1601 $\pm$ 634 days postoperatively.There was no pathologic acid exposure in the esophageal probe of anastomotic ulcer patients (0.9 $\pm$ 1.4%) or in the control (0.7%). Acid was present with a much higher frequency in the stomach probe of the patients with ulcer disease (64.4 $\pm$ 15.5%) than in the control (12.1%). Acid exposure was greater in the supine position than in the upright position in the symptomatic patients (79.8 $\pm$ 25.6 vs 47.4 $\pm$ 15.5, p = 0.15).

Summary: Excessive acid exposure of the stomach is risk factor for anastomotic ulcer in bypass patients. Acid exposure is worsened in the supine position.

A365

Preoperative Weight Loss Medication Use and Postoperative Outcomes

Tripurari Mishra [1], Laura Marchiando *Onalaska WI*[2], Andrew Borgert *La Crosse WI*[1], Kara Kallies *La Crosse WI*[1], Shanu Kothari *La Crosse WI*[2]

Gundersen Medical Foundation[1] Gundersen Health System[2]

Background: The impact of using weight loss medications (WLM) preoperatively on postoperative outcomes is not well understood. The objective of this study was to evaluate the outcomes for patients who used these medications preoperatively versus those who did not.

Methods: The medical records of all patients who underwent bariatric surgery at our medical center from 2001-2017 were retrospectively reviewed. Our integrated medical record system was used to determine long-term weights and comorbidity status. Patients were grouped by whether or not they used prescription WLM within 1 year prior to bariatric surgery.

Results: Overall, 1,876 patients underwent surgery; 333 laparoscopic sleeve gastrectomy, and 1,543 laparoscopic Roux-en-Y gastric

bypass. There were 67 patients prescribed a WLM preoperatively. Mean age, preoperative BMI, and proportion of women for those who did vs. did not use a medication preoperatively were 43.0±10.7 vs. 45.0±10.5 years (*P*=0.14), 46.8±6.7 vs. 47.2±6.2 kg/m^2 (*P*=0.67), and (76.1% vs. 80.1%; *P*=0.34). Glucose/HgbA1c and cholesterol values were available for 874 and 984 patients, respectively. Preoperative prevalence of type 2 diabetes (14.7% vs. 16.7%; *P*=0.85) and dyslipidemia (20.6% vs. 30.0%; *P*=0.24) were similar for those who did vs. did not use a WLM. No difference in preoperative weight changes for those who used vs. did not use WLM (+0.1±7.6 vs. 0.8±5.9 %TWL; *P*=0.09) were observed.
Conclusion: Use of WLM preoperatively did not significantly impact postoperative long-term weight loss or comorbidity improvement. Use of WLM should not be used as a predictor of successful weight loss post-bariatric surgery.

A366

Differences in regional fat loss following sleeve gastrectomy and roux en Y gastric bypass.

Jonathan Sivakumar *Melbourne* [1], Lynn Chong *Fitzroy* [2], Salena Ward *Fitzroy* [2], Tom Sutherland *Melbourne* [2], Michael Hii *Fitzroy* [2]
St Vincent's Hospital Melbourne[1] St Vincent's Hospital Melbourne[2]

Background: Regional body fat distribution is a significant predictor of health outcomes as cardiometabolic disorders are associated with android obesity, or central fat deposition. omparatively, gynoid obesity and peripheral fat deposition, reportedly has a protective role against these diseases.
Objective: The objective of this study is to evaluate regional body composition changes in patients undergoing bariatric surgery, comparing roux-en-Y-gastric-bypass (RYGB) with laparoscopic sleeve gastrectomy (LSG).
Methods: A prospective analysis was completed on fourteen patients undergoing bariatric surgery, RYGB or LSG, between 2017 and 2018 at St Vincent's Hospital Melbourne. Body composition was measured with dual-energy X-ray absorptiometry immediately before the procedure, and one-month post-operatively.
Results: Fourteen patients were recruited for this analysis (RYGB n=4, LSG n=10). At one month post-operatively; mean RYGB fat mass loss was 4.65 ±1.59 kg, of which 0.53 ±0.62 kg derived from android fat mass, and 0.36 ±0.67 kg from gynoid fat mass. Mean LSG fat mass loss was 4.16 ±1.83 kg, which included 0.37 ±0.55 kg android fat and 0.92 ±0.71 kg gynoid fat. RYGB was associated with greater truncal fat mass loss, mean of 2.22 ±2.51 kg, compared to a mean of 1.31 ±2.59 kg in the LSG group. RYGB was less associated with lower limbs fat mass loss, mean 1.41 ±1.57 kg, compared with a mean of 2.4 ±2.14 kg in the LSG group.

Conlusion: Both RYGB and LSG demonstrated substantial fat mass loss post-operatively; however, it is possible that RYGB is associated with a greater loss of fat from an android distribution.

A367

The impact of last 15 minutes of surgery on the hemorrhagic complications after laparoscopic sleeve gastrectomy. Case-control study.

Michal Janik *Warszawa* [1], Mateusz Czado *Warszawa* , Konrad Kosiński *Warsaw* , Szymon Grochans *Kurów* , Maciej Walędziak *Warsaw* [1], Krzysztof Paśnik [1], Piotr Kowalewski *Warszawa* [1]
Military Institute of Medicine[1]

Introduction

Laparoscopic sleeve gastrectomy (LSG) is associated with a significant risk of hemorrhagic complications (HC). Last 15 minutes of laparoscopic procedure are very important in terms of hemostasis control. Therefore, blood pressure profiles at the end of surgery may have an influence on the risk of HC.

Aim

The aim of the study was to assess the blood pressure profile in last 15 minutes of LSG in patients who experienced hemorrhagic complications after laparoscopic sleeve gastrectomy.

Methods

Medical records of 867 patients were reviewed. A case-control study of intraoperative blood pressure was undertaken in patients with bleeding after LSG and matched controls. Controls were matched (1:1) with cases by age (±3 year), BMI (±4 kg/m^2) gender (female versus male), staple line reinforcement (running suture versus haemostatic clips), comorbidities (diabetes, hypertension and obstructive sleep apnea) and surgeon's experience (>50 or <50 LSG procedures per year). The intraoperative blood pressure was recorded in last 5th, 10th and 15th minutes of surgery.

Results

12 patients after LSG with HC in postoperative period were matched with 12 controls. Patients who experienced hemorrhagic complications after LSG had statistically significant increased mean systolic blood pressure (mmHg) in last 10th and 15th minute of surgery (87.80± 11.96 vs 79.44±8.80mmHg, p= 0.049, and 89.20±11.67 vs 77.50±11,82 mmHg, p=0.011). The detailed analysis revealed significantly higher diastolic blood pressure measurements in 10th and 15th last minutes.

Conclusion

Compared with closely matched control subjects, patients with HC after LSG have incresed diastolic pressure at the last 10 minutes of surgery.

A368

Safety and outcomes of laparoscopic sleeve gastrectomy in patients older than 60: a case-control study.

Katarzyna Bartosiak *Warsaw* [1], Maciej Walędziak *Warsaw* [1], Piotr

Kowalewski *Warsaw* [1], Krzysztof Paśnik [1], Michał Janik *Warszawa* [1]
Military Institute of Medicine[1]

Background: The majority of older population suffers from multiple comorbid conditions including obesity. Surgical interventions seem to be the most promising solution for the obesity problem.
Objective: The aim of the study was to evaluate the safety and effectiveness of LSG in a cohort of patients over the age of 60 years compared with matched controls under 40 years old.
Methods: A retrospective review of a prospectively collected database was conducted of patients >60 years who underwent a LSG. 23 patients aged >60 years were matched 1:1 with patients aged <40.
Results: The mean postoperative BMI at 12 months after surgery was significantly higher in study group (36.38 kg/m^3 ± 7.07 vs 33.10 kg/m^3 ± 5.65, p= 0.004). ΔBMI was significantly lower in study group at 12 months (13.56 ± 6.05 vs 10.3 ± 4.89, p=0.008) as well as %EBMIL (50.71 ± 25.94 vs 64.20 ± 23.29, p= 0.015). At 24 months the mean BMI was still higher in elderly group but without statistical significance (32.57 ± 9.45 versus 30.16 ± 4.8, p=0.081). At 24 The difference in mean ΔBMI and %EBMIL at 24 months after surgery did not reach statistical significance, respectively: 14.34 ± 8.22 vs 16.51 ± 5.97 (p=0.125) and 69.92 ± 45.91 vs 77.50 ± 19.41 (p=0.112).
Conclusions: This study suggests that laparoscopic sleeve gastrectomy is safe and effective in patients with age over 60.

A369
Impact of bariatric surgery in anti-reflux medication use in patients with asthma and GERD
Gerardo Davalos *durham NC*[1], Dana Portenier *Durham NC*[1], Hui-Jie Lee *Durham NC*[1], Jennifer Ingram *Durham NC*[1], Alfredo Guerron *durhjam nc*[1]
Duke health[1]

Objective: to determine the effects of bariatric surgery in anti-reflux medication use in patients who have obesity and both asthma and GERD.

Background: There is an association between asthma and GERD (1). Although bariatric surgery has shown to reduce medication use in both comorbidities separately, there is limited research done in a population who have both asthma and GERD.

Methods: Adult patients had asthma and obesity, and at least one anti-reflux medication before surgery were followed up at 30 days and 1 year after bariatric surgery. Poisson Generalized Linear Mixed Models (GLMMs) with a log link for repeated measures were fit to evaluate the effect of time and procedure type on the number of hypertension medications while adjusting for risk factors including age,

gender, race, preoperative diabetes, and preoperative BMI.

Results: Among 332 patients who were prescribed with at least one asthma and one GERD medication, the mean number of pre-operative GERD medication use was 1.12 (SD:0.37), which was decreased to 0.78 (SD:0.48) at 1-year post-operation. We did not detect significant differences in a number of GERD medications between procedure types and thus procedure type was not included in the final model. We found that a significant decrease in a number of GERD medication at 1 year compared to baseline (RR:0.72, 95% CI:0.62-0.85, $p<0.0001$), after adjusting for confounders.

Conclusion: all bariatric procedures showed a decrease in anti-reflux medication use in patients who have obesity and both asthma and GERD

A370
REVERSAL GASTRIC BYPASS TO NORMAL ANATOMY WITH SLEEVE GASTRECTOMY BY HYPOGLYCEMIA

RAMON VILALLONGA *BARCELIONA* [1], Jose Manuel Fort *Barcelona* [2], Oscar Gonzalez *Barcelona* [3], Jose Maria Balibea *Barcelona* [1], Enric Caubet *Barcelona - Spain* [3], Renato Roriz-Silva *Porto Velho* [4], Gian Pier Protti *Barcelona* [5], Mariona Jofra *Barcelona* [5]

H Vall d'Hebron -Univ Aut de Barcelona[1] H Vall d'Hebron - General Surgery Depart[2] H Vall d'Hebron - Unit of Endoc surgery[3] University of Rondonia and Universitat Autónoma de Barcelon[4] Hospital Vall d'Hebron[5]

Background: Laparoscopic Roux-en-Y gastric bypass (RYGB) is one of the most important bariatric surgical procedures performed around the world and it can produce an important lose of weight with reversal of metabolic disorders like diabetes and dyslipidemia. Even though it has good results, some complications occur after gastric bypass. A rare complication of RYGB is hypoglycemia which has been estimated in 0,1% of cases but causes remain unclear. **Methods:** A retrospective analysis of a prospective database of Endocrine, bariatric and metabolic Unit. General Surgery Department. Universitat Autònoma de Barcelona. Hospital Vall Hebron. Barcelona, Spain. **Results:** Between 2011 and 2018, 8 patients underwent laparoscopic reversal procedure. Preoperative Body Mass Index (BMI) mean was 31.2 Kg/m2 (range: 28 – 39.4 Kg/m2) and 6 were women. The standard approach was laparoscopic reversal to normal anatomy with or without concomitant sleeve gastrectomy (SG) and resection or not of alimentary RYGB limb. Three patients presented postoperative complications: gastrogastric anastomosis leak (1), colitis with intra-abdominal collection (conservatively managed) (1), and one case of

mesenteric venous thrombosis. Average hospital stay was 9.8 days. No mortality. All patients recovered from their initial condition, but two (25 %) presented mild hypoglycaemia during follow-up. Two patients had weight regain (25 %) and one case developed gastroesophageal reflux disease (12,5%). The mean BMI in the last control was 29,8 Kg/m^2. **Conclusions:** The results of the laparoscopic reversal with SG after RYGB are acceptable, showing a clinical improvement of the hypoglycemic syndrome in all cases.

A371

Minimally invasive conversion of sleeve gastrectomy to Roux-en-Y Gastric Bypass for Intractable Gastroesophageal Reflux Disease: Short Term Outcome.

Daniel Davis *Dallas TX*[1], Lauren Kastner *Dallas TX*[2], Steven Leeds *Dallas TX*[2]
Baylor University Medical Center[1] Baylor University Medical Center Dallas[2]

Background Sleeve gastrectomy(SG) is considered definitiv e surgery for weight loss due to excellent short-term results. GERD has been reported to have a post-operative incidence between 3-50% and management remains controversial. This case series demonstrates our experience with intractable GERD management after SG with conversion of SG to Roux-en-Y gastric bypass (RYGB).***Methods*** Retrospective review of prospective data registry from Jan 2016 through Sept 2017. Eleven patients, 10 female and 1 male had conversion from SG to RYGB for control of reflux symptoms on high dose PPI. 11 surgeries(7 laparoscopic,4 Robotic). Mean BMI at time of RYGB was 40.7 ± 11.1 kg/m^2. Mean interval time between SG and RYGB was 48.2 ± 17.3 months. UGI series on 11 patients prior to RYGB showed significant reflux. pH testing mean DeMeester 43.3, pH < 4 mean time was 16%. High resolution esophageal manometry demonstrated varied abnormal peristalsis. ***Results*** Mean operative time was 173.3 ± 62.6 minutes. Mean hospital stay was 2.54 ± 1.21 days.There were no conversions to open surgery and no mortality. 7 surgeries included a hiatal hernia repair, 5 surgeries included fundectomy of the retained fundus. 3 dev GJ stenosis. Mean follow up of 5.33 ± 2.89 months, all reflux symptoms resolved and off PPI, mean change in BMI 8.64 ± 7.17 kg/m^2, % total weight loss13.73 ± 6.56%, and %EBMIL 40.1 ± 14.88%. Mean change in BMI at follow-up was significantly lower than initial values (p=0.0006). Conversion of SG to RYGB is effective in managing intractable GERD and improving weight loss.

A372

Internal Hernia Rates in Gastric Bypass Using Absorbable Versus Nonabsorbable Suture for Mesenteric Closure

Chris Finley *Stow OH*[1], Adrian Dan [1], Ashley Bohon *Akron OH*[1], Jenn Haas [1], John Zografakis *Akron OH*[1], Mark Pozsgay *Akron OH*[1]
Summa Health[1]

Background: Closure of the jejunal-jejunal mesenteric defect formed during a gastric bypass procedure is widely accepted as standard practice to decrease the risk of internal hernia formation. No current consensus exists regarding which suture type, absorbable versus nonabsorbable, is more efficacious in prevention of post-operative internal hernia formation.
Setting: University-affiliated, high-volume, accredited bariatric Center of Excellence.
Method: A retrospective review of prospectively gathered data for all laparoscopic gastric bypasses performed at a single high-volume center from 2012-2017 was performed. Data was utilized from the facility database which tabulates all bariatric post-operative complications. Patients were categorized into two groups based upon the type of suture used for mesenteric closure. All patients who subsequently underwent a second corrective surgery for an internal hernia through the jejunal-jejunal defect that was identified radiographically pre-operatively and/or intra-operatively were identified. Patients with only a hernia through Peterson's defect were excluded. Pearson chi-square test was used to compare the relative risk of internal hernia formation between absorbable versus non-absorbable sutures.
Results: A total of 1597 total gastric bypasses were performed between 2012-2017. 20 of 719 patients with absorbable sutures developed internal hernias compared 17 of 878 nonabsorbable. The relative risk of internal hernia formation with absorbable sutures was 2.8% versus 1.9% with nonabsorbable (p=0.264). The overall OR of hernia formation was 1.449 (95% CI 0.753-2.788).
Conclusion: Closure of the mesenteric defect of the jejunojejunostomy with nonabsorbable suture carries a lower risk for post-operative internal hernia formation than absorbable sutures after laparoscopic gastric bypass surgery.

A373

Trans-fistula Endoscopic Reduction of the Remnant Stomach: A Novel Treatment Option for Weight Regain in Roux-en-Y Gastric Bypass Patients with Gastrogastric Fistula

Pichamol Jirapinyo *Chestnut Hill MA*[1], Christopher Thompson *Boston MA*[1]
Brigham and Women's Hospital[1]

Introduction: Gastrogastric fistula (GGF) is a complication of Roux-en-Y gastric bypass (RYGB) that is associated with weight regain. Endoscopic closure of large GGF is ineffective and surgical revision is technically challenging.

Aim: To assess technical success, safety and efficacy of trans-fistula endoscopic reduction of the remnant stomach (TERRS) in the treatment of GGF.

Methods: This study was a retrospective review of prospectively collected data. RYGB patients with large GGF (≥10 mm) who underwent TERRS were included.

Procedure: The remnant stomach was accessed via GGF and reduced using a full-thickness suturing device (via Endoscopic Sleeve Gastroplasty (ESG) pattern) or a plication device (via circumferential and longitudinal plications of the body) (**Figure 1**). **Outcomes**: Technical success rate, serious adverse event (SAE) rate and percentage total weight loss (%TWL).

Results: Eleven RYGB patients with GGF were included. BMI and weight regain were 39.3±6.1 kg/m^2 and 37.0±20.0% of maximal weight loss. GGF size was 17.8±6.2 mm. Technical success rate was 100%. A median of 24 [19-48] stitches or 13.5 [8-10] plications were placed per procedure. SAE occurred in 2/11 patients (18%) including post-operative fevers that resolved with antibiotics and GI bleeding that required no intervention. At 6 months, weight loss was 9.8±8.3 kg (p=0.008), corresponding to BMI reduction of 3.6±2.8 kg/m^2 (p=0.005) and TWL of 8.8±6.1%. Plication had greater TWL than suturing, although this was not statistically significant (11.6% versus 8.0%, p=0.50).

Conclusion: Endoscopic reduction of the remnant stomach via GGF appears safe and effective at treating weight regain in patients with large GGF.

A374

Harnessing Electronic Health Record Information for Research on Bariatric Surgery

Alicia Beeghly-Fadiel *Nashville TN*[1], Robb Flynn *Nashville TN*[2], Robyn Tamboli *Nashville TN*[2], Shriya Karam [2], Malcolm-Robert Bringhurst Snyder [2], Xiao Ou Shu *Nashville TN*[2], Wayne English *Nashville TN*[2], Loren Lipworth *Nashville TN*[2]
Vanderbilt University Medical Center[1] VUMC[2]

Background: Bariatric surgery is the most effective approach for substantial and sustained weight loss to combat severe obesity, but individual response is highly variable. Few determinants have been identified, possibly due to homogeneous study populations.

Methods: We assembled a retrospective cohort of subjects who

had bariatric surgery at the Vanderbilt University Medical Center (VUMC) from 2001-2017. We iteratively developed an algorithm to select individuals based on Current Procedural Terminology (CPT) codes in VUMC electronic health records (EHR). We included patients with any of four codes (43644, 43645, 43846, 43847) for Roux-en-Y gastric bypass (RYGB) or one code (43775) for vertical sleeve gastrectomy (VSG), and excluded patients with any code for replacement, removal, or revision (43770, 43771, 43772, 43773, 43774, 43842, 43843, 43848, 43886, 43887, 43888).

Results: After removing patients with multiple CPT codes or age at surgery <18 years, our algorithm yielded 4,011 bariatric surgery patients from VUMC EHR. The majority were Caucasian (83.6%), female (77.6%), and had RYGB (79.0%). At surgery, mean age was 51.8 (±7.8) years and mean body mass index (BMI) was 48.5 (±8.6) kg/m^2. Over time, this decreased for mean BMI, but increased for age and proportion of non-Caucasian and VSG patients. Non-Caucasians were significantly more likely to have VSG than RYGB, even after adjustment for baseline BMI, age, and calendar year.

Conclusions: EHR information can be harnessed to facilitate research on bariatric surgery patients. Future directions include incorporating outcomes from across the VUMC EHR system as well as the analysis of linked genetic data.

A375

Evaluation of the feasibility of electronic data capture of patient-report questionnaires in routine bariatric surgery patient management with a rural population

Ashleigh Pona *Morgantown WV*[1], Stephanie Cox *Morgantown WV*[1], Nova Szoka *Morgantown WV*[1], Lawrence Tabone *Charlotte NC*[1], Salim Abunnaja *Morgantown WV*[1], Cassie Brode *Morgantown WV*[1]
West Virginia University School of Med.[1]

Objective: This quality improvement project sought to evaluate the feasibility of electronic data capture of patient-report questionnaires using a tablet portable personal computer ("tablet") for integration in routine bariatric surgery patient management with a rural population.

Methods: Participants (n=47) included all bariatric surgery patients presenting for their pre-surgical psychological evaluation (4/2017 to 5/2017) at an academic medical center in West Virginia. Tablets replaced the paper-and-pencil (P&P) forms routinely administered to patients at the time of their psychological evaluation. A nine-item feasibility/satisfaction questionnaire developed by the authors was administered to each patient to assess their experience of using the

tablet to complete clinic questionnaires. Data analysis included descriptive statistics (i.e., frequencies) of patient responses to the feasibility/satisfaction items.

Results: Most patients were very satisfied using the tablet (77%), would recommend its use to other patients (87%), and preferred it over P&P methods to complete clinic questionnaires (88%). The majority endorsed that the tablet was very comfortable to handle (i.e., light weight; 83%) and very easy to: read (87%), use to respond to questions (81%), and navigate with the touch screen (85%). Further, 47% and 60% of patients respectively reported that use of the tablet encouraged them to discuss eating/mental health concerns with their provider and prompted them to remember symptoms that they have experienced in the recent past.

Conclusions: The use of tablets to collect patient-report data in a rural bariatric population demonstrated excellent feasibility and satisfaction among patients and facilitated discussion about current mental health symptoms.

A376

Weight regain after bariatric surgery: Duodenal Switch (DS) vs One Anastomosis Gastric By Pass (OAGB) vs Roux En Y Gastric By Pass (RYGB) .

Alice Albanese *Padova* [1], Mirto Foletto *Padova* [2], Luca Prevedello *Padua*
University of Padova[1] Bariatric Unit Padua[2]

Background. Re-do surgery is still a major concern in bariatric field. The best conversion treatment after weight regain is still controversial.

Objectives. To compare early and late complications , weight loss and comorbidities resolution in mid term after three different bariatric conversional procedures: DS, OAGB, RYGB.

Methods. From January 2011 to December 2017, 21(3 M, 18 F) patients underwent DS, 22 (22 F) OAGB, 25 RYGB (18 F, 7 M), respectively **.** Early and late complications, body mass index (BMI), excess BMI loss (%EBL) were collected at 6, 12, 24 months follow-up and compared.

Discussion. OAGB patients showed the best results in terms of weight loss at 1st and 2nd year follow-up (%EBL = 65% and 63.7% vs 59% and 56.4% in DS Group vs 41.6% and 40.9% in RYGB Group, respectively). Despite intensive vitamin supplementation in all patients, sideropenic anemia and D hypovitaminosis affected mostly DS patients at 2nd year (76% of DS patients).

Comorbidities resolution resulted not statistically different in the three group: Type 2 Diabetes mellitus on oral drugs especially resulted controlled in the 60% of population about 2 years after surgery.

Early comorbidity rate resulted higher in the DS group : 3 duodeno-ileal anastomosis leak managed conservatively, 1 incarcereted ventral hernia.
Conclusion. OAGB efficacy on weight loss appeared higher.

A377
Conversion to Laparoscopic Sleeve Gastrectomy after failed Adjustable Gastric Banding for Morbid Obesity
Charmaine Gentles, DNP; Parth Patel, MD; Sarah Markham, MD, Larry Gellman, MD; Dominick Gadaleta, MD

Background
Failure rates following laparoscopic adjustable gastric banding (LAGB) are as high as 40-50% and laparoscopic sleeve gastrectomy (LSG) is commonly performed as a conversion procedure. The aim of the study is to present the feasibility and safety between 1- and 2-stage conversions compared to primary LSG.

Methods
Retrospective analysis performed on all LSG (n=988) including LAGB to LSG conversions, both 1- and 2-stages (n=118) from January 2012 to December 2017. Primary outcome was 30-day complication rate and secondary outcomes included length of stay and BMI.

Results
A total of 118 patients underwent LAGB conversion to LSG. 78 underwent 1- stage and 40 underwent 2-staged conversion. Patients who had LAGB conversions were significantly older *(p=0.0004),* had a lower BMI *(p<0.0001)* and a higher proportion of females *(p=0.02)*. There were 4 pre-discharge complications (0.5%) in the primary LSG group and no complication (0%) in the LAGB conversion group which were not statistically significant *(p=1.00)* between the 2 groups. 30-day readmission rates were not statistically significant *(p=1.00)* between the 2 groups; 16 (1.8%) in the primary LSG group and 2 (1.7%) in the LAGB conversion group. Mean LOS was 1.16 in the primary LSG group and 1.19 day in the LAGB conversion group which were not statistically significant between the 2 groups *(p=0.42).*

Conclusion
Our data suggests that conversion to LSG, performed as a 1 or 2-stage procedure after failed LAGB is safe and effective. No significant difference in 30-day adverse outcomes when performed 1 or 2-staged compared to primary LSG.

A378
Vertical banded Gastroplasty Revision to Gastric Bypass Helps Patients Lose Weight and Resolve Their Dysphagia and Reflux Symptoms
Sara Monfared *Indianapolis IN*[1], Don Selzer *Carmel IN*[1], Ambar

Banerjee *Indianapolis IN*[1], Dimitrios Stefanidis *Carmel IN*[1]
Indiana University School of Medicine[1]

Background: Patients with vertical banded gastroplasty (VBG) can experience failure or complications in the long-term and present for revisional bariatric surgery.

Objective: To review our experience for patient outcomes after VBG revisions and compare them to primary gastric bypass (RYGB) outcomes.

Methods: Data from patients who underwent VBG revisional surgery between 2009 and 2014 at a center of excellence were reviewed. Patient demographics, symptoms, co-morbidities, weight loss, complications, and length of stay were analyzed and compared to those of matched RYGB patients.

Results: Forty four patients (89% female, 55±9 years old) underwent revisional surgery during the study period (89% RYGB, 9% VBG reversal, and 2% sleeve gastrectomy) and were compared with 1589 patients after primary RYGB. Patients presented 17±7 years after their VBG for weight gain (55%), dysphagia (20%), or both (25%); preoperative BMI for these groups was 30.5±5.7, 53.0±9.2, and 45.7±7, respectively ($p<0.05$). Workup revealed anatomic abnormalities in 68% (stricture in 23%, gastrogastric fistula in 29%, and pouch dilation in 16%). Patients after VBG revisions stayed in the hospital longer, and experienced more complications and reoperations compared with primary RYGB patients (table 1). Nevertheless, BMI decreased significantly 2 years after revision to RYGB (36.7±6.2) compared to preop (49.8±11.9; $p<0.01$) except for reversals who gained weight. Dysphagia resolved in 100% and reflux in 95% of patients.

Conclusions: VBG revision to RYGB leads to significant weight loss and resolution of dysphagia and reflux symptoms. Higher complication rates compared with primary RYGB should be taken into consideration, however.

A379
Gastric Emptying and Small Bowel Transit in Poor Responders to Sleeve Gastrectomy

Scott Monte *Buffalo NY*[1], Joseph Caruana *Williamsville NY*[2], Michael Tabone [2], Lauren Burkard-Mandel *Williamsville NY*[1], Mitchell Pawlak *Buffalo NY*[1]
State University of New York at Buffalo[1] Erie County Medical Center[2]

Background: Evaluation of gastrointestinal motility alterations to semisolid meal in people with excess body weight loss (EBWL) reaching >65% after sleeve gastrectomy (SG) showed expedited gastric emptying (GE) and transit to ileum with extended time in ileum versus preoperatively (Melissas 2013). The objective of this

study was to characterize GE and small bowel transit in people with poor response to SG and compare these same measurements to the established findings.

Methods: Six hour GE and small bowel transit scintigraphy of subjects with SG and <40% EBWL were reviewed to identify: GE 10% ($TG_{10\%}$) and 50% ($TG_{50\%}$), Intestinal Max (T_{IntMax}), Duodenal-Ileum transit ($T_{DI-transit}$), Ileum 10% ($T_{Ileum10\%}$), Cecal Filling Initiation ($T_{CecalFilling}$) and Ileocecal Valve transit ($T_{ICV-transit}$). Values are reported as median minutes(range). The standardized semisolid meal contained 350 kcal (50% fat, 30% carbohydrate, 20% protein). 29 subjects were included in final analyses.

Results: Subjects were 46±11 years, 3±2 years after SG and 24% median EBWL. Scintigraphy findings were as follows: $TG_{10\%}$=1(1-30), $TG_{50\%}$=57(1-246), T_{IntMax}=150(10-270), $T_{DI-transit}$=210(5-329), $T_{Ileum10\%}$=240(15-330), $T_{CecalFill}$=270(60-360), $T_{ICV-transit}$=30(30-160). Compared to established findings $TG_{1/2}$ was delayed by 16%, T_{IntMax}35%, $T_{DI-transit}$283%, $T_{Ileum10\%}$208%, and $T_{CecalFilling}$29%. Expedited transit was observed for $TG_{10\%}$ by 88% and $T_{ICV-transit}$76%.

Conclusions: Poor responders to SG appear to have rapid initial transit through the pylorus, delayed gastric half-time emptying, prolonged transit time through duodenum and jejunum and expedited transit through ileum in comparison to established findings with EBWL >65%. These findings may implicate altered gastrointestinal transit as a variable in weight loss. Prospective study is underway to compare successful SG response.

A380

Gastric Emptying and Small Bowel Transit in Poor Responders to Roux-en-Y Gastric Bypass

Scott Monte *Buffalo NY*[1], Joseph Caruana *Williamsville NY*[2], Michael Tabone [2], Lauren Burkard-Mandel *Williamsville NY*[1], Mitchell Pawlak *Buffalo NY*[1]
State University of New York at Buffalo[1] Erie County Medical Center[2]

Background: No reference range or literature exists to characterize appropriate gastric emptying and small bowel transit for Roux-en-Y gastric bypass (RYGB). The objective of this study is to characterize gastric emptying and small bowel transit in subjects with poor weight loss response to RYGB. Recruitment of successful weight loss responders to RYGB is underway for comparative purposes.

Methods: Six hour gastric emptying and small bowel transit scintigraphy of subjects with RYGB and <40% excess body weight loss (EBWL) were reviewed to identify: Gastric emptying 10% ($TG_{10\%}$) and 50% ($TG_{50\%}$), Intestinal Max (T_{IntMax}), Duodenal-

Ileum transit ($T_{DI\text{-}transit}$), Ileum 10% ($T_{Ileum10\%}$), Cecal Filling Initiation ($T_{CecalFilling}$) and Ileocecal Valve transit ($T_{ICV\text{-}transit}$). Values are reported as median minutes (range). The standardized semisolid meal contained 350 kcal (50% fat, 30% carbohydrate, 20% protein). 39 subjects were included in the final analyses.

Results: Subjects were 46 ± 8 years, 9 ± 3 years after RYGB and had median 26% EBWL. Scintigraphy findings were as follows: $TG_{10\%}$ = 1 (1-30), $TG_{50\%}$ = 29 (1-408), T_{IntMax} = 180 (1-360), $T_{DI\text{-}transit}$ = 239 (89-361), $T_{Ileum10\%}$ = 255 (90-361), $T_{CecalFill}$ = 300 (120-360) and $T_{ICV\text{-}transit}$ = 30 (30-60).

Conclusions: Poor responders to RYGB have immediate gastric pouch emptying of 10% of the meal and rapid emptying of 50%. The remaining transit through the mid-bowel to the ileum appears delayed at over 4 hours. Cecal filling also appears delayed at 5 hours while residence in the ileum is transient. These findings provide important gastrointestinal transit benchmarks to compare with successful responders.

A381

Is Marginal Ulcer really a problem after OAGB/MGB- Our experience from more than 3000 cases at a single center

Mohit Bhandari *Indore* [1], Winnie Mathur *Indore, MP* [2]

Sri Aurobindo Medical College & PG Institute[1] Mohak Bariatrics and Robotics[2]

Introduction

Marginal ulcers after OAGB/MGB has been suggested to be a major problem. Some recently published studies have reported the incidence of marginal ulcers after OAGB/MGB. We are a high-volume center of bariatric surgery and would wish to report our results in terms of marginal ulcers after OAGB/MGB.

Upper GI endoscopy is one of the most common modalities used to assess the gastric mucosa in surveillance after bariatric surgery and we have to use the same modality to check for marginal ulcers, bile gastritis, any other lesions found after OAGB/MGB.

Material and methods

3645 OAGB/MGB surgeries have been performed at our Centre from 2011 to 2017. At 1 years of follow-up, all those patients with symptoms of upper GI discomfort, GERD , belching, vomiting, solid food intolerance and others were investigated by upper GI Endoscopy. Findings of bile gastritis, esophageal lesions including ulcers and esophagitis, hiatus, Barretts and marginal ulcers were reported.

Results

153 patients underwent upper GI endoscopy due to symptoms. 5 had marginal ulcers, 18 had bile gastritis, 2 had de novo hiatus, 13 had esophagitis . We had to convert one case to RYGB due to intractable bile reflux with more than 100 % excess weight loss.

Conclusion
High incidence of marginal ulcers after OAGB/MGB proven in other studies, is not the finding in our study. The incidence was less than 0.01% with more than 100% excess weight loss. Although, problem of protein energy malnutrition and micronutrient deficiencies was seen in most of these cases.

A382
Bariatric surgery in the rural community hospital: a Retrospective Review from a Single Institution.
Jon Harrison *Jackson MS*[1], Wade Christopher *Jackson MS*[1], Terry Pinson *Tupelo MS*[1]
University of Mississippi Medical Center[1]

The purpose of this study was to examine complications among bariatric surgery patients undergoing laparoscopic vertical sleeve gastrectomy (LVSG) at a single comprehensive bariatric center. The aim of the study was to assess safety in a community setting.

This is a retrospective review of bariatric procedures performed by a single surgeon at a community hospital from 2014-2017. The primary procedure in each case was a LVSG. LVSG performed as a conversion procedure after gastric band removal (GBR) was included. 24.5% of patients also underwent hiatal hernia repair (HHR) at the time of their LVSG. Outcomes of interest were complications requiring: medical management, hospitalization, operative intervention, and mortality. Patient follow-up was 2 weeks and 6 weeks for the timeframe of this study.

1000 patients (700 LVSG, 245 LVSG + HRR, 55 LVSG + GBR) were analyzed. 14 patients were treated outpatient for minor complications (1 C. diff and 13 UTIs). 10 patients required readmissioin for complications that did not require procedure or surgical intervention. Only 3 readmissions were related to the bariatric procedure (2 mesenteric vein thrombosis [10 days post-op and 20 days post-op] and 1 leak [25 days post-op]). 4 patients required re-operation for complications before discharge (3 resulted in no findings and 1 post-op bleed) and 2 patients required readmission/re-operation (1 mesenteric vein thrombosis [4 day post-op] and 1 incisional hernia related to previous hysterectomy incision [16 days post-op)]. There were no deaths.

LVSG is a low risk operation that can be successfully reproduced in a community hospital setting.

A383
Eliminating Routine Intra-operative Foley Catheters May Reduce Post-Operative Urinary Tract Infections in Bariatric Surgery Patients
Alexis Cralley Cralley *Denver CO*[1], Rebecca Jackson *Denver CO*[1], Fredric Pieracci *Denver CO*[1]

Denver Health[1]

Background
Urinary tract infections (UTIs) are a common post-operative complication in bariatric surgery patients . We hypothesized that elimination of routine intra-operative Foley catheters would reduce UTI prevalence in these patients.

Methods
This is a retrospective study of 227 bariatric surgery patients who had surgery from February 2012-April 2018 at Denver Health, a safety net hospital in Denver, Colorado. Retrospective EMR chart reviews were done to determine patients who had Foley catheters placed intra-operatively. Subsequently, data was collected on any urinary symptoms or UTI diagnoses during admission or follow up encounters (including scheduled bariatric follow ups, primary care visits or emergency room visits).

Results
227 bariatric patients were screened and 161 patients received intra-operative Foley catheters. Of these patients, 3 UTIs (1.9%) were identified compared to 0 UTIs (0%) in the 66 patients who did not receive an intra-operative foley catheter placed (Fisher's test = .558). Of the 66 patient who did not receive an intraoperative foley, 3 required a post-operative foley (4.5%) for urinary retention compared to 2 patient (1.2%) in the intra-operative foley group. (Fisher's test = .149).

Conclusions
While not statistically significant, Denver Health did see an elimination in UTI rates after discontinuing the practice of routine intraoperative foley catheters during bariatric surgery; however, the effort to reduce UTI rates may be at the expense of increased post-operative urinary retention. Larger studies should be carried out comparing the risks and benefits of intra-operative foley catheters when deciding which practice to follow.

A384
Investigating racial disparities in bariatric surgery referrals.
Crystal Johnson-Mann *Charlottesville VA*[1], Allison Martin *Charlottesville VA*[1], Michael Williams *Charlottesville VA*[1], Peter Hallowell *Charlottesville VA*[1], Bruce Schirmer *Charlottesville VA*[1]
University of Virginia Health System[1]

Background: Studies investigating the presence of racial, socioeconomic or insurance disparities with regards to access to care and outcomes in bariatric surgery have been performed with varying results. Our aim was to determine if racial disparities exist in regards to referral patterns for bariatric surgery at a single center.

Methods:A single center retrospective data review from January 2012 through

June 2017 was performed for patients that met referral criteria to bariatric surgery after obtaining Institutional Review Board approval. Data collection was limited to patients referred to our bariatric surgery clinic from on-site primary care clinics.

Results: Bariatric eligible patients totaled 4,736 patients. Population demographics as follows: 63.8% female (n=3022), 36.2% male (n=1714); 53.9% white (n=2553), 37.8% black (n=1790), and 8.3% Hispanic (n=393). Female patients more likely to be referred than male patients (5.5% versus 4.1%, $c^2$4.59, p=0.032). Hispanic patients less likely to be referred compared to Black or White patients (2.0% versus 5.3%/5.2%, $c^2$7.88, p=0.019).

Conclusion: Hispanic patients were less likely to be referred at our institution for bariatric surgery when compared to White and Black patients. A barrier to referral may be explained by the disproportionate number of Hispanic patients that were self-pay as our institution does not accept self-pay patients in referral for bariatric surgery. This underscores the need for further work with access to care for bariatric surgery.

A385

Vitamin D deficiency in the morbidly obese: Unraveling the correlation between perioperative BMI, rapid weight loss and Vitamin D levels in the bariatric population.

David Romero Funes *Weston FL*[1], David Gutierrez Blanco *Weston FL*[1], Maria Fonseca Mora *Weston FL*[1], Rama Rao Ganga *Columbia MO*[1], Emanuele Menzo *Weston FL*[1], Samuel Szomstein *North Miami Beach FL*[1], Raul Rosenthal *miami FL*[2]
Cleveland Clinic Florida[1] Cleveland Clinic of FL[2]

INTRODUCTION
There is evidence of an inverse association between obesity and Vitamin D levels, attributed to the sequestration of Vitamin D in the adipose tissue. The objective of our study is to show the impact of perioperative BMI and rapid weight loss in vitamin D levels in the bariatric population.
METHODS
We conducted a retrospective chart review of all patients who underwent Bariatric surgery at our institution from 2010 and 2015. The assessment of 25(OH) vitamin D levels was done pre-operatively and at 3,6, 12,18 and 24 months follow-up.
RESULTS
Of the 978 patients reviewed, 50.51%(n=494) had a pre-operative Vitamin-D assessment. Our population was predominantly Caucasian women 70.04%(n=346) and 75.10%(n=371) respectively and with a mean age of 54.67±12.54. The most prevalent surgery was LSG 51.18%(n=256). Pre-operatively 74.89%(n=370) of our population

presented with Vitamin D deficiency or insufficiency. Patients with underlying Vitamin D deficiency showed the most significant improvement at 12 and 24 months follow-up showing a Vitamin D improvement of 13.99ng/ml and 11.55ng/ml (p=0.0001 and P=0.0248) respectively. Regarding the relationship between pre-op BMI and Vitamin D levels the results of a simple linear regression show an inversely proportional relationship (P=<0.0001).

CONCLUSIONS
Our findings suggest that Vitamin D deficiency is an issue that should be addressed pre-operatively and, although rapid weight loss seems to have a positive impact on vitamin D levels, strict supplementation is still needed.

A386
When does the honeymoon end? Changes in psychological well-being based on time since bariatric surgery.

Lyndsey Wallace *Milwaukee WI*[1], Melissa Helm *Milwaukee WI*[1], Rana Higgins *Milwaukee WI*[1], Tammy Kindel *Milwaukee WI*[1], Jon Gould *Fox Point WI*[1], Kathleen Lak *Milwuakee WI*[1]
Medical College of Wisconsin[1]

Introduction: Bariatric surgery offers multiple benefits above and beyond weight loss including pain relief, improved cardiovascular health and improved psychological well-being. Despite well documented health and psychosocial benefits within the first year post-surgery, there is less known about longevity of these outcomes. In this study, we explore whether time since bariatric surgery attenuates psychological well-being in patients.

Methods: Patients at an accredited bariatric program who underwent bariatric surgery between the years 2011-2017 were surveyed to determine whether changes in psychological wellbeing differ in patients less than or greater than three years post-op.

Results: In total, 591 patients recieved surveys, of which 184 patients met inclusion criteria in responding to all survey questions. There was no difference in the age, sex, or type of bariatric surgery between groups (Table 1). Patients who recently underwent surgery were more likely to report that they like their new body, but significantly less likely to report that they met their weight loss goal (Table 2). Patients farther out from surgery were more likely to report significantly greater post-operative weight regain [p<0.001]

Conclusion: In summary, while those farther out from surgery were more likely to reach their weight loss goal they were also more likely to experience post-operative weight regain and decreased body satisfaction. There are unique challenges to improving quality of life in patients with obesity and this highlights the importance of an ongoing

multidisciplinary post-operative approach to address necessary lifestyle changes and to promote long-term durability of weight loss and psychological well-being.

A387
STANDARD REFERRAL PRACTICES FROM A SPECIALTY PRACTICE TO A BARIATRIC PRACTICE DO NOT INCREASE PATIENT TREATMENT FOR OBESITY

David Voellinger *Charlotte NC*[1], Craig Kolasch *Matthews NC*[1], Ellen Carraro *Charlotte NC*[1], Shannon McNeill *Charlotte NC*[1], Christine Bolo *Charlotte NC*[1], Bryan Springer *Charlotte NC*[2]
Novant Health Bariatric Solutions[1] OrthoCarolina[2]

Background:
24 million Americans are morbidly obese and only 0.9% received surgical treatment in 2016. A referral program was initiated between a community bariatric practice and a total joint program. This specialty practice was chosen due to the growing evidence of higher morbidity after total joint arthroplasty in the morbidly obese patient. The aim of this study was to investigate referral practices and results.

Methods:
A retrospective analysis was performed of referrals received from 2015-2017. Referrals initially consisted of literature distribution and patient-directed referral. Later, referrals consisted of literature distribution, optimization protocol and formal referral. Outcomes analyzed included number of: referrals, initial bariatric consults, patients undergoing medical weight management, bariatric surgeries and total joint arthroplasties performed.

Results:
327 referrals were made (mean 109/year). 72 initial bariatric consults were performed (22.0%). 25 patients received medical weight management (7.6%), 10 received bariatric surgery (3.1%). 12 patients underwent total joint arthroplasty (3.7%).

Conclusion:
Standard referral practices from a specialty practice to a bariatric practice only slightly increase patients treated for obesity with bariatric surgeries performed barely increasing from 0.9% to 3.1%. Phase two of this project will consist of a formal care collaborative for pre-surgical optimization with improved education, resources, patient navigation and clinical pathways.

A388
Is There a Learning curve in Adopting the Robotic Platform to Revisional Bariatric Surgery?

Andrew Godwin *Oyster Bay NY*[1], Julio Teixeira *Scarsdale NY*[1], Dimitar Ranev *New York NY*
Lenox Hill Hospital[1]

Introduction
Robotic technology is gaining interest in bariatric surgery with advocated benefits in revisional surgery. Whether there is of the learning curve of adopting this technology, has not been examined. Our study evaluates the introduction of this technology and impact on surgeon experience and patients outcomes.
Methods
Prospectively collected data on revisional robotic procedures analyzed looking at operative times, complications rates(CR), and LOS. Multivariable analysis and linear regression analysis to identify correlations between, time,original primary index procedure(OPIP) and outcomes.
Results
59 patients underwent robotic revisional procedures from 2015 to 2018: mean age 48 years, BMI 42, 84.7 % were female, 11.7%with BMI>50, The avg. operative time 145.2 minutes and avg LOS 2.93 days. Patients were divided into 3 groups,A 1st 20, B 2nd 20 and C 3rd 19. The groups were similar by age, BMI, and gender . There was a significant difference, with Group B having a higher number of LAGB as the OPIP and a higher CR in this group($p = 0.045$). Open gastric bypass as the OPIP had a significantly longer operative time but not associated with higher CR. LAGB was independently associated with a higher CR. Overall complications rate was 18.6% (45% of LAGB patients) ($p = 0.026$).
Conclusion
Revisional robotic surgery neutralized the effect of the learning curve in experienced laparoscopic surgeons with no impact on patient outcomes. LAGB and previous leak were significant risk factors not associated with the learning curve.

A389

Is there a difference in patients who are self referred for bariatric surgery VS those referred by relatives?

Winnie Mathur *Indore, MP* [1], Mathias Fobi *Palos Verdes Peninsula CA*[1], Mohit Bhandari *Indore* [1], SUSMIT KOSTA *Indore IN*[2]
MOHAK BARIATRICS AND ROBOTICS[1] Sri Aurobindo Medical College & PG Insti[2]

Background: Patients who present for bariatric surgery may be referred by a relative or self referred. We did a retrospective study to see if there are any differences in self referred and relative referred patients.

Material and methods: A review of the prospectively maintained database of patients who have surgery at Mohak, bariatric and Robotic Surgery Center in Indore, India was carried out. Patients who had surgery in 2017 were identified. Patient who stated their referral source were identified and data was collected on these patients and analysed and presented.

Result: 320 patients had information on their referral source. Of 48 self referred patients 40 were from print media and 8 knew someone who had had surgery. Of the 272 who were referred by a relative, 123 relatives had had bariatric surgery. It took 1.3 years on the average for the patients with a relative with surgery to decide to have surgery whereas the average time in the self referred group was 5.4 years. The most feared complication in the relative referred group was hair loss and loose skin whereas in self referred group it was fear of death due to surgery.

Conclusions: A significant number of the referrals to our center came from relatives and peers we operated on. The others who came mostly came by print media although we also utilise other sources of marketing. Relative referral group chose the surgery the relative had whereas the others choice was based on the recommendation of the surgeon.

A390

Opioid-free anesthesia (OFA) in super-obese Mexican patients undergoing bariatric surgery, with the protocol of Sint Jan Brugge.

Lizzet Villalobos *MEXICO* [1], Luis Aceves *CIUDAD DE MEXICO CMX*[2]
CENTRO BARIATRICO METABOLICO DALINDE[1] CBMD[2]

No intraoperative systemic, neuraxial opioid is administered during the anesthetic. Avoiding respiratory depression, central muscle stiffness, muscle weakness, obstructed breathing, negative inotropism, nausea, vomiting. Demonstrate that OFA protocol is reproducible, effective and safe causes less nausea, prevents postoperative respiratory collapse and generates adequate analgesia for patients with obesity.
A prospective, observational and descriptive study. Patients 20 to 65years old. ASA II-III with BMI equal or greater than 60 kg / m2 undergoing bariatric laparoscopic surgery.
Induction: Ketamine .125 mg/kg IBW, Dexmedetomidine 0.5 ug/kg IBW, Lidocaine 1.5 mg/kg IBW. Mg Sulfate 40 mg/kg IBW, Rocuronio 0.6 mg/kg IBW, Propofol 2.5 mg/kg IBW.Followed by inhalation anesthesia at 0.6 MAC Desfluorane.
Manteinance. Same doses of medicament.
Postoperative analgesia. Paracetamol 2 gr loading 1 gr/6h, Parecoxib 40 mg/12 h. Dexmedetomidine 0,1 – 0,2 ug/kg/h the first hour.
RESULTS 25 patients operated from August 2016 to December of 2017. With an age range of 20-60 years with an average of 35.7 of which 14 were women and 11 men, BMI range of 50.59 to 74.4 kg / m2 with an average 54.33 kg / m2.
11 gastric sleeves and 14 gastrojejunal bypass, with a maximum surgical time of 2:10 hours with an average of 1:50 hours.
Generating adequate hypnosis, immobilization and perioperative

hemodynamic stability. Two patients presented hypotension of 70/40 mmHg, was resolved with 5 mg ephedrine. **CONCLUSION.** The OFA protocol OFA is safe, reproducible and decreases the risk of VA collapse, postoperativa nausea and vomitig in Mexican obese patients in bariatric surgery

A393
Weight Loss, Complications, Readmissions, and Complications in Patients Undergoing Sleeve-To-Bypass Conversion
Jaime Dutton *Stanford CA*, Luis Garcia *Fargo ND*, John Morton *Stanford CA*[1]
Stanford School of Medicine[1]

Introduction: Patients may undergo conversion from laparoscopic sleeve gastrectomy (SG) to Roux-en-Y gastric bypass (RYGB) due to complications or weight gain. The objective of this study was to investigate weight loss, comorbidity, complication, and readmission outcomes after conversion.

Methods: Anthropometric and comorbidity data were obtained for from a prospectively maintained database at an academic medical center. The Wilcoxon Signed-Rank test was used to evaluate differences between preoperative and postoperative outcomes.

Results: Patients (n=24) underwent conversion due to GERD (n=11), weight regain (n=6), or both (n=6). The average preoperative weight before SG was 312 lbs. (SD=76.8), compared to 218 lbs. (SD=46.8, p=0.001) 1 year after SG. The average preoperative weight before conversion to RYGB was 264 lbs. (SD=70.6), compared to 207 lbs. (SD=38.1) 1 year after RYGB. Prior to SG, 64%, 29%, and 36% of patients experienced comorbid hypertension, diabetes, and hyperlipidemia, respectively. 1 year after SG, 45%, 18%, and 36% of patients still experienced comorbid hypertension, diabetes, and hyperlipidemia, respectively. Only 17%, 8%, and 27% of patients experienced comorbid hypertension, diabetes, and hyperlipidemia, respectively, 1 year after RYGB. No complications or readmissions were observed after initial SG, whereas 12.5% and 4.4% of patients experienced a complication (leak, stricture,arrythmia) or readmission, respectively, after RYGB. GERD motivated conversion in 74% of patients with only 13% continuing to experience GERD 1 year after RYGB.

Conclusion: The results of this study suggest that sleeve gastrectomy patients undergoing conversion to RYGB experienced resolution of GERD and significant weight loss.

A394
Bile Acids Increased after RYGB in Chinese Patients Could be Potential

Contribution to Improved Glucose and Lipid Metabolism

Pin Zhang *Shanghai*
Shanghai 6th People's Hospital

Background: The multifactorial mechanisms promoting weight loss and improved metabolism following Roux-en-Y gastric bypass (RYGB) surgery remain incompletely understood. Recent rodent studies suggest that bile acids can mediate energy homeostasis by activating the G-protein coupled receptor TGR5 and the type 2 thyroid hormone deiodinase. Altered gastrointestinal anatomy following RYGB could affect enterohepatic recirculation of bile acids.
Objective: We assessed whether circulating bile acid concentrations differed postoperatively in Chinese patients with different degree of obesity or HbA1c levels, which might then contribute to improved glucose and lipid metabolism.
Result: The data showed that the preoperative concentration of bile acid is not change significantly in patients with different degree of obesity in different HbA1c groups. Interestingly, bile acids all increased significantly 1 year after surgery in different degree of obesity group. In the HbA1c≥6.5 group, we also observed the same changes postoperatively (P<0.05), but the bile acid levels elevated moderately in the HbA1c＜6.5 group. In addition, the increase of bile acid levels after surgery was positively associated with the improvement of fasting blood glucose, cholesterol and triglyceride (r =-0.228, P=0.034; r =-0.237, P= 0.041; r =-0.318, P= 0.026; respectively).
Conclusion: Our data suggest that increased bile acid levels may contribute to the improved glucose and lipid metabolism in patients who have had RYGB.

A395

Evaluating sarcopaenia in bariatric surgery through regional body muscle distribution.

Jonathan Sivakumar *Melbourne* [1], Lynn Chong *Fitzroy* [2], Salena Ward *Fitzroy* [2], Tom Sutherland *Melbourne* [2], Michael Hii *Fitzroy* [2]
St Vincent's Hospital Melbourne[1] St Vincent’s Hospital Melbourne[2]

Background: The deterioration of lean body mass (LBM) and development of sarcopaenia has been reported in patients following bariatric surgery.
Objective: To evaluate regional lean body mass changes in patients following bariatric surgery, comparing roux-en-Y-gastric-bypass (RYGB) with laparoscopic sleeve gastrectomy (LSG).
Methods: A prospective analysis was completed on seventeen patients undergoing either RYGB or LSG, between 2017 and 2018 at St Vincent’s Hospital Melbourne. Body composition was measured with dual-energy X-ray absorptiometry (DXA) immediately before the procedure, and at one-month post-operatively.
Results: Fourteen patients were recruited for this analysis (RYGB n=4, LSG n=10). At one month after surgery; mean RYGB LBM loss was

1.07 ±3.27 kg, composed of 0.28 ±0.3 kg from the trunk and 0.78 ±1.99 kg from appendicular mass. In this group, the trunk accounted for 26.1% of LBM loss, whereas the upper and lower limbs each accounted for 37.6% and 35.0%, respectively. Mean LSG LBM loss was 4.48 ±3.42 kg, of which the trunk accounted for 1.72 ±3.06 kg and the appendicular mass accounted for 2.71 ±1.99 kg, respectively. In this group, trunk was responsible for 38.4%, upper limbs 16.0%, and lower limbs 44.6%.
Conclusion: This preliminary data is suggestive of a variance in outcomes with respect to lean body mass loss following RYGB and LSG. LSG is associated with a greater loss of lean body mass; however with a sparing effect of LSG on upper limb musculature. Further research is warranted in evaluating whether this is associated with differences in long term functional outcomes.

A396

Testing risk and protective pathways between weight bias and mental health symptoms in a bariatric sample: Internalized weight bias, shame, and self-compassion

Tosca Braun [1], Diane Quinn *Storrs CT*[1], Andrea Stone *Glastonbury CT*[2], Jennifer Ferrand *Hartford CT*[3], Amy Gorin *Storrs CT*[1], Jessica Sierra *Hartford CT*[3], Rebecca Puhl *Hartford CT*[1], Gina Sensale [1], Darren Tishler *Glastonbury CT*[2], Pavlos Papasavas *Hartford CT*[2]
University of Connecticut[1] Hartford Hospital[2] Hartford Hospital, Institute of Living[3]

Introduction: Experienced weight bias (EWB) causes poor psychosocial and behavioral health in bariatric surgery patients pre- and post-operatively, yet little research has examined related mechanisms or risk/protective pathways. The current study tests a mediational model positing risk paths between EWB, internalized weight bias (IWB), shame, and effects on mental health symptoms. Self-compassion (SC), an affect regulation strategy inversely linked to each risk factor, was tested as a mediating protective factor.

Method: Bariatric surgery candidates (BSC) recruited from a surgical clinic (*N* = 152, 61.4% women, 62.8% White, 43 ±12 years, mean BMI: 49±9 kg) completed validated measures for EWB, IWB, shame, and SC and post-traumatic stress disorder (PTSD) and depression screeners pre-operatively. PROCESS bootstrapping estimates tested our hypothesized model: EWB->WB->shame->self-compassion->mental health.

Results: In each model, hypothesized direct paths were significant ($p<.001$). The total effects of EWB on PTSD ($\beta=.43$, $p<.001$) and depressive symptoms ($\beta=.38$, $p<.001$) partially attenuated with mediators in each model (PTSD, $\beta=.19$, $p=.002$, $R^2=.570$;

depression, β=.18, p=.025, R^2=.297). For PTSD, significant indirect effects indicated one risk pathway from EWB to higher symptomatology via IWB->shame and three protective paths to lower symptomatology via SC. For depression, significant indirect effects revealed one risk pathway from EWB to higher symptomatology via IWB and one protective pathway to lower symptomatology via SC.

Discussion: Self-compassion appears to offer partial protection against the adverse mental health sequelae affiliated with EWB. Alongside broader systems efforts to reduce EWB, SC may prove a helpful accompaniment to intrapersonal stigma reduction efforts and mental healthcare for BSC.

A397

Differences in Psychosocial Status and Predisposition to Obesity by BMI Class and Type of Treatment

Jena Tronieri *Philadelphia PA*[1], Thomas Wadden *Philadelphia PA*[1], Rebecca Pearl *Philadelphia PA*[1], Kelly Allison *Philadelphia PA*[1], Olivia Walsh *Philadelphia PA*[1], Noel Williams *Philadelphia PA*[1]
University of Pennsylvania[1]

Background: In prior studies, women with class III obesity have reported more psychosocial complications and a stronger biological predisposition to obesity than patients with less severe obesity. This study extends these findings by independently comparing BMI classes and treatment-seeking populations.

Methods: Patients with class II (BMI=35–39.99 kg/m^2) and class III obesity (BMI=40–54.99 kg/m^2) from samples seeking bariatric surgery (*N*=584) and behavioral treatment with pharmacotherapy (BT+P; *N*=245) completed the Weight and Lifestyle Inventory and Beck Depression Inventory-II. Independent effects of BMI class, treatment-seeking group, and their interaction were analyzed (all $p<.01$).

Results: Across BMI classes, bariatric surgery patients were significantly more likely to report a history of emotional problems, current depression, and health-related stress than BT+P patients. These psychosocial outcomes did not differ by BMI class. Independent of treatment group, patients with class III obesity reported earlier onset of obesity and higher historic weights than those with class II obesity. Their parents had higher BMIs. Weight and dieting histories did not differ between treatment groups. Independent of BMI class, patients seeking BT+P endorsed more problematic eating behaviors than those seeking surgery. Surgery patients had larger weight loss goals and were more confident that they would change their eating/exercise habits than those seeking BT+P.

Conclusions: Psychosocial complications were more prevalent among patients seeking bariatric surgery but did not differ by BMI class. The weight histories of patients with class III obesity suggest a stronger biological predisposition to obesity. Desired weight loss and problematic behavioral habits may differentiate surgery and BT+P-seeking patients.

A398

Laparoscopic sleeve gastrectomy improves cardiac function for a heart failure patient requiring left ventricular assist device support

Russell Hawkins *Gainesville FL*[1], Julie Stortz *GAINESVILLE FL*[1], Alexander Ayzengart *Gainesville FL*[1], Jeffrey Friedman *Gainesville FL*[1]
University of Florida[1]

Introduction: Obesity is an epidemic closely associated with heart failure. The definitive treatment for end-stage heart failure is cardiac transplantation. However, morbid obesity is a contraindication for cardiac transplant listing. Left ventricular assist devices (LVADs) have emerged as a bridge to transplant for heart failure patients, and bariatric surgery can be performed in patients with LVADs. The effect of weight loss on cardiac function for these patients is not well known.

Methods: We reviewed the case of a patient with morbid obesity and heart failure on LVAD support who underwent laparoscopic sleeve gastrectomy (SG) in order to achieve sufficient weight loss to be eligible for cardiac transplant. The patient's medical record was reviewed for pre- and postoperative body mass index (BMI), ejection fraction (EF), and New York Heart Association (NYHA) classification.

Results: Preoperatively, the patient had BMI of 55.4 and suffered from non-ischemic cardiomyopathy with NYHA class 3 symptoms and EF 30%. She underwent SG without complication, reducing her BMI to 38.1 at 12 months. With weight loss, her EF improved to 55% and NYHA class improved to 2 at 12 months. Given these improvements in her EF and functional status, her cardiologist is considering weaning LVAD support to eventual explant and not listing for cardiac transplantation.

Conclusions: SG is safe and effective for patients with morbid obesity and end-stage heart failure requiring LVAD support. The excess weight loss accomplished with bariatric surgery can lead to significant improvements in cardiac function and may preclude the need for cardiac transplantation.

A399

Staple Usage Comparison Between Suction Calibration System and Rubber Bougie in LSG

Elizabeth Dovec *Baltimore MD*
GBMC Comprehensive Obesity Management Pr

TITLE: Staple Usage Comparison Between Suction Calibration System and Rubber Bougie in LSG
AUTHOR: Elizabeth Dovec, MD, FACS
BACKGROUND: Laparoscopic sleeve gastrectomy (LSG) procedures are growing in popularity which makes it important for institutions to be as efficient as possible. Suction calibration system (SCS) devices have been shown to reduce cork-screwing during the stapling process in LSG procedures which would also mean a shorter staple line. This shorter staple line may translate to a decrease in staple usage.
OBJECTIVE: To compare the staple usage between a SCS and a rubber bougie (RB).
METHODS: Surgical case records were retrospectively examined directly before and after the switch from using a RB to a SCS to determine the number of staples used.
RESULTS: There were 51 patients in both the RB and SCS groups (n=102). The mean number of staples used for the RB and SCS group respectively were 5.40 and 5.07 (p=0.02). There was no significant difference in mean between the RB and SCS groups in age (47.4, 45.0, p=0.27), female/male ratio (0.86, 0.84, p=0.78), or BMI (41.8, 42.7, p=0.52).
CONCLUSION: The data suggests a savings of 0.33 staple loads per case over this period due to switching to a SCS. That translates in to saving a staple approximately every third case. With bariatric staple loads costing upwards of over $400 per staple, this could mean significant savings for institutions who implement the use of a SCS in their LSG procedures.

A401
Bariatric Surgery Complication Rates in a Safety Net Hospital with a large Hispanic population
Alexis Cralley Cralley *Denver CO*[1], Rebecca Jackson *Denver CO*[1], Fredric Pieracci *Denver CO*[1]
Denver Health[1]

Background
Bariatric centers are not often found in safety net hospitals. However, as an urban safety net hospital Denver Health maintains a comprehensive bariatric center with a strong institutional focus on providing exceptional care to our 37% Hispanic population. Previous studies have identified Hispanic patients as 77% more likely to experience post-operative complications compared to non-Hispanic patients undergoing bariatric procedures. We hypothesized that post-operative complication rates in Hispanic patients would be no different as compared to non-Hispanic patients at both our institution and prior reports from other centers.

Methods
The medical records of 227 consecutive bariatric patients undergoing surgery from June 2012 through April 2018

were retrospectively reviewed. Records were reviewed for demographic information, past medical history, surgical procedures, and standard 30 day post-operative complications rates including re-admission, re-operation, surgical site infections, and UTI rates.

Results
91 of 227 patients (40%) identified themselves as Hispanic, while the national average across bariatric centers is 12.5%). Despite a high rate of one or more comorbidities (47.5% of patients), the overall 30 day post-operative complication rate was 22.0%; the most common complication was 30 day readmission for any reason at 8.8%. Compared to Denver Health's non-Hispanic bariatric patients, our Hispanic population was not at an increased risk for post-operative complications (OR=0.80, 95% CI: 0.39-1.60).

Conclusions
In this study, Hispanic patients did not appear to have a higher likelihood of complications as compared to non-Hispanic patients. A focus on providing culturally-sensitive care to this patient population specifically may partially explain this finding.

A402
Toned Down: A Case Study Demonstrating the Effect of Successful Weight Loss Surgery on the Professional Voice

Timothy Schaffner *Carmel IN*[1], Noah Parker *Carmel IN*, Don Selzer *Carmel IN*[1]
Indiana University[1]

Background: It has been previously suggested that successful weight loss after bariatric surgery could have an effect on various qualities of voice. Anectdotally, the idea that successful weight loss could be a detriment to voice is a commonly held belief among opera singers. However, this theory hasn't been rigorously tested in this population. We present a case study of an opera singer who lost approximately 180 pounds after gastric bypass, and hypothesize that this weight loss will have an effect on her vocal function.

Objective: To compare subjective and vocal parameters pre-and post-bariatric surgery in a professional opera singer

Methods: Voice assessment includes, 1) quality of life measurement using the Voice-Related Quality of Life questionnaire, 2) videostroboscopy, 3) perceptual analysis using the Consensus Auditory-Perceptual Evaluation of Voice, and 4) acoustic measurements of vocal function. Each measure was obtained pre- and post-weight loss.

Results: The patient's pre- and post-operative voice-related quality of life, endoscopic evaluation and perceptual and acoustic measurements were

assessed. Comparative analysis of vocal parameters are performed to delineate alterations in phonatory function following baraitric surgery.

Conclusion: The patient demonstrated altered vocal function following bariatric surgery by several assessment parameters. Bariatric surgery may have an effect on the phonatory tract, leading to changes in speech production that can be assessed through subjective and objective measures. These changes may be subtle in most patients, but have a more profound impact on the professional voice. Future studies prospectively evaluating vocal function before and after weight loss would better define these changes.

A403

The Outcomes of Bariatric Patients with Gut Malrotation

Zubaidah Nor Hanipah *Cleveland OH*[1], Kellen Hayes , Raul Rosenthal *miami FL*[2], Stacy Brethauer *Cleveland OH*[2], Philip Schauer *Cleveland OH*[2]
Cleveland Clinic, University Putra Malaysia[1] Cleveland Clinic[2]

Introduction:

Anatomic anomalies, such as gut malrotation, although rare, may significantly complicate surgical procedures and post-operative course. The aim of this study is to determine outcomes of patients with gut malrotation who underwent bariatric surgery.

Methods:

All patients who had either incidental or known gut malrotation and bariatric surgery, from 2010 to 2017 were identified. Data collected included baseline demographics, co-morbidities, intraoperative findings, perioperative parameters, length of stay, morbidity and mortality up to one-year follow-up.

Results:

There were 4 patients with gut malrotations. The majority were females (n=3) with a median age of 34 years.The median preoperative body mass index (BMI) was 51 kg/m^2. Preoperative comorbidities included hypertension (n=1, 25%), and sleep apnea (n=1, 25%).
All the patients had laparoscopic bariatric procedures; sleeve gastrectomy (SG, n=2) and Roux-en-Y gastric bypass (RYGB, n=2). Only one patient was known to have gut malrotation from preoperative computed tomography of the abdomen, and she had SG. One of the RYGB patients had Ladd band released and appendectomy during the same setting. The median operative time, estimated blood loss and length of hospital stay were 178 minutes, 20 ml and 4 days, respectively. There was no 30-day or 1-year morbidity, mortality, readmissions or reoperations in this group.

Conclusion:

Gut malrotation is a rare condition, mostly found incidentally during time of operation. Bariatric surgery can be performed safely in these patients with

good outcomes. However, definitive outcome of patients with gut malrotation can only be obtained with larger clinical trials.

A404

Healthcare Technology Use among Bariatric Surgery Patients

Colleen Tewksbury *Glenside AL*[1], Leah Cassella *Philadelphia PA*[1], Louise Hesson *Philadelphia PA*[1], Kristoffel Dumon *Philadelphia PA*[2], Noel Williams *Philadelphia PA*[2]
University of Pennsylvania Health System[1] University of Pennsylvania[2]

Background: Bariatric surgery patients have access to a large number of tools, apps, and information via healthcare technology. For online content, previous studies have found information available for bariatric surgery patients to be of poor quality. However, little is known about the utilization by patients and their perceptions about these technologies.
Methods: 234 patients completed a survey on their technology use. Descriptive statistics and frequencies were used to analyze responses including demographics, tracking technologies, smartphone apps, social media use, and internet searches.
Results: 98% of participants reported owning a smartphone. Of those, the majority reported having and regularly using at least 1 health app on their smartphone (n=203, 88%). More than half of participants reported using a healthcare tracker regularly, with the most common being a smartwatch. 2 out of 3 patients reported using social media and more than half used a search engine to get more information about weight loss surgery. More than half of those found the information they received from the either group of sites visited very or extremely helpful. A minority of patients reported that the information found through either social media or a search engine made them feel discouraged about their progress.
Conclusion: Bariatric surgery patients are actively engaged consumers of healthcare technology and are searching for information about bariatric surgery online. Future research should focus on the quality of the information patients are receiving through tools and apps and the impact of utilizing healthcare technologies on surgical outcomes.

A405

Remission of type 2 diabetes one year after bariatric surgery among Asian population

Bo Chuan Tan *Singapore*
Khoo Teck Puat Hospital

Background:
Bariatric procedures are effective treatment for type 2 DM with either improvement of glycaemic control or remission of DM. The aim of this study

is to look at remission of DM 1 year after Bariatric procedures (Laparoscopic Roux-En-Y Gastric bypass LRYGB and Laparoscopic sleeve gastrectomy LSG) among Asian population.

Methods:
A **r**etrospective cohort study was conducted to look at remission of DM among patients with at least class II obesity (BMI > 32.5) who underwent Bariatric surgery from year 2012 - 2016. The primary outcome was level of HbA1c at 6 and 12 months. Remission of DM is defined as HbA1c < 6.5% without medication / insulin.

Result:
There were total of 113 patients (80 LRYGB: 33 LSG) with mean BMI of 42.8kg/m2 ± 7.9 before surgery. Mean HbA1c before surgery were measured at 8.5% ± 1.7. Mean HbA1c measured at 6 months were 6.8% ± 1.3 ($p<0.05$) and at 12 months were 6.7% ± 1.3 ($p<0.05$). Overall, 66 (58.6%) patients had remission of type 2 DM 1 year after surgery. Patient in RYGB group has higher remission than LSG group (65.5% vs 42%).

Conclusion:
This study showed that bariatric procedure had significantly improved patient's diabetes control after surgery evidence by marked HbA1c improvement. We plan to publish 3 and 5 years follow-up result later

A406

Do Early Outcomes Improve the First Year After Completing a Bariatric Surgery Fellowship?

Dvir Froylich *Haifa* [1], Eden Gerszman [1], Edress Khatib *I`billin* [1], Christopher Daigle *Akron OH*[2], David Hazzan *Haifa* [1]
Carmel Medical Center[1] Akron General Hospital[2]

Background: Bariatric surgery training has long learning curves. It has been suggested that fellowship training can improve patient outcome. There is limited data comparing the outcomes before and after bariatric surgery training. The aim of this study was to evaluate the impact of bariatric surgery fellowship during a surgeon's early experience on perioperative outcomes and to compare it to the results before training.
Methods: All patients who underwent bariatric surgery by a single surgeon with a junior assistant prior to his training and the 18 months following bariatric surgery fellowship were included. A 30-day outcomes comparison was conducted between those two periods.
Results: Prior to the fellowship training, there were 49 patients who underwent sleeve gastrectomy. Eighteen months following fellowship training there were 146 patients who underwent sleeve gastrectomy, Roux en-Y gastric bypass or mini gastric bypass (117, 29, and 5 respectively). Post-training sleeve gastrectomy patients were

significantly older 36.4±11.7 vs. 42.3±14.6 years old (p=0.01), with higher ASA score 2.1±0.3 vs. 2.29±0.4 (p=0.02). Intra-operative complications occurred in 1 (2.0%) vs. 2 (1.7%) (p=n/s) during the pre-training and post-training periods, respectively. Estimated blood loss was77.7±16.6 vs. 76.0±24.7 (p=n/s). There were no conversions to open surgery and no mortalities. Overall 30-day morbidity was 5 (10.2%) vs. 4 (3.4%) (p=0.07). Major complication (bleeding and leaks) were significantly lower during the post-training period; 3 (6.1%) vs. 1 (1.7%) (p=0.04).
Conclusions: Designated bariatric surgery training is associated with reduced major post-operative complications. Surgeons should pursue a formal bariatric surgery training before starting their practice.

A407

Pre-operative serum microRNA profiles associated with weight loss following bariatric surgery

Laura Doyon *Concord MA*[1], Travis Sullivan *Burlington MA*[2], Sanjna Das *Burlington MA*[2], Jingjing Sherman *Englewood NJ*[3], Thomas Schnelldorfer *Burlington MA*[2], David Brams *Burlington MA*[2], Kimberly Rieger-Christ *Burlington MA*[2], Dmitry Nepomnayshy *Burlington MA*[2]
Emerson Hospital[1] Lahey Hospital and Medical Center[2] Englewood Hospital and Medical Center[3]

Introduction:
Despite variable weight loss after Sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB), bariatric surgery remains the most effective, durable treatment for morbid obesity. MicroRNA (miRNA) are short non-coding RNA that regulate post-transcriptional gene expression. They are implicated in numerous metabolic processes, possibly including weight homeostasis. MicroRNA are readily detectable biomarkers that exist in a variety of cell-free matrices. This pilot study aims to investigate the utility of miRNA biomarkers to predict weight loss.
Methods:
Serum was collected from patients at the initial bariatric consultation. Data was collected 6-12 months postoperatively on 53 patients. Individuals experiencing the least (n=10) and the greatest (n=10) amount of percentage of excess weight lost (%EWL) were included in this study. Total RNA was isolated from each serum sample and screened for 752 miRNA.
Results:
The median %EWL was 51% (range 23-61%) for those who lost the least and 87% (range 80-105%) for those who lost the most. Groups were similar in age, gender, diabetic status, and type of surgery. In total, 119 miRNA were detected; seven were selected for additional analyses (FDR<0.15). Supervised hierarchical clustering analysis grouped samples by weight loss group (p=0.001); six

miRNA demonstrated potential for discriminating between these groups (AUC>0.7). Bioinformatics pathway analysis identified several target proteins.
Conclusions:
Several serum miRNA were detected in bariatric patients that could serve as predictors of postoperative weight loss. These biomarkers could help facilitate an informed decision about surgery. Likewise, these miRNA could play a critical role in the pathophysiology of obesity.

A408
Does the Number of Follow-Up Following Stomach Intestinal Pylorus-Sparing Surgery Affect Weight-Loss Outcomes?
Amit Surve *Salt Lake City UT*[1], Hinali Zaveri *Salt Lake City UT*[1], Daniel Cottam *Salt Lake City UT*[2], Austin Cottam *Salt lake City UT*[1], Walter Medlin *Salt Lake City UT*[1], Christina Richards *Salt Lake City UT*[1], Legrand Belnap *Salt Lake City UT*[1], Samuel Cottam *Salt Lake City UT*[1], Benjamin Horsley *Salt Lake City UT*[1]
Bariatric Medicine Institute[1] Bariatric Medical Institute[2]

Background It is presumed that good postoperative programs correlate with weight loss outcomes. Therefore, surgeons design “optimal” programs to maximal weight loss. However, we wondered does compliance with postoperative programs result in better weight loss?

Aim To determine if the number of follow-ups before weight-loss plateau affects the weight-loss outcomes following stomach intestinal pylorus-sparing (SIPS) surgery.
Methods The medical records of 437 patients who underwent primary SIPS surgery by three surgeons from June 2013 through January 2018 were retrospectively reviewed. The inclusion criterion was patients that were out by 18 months of surgery. Follow-ups above 18 months were excluded from analysis. Patients with <5 follow-ups (range 1-4) and ³5 follow-ups (range 5-15) were categorized into two different groups. Percentage excess body weight (%EWL) and change in body mass index (BMI) were calculated for each group at 18 months.
Results A total of 305 patients were identified for analysis. There were 132 patients with <5 follow-ups and 173 patients with ³5 follow-ups until 18 months following surgery. There was no statistically significant difference between the preoperative characters of both groups. The patients with <5 follow-ups and ³5 follow-ups achieved 73.4% EWL and 69.6% EWL at 18 months, respectively. However, there was no statistically significant difference (*P*: 0.819). Similarly, the patients with <5 follow-ups and ³5 follow-ups lost 18.4 BMI points and 19.9 BMI points at 18 months, respectively. However, there was no statistically significant difference (*P*: 0.906).
Conclusion More follow-ups do not

result in significantly higher weight loss.

A409

Physician follow up is unnecessary: PAs are all we need

Samuel Cottam *Salt Lake City UT*[1], Daniel Cottam *Salt Lake City UT*[2], Austin Cottam *Salt lake City UT*[1], Amit Surve *Salt Lake City UT*[1], Hinali Zaveri *Salt Lake City UT*[1], Christina Richards *Salt Lake City UT*[1], Walter Medlin *Salt Lake City UT*[1]
Bariatric Medicine Institute[1] Bariatric Medical Institute[2]

Introduction:
Currently there are mixed opinions on how much the surgeon should be involved with the follow up visits of patients following bariatric surgery. Some believe that surgeons should be present for the patients throughout the weight loss journey while others believe that this attention is not necessary and can be delegated to competent office staff. In our practice we began to delegate follow up to the PAs in 2016 and have now decided to compare weight loss outcomes to see if surgeon follow up helps patients lose more weight.
Methods
We retrospectively analyzed 1124 patients, 893 of whom received surgical follow up from a surgeon and 231 of whom received surgical follow up from a PA. The two groups were compared in terms of pre-operative BMI, age, and comorbidities. Patients' weight loss outcomes were also compared at 3 and 12 months.
Results
The two groups, those with surgeon and PA follow up, were not found to have statistically significant differences in any preoperative demographic. They also were found to have statistically similar weight loss following surgery.
Conclusion
Surgical postoperative visits can be very important for patients following bariatric surgery, however, they need not be done by the surgeon and can be delegated to competent staff without affecting patient outcomes.

A410

Common Channel Lengthening is the best way to treat chronic diarrhea and hypoprotenemia following Single Anastamosis Duodenal-Ileal Bypass with Sleeve Gastrectomy

Benjamin Horsley *Salt Lake City UT*[1], Daniel Cottam *Salt Lake City UT*[1], Austin Cottam *Salt lake City UT*[1], Amit Surve *Salt Lake City UT*[1], Hinali Zaveri *Salt Lake City UT*[1], Walter Medlin *Salt Lake City UT*[1], Samuel Cottam *Salt Lake City UT*[1]
Bariatric Medicine Institute[1]

BACKGROUND:
Single Anastomosis Duodenal-Ileal Bypass with Sleeve Gastrectomy (SADI-S) is a modification of the biliopancreatic diversion with duodenal switch (BPD-DS) surgery. A concern with SADI-S is chronic diarrhea and

hypoproteinemia. Common channel lengthening (CCL) is a surgical procedure to increase absorption in the small intestine to decrease diarrhea.
OBJECTIVES
The aim of this study was to assess the occurrence and treatment of hypoproteinemia and chronic diarrhea with CCL following SADI-S surgery.
SETTING
Private Practice in the United States
METHODS
The prospectively kept data bank was searching for patients who underwent primary SADI-S from September 2013 to March 2018 or revisions of gastric bypass to SADI-S and Sleeve to SADI-S. We then looked through each patient record to find which patients had undergone CCL procedures.
RESULTS
Average operating time for laparoscopic CCL is 56.5 ± 4.6 minutes. The average bowel movements for the eight patients before laparoscopic CCL was 9.1 ± 4.7 a day. After the surgery, the bowel movements were reduced to 2.625 ± 0.4 a day. This difference was found to be statistically significantly different (p=.002). The only patient experiencing hypoproteinemia, improved protein levels following CCL.
CONCLUSION
With chances of complications being low, CCL are feasible options to treat symptomatic chronic or acute diarrhea without labs to confirm malnutrition.

A411

Body composition changes 1 month following bariatric surgery: RYGB vs LSG

Jonathan Sivakumar *Melbourne* [1], Lynn Chong *Fitzroy* [2], Salena Ward *Fitzroy* [2], Tom Sutherland *Melbourne* [2], Michael Hii *Fitzroy* [2]
St Vincent's Hospital Melbourne[1] St Vincent's Hospital Melbourne[2]

Purpose: While the effects of bariatric surgery on total body weight have been well-documented, the post-operative body composition changes in these patients is poorly understood.
Objective: To evaluate body composition changes in patients undergoing bariatric surgery, and to compare roux-en-Y-gastric-bypass (RYGB) with laparoscopic sleeve gastrectomy (LSG).
Methods: A prospective analysis was completed on patients undergoing RYGB or LSG at St Vincent's Hospital Melbourne between 2017 and 2018. Body composition was measured with dual-energy X-ray absorptiometry (DXA) immediately before surgery, one-month post-operatively and ongoing.
Results: Thirteen patients were included in this series, (RYGB n=4, LSG n=9). In average, the total bariatric cohort lost 7.9 kg (95% CI: 5.9 – 9.9), body mass index decreased by 2.9 kg/m^2 (95% CI: 2.3 – 3.5) and excess weight loss was 22.2% (95% CI: 15.5 – 26.9). LSG patients lost 3.8 kg more lean body mass (LBM) compared to the RYGB group. (LSG; 4.8 kg, 95% CI: 2.8 – 7.1 vs. RYGB; 1.1 kg 95%

CI: 2.6 – 5.3) (p=0.052). Fat mass (FM) loss was 4.0 kg (LSG; 95% CI: 2.6 – 5.3) and 4.7 kg (RYGB; 95% CI: 2.5 – 6.8), respectively. No meaningful change in bone mineral density was detected in the cohort.
Conclusion: There was substantial weight loss in the first month following bariatric surgery. LBM is lost concurrently with FM however there is a trend for LSG resulting in greater loss of LBM as compared with RYGB.

A412
Weight Regain and Insufficient Weight Loss after Bariatric Surgery: a Survey to identify current practices and attitudes amongst ASMBS members.

Saniea Majid *Chatham NJ*[1], Anthony Gonzalez *Miami FL*, Brandon Grover *La Crosse WI*, Michael Morell *La Crosse WI*, David Podkameni *Gilbert AZ*, Vanessa Cobarrubia *Bend OR*, Christopher Still *Danville PA*, Raul Rosenthal *miami FL*, Stephen Archer *Bend OR*
Weightloss and Wellness Center[1]

Background

Weight regain (WR) and insufficient weight loss (IWL) are observed in some post bariatric surgery patients. This has an impact on patients and affects the perception of bariatric surgery among referring providers.

Setting
ASMBS members current practice patterns.

Objective

To identify preoperative practice patterns related to bariatric weight management and identify postoperative practice patterns when WR or IWL is present.

Methods

A survey was emailed to the ASMBS membership of 3,939 individuals. Ten questions pertained to the preoperative timeframe, 11 to the postoperative timeframe, and 4 to demographics. In order to explore common practice patterns, Chi-square tests were used to examine bivariate associations between selected question responses.

Results

Responses were received from 337 (8.5%). There was variability related to requirements for preoperative and postoperative weight loss, dietitian visits, use of medications, and other interventions. Correlations were found between requirements for preoperative weight loss and postponing surgery, and the frequency of preoperative and postoperative visits with the dietitian.

Conclusions

There is currently variability in the care of bariatric surgery patients.

Empirically developed pathways could standardize care and allow greater understanding of WR and IWL. Focused interventions could prevent and treat these problems.

A413

Orotracheal intubation in the super-super obese patient with a flexible bronchoscope under general anesthesia and deep neuromuscular relaxation

Lizzet Villalobos *MEXICO* [1], Luis Aceves *CIUDAD DE MEXICO CMX*[2]
CENTRO BARIATRICO METABOLICO DALINDE[1] CBMD[2]

The approach of the airway in the patient is always a challenge for anesthesiologists especially when this, is done under general anesthesia and Relaxation Neuromuscular deep (RND), the approach firoscopy is often performed under local anesthesia or sedation, without relaxation, for the collapse of the VA that can be generated, hampering ventilation; however, recent studies show that the RNP facilitates ventilation-perfusion
A prospective, observational, descriptive study. Patients 20 to 65 years old. ASA II-III, BMI equal or greater than 60 kg / m2 undergoing elective laparoscopic abdominal surgery ,Inducción. Dexmedetomidine 0.5 ug/kg IBW, Lidocaine 1.5 mg/kg IBW. Mg Sulfate 40 mg/kg IBW, Rocuronio 0.6 mg/kg IBW, Propofol 2.5 mg/kg IBW. at 0.6 MAC Desfluorane.
table position beach, tongue is retracted and placed cannula Migration endotracheal tube is advanced fiberoptic, identify epiglottis, vocal cords, advances to the carina, endotracheal tube is lowered and removed fiberscope
20 patients operated from August 2016 to March 2017. With age range of 20-65 years with an average of 62.4 of which 9 were women and 11 men, BMI range of 60.1 to 71.9 kg / m2 with an average 62.5 kg / m2. And 100% over 5 predictors of VAD and ventilation difficult, with neck circumference of 55-63 cm. a successful intubation at the first attempt 19 of 20. 25' range intubation.
Conclusions: The use of flexible fiberoptic bronchoscopy disposable, is a good tool in the endotracheal intubation of super super obese patients with a high success rate, allowing increased security to addressing complex VA

A414

Pregnancy after Bariatric Surgery: Current Evidence and Recommendations

Leah Kim *Savannah GA*[1], Jaine McKenzie *Augusta GA*[1], Lisa Hilton *Augusta GA*[1], Andrew Duffy *New Haven CT*[2]

Medical College of GA at Augusta Univ.[1] Yale University[2]

Approximately 30% of reproductive age women in the United States are obese. Maternal obesity is associated with an increased risk of many complications including gestational diabetes mellitus, hypertension, preterm delivery, and fetal macrosomia. As a result, weight reduction in the pre-pregnancy period has become imperative for both maternal and fetal health. The American College of Obstetrics and Gynecology (ACOG) recognizes bariatric surgery as a promising pre-pregnancy obesity treatment.

Nearly half of all bariatric surgeries performed in the United States are for women of reproductive age. Due to concern for increased maternal and fetal risks, the current recommendation is to delay pregnancy for 12-18 months after bariatric surgery. This poses an important topic of patient counseling for contraceptive use in the postoperative period. The issue is further amplified by increased postoperative fertility after weight loss along with decreased efficacy of oral contraceptives in patients who have undergone malabsorptive weight loss procedure.

In addition to the risks imposed on the fetus as a result of early pregnancy following bariatric surgery, the delay in continued weight loss during the pregnancy is often detrimental to successful weight loss following bariatric surgery. Management is often complex and can require a high risk obstetrician in addition to a bariatric surgeon.

This manuscript discusses pregnancy considerations following bariatric surgery, including the safety of pregnancy, the effect of pregnancy on post-operative weight loss, and obesity-related infertility. Current contraception recommendations in the perioperative period as well as nutritional monitoring and supplementation in the post-operative period are defined.

A415

Gut hormone changes and resolution of diabetes in Indian morbidly obese patients undergoing sleeve gastrectomy

Vivek Bindal *New Delhi*
Sir Ganga Ram Hospital

Introduction
We propose to analyze and attempt to understand the gut physiology and its metabolic alteration in Type 2 Diabetes Mellitus (T2DM) after Laparoscopic / Robotic Sleeve Gastrectomy (SG).

Objectives
1. To evaluate the gut metabolic alterations in Indian Diabesitic patients undergoing SG
2. To correlate with the improvement in the anthropometric, diabetic indices and co-morbid conditions leading to

betterment of quality of life indices

Methods
This is a prospective study being conducted in Sir Ganga Ram Hospital, New Delhi, India after IRB approval. Prospectively enrolled patients having BMI $\geq$ 32.5 Kg/m^2 with T2DM underwent Standardized SG. Baseline levels of Glucose, Insulin, C-Peptide were measured in Fasting (F) and Postprandial (PP) states. HbA1C levels are evaluated and HOMA-IR index calculated. Baseline fasting and PP levels of GHRELIN, GLP-1 & PYY are evaluated.

Results
A total of 32 patients have been enrolled in study thus far. The preliminary results show a significant decrease in BMI and a significant ($p>0.001$) correlation is found between fasting blood glucose-, insulin-levels with HbA1c. Furthermore, C-peptide decreases significantly within 1 month but increases as expected by 1 year. Also, as levels of Ghrelin decrease, GLP1 was observed to increase and PYY1 was also observed to decrease over a period of 6 months. Further Gut hormone data analysis is under process.

Conclusions
Our preliminary data shows that SG even though traditionally believed to be a restrictive procedure, does lead to metabolic alterations by producing changes in the gut hormones and resetting the deranged Gut- Endocrine Axis.

A416

History of #obsmuk : The obesity and bariatric surgery social media group in the UK

Zaher Toumi *Durham*
County Durham and Darlington NHS Foundation Trust

#obsmuk is a multidisciplinary group of doctors, AHPs and patients that was established in March 2017.

#obsmuk ‘s main objective is to fight obesity. This is achieved by disseminating an evidence-based message about obesity and bariatric surgery and by campaigning to improve prevention programmes, to improve access to treatment and to stop weight bias.

The evidence-based message is disseminated through: 1) establishing a specific UK obesity social media hashtag: #obsmuk 2) conducting multidisciplinary tweet chats about obesity and bariatric surgery related topics and 3) by tweeting and retweeting evidence-based message about obesity and bariatric surgery.

The campaigning and advocacy are achieved through: 1) highlighting the poor provision of services that help in the prevention and treatment of obesity and campaigning for better provision and access 2) drawing attention to misconceptions about obesity and bariatric surgery and about patients

who are affected by obesity and/or had bariatric surger 3) by accentuating the prevalence of weight bias and its detrimental effects on people affected by obesity and by initiating and supporting campaigns to eliminate weight bias.

#obsmuk has made significant achievements during its first year that include: establishing large number of followers and producing many tweets, running 9 chats, being invited to present at BOMSS scientific meeting, influencing a UK parliamentary survey about obesity that omitted bariatric surgery as a treatment option, signing a letter to eliminate weight bias in the media and establishing another obesity social media group in the Middle East and North Africa region.

A417

Concurrent Bilateral Salpingectomy for Sterilization at the Time of Bariatric Surgery

Brandon Williams *Nashville TN*
Vanderbilt University Medical Center

Background: Women of child-bearing potential generally experience an increase in fertility following bariatric surgery. However, the most commonly performed bariatric operations, Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (VSG), may impair absorption of oral contraceptives, potentially rendering them ineffective. Moreover, women desiring to lose weight should avoid contraceptive medications known to cause weight gain. As an alternative, bilateral salpingectomy provides highly reliable contraception and has even been proposed as a strategy to reduce the risk of ovarian, tubal, and peritoneal cancers.
Objective: To demonstrate the safety and feasibility of performing bilateral salpingectomy for sterilization at the time of a bariatric operation
Setting: A large academic medical center
Methods: Between September 2011 and April 2018, we performed 19 cases of planned concurrent bariatric and sterilization procedures. These cases were retrospectively reviewed.
Results: Nineteen patients underwent various sterilization procedures at the time of minimally invasive bariatric surgery (11 RYGB, and 8 VSG), with the vast majority receiving bilateral salpingectomy. No additional incisions or instruments were required. The average age body mass index was 46.3 kg/m^2, and average age 39.4 years. Over half (10/19) of the patients had a history of prior abdominal gynecologic surgery, predominately C-section. The average additional time required for bilateral salpingectomy was 8.1 minutes. Only 1 sterilization procedure could not be performed, due to dense pelvic adhesions. There were no perioperative complications.
Conclusions: Salpingectomy at the time of bariatric surgery is safe, feasible and should be offered to women who desire permanent sterilization.

A418

The Integration of Medical, Psychological, and Quality of Life Measures in the Prediction and Maintenance of Excess Weight Loss after Bariatric Surgery.

Vincent Escandell *Alexandria LA*[1], James Parrish *Alexandria LA*[2], Richard Elder *Alexandria LA*[1]
Louisiana State University Alexandria[1] Mid Louisiana Surgical Specialist[2]

The National Institute of Health, the American Association of Clinical Endocrinologists, the American Society for Metabolic and Bariatric Surgery, and the Obesity Society Guidelines for the Clinical Management of Bariatric Surgery patients have long recommended that assessment of bariatric surgery candidates include presurgical psychological evaluations as a national standard practice amongst bariatric centers.
Escandell and Elder in a previous study showed results affirming predictive validity for cognitive, psychological, and operationalized questions from categories of the Allied Health Sciences Section Ad Hoc Behavioral Health Committee (AHSSAHBHC) pre-surgical psychological assessment of bariatric surgery candidates. The results of this study affirmed the predictive ability of these psychological tests plus the patient's goals in determining excess weight loss. The authors then validated these measures with another sample reliably showing excess weight loss benefits from the inclusion of the patient's goals. This current psychological data include the Coding subtest of the Wechsler Scales, the Beck Depression Inventory, the Obsessive Compulsive Screening, anxiety screening, EATS-26, and the Three Factor Eating Questionnaire. Currently, the authors integrate medical data (blood pressure, sleep apnea, diabetes, GERD, hours of sleep), the psychological data, the Schwartz Outcome Scale, and the patient's stated desired weight. The medical data plus the psychological data and QOL/goal allow this predictive performance at post-surgical assessment, <.05. Tables acknowledging the regression and correlation data will be presented.

A419

Chances of Normal BMI Following Single-Anastomosis Duodenal Switch (SDS)

Sarah Pearlstein *New York NY*[1], Mitch Roslin *New York NY*, Ali Shayesteh *New York NY*, Deborah Allis *Mount Kisco NY*
Lenox Hill Hospital Northwell Health[1]

Introduction: After SDS, patients can expect to lose around 70-80% of excess weight with an average BMI around 50. Although many people appreciate the health benefits that come with mild to moderate weight loss, the desire for most people having surgery for obesity is that they would no longer be obese

post-op.
The purpose of this investigation is to determine the probability of each individual patient of whether they will be obese following SDS, as well as the probability of them being outliers; looking at whether various factors affected weight loss.

Methods: Retrospectively retrieved data of 34 SDS performed, looking at percent total weight loss (TWL) differences at one year between age, sex and BMI class.

Results: Average TWL was 41% from pre-op. There was no statistical difference in TWL between age, sex or BMI class. Probability of becoming non-obese was 81% for starting BMI 45-50, 33% for BMI 51-55, 20% for BMI 56-60% and 0% for BMI over 60. 12% of patients lost <35% total body weight, 62% lost between 35-45%, and 26% lost over 45%. Nutritional data showed Vitamin D deficiency in only 12% of 26 patients with measured levels, and no albumin or Vitamin A deficiency in 24 patients reported.

Discussion: SDS proves effective in reducing patient's weight to a non-obese level at one year. The results of SDS are replicable across gender, age and BMI class.

Conclusion: The results of SDS are consistent and replicable and patients can fairly reliably expect >35%TWL.

A420
Utilization of Enhanced Recovery After Surgery in Patients Undergoing Revisional Bariatric Surgery
Kevin Bree *Cincinnati OH*[1], John Mitko *Cincinnati OH*[1], Lala Hussain *Cincinnati OH*[2], George Kerlakian *Cincinnati OH*[1], Kevin Tymitz *Mason OH*[1], Katherine Meister *Cincinnati OH*[1]
Good Samaritan Hospital[1] 2. TriHealth Hatton Research Institute[2]

Background: Enhanced Recovery After Surgery (ERAS) has been adopted by many surgical disciplines to improve clinical outcomes and Length of Stay (LOS). The LOS for ERAS primary Roux en Y gastric bypass (RYGB) was previously found to be 2.34 days at our institution. The purpose of this study is to investigate clinical outcomes of patients undergoing revision bariatric surgery using ERAS.

Methods: A retrospective chart review was performed at a single institution to identify patients who underwent revisional bariatric surgery using ERAS from January 2016 to March 2018. ERAS pathway consisted of extensive preoperative patient education, regimented oral hydration until 3 hours preoperatively, multimodal pain management, judicious use of perioperative intravenous fluids, early Foley catheter removal, ambulation, and enteral feeding. Demographic data, LOS, reoperation rates, and readmission rates

were collected and calculated.

Results: Twenty-seven patients were included. Seventeen (62.9%) underwent single stage band removal with conversion to RYGB. Median preoperative Body Mass Index was 44.01 kg/m^2(range, 31.48-67.78 kg/m2) and median age was 54 years (range, 26-67 years). Median LOS was 1 day (range, 1-5 days). Six (22.2%) patients underwent intraoperative drain placement. Two (7.4%) patients underwent postoperative contrast study; all others were started on a liquid diet the night of surgery. There were no mortalities, thirty-day readmissions or reoperations.

Conclusion: ERAS is safe and feasible in patients undergoing revisional bariatric surgery, with no observed mortality, thirty-day readmission or reoperations in this cohort. LOS is similar to that of patients undergoing RYGB at our institution.

A421
A Single-Center Experience in Supporting Certified Bariatric Nurse Certification
Carmela Pontillo *Bothell WA*
Overlake Hospital Medical Center

As a MBSAQIP Accredited Center, we are committed to the quality care we deliver to our metabolic and bariatric surgery patients. Our facility has a dedicated and knowledgeable nursing staff. However despite our dedication and commitment to ongoing education, none of our nurses are currently certified bariatric nurses (CBN). With nursing leadership support, we have witnessed an increase number of our nurses throughout the institution becoming certified in a variety of specialties. A recent change in nursing leadership on our bariatric surgery designated unit provided us the opportunity to begin the dialogue with our nursing staff on the benefits of certification. This resulted in 20 nurses expressing an interest to become certified bariatric nurses.

A team was assembled to develop an in-house, 2 day-eight hour review course to assist our nurses in preparing for the CBN examination. In addition, we use a weekly newsletter to provide nurses with sample examination questions. We created a CBN board on the unit with test taking tips, additional review questions and case studies. A review Q & A is planned for late June with one of our bariatric surgeon to allow for any last minute clarifications before the July-August examination.

As per MBSAQIP Standard 2.9, we are continuously seeking ways in which to improve our nurses' knowledge and clinical expertise in bariatric surgery. Our goal is to now expand upon Standard 2.10 and offer our patients nursing care which has met the professional standards for certification in bariatric nursing.

A422

Leak, Bleeding and Complications in Bariatric Surgery, A Quality Improvement Opportunity

Robert Rutledge *La Quinta CA*[1], KS Kular
Center for Laparoscopic Obesity Surgery[1]

Bariatric surgery results have improved over time. The purpose of this study is to review recent studies of leaks, bleeding and readmissions and suggest this may be a Quality Improvement (QI) opportunity to further protect patients from these complications.

Methods
Recent published articles on Bariatric surgery complications such as leak, bleeding and readmission's were reviewed. Predictive and preventative factors were also reviewed to search for QI efforts that might offer opportunities for improvement.

Results
Reported rates of leak, bleeding and readmission ranged widely from less than 1% to 6% or more. Procedures with long suture/staple lines appeared to have the greatest risk of major complications. Predictive or preventative factors for these complications included surgeon skill, staple misfire, reinforcement of staple/anastomotic suture lines, elevated blood pressure, diabetes, smoking and pulmonary disease as well several measures of patient frailty or fitness. Recommended techniques designed to decrease complications or improve the outcomes of leaks, bleeding and other complications included: Preoperative, intra-operative and post operative strategies. Most appear to have mixed or small effects making these areas ripe for efforts to improve the outcomes of bariatric surgery.

Conclusions
Publications reporting the relative safety of the present state of bariatric surgery are in the main to be correct. On the other hand taking a QI approach to the devastating impact of leaks, bleeding, readmissions and other complications have on the 1-5% of patients that do have these complications appears justified.

A423

Morgagni Hernia in a patient with gastric bypass - laparoscopic repair with mesh

Subhash Reddy *San Antonio TX*[1], Nilesh Patel *San Antonio TX*[1]
Texas Bariatric Specialists[1]

41 years old male with history of gastric bypass in 2011 (399 lbs,BMI 57.4), lost to follow up for 3years now comes to office with giant diaphragmatic hernia and current wt 224 lbs (BMI 32). He went to local ER for shortness of breath and cough after workup with chest xraythen CT

abdomen/pelvis diagnosed with diaphragmatic hernia. He underwent elective laparocopic repair with underlay mesh. Defect was 7*8 cms and repaired with 15 cms mesh. Pateint was discharged home on POD1. No issues in recent followup (2 months). Rare type of congential diaphgramatic hernia, can be managed effectively by laparoscopic approach with mesh.

A424

Qualitative Assessment of Technology Use and Development of a Smartphone App for Bariatric Surgery Patients

Colleen Tewksbury *Glenside AL*[1], Megan Mulgrew *Philadelphia PA*[1], Samantha Warner-Grimsley *Philadelphia PA*[1], Jacqueline Countess *philadelphia PA*[1], Kristoffel Dumon *Philadelphia PA*[2], Noel Williams *Philadelphia PA*[2]
University of Pennsylvania Health System[1] University of Pennsylvania[2]

Background: Bariatric surgery patients have access to thousands of heath care apps through their smartphones. Few studies have been conducted to assess the current use of these tools and overall preferences.
Methods: Nineteen bariatric surgery patients of a multicenter academic health system bariatric program participated in five separate focus groups on healthcare technology use and development of a bariatric-program specific smartphone application. Sessions were recorded, and themes were identified.
Results: Major results indicated that bariatric surgery patients are actively using multiple forms of technology to gain knowledge about bariatric surgery and track their health progress. Additionally, patients reported a strong desire for more technology options and support from their surgical program. This included mechanisms to track progress on relevant health outcomes, share with healthcare providers, and receive feedback.
Conclusion: Bariatric surgery patients are consumers of healthcare technology widely available. Additionally, patients interviewed reported being receptive to program-specific technologies such as a smartphone app. Future studies are needed to develop a viable technological such as an app tool to assist bariatric surgery patients.

A425

Weight loss outcomes of tier 3 weight management service in patients referred to bariatric surgery.

Robert Winstanley *Durham* [1], Zaher Toumi *Durham* [2]
County Durham and Darlington NHS[1] County Durham and Darlington NHS Foundation Trust[2]

Background
Engagement with Tier 3 weight loss service is a pre-requisite to qualify for weight loss surgery in the UK. Tier 3

involves a Multi-Disciplinary Team approach to weight loss that is based on dietary, lifestyle, psychological and medical interventions (when deemed necessary).

Aim

The aim of this study was to assess weight loss outcomes of Tier 3 services in patients referred to a single bariatric surgeon.

Methods

A retrospective study of a single bariatric surgeon's patients over an 18 months' period. Demographics, weight and weight loss data were collected from an electronic patient management software.

Results

Thirty five consecutive patients were included in the study (30 females). The median age at time of operation was 47.5 (range 24-70)). The median weight when patients joined Tier 3 was 147.95 (98-182) kilograms and the median BMI was 53 (34.4-62.1). The median time between joining Tier 3 and referral for surgery was 260 (135-728) days. Tier 3 resulted in a median weight loss of -6.1% (-0.1 to -17%). The median weight loss of patients with BMI less than 50 was -6.2% and those with a BMI greater than 50 was -4.2%.

Discussion

This study shows that Tier 3 weight management service might help patients to lose weight before bariatric surgery. However, a study of all patients who are referred to tier 3 (rather than those who are referred onward for bariatric surgery) is required to establish its overall effectiveness, its drop out rate and its weight loss and health outcomes.

A426

Endoscopic trans-luminal abscess drainage following sleeve gastrectomy.

Alejandra Munoz *Grand Rapids MI*[1], Martin Thomas *Grand Rapids MI*[2], David Scheeres *Grand Rapids MI*[2], Stephen Thorp *Grand Rapids MI*[3]
Michigan State University[1] General Surgery Spectrum Health[2] Spectrum Health/General Surgery/MSU[3]

Laparoscopic sleeve gastrectomy is becoming a commonly used procedure to treat morbid obesity, and gastric leaks remain a complication. We describe an innovative method of endosopic abscess aspiration with leak control.

This is a 35 yo woman who had a laparoscopic sleeve gastrectomy. Her postoperative course was complicated by a bleed which was controlled. The rest of her stay was uneventful.

On POD 10 she presented with pain and abdominal CT scan showed an air-fluid collection next to the sleeve, demonstrating a gastric leak at the proximal staple line. Interventional radiology was unable to place a drain given the abscess location. On POD 15, CT scan showed an enlarging abscess despite antibiotic treatment.

She underwent an EGD with endoscopic transgastric aspiration of the abscess with stent placement. Using

a cannula and guidewire, contrast was injected into the fistula for better visualization. The guidewire was advanced while exchanging the cannula for a 7 Fr nasobiliary catheter. The guidewire was removed and contrast was aspirated via the catheter. A covered metallic stent was used to cover the leak.
On post-drainage day 1, follow-up CT showed good stent positioning and decreasing abscess. She received an 8 Fr naso-jejunal feeding tube and was discharged home. Two months later, follow-up CT showed resolution of the abscess and stent was removed.
Treating gastric leaks via endoscopic transgastric aspiration successfully provides patients with a minimially invasive, first-line treatment option. With less procedures needed and decreased hospitalization time than other methods available, patients have better quality of life.

A427

Preoperative weight loss expectations in patients seeking bariatric surgery

Andrea Stone *Glastonbury CT*[1], Janet Ng *Corvallis OR*[1], Richard Seip *Glastonbury CT*[1], Madison O'Brien *South Windsor CT*[1], Emma Tishler *Glastonbury CT*[1], Nicholas Duga *Farmington CT*[2], Pavlos Papasavas *Hartford CT*[1], Darren Tishler *Glastonbury CT*[1]
Hartford Hospital[1] University of Connecticut[2]

Prior work has indicated that patients seeking bariatric surgery have unrealistic expectations regarding post-surgical weight loss (WL). Unrealistic expectations may contribute to patient dissatisfaction, undue surgical risk, and program attrition. We aimed to explore 6-month and 1-year WL goals compared to measured outcomes in a pre-surgical population using the Weight and Lifestyle Inventory (WALI).

From 10/2012-3/2014, 29 patients responded to the WALI item “If you are successful in our program in changing your eating and exercising habits, how much weight do you realistically expect to lose after 6-months and 1-year?” and had weight outcomes 6-months and 1-year post-surgery.

24 female and 5 male subjects ultimately underwent gastric banding, gastric bypass, or sleeve gastrectomy (10%, 48%, 41%, respectively). Average WL goals at 6-months and 1-year (55±20lbs and 86±24lbs, respectively) did not differ from actual WL (60±27 and 85±36lbs, respectively). Gender differences emerged at both time points for goal and actual WL ($p<0.001$). Actual WL exceeded WL goals in females by 3% and fell short by 11% at 6-months and 1-year, respectively, and exceeded in males by 33% and 30%, at the same timepoints, respectively. In females who underwent gastric banding, actual WL fell short of goals by 54% and 51%

at 6-months, 1-year, respectively.

This study expands on previous work to include sleeve gastrectomy. Patients pursuing banding have the most elevated WL goals compared to actual, while those pursuing other procedures have very realistic goals. This study is limited by the small numbers of male patients and patients with banding.

A428

Giant incarcerated paraoesophageal hernia in super morbid obese patient with Concurrent Roux en Y Gastric Bypass

Rami Mustafa *cleveland OH*[1], Isabel Janmey *Cleveland OH*[2], Heba Elghalban *Cleveland OH*[1], Tomasz Rogula *Chardon OH*[1]
University Hospitals of Cleveland, CWRU[1] Case Western Reserve University[2]

Title: Giant incarcerated paraoesophageal hernia in super morbid obese patient with Concurrent Roux en Y Gastric Bypass

Case Presentation:

68yo Caucasian MaleInitial BMI 65.8,Gastroesophageal reflux disease refractory to medical therapy,Comorbidities: HPT, OSA, Anxiety
3 of 5 mm ports and 1 of 10-12 mm, Rt paramedian incision. Laparoscopic reduction on incarcerated type 4 hiatal hernia, Laparoscopic repair of HH with primary closure of the crura,Laparoscopic Roux-en-Y gasric bypass with creation of tubular gastric pouch , 150cm Roux limb and 150cm of biliopancreatic limb.
Intraoperative gastroscopy

Postoperative outcomes:

D/C to home on POD #3,1 mo f/u: tolerate soft and liquid diet without nausea/ vomiting.
Previously reported severe reflux completely resolved. 3 mo f/u . Tolerating normal bariatric diet. No s/sx of reflux or recurrent hiatal hernia
BMI 65.8 > 57.21 > 55.4

Conclusions:

1.We recommend pre-operative gastroscopy as a part of early diagnosis of HH.
2.Gastric bypass remain the best solution for patient with GERD in Large HH.
3.Laparoscopic Gastric bypass with HH repair can be done safely in super morbid obese patients.
4.Long term follow up is needed to establish effectiveness and durability of such management.

A429

Safety of Over Sewing the Reinforced Staple Line vs. Reinforced Stapler only in Sleeve Gastrectomy; Comparing two

Surgeons' Techniques in a Single Institution

Adel Alhaj Saleh *Lubbock TX*[1], Michelle Estrada *Lubbock TX*[1], Grant Sorensen *Lubbock TX*[2], Amir Aryaie *Lubbock TX*[1]
Department of Surgery/ Texas Tech University Health Sciences Center[1] School of Medicine/ Texas Tech University Health Sciences Center[2]

Background:

In sleeve gastrectomy (SG) only reports comparing over sewing the staple line versus stapler only are available in the literature. No data comparing reinforced stapler only vs. over sewing a reinforced staple line is yet available.

Objective:

To determine whether over sewing the reinforced staple line would minimize unfavorable outcomes in 30-day after SG.

Methods:

We analyzed the data of SG patients performed by 2 bariatric surgeons in our institution. Surgeon A only used reinforced stapler while Surgeon B added over sewing to the reinforced staple line. Outcomes compared included, readmission, reoperation, leak and bleeding. Univariate analysis, was done. T-test and Chi square were used for comparing continuous and categorical variables respectively and Fischer's exact test for significance, P value < 0.05 was considered significant

Results:

Ninety two patients underwent SG, between 2016 and 2018 were identified. Twenty seven cases performed by Surgeon A vs. 65 by Surgeon B. Demographics, comorbidities, and other variables were comparable between the 2 groups. (Table 1). No statistical difference in the compared outcomes in both groups. (Tables 1-2). However Surgeon B has 1 case of mortality, 7 cases of readmission for different reasons, 4 cases of leak, 1 case of bleeding, and 4 cases of reoperation.

Conclusion:

Although there was no statistical significance in all the variables compared between the 2 groups, a trend toward higher rate of complications was noted with over sewing the reinforced staple line, hence it did not prevent the occurrence of bleeding or leak after SG.

A430

"Right Size Prescribing" Through Statistical Analysis & Bariatric Surgical Patients' e-Feedback to Prevent Prescription Opioid Misuse and Related Overdose Deaths

Shelly Brimhall *Murray UT*[1], R. Richard Rasmussen *Provo UT*[1], Sathya Vijayakumar *Salt Lake City UT*[1]
Intermountain[1]

From 1999 to 2016, more than 200,000 people died in the U.S. from overdoses related to prescription opioids. Overdose deaths involving prescription opioids were five times higher in 2016

than 1999 as reported by The Centers for Disease Control and Prevention. Utah is one of 22 states where the overdose rate is higher than the national average. Intermountain Healthcare is a 23-facility healthcare system (including 3 comprehensive, accredited, bariatric centers) based in Salt Lake City, UT with an organizational mission to help people live the healthiest lives possible. In 2016-2017 Intermountain established opioid reduction as a system priority and leadership teams were tasked with reducing opioid prescribing by 40% by 2019. In support of the initiative Intermountain's Surgical Services Clinical Program rolled out a quality improvement project to determine the variability of opioid prescribing practices for bariatric surgical procedures. This project includes distributing surveys to bariatric patients to obtain self-reported feedback about their pain medications (e.g. amount consumed, disposition of unused medications). A dashboard was created from the survey data showing prescribing trends, patient consumption trends and disposal of excess opioids. Data shows the median consumption of opioids is about a third of what is prescribed. Providing recommendations to physicians concerning ideal "right size" prescribing for bariatric surgeries is key to our efforts to prevent prescription opioid misuse and to reduce overdose deaths among our patient population.

A431

Confusion and Misunderstanding the Mini-Gastric Bypass Leading to Complications and Death in Surgeons with Limited Experience with the Procedure: The Need for Standardization, Education and Recognition

Robert Rutledge *La Quinta CA*
Center for Laparoscopic Obesity Surgery

This paper was demonstrates confusion and associated complications in the performance of Mini-Gastric Bypass (MGB) by surgeons with limited experience.
Methods
International journals, publications, national and international organizations' programs, meetings, personal communications and social media were searched for episodes of confusion, disagreement and misunderstanding the Mini-Gastric Bypass often resulting in complications.
Results:
Numerous examples of errors, confusion and misunderstanding of the Billroth II and MGB were documented in Journals, national and international organization and meetings, personal communications and social media many resulting in serious complications and death.
Examples: 1. One series reported a rate of stricture of 16%. This high rate was seen in no other large scale reported series.
2. A 10% rate of liver disease,

dysfunction, liver failure and death was reported in a small series of MGBs. (Excessive BPLimb)
3. A reported acute onset of crippling bile reflux esophagitis leading to early revision. (Unrecognized Short Pouch)
4. A series of MGB patients converted to RNY for excessive weight loss resulted in serious complications in more than 46%
5. Many more

Conclusions:
More than than 20 studies like those above have reported complications or death that are rare or absent in large series by experienced MGB surgeons. In most studies and by most measures the MGB has been shown to be the equal to or better than comparable bariatric surgery procedures, yet confusion on the performance and management of the MGB remains widespread with
attendant complications and death.

A432

Understanding the Important Details of the Surgical Technique of the Mini-Gastric Bypass

Robert Rutledge *La Quinta CA*[1], KS Kular
Center for Laparoscopic Obesity Surgery[1]

This is the first year of the MGB being recognized as a standard Bariatric procedure. Adoption is growing around the world. But Complications are being reported by surgeons who do not carefully follow the technical details of the surgical procedure.

Methods
The surgical technique of the MGB is presented with attention to common errors reported by new MGB surgeons

Results
The MGB components include a gastric pouch (different in several important ways from the sleeve pouch) and ante-colic Billroth II gastro-jejunostomy. Important points include avoiding a twist in the pouch, creating a wide distal tip of the gastric pouch for the gastro-jejunostomy, avoiding the esophago-gastric junction and the risk of leak, avoiding the hiatus and the diaphragmatic cura. The creation of the bilio-panceratic limb allows the MGB to treat all manner of patients from the thin diabetic to the super obese but carries great power and thus is dangerous in inexperienced hands.

Conclusion
Now after 20 years the IFSO has recognized the MGB is no longer investigational. The MGB has been shown in numerous studies to be simple, elegant, effective, durable > 15 yrs, powerful, tailored to patient, reversible, revisable, studies also show inexperience can lea to complications and death so attention to detail is important.

A433

Meta-analysis of Suicide and Self-harm following Bariatric Surgery

Dawn Roberts *Peoria IL*[1], Nicole Pearl *Peoria IL*[2]
Bradley University[1] Washington University[2]

Bariatric surgery dramatically improves quality of life in several domains. However, several researchers have reported an increased risk for suicide and self-harm following surgery. Others have failed to find an increased risk, and reasons for the disparity are not obvious. This meta-analysis examined the association between bariatric surgery and suicide or self-harm. It also explored possible moderators of this association. Twenty-eight studies of persons who had undergone bariatric surgery were identified. Two independent researchers coded studies by outcome measure (e.g., completed suicide, attempted suicide, psychiatric hospitalization, suicide-related questionnaires), and potential moderators (i.e., patient, procedure, and study characteristics). Odds ratios (ORs) for studies without a comparison group were extrapolated using World Health Organization suicide rates for the country and year of the study. ORs for studies with a prospective design used pre-surgical values as comparisons. Mean OR for all studies and outcomes suggests that bariatric surgery patients had an approximately 75% increased risk of suicide or self-harm than those who did not have this surgery [OR = 1.76 (95% CI: 1.69, 1.83)], $p<0.001$ using a fixed-effects model. Moderator analyses did not yield any significant predictors of study-level odds ratios; however, the length of time since surgery and suicide approached significance ($p=0.06$), indicating greatest risk for suicide or self-harm in the first years after the procedure. This meta-analysis does not address the issue of a nonequivalent surgical group (i.e., persons at greater risk for suicide/self-harm are more likely to seek or obtain bariatric surgery) and analyses for publication bias were inconclusive.

A434

Obstructive Sleep Apnea after Sleeve Gastrectomy versus Roux-en-Y Gastric Bypass Surgery

Matthew Mozzo *Suwanee GA*[1], Aliu Sanni *Snellville GA*, Gulsedef Arslan *Suwanee GA*, Vaishali Jadhav *Suwanee GA*, Luis Gutierrez *Suwanee GA*
GA - PCOM[1]

Obstructive sleep apnea (OSA) is a very common co-morbidity in patients who are morbidly obese. OSA is a progressive life-threatening disorder characterized by repeated interruptions in upper airway breathing that causes strain on the heart and brain. Bariatric surgery is the best treatment for morbid obesity. The aim of this study is to evaluate clinical outcomes for patients with OSA after sleeve gastrectomy (SG) versus Roux-en-Y gastric bypass

(RYGB) surgery.

A systematic review was conducted through PubMed to identify relevant studies from January 2016 through March 2018, with comparative data on OSA in SG versus RYGB. OSA reduction between the two groups were analyzed. The other outcomes measured were the reduction of hypertension, diabetes mellitus, and dyslipidemia. Results are expressed as standard difference in means with standard deviation. Statistical analysis was done using fixed-effects meta-analysis to compare the mean value of the different groups. (Comprehensive Meta Analysis Version 3.3.070 software; Biostat Inc., Englewood, NJ).

Four out of 57 studies were included in this meta-analysis. Among the four studies, there were 52,426 patients who underwent bariatric surgery; 9,692 SG and 42,734 RYGB. The incidence of OSA (0.042 ± 0.018, $p = 0.022$), Hypertension (0.071 ± 0.019, $p = 0.000$), Diabetes mellitus (0.059 ± 0.016, $p = 0.000$), and Dyslipidemia (0.075 ± 0.020, $p = 0.000$) in post-operative bariatric patients were lower in the RYGB group when compared to the SG group.

RYGB is more effective in the improvement and resolution of OSA when compared to SG.

A435

Remission of Barrett's Esophagus after Sleeve Gastrectomy, A Case Study.

Stephanie Therrien *Boston MA*[1], Daniel Jones *Boston MA*[1], Blaine Phillips [1]
Beth Israel Deaconess Medical Center[1]

Introduction: Barrett's Esophagus (BE),common in individuals with gastroesophageal reflux disease (GERD), pre-disposes the affected individual to the potential development of intestinal metaplasia, dysplasia and esophageal adenocarcinoma. Due to physiologic changes incurred post Laparoscopic Sleeve Gastrectomy (LSG), there is an increased risk of BE development, or progression in patients with active GERD. Because of this, many surgeons consider a patient who has BE to be contraindicated for LSG surgery.

Case: 64 y/o Caucasian female with impaired fasting glucose, GERD, hypercholesterolemia, hiatal hernia, nonalcoholic steatohepatitis and class III obesity presents for bariatric surgery. An EGD biopsy taken at the gastroesophageal junction (GEJ) showed cardia-type mucosa with intestinal metaplasia consistent with BE. Side effects of LSG verses the Gastric Bypass (GB), including the potential worsening of BE into esophageal cancer, were explained. The patient was concerned by the malabsorptive properties of the GB and wished to proceed with LSG. She demonstrated good understanding of the risks and benefits and agreed to a

conversion to GB should her BE or GERD worsen.

Results: Patient undergoes LSG (36F Bougie) with no complications. Repeat EGD biopsy at the GEJ is performed two years after LSG by the same Gastroenterologist. Tissue pathology demonstrates normal squamous epithelium with no BE identified.

Conclusion: At two years post-operative, patients GERD has completely resolved. Her EGD results are consistent with the resolution of Barrett's. These results are short-term. Long-term follow up and monitoring will be necessary. This case report questions the dogma that BE is an absolute contraindication to LSG.

A436

Omental Necrosis as a Cause of Chronic Abdominal Pain in Gastric Bypass Patients

Margaret Ahrens *York PA*
Wellspan York Hospital

BACKGROUND
Chronic abdominal pain is a common complaint following Roux-en-Y gastric bypass (RYGB) and has a wide array of presentations and causes. Torsion of the omental leaflets, created by cleavage of the greater omentum during the bypass procedure, has been previously described as a cause of acute abdominal pain. However, pathology of the omental leaflets has not been shown to cause chronic pain of a non-emergent etiology. This case report presents three cases of omental torsion and necrosis with subsequent calcific change that resulted in chronic abdominal pain.
CASE PRESENTATION
Three cases of patients with chronic abdominal pain are presented herein. All patients had previously undergone Roux-en-Y gastric bypass and presented without laboratory abnormality. They were subsequently taken for diagnostic laparoscopy and found to have encapsulated, calcified, omental masses. Two had computed tomography imaging showing encapsulated fat necrosis in the omentum. These patients were all taken for diagnostic laparoscopy during which masses of calcified fat from torsed omental leaflets were excised. Pain improved in two out of the three cases.

CONCULSIONS
Fat necrosis of the omentum is a documented occurrence and a known cause of acute abdominal pain in gastric bypass patients. However, this case report is the first documentation of it as a cause of chronic abdominal pain. The described patients had no laboratory abnormalities and their imaging studies were inconclusive. Pathology in all confirmed fat necrosis. This report also illustrates the benefit of diagnostic laparoscopy in gastric bypass patients with chronic pain of unknown etiology.

A437

Long-Term Update on the Efficacy of Laparoscopic Adjustable Gastric Banding in the Treatment of Adolescents with Morbid Obesity (age 14-17)

Shinban Liu *Brooklyn NY*[1], Heekoung Youn *New York NY*[1], Bradley Schwack *New York NY*[1], Marina Kurian *New York NY*[1], Christine Ren-Fielding [1], George Fielding *New York NY*[1]
NYU Langone Medical Center[1]

Introduction

Obesity in the adolescent population is an increasing and challenging national epidemic. Our institution has demonstrated favorable short and mid-term results using laparoscopic adjustable gastric banding (LAGB) in adolescents. This analysis is a report of our long-term results in adolescent patients.

Methods

Adolescents aged 14 to 17 who met criteria for bariatric surgery were enrolled in our FDA-approved LAGB trial. Demographic data, body mass index (BMI), laboratory evaluations, and comorbid conditions were collected pre and postoperatively.

Results

112 adolescents underwent LAGB since September, 2001. The mean preoperative weight of 298±57 lbs and BMI 48±7 kg/m^2 were reduced to 233±67 lbs and 37±10 kg/m^2 respectively at 5 year follow up. The percent excess weight loss (EWL) at 1 year, 2 years, 3 years, 4 years, and 5 years was 41±19%, 44±23%, 45±26%, 43±28%, and 44±27% respectively with an 80% follow up rate at 5 years. Comorbid conditions improved with resolution of diabetes mellitus (50%, n=6), impaired glucose tolerance (71%, n=7), dyslipidemia (43%, n=46), and hypertension (63%, n=8). Patients had a significant increase in mean iron level after LAGB (11 mcg/dL increase) and no significant changes in folate, B12, vitamin D, phosphorus, magnesium, and albumin.

Conclusion

LAGB is an effective and sustainable form of bariatric weight loss for adolescents with an EWL of 44% at 5 year follow up. Additionally, the weight loss was found to be associated with excellent resolution of comorbid conditions and no significant nutritional deficiencies.

A438

Clinical Outcomes of Single Stage Conversion of Gastric Banding to Sleeve Gastrectomy or Gastric Bypass: a Meta-analysis of the Literature

Caitlin Mueller *Atlanta GA*[1], Jeremy Jose *Lawrenceville GA*[1], FeTausha McCoy *Suwanee GA*[1], Aliu Sanni *Snellville GA*[2]
PCOM- Georgia Campus[1] Eastside Bariatric and General Surgery[2]

Introduction:

Adjustable gastric banding has fallen out of favor in recent years due to its complications and inferior weight loss achievement compared to other bariatric surgical procedures. This study aims to evaluate the outcomes of single stage gastric banding revision to either laproscopic Sleeve Gastrectomy(LSG) or Roux-en-Y gastric bypass(LRYGB).

Methods:

A systematic review was conducted through PubMed to identify relevant studies from 2015 to 2018 comparing the outcomes of single stage gastric banding revision to LRYGB versus LSG. Four out of 27 studies were considered for quantitative analysis. Outcomes included were anastomotic / staple line leaks, 30-day readmission, 30-day reoperation, and percentage of excess weight loss(%EWL) at 12 months. Results are expressed as odds ratio(OR) and 95% confidence interval(CI), and standard difference in means(SDM). Statistical analysis was performed using fixed-effects meta-analysis to compare the OR and SDM (Comprehensive Meta Analysis Version 3.3.070 software, Biostat Inc., Englewood, NJ).

Results:

A total of 5,053 patients were studied, 1,566 undergoing band revision to LRYGB, and 3,487 revision to LSG. There are more 30-day reoperations (OR=0.541, p=0.002) and readmissions (OR=0.687, p=0.007) with conversions to LRYGB when compared to LSG. There was no difference in staple line leaks (OR= 0.734, p=0.35) or %EWL at 12 months (SDM= -0.318, p= 0.063) between the two groups.

Conclusions:

Gastric band conversions to both LRYGB and LSG are both safe and effective options to help bariatric patients achieve their goals. Single stage gastric band conversion to LSG is associated with reduced postoperative complications when compared to LRYGB.

A439
Possible Role of Omentopexy in Minimising Post Sleeve Gastrectomy Complications
Ibrahim Hassan *Kuwait*
Sidra(Alomooma)Hospital,Kuwait

Abstract: Laparoscopic Sleeve Gastrectomy(LSG)has recently been recognized as a potential stand alone operation for the treatment of obesity worldwide.However,the incidence of postoperative nausea and vomiting is not uncommon in surgical practice,whereas other serious complications might occur including leakage or bleeding. Objective: To evaluate the possible role of post-sleeve gastrectomy staple line plication and omentopexy to minimize the aforementioned postoperative complications. Subjects: This was a

retrospective study that was performed at Sidra (Alomooma)Hospital in kuwait.Data was collected from November 2014 to December 2017. Three hundred patients were selected for this study and divided into 2 groups to compare the outcome and the potential complications in each group. In group A,150 Patients had LSG with stapler line plication and omentopexy. In group B,150 patients had LSG alone. Both groups were followed and compared for the incidence of the aforementioned complications. Results: No patients had leakage in group A(0%),wheres 1 patient in group B(0.66%)had leakage in postoperative day 1. Eight patients had early postoperative vomiting in group A(5.33%);one of them required hospital readmission for supportive treatment (0.66%). Eighteen patients in group B(12%) suffered from vomiting ,and 4 of them (2.6%) were hospitalized. Two patients in group B(1.33%) had postoperative bleeding due to haemoglobin drop from 14.9 to 10 g and from 13 to 9.9 g.Both were treated conservatively with blood transfusion. Conclusion: In this study ,It was noticed that performing LSG with staple line plication and omentopexy offers an extra guard and against postoperative nausea,vomiting,leakage or bleeding.

A440
Comparison of a Novel, Port-Free Internal Liver Retractor to Standard Liver Retraction in Bariatric Surgery

Donald Yarbrough *Corvallis OR*[1], Erika La Vella *Corvallis OR*[2], Andrew Sweeny *Corvallis OR*[2]
Samaritan Health Services[1] Samaritan Weight Management Institute[2]

Background: Adequate liver retraction is an essential in bariatric surgery, with technical challenges due to an enlarged, fatty liver. Traditional methods utilize externally-fixed, rigid retractors with inherent drawbacks including an extra incision, pain, scarring, and potential liver injury. Advancement of laparoscopic techniques for liver retraction methods has focused on simplicity, reproducibility, safety and effective use to avoid patient comorbidity.
Objective: Evaluation of the safety and efficacy of a port-less internal, atraumatic bulldog liver retractor versus standard retraction in a large series of patients undergoing minimally-invasive bariatric surgery.
Methods: Retrospective review on all bariatric operations from April 2010 to December 2017. Standard retraction (Nathanson or equivalent) was used in 108 patients and a novel, internal bulldog-rubber band retractor system attached to the pars flaccida and anterior abdominal wall was used in 483 patients. Any operations with additional procedures, re-do operations, or missing data were excluded.
Results: 551 procedures (gastric bypass and sleeve gastrectomy) were included. No significant differences

were found in demographics, AST/ALT elevation, need for additional retraction (9.8% of cases), or length of stay (LOS) between the bulldog and standard retraction. Adjustment for demographics and procedure in a multivariable logistic regression model, BMI >50 was more likely to require additional retraction methods (OR 2.8, 95% CI 1.2 – 6.8) and gastric bypass had higher risk of postop elevation AST/ALT 3 times baseline than a sleeve.
Conclusion: Port-less internal bulldog retraction can safely and effectively retract the liver and expose the stomach and GE junction in bariatric surgery.

A441
Validation of the Yale Food Addiction Scale 2.0 Among a Bariatric Surgery Population
Shannon Clark *Detroit MI*[1], Kellie Martens *Beverly Hilld MI*[1], Christine Mason *Detroit MI*[1], Aaron Hamann *Detroit MI*[1], Lisa Miller-Matero *Detroit MI*[1]
Henry Ford Health System[1]

Symptoms of food addiction relate to obesity and may impede the success of individuals who seek bariatric surgery. The original Yale Food Addiction Scale (YFAS) was validated for use among patients who underwent bariatric surgery; however, the YFAS was revised to reflect the changes in substance use criteria in the DSM-V. The purpose of this study was to validate this revised measure of food addiction, the YFAS 2.0, among patients pursuing bariatric surgery. A retrospective chart review was conducted of 315 patients who underwent pre-surgical psychological evaluation for bariatric surgery. Information gathered included symptoms of food addiction (YFAS 2.0), emotional eating (Emotional Eating Scale; EES), and history of problematic substance use and binge eating. In this sample, 27.3% met criteria for food addiction. Of those, 20.7% met criteria for mild addiction, 25.3% for moderate, and 54% for severe. The YFAS 2.0 was related to all factors of the EES: Anger/Frustration (p<.001); Anxiety (p<.001); and Depression (p<.001). There was no relationship between the YFAS 2.0 and a history of problematic substance use. The YFAS predicted a history of binge eating above and beyond emotional eating (p< .001; *Exp(B)*=1.29). Given the relationship between the YFAS 2.0 and emotional eating, convergent validity is present. Divergent validity was also established for the YFAS 2.0 because it was not related to other substance addictions. Accordingly, the YFAS 2.0 appears to be a valid measure and could be used in the pre-surgical assessment of bariatric candidates.

A442
Concomitant Bariatric Surgery and Ventral Hernia Repair

Steven Schulberg *Brooklyn NY*[1], Vadim Meytes *Brooklyn NY*[1], George Ferzli *Staten Island NY*[1]
NYU Langone Brooklyn[1]

Introduction:
As bariatric surgery becomes increasingly prevalent, new questions arise regarding management of coexisting surgical issues in this population. No clear consensus exists regarding treatment of patients undergoing bariatric surgery with concomitant or recurrent hernias. We aim to review the available literature in order to provide recommendations regarding hernia repair in these patients.

Methods:
A systematic review of the available literature was performed in October 2017 using Medline, PubMed, Cochrane Library, and relevant journals. Search criteria included the terms *ventral hernia OR incisional hernia AND repair AND gastric bypass OR gastric sleeve OR gastric band OR bariatric*. 114 articles were discovered and after review, 12 were included in this study.

Results:
All articles included in this study were retrospective reviews. Based on the evidence, primary repair of hernias in the population undergoing bariatric surgery should be avoided due to increased rates of recurrence, seroma, and post operative complications. Mesh repair is preferred in these patients with no consensus for type. In certain situations, it is appropriate to repair recurrent ventral hernias at the time of bariatric surgery. Overall, staged bariatric surgery and interval hernia repair may lead to fewer complications in this patient population.

Conclusions:
After a thorough review of the literature, no clear consensus exists for concomitant treatment of hernias in bariatric surgery patients. Based on the current level of evidence, we recommend interval repair with mesh in these patients. Additional research with randomized controlled trials should be performed in order to provide level 1 evidence regarding this topic.

A443
Community Hospital Decreases Narcotic Usage In Postoperative Bariatric Patients

Robert Felte *Media PA*[1], Caitlin Halbert *Rockland DE*[1], Dakota Urban *Newark DE*[1]
Christiana Care Health System[1]

Background
The use of opioids has had a significant impact on the surgical patient and the surgeon's ability to control postoperative pain but their use has been wrought with complications and dependency.

Objective
The purpose of this study is to assess a

multimodal pain management plan and its effectiveness at reducing opioid usage.

Methods

Laparoscopic gastric bypass and laparoscopic sleeve gastrectomy patients were included in our retrospective cohort study. The postoperative opioid usage of 516 patients from 2016 was compared to that of 96 patients from a 3 month period in 2017 after initiating the new pain management protocol. In the protocol, patients received 15mg intravenous (IV) ketorolac and 975mg oral acetaminophen every six hours. Oral gabapentin, 300mg, was given at bedtime. Patients experiencing pain were treated with oral oxycodone or IV hydromorphone. Before the protocol, patients were managed with IV hydromorphone and transitioned to liquid codeine. Breakthrough pain was treated with IV hydromorphone. The Wilcoxon Ranked Sum test was used.

Results

The study included 494 of the 2016 patients, 95.7%, required IV hydromorphone compared to 86 of the 2017 patients, 89.6%. Hydromorphone usage decreased, from 4.0mg (± 4.0) in 2016 to 1.8mg (± 1.7) in 2017 ($p<0.001$). Acetaminophen usage increased from 975.0mg in 2016 to 3,280.6mg in 2017, ($p<0.001$). 8.5% of patients in 2016 received acetaminophen compared to 93.8% in 2017.

Conclusions

Our multimodal pain protocol successfully reduced opioid usage, specifically hydromorphone. Further analysis and continued protocol driven management provides encouraging outcomes in the effort to reduce opioid consumption.

A444

The PromMera study – an RCT evaluating the effect of a smartphone application to improve lifestyle after bariatric surgery

Mari Hult *Stockholm* [1], Stephanie Bonn *Stockholm* [1], Ellen Andersson *Norrköping* [2], Kristina Spetz *Norrköping* [2], Ylva Trolle Lagerros *Stockholm* [1]
Karolinska Institutet[1] Linköping University[2]

Being physically active is highly recommended to optimize postoperative outcomes after bariatric surgery. To motivate and support physical activity, smartphone applications can be used as a new tool to deliver interventions directly to the individual patient. Our aim is to evaluate a new smartphone application to support physical activity and intake of supplementary vitamins and minerals after bariatric surgery. We hypothesize that at follow-up, the intervention group will be more physically active, have a greater weight loss, and be more compliant with vitamin supplement intake, compared

to the control group.

The ongoing PromMera-study includes patients undergoing bariatric surgery. Inclusion began November 2017, and both men and women are recruited. A total of 150 patients will be included. Participants are randomized 1:1 to intervention (application) or control (standard care) group. The participants in the intervention group use the smartphone application during 12 weeks (week 6-18 post-surgery). Participants' body weight, body composition, physical activity (accelerometer) and lifestyle (questionnaires) are assessed pre-surgery, and at 18 weeks, 6 months, and 1 and 2 years post-surgery. Compliance with vitamins and minerals is assessed through regular laboratory tests, as well as through the prescribed drug register.

To date, over 80 participants have been enrolled. Among these, the majority were women (83%). The mean age and mean body mass index pre-surgery were 40.0 (11.3) years and 41.1 (6.5) kg/m^2. The recruitment process is estimated to be complete by the end of 2018.

The trial is registered at ClinicalTrials.gov Identifier: NCT03480464.

A445

Resolution of Proximal Sleeve Leak Using Endoscopically Place Negative Pressure Vac: First Documented Case in the Southwest

Joseph Heller *Gilbert AZ*[1], Albert Chen *Gilbert Az*[1], Emil Graf *Gilbert AZ*[1], Flavia Soto *Gilbert AZ*[1], David Podkameni *Gilbert AZ*[1]
Banner Gateway Weight Loss Center[1]

This is a case of a 25-year-old female who presented with a leak from the proximal third of her laparoscopically performed sleeve gastrectomy. After performing initial washout and drainage as well as placement of a distal feeding tube, numerous attempts were made to control the leak. These included endoscopic clipping as well as eventual surgical intervention. The leak continued to persist and after a literature search to find alternative methods for resolution, an endoscopic negative pressure vacuum device was placed. This allowed for gradual closure of the fistulous tract to a state where endoscopic clipping was able to control the leak. This was confirmed with multiple methods including radiologic imaging and methylene blue analysis. This is believed to be the first attempt at such in the Southwestern region.

A446

Port-site hernias following robotic colorectal surgery in people with obesity: a case series and review of literature.

Matthew Chang *Rockville MD*[1], Nicholas Morin *Brooklyn NY*, Vadim Meytes *Brooklyn NY*, George

Ferzli *Staten Island NY*, Shinban Liu *Brooklyn NY*, Josef Shehebar *Brooklyn NY*
NYU Langone - Brooklyn[1]

Port-site hernia is a rare complication following robotic surgery that can result in disastrous outcomes. We describe incarcerated port site hernias in two patients with obesity. Both patients required laparoscopic reduction. One patient was taken back to the operating room a third time during his hospital admission for small bowel resection due to pneumatosis intestinalis.

It is standard practice to not close the fascia of port-sites less than 12 mm in robotic surgery. However, this allows for the rare possibility of small bowel herniation through the port-site. We suggest that our patients' history of obesity and metabolic dysfunction contributed to difficult port retention during the case, and longer operating times which caused an increased amount of torque at the port-site. This extended the fascial defect, ultimately leading to the incarceration of small bowel in the port-site.

A447
Endoscopic Versus Laparoscopic Gastrojejunal Revision as Therapeutic Options for Weight Regain after Roux-en-Y Gastric Bypass

Keith King *Piscataway NJ*[1], Ragui Sadek *New Brunswick NJ*[1]
Rutgers RWJ Medical School[1]

Background
Revisional surgery is rapidly growing within the field of bariatric surgery, increasing from 6% of all cases in 2013 to 13.9 % in 2016. Endoscopic gastrojejunal revision (EGJR) has been shown to be a safe, effective, and less invasive alternative to revisional surgery in addressing weight regain. However, there is limited data available comparing EGJR to similar laparoscopic techniques. We examine the effectiveness of EGJR and laparoscopic gastrojejunal revision for weight regain after Roux-en-Y gastric bypass.

Methods
A retrospective review was conducted of 83 patients who underwent EGJR using interrupted suture technique for weight regain. Pre and post-revision weights, intraoperative factors, and complications were collected and analyzed. For comparison purposes, a systematic literature review was conducted to identify peer-reviewed articles examining outcomes after laparoscopic gastrojejunal revision.

Results
EGJR were performed in 83 patients (84% female, mean age: 50.6, BMI: 42.5 kg/m^2). Technical success (stoma diameter ≤10 mm) was achieved in all cases. BMIL at 3, 6, and 12 months was 2.8 ± 2.0 (N = 42), 3.1 ± 2.4 (N = 22), 2.1 ± 3.0 (N = 12) kg/m^2 respectively. Eight articles met

criteria with 156 pooled patients. BMIL at 3, 6, and 12 months was 5.97 ± 1.22, 5.43 ± 1.23, and 7.55 ± 1.19 kg/m^2 respectively.

Conclusions

Laparoscopic gastrojejunostomy revision has a greater impact on weight loss when compared with EGJR. However, as a less invasive procedure with fewer complications, EGJR may still be considered as part of the algorithm for addressing weight regain after RYGB.

A448

Resolution of Diabetes Mellitus with Laparoscopic Sleeve Gastrectomy – A Single Institution Review

Joseph Heller *Gilbert AZ*[1], Andy Novak *Gilbert AZ*[1], Eshaan Daas *Phoenix AZ*[2], Albert Chen *Gilbert Az*[1], David Podkameni *Gilbert AZ*[1], Emil Graf *Gilbert AZ*[1], Flavia Soto *Gilbert AZ*[1]
Banner Gateway Weight Loss Center[1] University of Arizona[2]

Background: Laparoscopic sleeve gastrectomy (LSG) is a proven intervention to induce metabolic changes resulting in weight loss and comorbidity resolution. Its applications as a surgical procedure which result in metabolic therapy in chronic conditions such as diabetes mellitus (DM), are well established in the literature. This paper will analyze pre- and post-operative metrics at established time intervals to determine this metabolic surgical program's efficacy in resolution or improvement of DM following bariatric surgery compared with previously published data
Methods: A review of 82 adult diabetic patients were treated with sleeve gastrectomy at our two affiliated medical centers over one year. We conducted a single point analysis of longitudinal data for one year through retrospective chart review. Primary outcome was resolution of DM determined by glucose control without medication. Secondary outcomes included reduction of antidiabetic medications, EWL%, HgbA1c,BMI.
Results: 78 patients,55 females and 23 males,were included in the final study. 28 patients utilized insulin,while 50 were on only oral medication(s). 55 patients (70.1%)were glycemic controlled without medication within the first year. 41/50 patients (82.0%) on oral medications alone demonstrated resolution. HgbA1c drawn between 3-6 months postoperatively resulted in a mean of 6.31% ,median of 6.1%
Conclusions: Sleeve gastrectomy is a proven surgical method for weight loss and DM resolution. Our institution has acceptable data when compared to national literature. In our review, resolution was much higher in patients on oral hypoglycemic medications vs insulin which could be open to further study.

A449

Techniques for ERCP access in the post Roux-en-Y Gastric Bypass

Patient: A novel approach and review of the literature R. Robalino DO, V. Meytes DO, George Ferzli MD, NYU Langone Hospital – Brooklyn

Ryan Robalino *Brooklyn NY*[1], Vadim Meytes [2], George Ferzli *Staten Island NY*[3]
NYU Langone Hospital - Brooklyn[1] Fellow[2] Attending[3]

Introduction: As the prevalence of people with obesity continues to rise so do surgical weight loss procedures. Approximately 25% of the nearly 200,000 procedures performed annually are Roux-en-Y Gastric Bypasses (RYGB). RYGB patients present unique challenges to the management of biliary pathology. When endoscopy is insufficient to access the ampulla, a surgical approach is mandated.

Methods: In our patient with recurrent choledocholithiasis following previous biliary clearance we anticipated multiple procedures for definitive decompression. The superior/posterior position of the gastric remnant, in relation to the costal margin and gastrojejunal anastomosis respectively, required a lengthening procedure to reach the abdominal wall. A modified tube gastrostomy was created along the greater curvature of the gastric remnant which provided adequate length and allowed multiple ERCPs to be performed.

Discussion: Endoscopic access to the ampulla is needed for the treatment of biliopancreatic disease which is seen with increased frequency in people with obesity. Endoscopic adjuncts, such as balloon and spiral enteroscopy, have similar success rates cited at approximately 60%. When unsuccessful, the classic approach is laparoscopic-assisted gastrostomy with trans-gastric ERCP. This technique requires the coordination of the surgeon, endoscopist, and procedural staff to function simultaneously for a one-time access point to the ampulla. Our technique (modified tube gastrostomy) allowed multiple ERCPs to be performed and subsequent gastrostomy reversal when definitive biliary drainage was obtained.

Conclusion: A modified tube gastrostomy to the distal gastric remnant is a safe alternative for repeat ERCP access to the ampulla in RYGB patients with choledocholithiasis.

A450

Laparoscopic sleeve gastrectomy comorbidity reduction: a six months to one year-follow up.

Omar Quiroz *MEXICO MEXICO*[1], Alfredo Peniche *MEXICO* , Víctor Cuevas *México*
PEMEX[1]

Background
Laparoscopic sleeve gastrectomy (LSG) has become the most popular procedure worldwide for management of the obese patient. Just recently it has

been gaining popularity amongst bariatric surgeon in our country.

Introduction
According to WHO data from 2016, Mexico has the highest prevalence in obesity amongst Latin American Countries and has become the number one in Latin America.

Objectives
The purpose is to assess the impact of the changes in laparoscopic sleeve gastrectomy on 6 months, 1 year, 2 years, and to evaluate the impact of those changes in the excess weight loss, complications, and resolution of comorbidities.

Methods
A retrospective data collection in a single institution was performed in our date registry of LSG from 2012-2017, data analysis was conducted at 6 months, 1 and 2 years to asses the percentage of excess body weight loss and comorbidity status change, in all cases we used the same procedure.

Results
The percentage of resolved sleep apnea from baseline in 6 months and 1 year were 45.7% and 84.1%, for reflux disease 33.1% and 48.2%, hyperlipidemia 45% and 57%, hypertension 38.9% and 42.2%, diabetes 57% and 75% respectively. The percentage of excess body weight loss at the 6 months, 1-and 2-years was 46%, 59% and 52% respectively.

Our results show LSG is a safe and effective weight-loss procedure with results similar to those of gastric bypass and superior to laparoscopic adjustable gastric banding. Additional long-term studies are still needed to accurately compare laparoscopic sleeve gastrectomy with gastric bypass.

A451
Decreasing Narcotic Prescribing and Availability in a Post-Operative Bariatric Program
Ginny Andreasik *Baltimore MD*, Karen Wheeler *Baltimore MD*[1], Andrea David *Baltimore MD*[1]
MedStar Franklin Square Medical Center[1]

INTRODUCTION: While prescription narcotic abuse and misuse can be found all across the United States and the world, the state of Maryland has one of the highest overdose rates from prescription drugs. A quality improvement project was designed to evaluate and assess the need to decrease prescribing narcotic pain medication in the post-operative bariatric surgical program at MedStar Franklin Square Medical Center in Baltimore, Maryland. This project also provided an opportunity for patients to bring their unused narcotic medication to the office for safe, convenient, secure disposal. The goal of this project was to decrease the overall prescription narcotic medication prescribed to the post-operative bariatric patient by 25%.

METHODS: In April 2017, prescribers conducted a review of prescription practices. Adjustments to the amount of narcotic pills prescribed were made on an individual prescriber basis. Also, patient education began in April 2017 to discuss the importance of properly destroying unused prescription narcotics, pain management and pain control techniques, and non-narcotic pain management efforts which included ambulating, hydration, distraction, and massage therapy. Staff members were also trained on the safe disposal of unused prescription narcotics.
RESULTS: In January of 2017 bariatric patients were prescribed a total of 591 narcotic pills. By September 2017, the number of prescribed narcotic pills decreased by 66% with a total of 204 narcotic pills prescribed. An increase in the amount of prescription narcotics being destroyed safely by trained staff was also seen.

A452
Portomesenteric Thrombosis (PMVT) after Laparoscopic Sleeve Gastrectomy (LSG)

Michael Cudworth *Chicago IL*[1], Gabriela Aguiluz *Chicago IL*[1], Roberto Bustos *Chicago IL*[1], Mario Masrur *Chicago IL*[1], Antonio Gangemi *Chicago IL*[1], Lisa Sanchez-Johnsen *Chicago Illinois*[1], Chandra Hassan *CHICAGO IL*[1], Pier Cristoforo Giulianotti *Chicago IL*[1]
UIC[1]

Introduction. PMVT after LSG is relatively rare in patients with a previously non-cirrhotic liver, with a reported incidence between 0.3-1.8%. Symptoms are usually non-specific, severity depends on location and degree of venous obstruction. We present a case of a 60-year-old male patient with PMVT after LSG.
Methods. This patient had a preoperative BMI of 42.8 and history of paroxysmal Afib (not on anticoagulation), hypertension and hyperlipidemia. He underwent an uneventful LSG. Discharged on POD1, ambulating and tolerating clear liquids. The patient presented to emergency on POD11 with abdominal pain, bloating and loose stools. Labs were unremarkable other than WBC of 23.5. CT without contrast reported diffuse bowel wall edema suspicious for infectious enteritis. Patient improved with IV fluids and antibiotics and was discharged on day 14. Returned 5 days post-discharge with increasing shortness of breath, abdominal pain, loose dark stools and Afib with RVR. A CT with intravenous contrast demonstrated left upper lobe pulmonary embolism and a thrombus in the portal vein extending into the splenic and superior mesenteric veins and ascites, of which 5L were drained percutaneously. The patient was treated with esmolol, systemically heparinized. Later transitioned to apixiban per hematology consult due to repeated CT scan demonstrated stable but persistent

PMVT. Discharged on day 13. At follow-up, patient reported feeling well, and a Dupplex-scan showed a patent portal vein and normal flow.
Conclusions. When non-occlusive PMVT after LSG occurs, a hypercoagulable workup should be obtained. PMVT management entails hospitalization, electrolyte replacement, bowel rest, and systemic anticoagulation.

A453

Use of disposable stomach clamp results in efficient usage of staple loads at time of Vertical Sleeve Gastrectomy

Aviv Ben-Meir *Cleveland OH*
Lake Health

Introduction
There is a tremendous amount of variability in technique for performing laparoscopic vertical sleeve gastrectomy and in the number of staple loads used to perform the operation. In our experience, five to six loads are typically required to perform the operation. Recently, a disposable gastric clamp has become available to aid in performance of vertical sleeve gastrectomy with a goal of standardizing vertical sleeve gastrectomy. This retrospective study evaluated the number of staple loads used to perform vertical sleeve gastrectomy in the first 39 patients undergoing sleeve gastrectomy with this device.
Methods
From November 29, 2017 to April 24, 2018, 39 patients had laparoscopic vertical sleeve gastrectomy at our institution utilizing a disposable gastric clamp to fix the relationship of the stomach to the stapler.
Results
Of the 39 patients, five patients required three staple loads to complete sleeve gastrectomy. The remaining 34 patients required four staple loads to perform the operation. There were no intraoperative adverse events and no postoperative staple line complications in this group of patients. No patients had any postoperative nausea.
Discussion
Vertical Sleeve Gastrectomy utilizing a stomach clamp reduces the number of loads fired to an average of 3.9 loads per operation. This is a reduction in the number of loads used in our institution. In addition to a time and cost savings performing the operation, there appears to be a more consistent appearance of the postoperative day one upper GI appearance of the stomach.

A454

Reducing Wait times to the 1st Scheduled Weight Management Clinic Appointment after Bariatric Seminar Attendance

Mary Ellen Lawless *Cleveland OH*[1], Sheila Vacha *Cleveland OH*[2], Vicki Dachtler *Cleveland OH*[2], Mary Madal *Cleveland OH*[2], Karen Yuhasz *Cleveland OH*[2], Adam

Perzynski *Cleveland OH*[2], Charles Thomas *Cleveland OH*[2], Janeen Leon *Cleveland OH*[2], Elaine Mead *Cleveland OH*[2], Eileen Seeholzer *Cleveland OH*[2], Sergio Bardaro *Cleveland OH*[2]
The MetroHealth System[1] MetroHealth Medical Center[2]

Background:
Prospective Weight Loss Surgery (WLS) patients complete a lengthy presurgical process. Common first steps include: attending an information session and scheduling a weight management clinic (WMC) appointment. Process delays can be an area to improve patient access.

Objective:
Decrease average wait time and variation between WLS seminar attendance and first WMC appointment by ≥50% within three months using two scheduling interventions: A) blocking WMC appointments slots for WLS seminar attendees and B) offering appointment scheduling services onsite post seminar.

Methods:
Process mapping identified time delays to first scheduled WMC appointment post seminar. Monthly seminar attendee lists were reviewed for baseline trends. Mean, minimum, and maximum wait times were calculated and an Xbar-R and range chart calculated average and variation for wait times. Independent sample t-tests compared time to appointment for baseline attendees (Nov 2017 – Feb 2018) to intervention A attendees (March 2018) and interventions A+B attendees (April 2018).

Results:
Wait times decreased by 28 days (65% improvement) and variation decreased 64 days (77% reduction). Mean and range for each group included: baseline (n=112) 43, 6-89 days; Intervention A (n=30), 30, 9-50 days and Intervention A+B (n=20) 15, 2-21 days. Two independent sample t-Tests resulted in significant differences between the means: Baseline > Intervention A ($p=0.035$), and Baseline > Intervention A+B ($p=0.00001$).

Conclusions:
Prioritizing presurgery patients by blocking appointment slots and scheduling appointments onsite following WLS seminar significantly reduced average wait time and variation. QI methods can be used to monitor process changes to optimize patient access.

A455

Outreach to laparoscopic adjustable gastric band patients: A quality improvement project

Catherine Cline *East Kingston NH*[1], Sara Tortorici *Burlington MA*[1], Pamela O'Brien [1], Thomas Schnelldorfer *Burlington MA*[1], Dmitry Nepomnayshy *Burlington MA*[1], David Brams *Burlington MA*[1]
Lahey Hospital and Medical Center[1]

Background: Recent research has shown patients experience long term complications related to laparoscopic adjustable gastric band (LAGB) including but not limited to: suboptimal weight loss, significant food intolerances or maladaptive eating behaviors, vomiting, reflux, lap band slip and lap band erosion.
Introduction: The Lahey Hospital and Medical Center Surgical Weight Loss Program (SWL) has placed 896 lap bands between 2003 and 2014. Significant loss to follow-up has been noted with postop LAGB patients. This quality improvement project was developed to communicate negative outcomes from LAGB surgeries and to recapture patients.
Methods: 803 laparoscopic adjustable gastric band patients were identified through a surgical weight loss database from 2003-2010. Additional patients were captured through the MBSAQIP database from 2011-2014. Exclusion criteria included deceased patients. A simple, one time mailed letter outlining possible complications was sent to patients in August 2017. An algorithm was developed support care pathways for the anticipated surge in patients returning for care.
Results: Of the 803 letters sent, 156 returned for appointments to reestablish care. As of March 2018, there have been 20 conversion surgeries completed, 6 conversion surgeries scheduled and 3 patients are ready to be scheduled. As a result of the letter, 19% of patients were seen in the clinic. Appointments nearly doubled in the 6 month following the mailing, compared to the prior year.
Conclusion: The simple, one time mailer allowed for improved quality patient care by addressing complications, increase appointment and surgical volume and improve patient care to address long term postop complications.

A456
VARIATION BY AGE IN BASELINE CLINICAL CHARACTERISTICS AND POST-OPERATIVE OUTCOMES AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB)
Christopher Bashian *Vineland NJ*[1], Gus Slotman *Vineland NJ*[1], Malinda Lyon *Vineland NJ*[1]
Inspira Health Network[1]

Introduction: Baseline data and LRYGB clinical outcomes by age are unknown. Objective: To identify age variation in pre-operative LRYGB characteristics and post-operative outcomes.

Methods: 83,059 LRYGB patients from the Surgical Review Corporation's BOLD database were analyzed pre-operatively through 24 months by age: <30, 30-40, 40-50, 50-60, 60-70, >70. Statistics: ANOVA, Chi-squared, linear and categorical models.

Results: Female/male <30 (85%/15%) to >70 (63%/37%) ($p<0.0001$). Race:

Caucasian <30-68%/>70-88%; African-American 30-40-14%/>70-3.5%; Hispanic <30-14%/>70-4% (p<0.0001) Insurance: Medicaid: <30-9.9%/>70-2.2%; Medicare: <30-2%/>70-53%; Private; 40-50-87%/>70-42% (p<0.0001). Baseline to 24 months, diabetes, hypertension, back and musculoskeletal pain, gout, dyslipidemia, peripheral vascular disease, pulmonary hypertension, sleep apnea (OSA), and stress urinary incontinence increased linearly <30->70 (p<0.0001) as did 24 month angina and leg edema (p<0.0001) support group and GERD (p<0.05). Weight and BMI (p<0.001), PCOS, pseudotumor cerebri, and smoking varied by inverse age, <30 highest to 24 months, as did baseline substance abuse, and alcohol abuse to 12 months, (p<0.0001). 30-40: highest baseline-12 mental health diagnosis and 12 month alcohol. 50-60: highest baseline asthma, GERD , liver disease, depression, and psychological impairment. 60-70: highest angina, OHS, cholelithiasis, panniculitis, leg edema, and fibromyalgia. Liver disease, panniculitis, asthma, mental health, pulmonary hypertension, and substance abuse did not vary by age after LRYGB.

Conclusion: Clinical characteristics and LRYGB outcomes vary by age. Older patients who have obesity the longest had highest weight-related problems, and resolved them least. In spite of greater weight, BMI and alcohol/tobacco abuse, youngest patients fared best. This advance knowledge could help LRYGB patient selection and optimize management.

A457

Risk of anemia in morbidly obese patients after bariatric surgery in Taiwan

Hsien-Hao Huang *Taipei* [1], Ming-Shun Hsieh *Taoyuan* [1], Chih-Yen Chen *Taipei* [1]
Taipei Veterans General Hospital[1]

Background: Bariatric surgery is a promising long-term body weight loss for morbidly obese patients, but the increasing rate of anemia was a challenging problem.[1] 5% of patients after bariatric surgery had anemia.[2]
Method: We conducted a population-based cohort study by using claims data from the Taiwan National Health Insurance Research Database. The study cohort comprised 4,922 patients diagnosed with morbid obesity.
Results: Among the morbidly obese patients, 3,086 underwent bariatric surgery. Females and younger subjects were more prevalent in the surgical group than non-surgical group. Bariatric surgery reduced all obesity-related comorbidities. Cox proportional hazards regression was performed, which revealed increased risk of anemia after bariatric surgery among obese patients (adjusted hazard ratio: 2.36, p=0.0001). After adjusting for sex and age, the incidence of anemia was increased in the females population (adjusted hazard ratio, 2.48, p<

0.0001), in 30–64 years-old-group (adjusted hazard ratio: 2.37, $p < 0.001$) and 20–29 years-old-group (adjusted hazard ratio: 3.83, $p < 0.05$). Malabsorptive procedures has higher hazard of anemia than restrictive procedures. The cumulative incidence rate of anemia showed a significant increased rate in those undergoing bariatric surgery by log-rank test ($p= 0.0002$).
Conclusion: Based on the Taiwan database population-based cohort study, bariatric surgery increases the risk of anemia among morbidly obese patients, especially in the female population and patients aged 20–29, and 30–64 years. The malabsorptive procedures have more effect than the restrictive procedures on anemia after bariatric surgery.

A458
A Single-Center Retrospective Cohort Study of Contraceptive Counseling, Referral and Uptake Among Women Undergoing Bariatric Surgery
Beatrice Telzak *New York NY*[1], Veronica Ades *New York NY*, Akuezunkpa Ude Welcome , Cara Dolin *New York NY*
New York University[1]

Objectives: Assess contraceptive counseling and use among women undergoing bariatric surgery and determine predictors of referral to contraceptive counseling.

Methods: A retrospective cohort study of women aged 18-45 who underwent bariatric surgery at Bellevue Hospital between 1/1/14-12/31/15. Demographic characteristics and information about contraceptive counseling and use prior to bariatric surgery was collected through electronic medical record review. Data analysis was conducted using descriptive statistics, and associations were examined with chi square tests and logistic regression.

Results: Of 1087 women who underwent bariatric surgery during the study period, 86.9% had recommendations for delayed childbearing documented, and 26.9% were using contraception at time of their preoperative visit. Of those not using contraception, 59.3% were referred to gynecology but only half (53.7%) attended a gynecology visit. While 79.9% of those women attending a gynecology visit had contraception prescribed to them, 66.4% being long acting contraceptive methods. Age was inversely associated with odds of referral (OR=0.95, $p<0.001$), while there was no association with race/ethnicity or BMI.
Discussion: The majority of women were not using contraception at time of bariatric surgery preoperative visit. Preoperative bariatric surgery workup provides an opportunity to counsel high-risk women regarding family planning, and referral to gynecology clinic can improve contraceptive uptake, Gynecologist and bariatric surgeons should work together to

improve contraceptive counseling and uptake among reproductive-aged women.

A459
Telemedicine Follow-up After Bariatric Surgery

Adam Meyers *Sacramento CA*[1], Elizabeth Pontarelli *Sacramento CA*[2], Sanjoy Dutta *Fremont CA*[2], Gary Grinberg *Elk Grove CA*[2], Pandu Yenumula *Sacramento CA*[2]
Univerisity of California Davis Health System[1] Kaiser Permanente South Sacramento Medical Center[2]

Background:
Telemedicine is evolving as an efficient and cost-effective method for conducting surgical follow-up care. We began offering telemedicine follow-up visits (TFVs) after non-revisional laparoscopic gastric bypass (LGBP) and non-revisional laparoscopic sleeve gastrectomy (LSG) in April 2016. We evaluated the rate of emergency room visits and readmissions before and after offering TFVs.

Methods:
This a retrospective review of prospectively entered medical record data from a single bariatric surgery center. Nine hundred and forty patients underwent non-revisional LGBP or LSG during the first 21 months in which we offered TFVs. Nine hundred and five patients underwent non-revisional LGBP or LSG in the 21 months prior to offering TFVs and these patients had in-person postoperative follow-up visits. Follow-up occurred at 1 and 4 weeks for both cohorts.

Results:
A total of 1140 TFVs were scheduled between April 2016 and December 2017. The rate of successful TFV connection was 76%. The average duration of each TFV was 4.9 minutes. 72% (681) of our patients completed a TFV for at least one of their two follow-up appointments. 49% (558) completed TFVs for both follow-up appointments. The frequency of emergency room visits before and after implementing TFVs was 12.4% and 14.0% (P=0.29). The frequency of hospital readmission was 1.8% and 2.2% (p=0.48).

Conclusion:
Telemedicine is an efficient method for surgical follow-up after bariatric surgery. Preliminary data suggests that there is no significant difference in the rate of emergency room visits or hospital readmission when telemedicine is used for routine follow-up after non-revisional LGBP and LSG.

A460
Long-term outcomes comparing conventional surgical management versus new minimally invasive techniques of pilonidal sinus disease. Meta-analysis and review of literature.

Grace Yi *Alpharetta GA*, Bo Soyele [1], Maxwell Bempah [1], Luis Valdes [1], Judy Trang [1], Assia Miller *Loganville GA*[1], Christian Cruz Pico *Atlanta GA*[1], Angelina Postoev *Loganville GA*[1], Christopher Ibikunle *Loganville GA*[1]
GeorgiaSurgiCare[1]

Background
Pilonidal disease is a subcutaneous infection occurring in the upper half of the gluteal cleft. The optimal treatment of this disease is controversial and more complex techniques do not obviate the risk of failure or recurrence. A consensus on its efficacy and outcomes of minimally invasive techniques versus standard surgical treatment has not been reached. We reviewed the efficacy of minimally invasive techniques versus conventional surgical methods.
Methods
PubMed, Medline, Scopus, Ovid and Google scholar databases were searched. All studies describing minimally invasive techniques versus standard surgical treatment were included. The primary outcome parameter was recurrence and the secondary outcome parameters were complication rate, operating time, return to work and healing time.
Results
A total of 265 studies were screened. Out of these, 14 studies were finally included for the analysis. Sample sizes for minimally invasive procedures and conventional methods were 2806 and 1639 respectively. The analysis demonstrated a net proportion meta-analysis pooled rate of 1.90% (95% CI = 1.29–2.80) for recurrence, 1.04% (95% CI = 0.65–1.65) for complications, and 1.5 minimally invasive procedures vs.19.2 days of conventional procedure days for healing time.
Conclusions
The meta-analysis demonstrates that minimally invasive techniques have distinct advantages. These include high success rate, possible in all types of pilonidal disease (simple and complex), low complication rate, short operating time, and early return to normal routine and work. This procedure can be performed conveniently under local anesthesia as an outpatient procedure.

A461

Outcomes of bariatric surgery in patients undergoing complex incisional hernias with loss of domain.

Turna Mukherjee *Gaithersburg MD*, Nara Tashjian *Omaha NE*[1], Margaret Siu *Omaha NE*, Sarah Aurit *Omaha NE*, Nicholas Whitenack *Omaha NE*, Robert Fitzgibbons *Omaha NE*, Kalyana Nandipati *OMAHA, NE NE*
Creighton University School of Medicine[1]

Introduction:
This study investigates outcomes in patients undergoing bariatric procedure with concurrent complex incisional hernia (CIH) with loss of domain (LOD).

Methods:
In this retrospective study, patients undergoing bariatric surgery at our institution between 2007 and 2018 with at least 12 month follow up were included. Patients were stratified into two groups dependent on presence of CIH with LOD. The Mann-Whitney and the Fisher's exact tests were used for statistical comparison of continuous and categorical variables, respectively. Analysis of covariance (ANCOVA) analyzed BMI at 12 months after adjusting for baseline BMI; $p < 0.05$ was considered significant.

Results:
Twelve patients were found to have CIH with LOD undergoing bariatric procedure, five underwent laparoscopic sleeve gastrectomy (LSG) and seven underwent laparoscopic roux en Y gastric bypass (LRNYGB). Twenty-nine patients underwent bariatric procedure without CIH, five with LSG and twenty-four with LRNYGB. Patients with CIH had excess weight loss (EWL) of 51.81% at 12 months postoperatively compared to 67.18% in patients without CIH with no statistical significance ($p = 0.368$). Resolution of comorbidities including diabetes, hypertension and sleep apnea was not significantly different between groups. ANCOVA model results showed no significant difference in BMI at 12 months between the CIH and non-CIH groups ($p = 0.289$).

Conclusion:
Bariatric surgery can be safely performed in patients with CIH and LOD with comparable outcomes.

A462
The role of the NLRP3 inflammasome and Caspase-1/11 in lipid inflammatory metabolism and gut microbiota profile of obese animals high fat diet-induced.
Livia Sant'Ana *Brasilia* [1], Luís Henrique Corrêa *Brasília* [1], Corinne Maurice *Montreal* [2], Kelly Magalhães *BRASILIA* [1]
University of Brasilia[1] McGill University[2]

Background: Obesity is a disease recognized by the WHO since 1997. Currently, this disease affects a large part of world population and is associated with several other pathogenicities, like cancer, as shown in several studies. Inflammation is related to obesity and cancer. Pro-inflammatory mediators cause local and systemic effects. The inflammasome NLRP3, an important protein complex in inflammatory process, is responsible for maturing pro-inflammatory cytokines IL-1β and IL-18. Absence of components of NLRP3 has already been related to enhanced weight gain. Another factor closely related to obesity, inflammation and cancer is the

microbiota. Phylogeny and metabolites of gut microbiota may play a beneficial or harmful role to the development of diseases in the host. This study evaluated the role of inflammasome NLRP3 in inflammatory profile of obese animals and modulation of gut microbiota. **Methods:** wild type, caspase 1/11 and NLRP3 knockout mice were fed with a conventional diet or high fat diet for 90 days. The lipid metabolism, inflammatory response and phylogeny of gut microbiota were analyzed. **Results:** caspase 1/11 knockout mice were more susceptible to obesity, with consequent changes in markers of lipid and inflammatory metabolism (hepatic steatosis, lipid droplet biogenesis, IL-12 secretion) and alteration in abundance of gut microbiota, presenting phyla involved with weight gain and hepatic steatosis. **Conclusion:** Taken together our data rise a new function for caspase 1/11 in modulation of gut microbiota. In addition, our results suggest that obesity diet-induced and the absence of caspase 1/11 may regulate lipid metabolism, inflammatory response and gut microbiota.

A463

Patterns of Preventable ED visits within two years after bariatric surgery. Retrospective Chart Review In A Single Institution.

RICHIE GORIPARTHI *north providence RI*[1], Cullen Roberts *Providence RI*[1], Marco Giorgi [1], Seungjun Kim *Providence RI*[1], Yuqi Zhang *Woodbridge CT*[1], Alicia Alterio *Providence RI*[1], Gary Roye [2], Todd Stafford [2], Beth Ryder *Providence RI*[2], Sivamainthan Vithiananthan *Providence RI*[2]
Brown University[1] Lifespan[2]

Introduction : Emergency department visits (ED) for medical care leads increased costs to the health care system.

Methods: This study looked into a single institution's post-operative ED visit patterns in patients who underwent primary bariatric surgery. Data was collected retrospectively from 2015 to 2017. In the settings of a negative work up, preventable causes of ED visits were defined as: nausea, abdominal pain, constipation, dehydration and dysphagia.

Results: During this period 305 primary bariatric procedures were performed. Also, 114 patients were evaluated in the ED, for a total of 316 visits. There were 14 outlier patients who resulted in 133 ED visits. 61 ED visits were found to have GI complaints, and rest were medical/psychological complaints, which were excluded. 48 visits (79%) were for abdominal pain, 7(11.4%) for nausea, 2 (3.3%) for constipation, 3 (4.9%) for dehydration and 1(1.6%) for dysphagia. There were 18 patients who needed surgeries (10 internal hernias, 2 bowel obstruction and 2 for intraabdominal bleeding, 1 marginal ulcer perforation, 3

Cholecystectomies). Endoscopies with dilations for nausea/dysphagia secondary to stricture were carried out in 7 patients. Total readmissions to the hospital were 27, out of which 18 were for GI issues. Readmission rate was 5.9% over a 2-year period.

Conclusion: Abdominal pain is the common cause of ED visits. Some outliers attributed to 1/3 all visits. Appropriate teaching and triaging may help reduce unnecessary, no- emergent visits to the ED , thereby reducing health care costs.

A464

The usability of temperature-controlled delivery of ablative techniques in managing fecal incontinence. Review of literature and meta-analysis.

Luis Valdes [1], Maxwell Bempah [1], Bo Soyele [1], Assia Miller *Loganville GA*[1], Angelina Postoev *Loganville GA*[1], Kola Ibikunle [1], Christopher Ibikunle *Loganville GA*[1]
GeorgiaSurgiCare[1]

Background: Fecal incontinence is a debilitating condition that can be socially and personally incapacitating. Though a broad range of medical and surgical management options are available, definitive treatment is challenging. New treatment is developed such as a minimally invasive endoanal procedure based on temperature-controlled radio frequency energy delivered to the anal canal muscle. We aim to conduct a systematic review and meta-analysis to access the effectiveness of this new treatment.
Methods: PubMed, Embase, OVID were searched using predefined inclusion criteria for relevant articles published up to April 2018. A total of 143 studies were screened. Seven studies were finally included for the meta analysis. The evaluation focused on quality of life and the Wexner incontinence score.
Results: In the majority of clinical studies, the SECCA procedure has been shown to be an effective treatment of mild-to-moderate fecal incontinence. Meta analysis of a baseline sample of 131 patients revealed statistically significant improvement of Wexner incontinence scores (p= 0.001) and quality of life (p=0.0001) after treatment.
Conclusion: Radiofrequency is a valid treatment option for patients with mild-to-moderate fecal incontinence. When patient selection is appropriate, radio frequency ablation has demonstrated clinically significant improvements in symptoms and could be used as bridge between medical and surgical management.

A465

REVISION SURGERY FOR MALNUTRITION AFTER AFTER BARIATRIC SURGERY Ju-Jun Chou,CBN 1; Wei-Jei Lee MD&PhD1,2; Jung-Chien Chen

MD1,2; Kong-Han Ser MD2; Pei-Ling Tsai, RN2. Shu-Chu Chen RN2. 1.Central Clinic Hospital, Taipei, Taiwan. 2.Min-Sheng General Hospital, Taoyuan, Taiwan
Ju Chou *Taipei*
Central clinic hospital

Background: Bariatric surgery is an effective therapy for morbid obesity but may reduce nutrients absorption and induce malnutrition. Revision surgery is sometimes indicated for the intractable malnutrition. This study examined the prevalence, cause and outcome of revision surgery for malnutrition after previous bariatric surgery, including sleeve gastrectomy(SG), roux-en gastric bypass (RYGB), single anastomosis gastric bypass (SAGB), SG with duodeno-jejunal bypass (SG-DJB) and laparoscopic adjustable gastric banding (LAGB).
Methods: Between October 2001 and December 2015, 508 morbidly obese patients received primary bariatric surgery (1759 SG, 805 RYGB, 1839 SAGB, 200 SG-DJB and 475 LAGB) as primary bariatric procedure at the Min-Sheng General Hospital were recruited. We identified 47 patients had revision surgery for their intractable malnutrition after surgery. The charts of patients were reviewed.
Results: The prevalence of intractable malnutrition was 1.4%(11/805) after RYGB and 2.0%(36/1839) after SAGB. Anemia (28) and protein deficiency (19) were the major reasons for revision. All the malnutrition can be corrected after conversion to normal anatomy (2) or SG (46). Protein deficiency tend to develop when the bypass limb (bilio-pancreatic limb) longer than 200cm or the common channel shorter than 400cm.
Conclusion: Some patients might develop intractable malnutrition after gastric bypass surgery. Revision surgery to normal anatomy of SG was effective for the conversion of intractable malnutrition.

A466
Percutaneous Therapy of Choledocholithiasis After Roux-en-Y Gastric Bypass and Past Excision of Gastric Remnant
Noe Rodriguez *Boca Raton FL*[1], Fernando Rivera *Delray Beach FL*[2], Theodore Doukides *Boca Raton FL*[3], Ariel Rodriguez *Boynton Beach FL*[4]
Florida Atlantic University, Department of Surgery[1] Delray Medical Center, Interventional Radiology[2] Delray Medical Center, Florida Atlantic University, Therapeutic Endoscopy and Gastroenterology[3] Florida Atlantic University, Department[4]

Background: Obese patients who undergo Roux-en-Y gastric bypass (RNYGB) have a higher incidence of gallstones. RNYGB excludes the biliary tree from traditional evaluation with endoscopic retrograde cholangiopancreatography (ERCP).

Excision of the gastric remnant further restricts options including EUS-directed and laparoscopy-assisted transgastric ERCP. Double balloon enteroscope-assisted ERCP has limited success, and transenteric ERCP exposes patients to higher perioperative risks. Given the limited therapeutic options, we report the successful percutaneous transhepatic therapy of choledocholithiasis in a patient with RNYGB and remnant gastrectomy.

Case Presentation: Eighteen years after receiving a RNYGB and 7 years after subsequent gastric remnant excision, a 74-year-old man presented with abdominal pain, emesis, malaise, and itching. He had a history of congestive heart failure status post pacemaker defibrillator and prostate cancer status post radiation. Imaging identified choledocholithiasis. He underwent percutaneous transhepatic cholangiography and transhepatic balloon dilation of the papilla of Vater. Basket lithotripsy was used on stones >15 mm, and advanced into the duodenum using a Fogarty balloon catheter. Complete clearance of the biliary tree was achieved in a 45-minute procedure requiring 13.2 minutes of fluoroscopy time. Liver function tests were normal by post procedure day 3 and the patient was discharged the next day.

Discussion: This case suggests that percutaneous transhepatic access for stone expulsion into the duodenum through the papilla is a feasible technique for patients with excluded biliary tree and hostile abdomen. It could be applied more extensively to manage RNYGB choledocholithiasis safely and more efficiently. A higher level of interventional radiology training is needed.

A467
Bariatric Surgery Patients Can Be Routinely Discharged Without Dispensing Narcotics

Timothy R. Heider *Mooresville NC*[1], Yvonne Kelly *Mooresville NC*[1]
Lake Norman Regional Medical Center[1]

Introduction: Rates of prescription opiod usage and abuse are at epidemic levels in the United States. Recent data indicate that a large proportion of postoperative opiods are not consumed by patients and that the risk of opiod naïve patients continuing to take narcotics after surgery is not insignificant. Therefore, we sought to determine if implementation of an enhanced recovery after surgery (ERAS) program could effect the amount of in-hospital narcotic usage as well as the number of postoperative narcotics dispensed upon discharge. **Methods:** Data from two hundred consecutive patients undergoing elective bariatric surgery were collected after institution of the ERAS protocol. The protocol consisted of extensive coaching both preoperatively and during the

hospitalization, preoperative oral pregabalin and carbohydrate loading, scheduled oral acetaminophen ad lib oral intake 2 hours after surgery, early ambulation and cessation of routine upper GI series. **Results:** The study population (81% female, average BMI 42.1 kg/m^2, 92% sleeve gastrectomy) was discharged after an average length of stay of 1.1 days. Hospital narcotic consumption averaged 12.56 morphine milligram equivalents (MME) compared to 18.86 MME prior to ERAS protocol initiation. In-hospital narcotic administration was not required in 11% of patients and no patient required a discharge analgesic prescription. Upon follow-up survey, 93.6% of patients stated that their post-discharge pain control was satisfactory and only 5.6% stated they would have preferred a narcotic prescription upon discharge. **Conclusions:** Routine postoperative narcotics after discharge can be avoided after bariatric surgery without negatively impacting patient satisfaction.

A468

Exposure 3T3-L1 differentiated preadipocytes to mild hypoxia stimulate de novo biosynthesis of fatty acids by reverse Krebs cycle.

Martina Musutova *Prague*
Charles University

Introduction: Obstructive sleep apnea (OSA) is a condition affecting 5-15% of adults. Epidemiological and experimental studies have pointed out a causal link between OSA and Type 2 diabetes, but the molecular mechanisms causing the development of insulin resistance and glucose intolerance are yet to be explained. One of the possible biomechanisms leading to a higher lipide level in OSA patients is the reductive Krebs cycle (TCA). The aim this study was to verify the TCA's effect by exposing 3T3-L1 differentiated preadipocytes to mild hypoxia.
Materials and methods: 3T3-L1 cells have been cultivated and differentiated in a CO_2 incubator at 37°C on gas-permeable fluorocarbon plates. The differentiated cells have been kept in hypoxic (4% O_2 + 5% CO_2) and control (20% O_2 + 5% CO_2) environments for 14 days. 5-^{13}C L-glutamine (2.5 mM) was used for analysis. For the control group, unlabeled L-glutamine (2.5 mM) was used. The analysis itself was performed using a GC-MS.
Results: Exposing the 3T3-L1 cells to a prolonged state of mild hypoxia causes an increase in palmitic acid (C16:0) by 91.01% and palmitoleic acid (C16:0) by 101.90%. When using 5-^{13} L-glutamine, the culture contained 71.2 % C16:0 0 ^{13}C, 22,9% 1 ^{13}C, 4,6% 2 ^{13}C and 1,3% 3 ^{13}C. The natural state is ^{13}C for C16:0 is 82,65% 0 ^{13}C, 15,58% 1 ^{13}C, 1,73% 2 ^{13}C and 0,14% 3 ^{13}C.
Conclusions: OSA can contribute to Type 2 diabetes via a heightened fatty acid synthesis through the reductive Krebs cycle.

A469

Cardiometabolic Changes in an Ethnically Diverse Sample of Adolescents Following Bariatric Surgery

Melissa Santos *Newington CT*[1], Zachary Patinkin *Hamden CT*, Alan Ahlberg *Hartford CT*, Shefali Thaker *Hartford CT*, Nicole Boone *Hartford CT*, Meghna Misra *Hartford CT*, Priya Phulwani *Hartford CT*, Jessica Zimmerman *Hartford CT*, Christine Finck *Hartford CT*
Connecticut Children's Medical Center[1]

Background: Research has shown that youth presenting for bariatric surgery carry a significant number of medical comorbidities, which can be resolved with surgery. However, studies to date have primarily been performed in White, Non Hispanic populations. This abstract will present findings from a bariatric center that consists of a significant minority population. We will describe patients' presenting medical comorbidities and symptom pattern after bariatric surgery

Methods: This study is a retrospective review of 91 adolescents presenting to an adolescent bariatric surgery program, 43 of whom underwent surgery. Primary outcomes for the study were: BMI, blood pressure, cholesterol, fasting glucose and HOMA-IR.

Results: Of the 91 patients, 69% were female; 43% were Hispanic, and 15% were Black, Non-Hispanic, with a mean age of 16.6 ± 1.6. BMI was 49.5 ± 7.8 with a BMI z-score of 2.7 ± 0.3. A total of 65% were pre- or stage 1 hypertensive, 49% had dyslipidemia and 13% had a fasting glucose at or above 100. HOMA-IR for this sample was 9.9 ± 9.9. Significant improvements were seen within six months in the subset who underwent bariatric surgery (n = 43; 49% Hispanic); including reductions in BMI ($p < .001$), BMI z-score ($p < .001$), triglycerides ($p < .03$), LDL-C ($p < .03$), Insulin ($p < .03$) and HOMA-IR ($p < .03$).

Conclusions: This abstract lends support to the benefits of bariatric surgery for all, regardless of race and ethnicity. Future research should continue to examine long-term longitudinal outcomes from bariatric surgery in ethnically diverse samples to document the sustained efficacy of this treatment.

A470

Females with Obesity Are Not All the Same: Variation of Pre-operative Clinical Characteristics by Health Insurance in Sleeve Gastrectomy Women

Jessica Tyrrell *Vineland NJ*[1], Gus Slotman *Vineland NJ*[1]
Inspira Health Network[1]

Introduction: Clinical variation among women with obesity by health insurance has not been explored. Objective: to identify pre-

operative clinical variation by health insurance among sleeve gastrectomy females.

Methods: Pre-operative data on 6,685 sleeve gastrectomy females from the Surgical Review Corporation's BOLD database was studied in four insurance cohorts: Medicaid (n=330), Medicare (n=126), Private (n=4,424), and Self-Pay (n=1,366). Variables: Demographics and 33 medical/behavioral conditions. Statistics: ANOVA, Chi-squared equation.

Results: Medicare/Medicaid/Private/Self-Pay age (56+-13/40+-5/45+-11/44+-12) and BMI (52+-12/50+-10/46+-8/44+-12) varied ($p<0.0001$). Medicare: highest hypertension (69%), angina, CHF, DVT/PE, ischemic heart disease, pulmonary hypertension, sleep apnea (52%), obesity hypoventilation, hernia, panniculitis, cholelithiasis, stress incontinence, diabetes (55%), gout, dyslipidemia, menstrual irregularity, leg edema, back/musculoskeletal pain, fibromyalgia, disabled, psychological impairment, unemployed (67%) ($p<0.0001$), GERD ($p<0.001$), mental health diagnosis (MHD, $p<0.01$); lowest alcohol ($p<0.0001$), smoking ($p<0.001$), substance abuse, PCOS ($p<0.05$). Medicaid: highest asthma, liver disease, smoking ($p<0.0001$), substance abuse ($p<0.05$). Private: highest PCOS ($p<0.05$), second alcohol; lowest psychologic impairment ($p<0.0001$), MHD ($p<0.01$). Self-Pay: highest alcohol; lowest cardiopulmonary (n=9), abdominal/hepatobiliary (n=6), somatic (n=3), diabetes, gout, dyslipidemia, menstrual irregularity, fibromyalgia ($p<0.001$).

Conclusion: Clinically, pre-operative female sleeve gastrectomy patients vary by insurance. Medicare females were oldest, heaviest, affected most by 24 obesity co-morbidities and disabilities, but smoked, drank, and used drugs least. Medicaid were youngest with highest asthma, liver disease, and tobacco use. Private and self-pay women had fewer co-morbidities in spite of doubled alcohol use versus Medicare/Medicaid. This advance knowledge of increased risks for Medicare and Medicaid sleeve gastrectomy females may facilitate operation choice and improve outcomes.

A471

Medical Therapy in Weight Regain and Suboptimal Weight Loss Following Metabolic Surgery

Michael Alexander *Sarasota FL*[1], Joseph Chebli *Venice FL*[2], Robert Dubin *Englewood FL*[1]
Florida State University School of Medicine[1] Venice Metabolic and Bariatric Surgery[2]

While metabolic surgery remains an effective treatment for many patients with obesity, weight regain (WR) and

suboptimal weight loss (SWL) occurs after surgery. There are few studies addressing the efficacy of medical interventions for these patients.
A retrospective review was performed on 20 patients to evaluate the effect of medical therapy in treating WR and SWL. Medical therapies included phentermine/topamax ER (PTER), naltrexone/buproprion (NB), phentermine (P), and liraglutide (L). Two diabetic patients were treated with GLP-1 agonists (GLP1). Response to therapy was defined as weight loss > 5%.
The mean age was 63.8 $\pm$ 11.0 years. Eighteen (90%) patients were female. Surgeries included: Roux-en-Y gastric bypass (55%), sleeve gastrectomy (40%), and gastric banding (5%).Mean BMI at start of treatment was 37.1 $\pm$ 7.2 kg/m^2. Mean weight regain in all patients was 12.2 $\pm$ 10.0% from baseline. Medical treatments included: PTER (35%), NB (30%), P (15%), L (5%), PT (5%), and GLP1 (10%). Five patients (25%) responded to medical therapy, 9 (55%) patients were non-responders and 6 (30%) patients discontinued therapy due to side effects. Mean weight loss from baseline in responders was 9.5 $\pm$ 4.5%. PTER and P were used in 80% of responders. Years from procedure correlated with weight loss percentage ($p=0.03$, $r=0.46$); no correlation existed with subject age, initial BMI or percentage of weight regain.
There was a low response rate (25%) using current medical therapies in WR and SWL subjects. Further studies are warranted to understand factors that determine response to medical therapy in these patients.

A472

Helicobacter pylori infection does not impact one-year outcomes after Roux-en-Y gastric bypass

Yasamin Ghiasi , Ashar Ata , Kristian Singh , tejinder Singh , Jessica Zaman *Albany NY*[1]
Albany Medical Center[1]

Background: *Helicobacter pylori* (HP) is most often associated with gastritis, but there is also a link with obesity. Eradication of HP can lead to weight gain with an increase in plasma leptin and ghrelin levels. It is likely that HP infection also affects outcomes after bariatric surgery, but few studies have been performed. We sought to determine if HP status affects peri-operative and long-term outcomes in patients undergoing Roux-en-Y gastric bypass (RNY).
Methods: A retrospective analysis of patients undergoing RNY at a tertiary care, academic medical center from 2012-2014 was performed. Electronic medical records were reviewed to determine results from upper endoscopies performed as part of the pre-operative assessment for patients. Patient demographics, peri-operative outcomes, 30-day, and 1-year post-operative outcomes were extracted from the MBSAQIP longitudinal database for our institution. Statistical

analyses were performed using Stata version 14.0.
Results: Of 170 total patients undergoing RNY, only 6 were positive for HP on pre-operative upper endoscopy. Although none of the HP positive patients were symptomatic, treatment was administered at the two-week post-operative period. There were no statistically significant differences in operative times, length of stay, readmission rates, or rate of re-operation within 30-days post-operatively (see Table 1). Weight loss was similar and statistically insignificant for both cohorts.
Conclusion: HP colonization and treatment do not impact short or long-term outcomes after RNY. A series with a larger population and studies at a molecular level would be necessary to distinguish a subtle effect the bacteria may have on outcomes after RNY.

A473

Preoperative weight loss regimen, does it affect the outcomes of Bariatric surgery?

Adel Zedan *Menoufia* [1], hatem soltan *New cairo* [2], Mohammed Sabry [2], Rami Mustafa *cleveland OH*[3], mahmoud hagag [2], Tomasz Rogula *Chardon OH*[3]
General Surgery Dep. - Menoufia Universi[1] Menoufia University, General surgery Dep[2] University Hospitals of Cleveland, CWRU[3]

Objective

The aim of the study was to compare between patients who lose weight and those who don't lose weight before sleeve gastrectomy **Background**

There are conflicting data in the literature regarding the true effect of a preoperative weight loss regimen on various aspects of clinical outcome after bariatric surgery.

Materials and methods

fifty morbidly obese patient admitted to General Surgery Department in Menoufia University Hospital from January 2016 to January 2017. Patients were randomly divided into two groups: Experimental Group (A) included 30 patients, they were subjected to a preoperative weight loss (PWL) using VLCD for 4-6 weeks, and control group (B) included 20 patients were not included in any recent weight loss program. Then after, all patients in group (A), and group (B) were subjected to vertical sleeve gastrectomy operation by surgeons with initial experience in bariatric surgery.

Results

Operating time was significantly shorter in the PWL group, 75±10 versus 91±11 min, also blood loss was significantly less in PWL group74±30ml versus 173±81.7 ml and finally length of hospital stay was shorter in PWL group1.4±0.3 day versus 2±0.4-day, *P*-value0.001. PWL caused significant reduction in liver size, and also reduction of waist circumference but without statistical significance

Conclusion

PWL cause reduction in operative time and blood loss due to reduction of liver size and improved visibility which is of great value for surgeon with initial experience. PWL is associated with shorter hospital stay but it was not able to show reduction in complication or excess weight loss.

A474

Adolescent Obesity Resulting in a Devastating Sequela from Childhood Sexual Trauma: A Systematic Review

Lauren Poliakin *brooklyn NY*[1], Pratibha Vemulapalli *brooklyn, Ny 11201 NY*[1]
The Brooklyn Hospital Center[1]

Background: Previous studies have shown an association between childhood sexual abuse and early adulthood obesity. The aim of this study is to review the literature investigating the relationship between childhood sexual abuse and adolescent obesity.
Methods: MEDLINE/PubMed was systematically searched for articles on childhood sexual abuse and adolescent obesity.
Results: Of the eight references identified by the search, five included studies providing estimated odds ratios greater than 1 indicating that there is an association between childhood sexual abuse and adolescent obesity in both boys and girls. 1,502 pediatric patients with obesity, 897 girls and 605 boys, were included in this review. Pediatric patient age ranged from 11 to 16 years old. Three references showed there was a higher prevalence of white 44 to 64% compared to black 29 to 43% and Hispanic 2 to 7%. Adolescent obesity is defined as a BMI at or above the 95th percentile for adolescents of the same age and sex. Those who reported a history of childhood sexual abuse were more prone to develop obesity in adolescence than those who denied a history of sexual abuse.
Conclusion: Pediatric patients who had experienced sexual abuse in childhood had an increased risk of adolescent obesity. A bariatric team comprising of psychologists, dietitians, internists, and surgeons through their own methods of intervention can treat comorbidities of obesity resulting from previous sexual trauma at an early age. This will improve the patient's quality of life, both psychologically and metabolically, as well as structurally.

A475

Late Leak After Sleeve Gastrectomy Treated with Endoscopic Stenting

Morgan Pomeranz *Las Vegas NV*[1], Allan MacIntyre *Las Vegas NV*[1]
Sunrise Health GME Consortium[1]

Late gastric leaks after sleeve gastrectomy present a unique challenge. They occur during the period of healing and inflammation that makes

operative interventions not only difficult but also dangerous.

A 49-year-old female, 5 weeks status-post laparoscopic sleeve gastrectomy, had been recovering well and tolerating her diet. She presented with four days of acute epigastric abdominal pain accompanied by nausea and high fevers. Upper GI study revealed contrast extravasation consistent with a gastric leak. A hostile abdomen was encountered on laparoscopy, prompting drain placement for the abscess, and closure. Endoscopy shortly thereafter confirmed a leak immediately distal to the GE junction. A Boston Scientific 153 mm covered esophageal stent was placed. The stent was exchanged during repeat endoscopy after 2 weeks, and repeated twice for a total of 3 stents over a period of 8 weeks. A repeat upper GI series demonstrated no further contrast extravasation.

The use of stents has been described for management of post-op leaks, however there is a wide variation in several key areas; including early vs intermediate vs late leaks, full vs partial covered stents, duration of individual stent placement, and duration of overall treatment. Non-operative management with drains and stents for late leaks after sleeve gastrectomy is safe and effective, and may often obviate the need for revision surgery and its associated morbidity/mortality. After ensuring stability and initial response to treatment, select patients may continue their course as outpatients. Further prospective data is needed to determine standards for timing and duration of treatment.

A476

Effects of Roux-en-Y Gastric Bypass and Very Low Calorie Diet on the Thermic Effect of Feeding

Jamie Mullally *New York NY*[1], Gerardo Febres *New York NY*[1], Marc Bessler *New York NY*[1], Judith Korner *New York NY*[1]
Columbia University College of Physicians and Surgeons[1]

Background: The thermic effect of feeding (TEF) is an increase in the metabolic rate after ingestion of a meal and accounts for 3-10% of total energy expenditure. TEF may increase after Roux-en-Y gastric bypass (RYGB) and contribute to the sustained weight loss post-RYGB compared to treatment with diet. Our objective was to compare change in TEF before and after weight loss with RYGB *vs* a very-low calorie diet (VLCD).

Methods: Resting energy expenditure (REE) and post-prandial energy expenditure were measured using indirect hood calorimetry, pre- and three weeks post-weight loss in subjects treated with RYGB and an inpatient 500 kcal/day diet designed to mimic the post-RYGB diet. TEF was calculated using incremental area under the curve from baseline REE over the post-prandial period. Lean mass was

measured by DXA.

Results: There were 9 subjects in each group with similar baseline (mean±SEM) BMI (40.0kg/m^2±1.7) and total (114.7kg±6.3) and lean mass (64.5kg±3.0). The RYGB subjects lost somewhat more weight than the VLCD subjects (10.2% vs 6.8%, p=0.11), which was adjusted using a mixed effects model. Both groups trended towards a within-group reduction in TEF from pre- to post-weight loss (change in TEF: RYGB -6.5kcal±4.8, p=0.21; VLCD -5.3±3.1kcal, p=0.13), but the groups did not differ significantly in change in TEF from pre to post-weight loss (p=0.63 adjusted for weight loss).

Conclusions: RYGB and VLCD result in a similar non-significant reduction in TEF at an early follow-up time point. Thus, TEF is unlikely to contribute significantly to the weight change following RYGB.

A477

A case report: Torsion of Falciform ligament as a cause of abdominal pain post Roux-en-Y gastric bypass

Adil Khan *Winchester TN*[1], Laura Doyon *Concord MA*[2], David Brams *Burlington MA*[3]
southern Tennessee regional healthcare[1] Emerson hospital, concord MA[2] Lahey hospital and medical Center[3]

Torsion of falciform ligament (FL) has been described in literature as a rare cause of acute abdominal pain. There are no reports of FL torsion in literature after Roux-En-Y gastric bypass (RYGB). We present a case of FL torsion after RYGB presenting as acute abdominal pain.

Case report: 56 y/o female with morbid obesity (BMI 41) and multiple medical comorbidities was taken to the operating room for a laparoscopic RYGB. Port placement included 12 mm trocar above the umbilicus slightly towards the left of the midline and two 5 mm in left upper quadrant. We then took the falciform ligament off of the anterior abdominal wall using ultrasonic shears; a step routinely performed in our practice to facilitate placement of trocars in the right upper quadrant. An antecolic antegastric RYGB was then performed, using linear stapled anastomosis, and hand-sewn common enterotomies. The patient had uneventful recovery and was discharged home on post-operative day 2.

Patient returned 2 weeks post operatively with severe RUQ abdominal pain. WBC count was 14. CT scan showed findings inflammatory changes around falciform ligament. On operative exploration necrotic falciform ligament was found which was dissected and excised using ultrasonic shears. Patient tolerated the procedure well and was discharged home on post operative day 1.

Discussion: Although the occurrence of FL torsion is very rare, surgeons must be aware of the pathology as a cause of abdominal pain after RYGB. We recommend change in practice not to mobilize FL during surgery to avoid this complication.

A478

Single Surgeon Outcomes for Roux-en-Y Gastric Bypass

Shinban Liu *Brooklyn NY*[1], Vadim Meytes *Brooklyn NY*[1], George Ferzli *Staten Island NY*[1]
NYU Langone Hospital[1]

Introduction: Within the United States, obesity has become a common, costly, and severe epidemic. For patients that are incapable of losing weight, Roux-en-Y gastric bypass (RYGB) has emerged as a safe and effective treatment option. The purpose of this study was to report the successful laparoscopic technique of a single surgeon.

Methods: Retrospective analysis of prospectively collected data was performed for patients undergoing laparoscopic RYGB performed by a single surgeon between January 2014 and May 2016 at a single institution. The procedure is performed in an ante-colic, ante-gastric fashion with 150cm biliopancreatic and Roux limbs, hand-sewn anastomosis, and no surgical drains. The data collected included patient demographics, body mass index (BMI), procedure duration, complications, percent total body weight lost (%TBWL), and percent excess weight loss (%EWL). Patient follow up ranged from 1 month to 30 months postoperatively.

Results: 89 patients underwent RYGB between January 2014 and May 2016. The cohort consisted of 71 females (80%) and 18 males (20%) with a mean preoperative BMI of 47.0 kg/m2 (range, 29.5 to 68.1 kg/m2). The mean operative time was 81 minutes (range, 48 to 168 minutes), mean %TBWL was 26.8% (range, 3.4 to 43.2), and mean %EWL was 60.4 (range, 6.7 to 92.8). Only two patients had complications, none requiring a return to the operating room or readmission.

Conclusion: Herein we describe a safe and reproducible laparoscopic technique shown to effectively decrease operative times with efficacious long term weight loss results.

A479

Conversion of a SADI-S procedure to a Roux-en-Y Gastric Bypass. Indications, technical details and review of the literature.

Alvaro Galvez *Philadelphia PA*[1], Daniel Galvez *Richmond VA*[2], Alexander Onopchenko *Egg Harbor Twp NJ*[3]
Drexel University College of Medicine[1] Virginia Commonwealth University[2] AtlantiCare Regional Medical Center[3]

We present the case of a 46-year-old male with an initial BMI of 44.7, who underwent a laparoscopic single anastomosis duodenal-ileal bypass with sleeve gastrectomy (SADI-S). Postoperatively he developed an anastomotic leak at the duodeno-ileal (DI) anastomosis that would not resolve despite reoperation and bowel rest. A conversion to a Roux-en-Y gastric bypass (RYGB) was performed 14 days after the index case.
The DI anastomosis with the defect was resected, along with a subtotal remnant gastrectomy. The ileum was re-anastomosed and a standard Roux-en-Y reconstruction was performed with a 30 cm bilioenteric limb and a 75 cm Roux limb. A feeding jejunostomy was placed 10 cm distal to the JJ anastomosis. The patient was discharged 2 days following surgery.

The patient would present with a duodenal stump leak, presumed to be secondary to kinking at the feeding tube site. This would be managed conservatively with percutaneous duodenostomy and removal of the feeding J tube. At one year follow up the patient has lost 76% of his excess body weight and BM is now 27 kg/m2.

In this article we review current effectiveness and complication data with the SADI-S procedure; as well as discuss the indications for revision and the different techniques described in the literature. We describe and illustrate the details of our conversion, which has not been previously described in current literature.

A480
Long-term outcomes of bariatric surgery in adolescents with morbid obesity with a follow-up of at least 5 years: A systematic review
Patricia Ruiz Cota *Tijuana, Baja California* [1], Arturo Jimene-Cruz *Tijuana, Baja California* [1]
Autonomous University of Baja California[1]

Background: Effectiveness of bariatric surgery among adolescents has been widely reported. The aim of this study is to review the outcomes of bariatric surgery in adolescents with long-term follow-up.

Methods: Pubmed, EMBASE, and Cochrane databases were systematically searched; Inclusion criteria were 10-19 yo adolescents with five years minimum of follow-up. Adiposity indicators outcomes, co-morbidities remission, and complications were analyzed.

Results: Eight articles met the inclusion criteria. Surgeries performed included gastric bypass, gastric band, and sleeve gastrectomy. Age of the participants ranged from 13-17.2 years. The longest follow-up after intervention was 149.9 months. Mean BMI at baseline and follow-up was 46.87 kg/m^{2}and 31.47 kg/m^2,

respectively. All studies reported reductions in BMI, mean percentage of excess BMI loss was of 71.8%. Most of the studies reported weight regain after 2 to 10 years of follow-up. Remission rate of co-morbidities after follow-up was 85% for dyslipidemia, 83% for musculoskeletal problems, 83% for hypertension, and 85% for type 2 diabetes. The most frequent complication reported was anemia (16-46%), followed by vitamin and minerals deficiencies. The rate of participants who underwent a second bariatric procedure in patients who initially underwent gastric band was 26%.

Conclusion: This review indicates that long-term outcomes of bariatric surgery in adolescents shown a substantial reduction in BMI; it was also reported weight regain and frequent remission of cardiometabolic comorbidities. Studies reviewed were of low quality, did not report statistical power, were non-randomized controlled trials, and had low retention rate; besides, complications and adverse effects were not appropriately reported.

A481
Comparison of Laparoscopic to Robotic Bariatric Surgery in Community Hospital Program
Katie Novitski *Pelham AL*[1], Robert Flores *Birmingham AL,* Andrew DeWitt *Birmingham AL*
Brookwood Baptist Health System[1]

Objective: Laparoscopic sleeve gastrectomy, laparoscopic roux-en-y gastric bypass and revisional bariatric surgery are the most popular bariatric surgical procedures performed today for treatment of morbid obesity, accounting for 90.7% of all bariatric surgeries in 2016. Many bariatric patients pose unique issues for the surgeon due to body habitus. Robotic surgery is gaining popularity among bariatric surgeons as a way to perform many of these surgeries. The enhanced visualization and ergonomic dexterity may offer these surgeons advantages in the morbidly obese.

Methods: In order to assess the safety and utility of robotic bariatric surgery, a retrospective review of a single surgeon's experience for both laparoscopic and robotic bariatric surgeries was evaluated. Surgeries evaluated included sleeve gastrectomy, roux-en-y gastric bypass and revisional bariatric surgery. Intraoperative and perioperative complications along with weight loss at 3- and 6- months postop were examined and compared between the laparoscopic and robotic groups.

Results: From February 2012 through April 2017 there were a total of 279 patients undergoing robotic bariatric surgery and 721 patients undergoing laparoscopic bariatric surgery by a single surgeon in a teaching community hospital. Specific outcomes included blood loss, days of hospital stay, 30-day postoperative complications and

readmissions, operative times, and 3- and 6-month postoperative weight loss were used. Robotic surgery resulted in similar weight loss to the laparoscopic surgery group. Complication rates were similar with a trend towards decreased leak and intraoperative complication rates among the robotic group.

A482
Incidental Well-Differentiated Papillary Mesothelioma Discovered in Laparoscopic Sleeve Gastrectomy

Shinban Liu *Brooklyn NY*[1], Vadim Meytes *Brooklyn NY*[1], George Ferzli *Staten Island NY*[1]
NYU Langone Hospital[1]

Case Presentation
34 year-old female with past medical history significant for morbid obesity, obstructive sleep apnea, asthma, hypertension, and hyperlipidemia underwent an uncomplicated laparoscopic sleeve gastrectomy. Intraoperatively, a 5cm omental nodule was identified and resected for pathologic examination. She tolerated the procedure well and was discharged home the next hospital day with a bariatric clear liquid diet. The pathology would ultimately return as well-differentiated papillary mesothelioma of peritoneal primary origin. She was subsequently referred to an oncologist and underwent CT scan of the chest/abdomen/pelvis which demonstrated no additional abnormal findings. The patient completed a course of chemotherapy with a regimen of pemetrexed and cisplatin and is currently in remission.

Discussion
Well-differentiated papillary mesothelioma (WDPM) is a rare variant of malignant peritoneal mesothelioma (MPM). This disease is most prevalent in women of reproductive age and most commonly arises in peritoneal surfaces of the pelvis. There are no reported associations with asbestos exposure and lesions are typically identified incidentally during surgeries performed for other indications. Due to the rarity of this entity, there is no consensus for the optimal treatment of this malignancy. However, WDPM is considered to be a low-grade malignancy with a high cure rate following complete surgical resection. Unlike MPM, cytoreductive surgery and hyperthermic intraperitoneal chemotherapy are not indicated as the potential to progress is low. Following resection, patients should have long-term follow-up to monitor remission. This case highlights the importance of surgical vigilance and gross anatomic examination during operations.

A483
Case report: “2 steps” Laparoscopic Roux-em-Y Gastric Bypass due to Important Hepatomegaly.

Carolina Ribeiro *Rio de Janeiro* [1], Guilherme Pinheiro *Rio de Janeiro* [1], Bruno Serrano *RIO DE JANEIRO* [2], Paula Perricelli [3], Paula da Silva *Rio de Janeiro* [3], Taisy Ingrund *São Paulo* [1], Loraine Ferraz *Rio de Janeiro* [1], Victor Luiz Filgueiras *Rio de Janeiro - RJ. Brazil* [3], Luiza Lourenço *Rio de Janeiro* [1]
Hospital Federal do Andaraí[1] Multidisciplinar[2] Hospital Federal do Andarai[3]

SHRV, female, 49 years old, weight 163kg, height 1.55m, BMI 67.9kg/m2
Comorbidities: systemic arterial hypertension, type 2 diabetes, hepatic steatosis and dyslipidemia.
On 01/26/2016, the patient underwent laparoscopic surgery (LS) to perform Roux-en-Y gastric bypass, in which we could identify an important hepatomegaly, preventing access to the Hiss angle. It turns very difficult to make an adequate gastric pouch. So, we performed an horizontal gastrotomy at the level of the upper body with a posterior gastrojejunoanastomosis (GJA) along the small curvature, and a Roux-en-Y intestinal deviation.
Patient showed no complications and followed the postoperative protocol as we expected.
There was a significant weight loss in the first year after surgery (minimum weight of 116.3kg) and the comorbidities were controled with no medications. However, she did not reach the loss goal and started regaining weight after this period.
Patient reported more appetite and ability to eat larger volumes of food.
The upper digestive tract endoscopy showed an abundant gastric fundus and an estimated GJA of 2cm, and the abdominal ultrasonography showed remission of the hepatic steatosis.
With a weight of 122kg and BMI 50.8kg/m2, she underwent a new LS for gastric reduction. In this surgery, the liver was normal in appearance and size. So, we were able to identify the Hiss angle and perform a "re-sizeing" of the stomach and the GJA.
Again, patient had a good postoperative evolution and restarted the process of weight loss. The last registered weight was 92.8kg (6 months after surgery).

A484

Nurses Attitudes toward Handling of Patients with Morbid Obesity

Cheryl Newton *Columbus OH*[1], Joann North *Columbus OH*[2], Inga Zadvinskis *Columbus OH*, Esther Chipps *Columbus OH*
Ohio State Wexner Medical Center[1] Ohio State University Wexner Medical Cen[2]

Purpose

The purpose of this study was to understand nurses' attitudes toward patients with morbid obesity and the propensity to use safe patient handling equipment (SPHE).

Background/Significance

Obesity is a common issue in two thirds of the U.S. population

.[1] Attitudes regarding patient handling and equipment use influence adoption of safe patient handling practices.[2,3] It is unknown if there is an association between nurses' own body image/weight, their attitudes toward patients with obesity, and propensity to use SPHE.

Research Questions:

1. What are nurses' attitudes toward use of SPHE for patients with morbid obesity?
2. Is there an association between nurses' weight bias toward obese patients and use of SPHE?

Methods

We used a cross-sectional descriptive design with a convenience sample of RNs that were members of the Ohio Nurses Association and practiced in an adult setting (*n*=244). Nurses completed a 26-item instrument, *Nurses Attitudes Regarding the Safe Patient Handling of Persons who are Morbidly Obese*[3], via email. Data analysis included descriptive and inferential statistics.

Results: Nurses indicated that using SPHE was time consuming and that their workload interfered with their ability to use it. There was no association between nurses' bias toward patients with obesity and motivation to use SPHE, or perceived time/work load.

Conclusions: Nurses' attitudes toward patients with morbid obesity and the use of SPHE is highly variable.

A485

Delayed postoperative bleeding after a laparoscopic sleeve gastrectomy in a patient with factor VII deficiency

Roberto Alatorre Adame *Monterrey, N.L.* [1], Javier Rojas Mendez *Santa Catarina TX*[1], Alan E. Ramos Mayo *Monterrey* [1], Eduardo Flores Villalba [1], Montserrat Guraieb Trueba *San Pedro* [1]
Hospital San José Tec de Monterrey[1]

Roux-en-Y gastric bypass (LRYGB) and sleeve gastrectomy (SG) are the most commonly performed procedures worldwide, and because of recent evidence SG has become more accepted as stand-alone bariatric surgery. Bleeding from staple line represent about 1-2% of patient complications.

We present a case of a patient with background of a SG procedure which present postoperative bleeding associated with coagulation factor VII deficiency.

A 19-year-old woman, she had no chronic diseases or bleeding history, nor use of medication, body mass index (BMI) 37 kg/cm^2; she underwent SG without staple-line reinforcement without any surgical complications, and the patient was discharged two days after surgery. On post-op 6, she presented to emergency department with complaining of 6-hour 38.7°C fever. She underwent to computed tomography showing a 10x10x7cm, heterogeneous left sided collection,

with 50 Hounsfield unit (HU) density, consistent with a left sub phrenic hematoma for which she underwent percutaneous drainage, with resolution of the symptomatology and was discharged after an uneventful recovery. Twenty-one days after discharged, she presented to emergency department complaining of untreated 38.5°C fever. A CT scan was performed showing an increased size left sub phrenic collection and a new collection adjacent to the stomach stapled line of approximately 800 ml of volume, consistent with an infected hematoma. A diagnostic laparoscopy with drainage of the infected hematoma was performed obtaining approximately 1.5 liters of blood clots and hematic-purulent material. Due to inexplicable bleeding a coagulation factor test was performed and a Factor VII (FVII) deficiency was diagnosed with 19.1% of activity.

A486

Laparoendoscopic removal of eroded gastric banding after multiple surgeries for band slippage.

Jacob Skeans *Cleveland OH*[1], D. Roy Ferguson *Cleveland OH*[1], Ronnie Fass *Cleveland OH*[1], Eileen Seeholzer *Cleveland OH*[1], Sergio Bardaro *Cleveland OH*[2]
Case Western Reserve University[1] Case Western Reserve University - MetroHealth Medical Center[2]

One of the complications of laparoscopic gastric banding is intragastric erosion. We present a 45 y/o female with h/o morbid obesity and lap band placement 10 years ago in outside hospital with multiple episodes of band slippage, recurrent epigastric pain and recent significant weight regain. The patient consulted our ED due to new episode of epigastric pain. A CT sowed no perigastroesophageal collection. An EGD showed an eroded band in the upper stomach in 2 different places with approximately 50 % band erosion. Because of the recurrent upper abdominal surgeries due to band slippage and the significant band erosion, the decision was made to remove the band laparoendoscopically. The band was deflated with fluoroscopic guidance. Surgical technique is presented step by step. The mucosa was separated from the band with blunt dissection with the endoscopy tip. An ERCP guide-wire was passed between the mucosa and the band into the stomach in excess. The wire was looped only around the lap band. The wire was then fed into a Sohendra mechanical lithotripter and was used to cut the silicon band under endoscopic retroflexed view in the stomach. Laparoscopically, the tubing was cut to release the silicon band from the bumper. With snare in place around the buckle of the lap band, gentle rotational force was used to pull the band completely into the stomach, which was then completely removed via oral route.
Endoscopic removal of eroded band is feasible and avoids extensive dissection

on a complex and hostile surgical field.

A487

A Novel Measure to Improve Turnover Time in the Operating Room

Mohammed Nimer [1], Steven Schulberg *Brooklyn NY*[2], Vadim Meytes *Brooklyn NY*[2], George Ferzli *Staten Island NY*[2]
St. Georges University[1] NYU Langone Brooklyn[2]

Background:
Turnover time (TT) in the operating room (OR) is an important indicator of efficiency. Traditionally, TT is defined as the time between one patient leaving the OR and the next arriving. However, the TT metric does not accurately reflect the time lapsed between procedures. This study aims to refine the definition of TT with a new parameter called extended turnover time (ETT), the time period between extubation and next intubation.

Methods:
We conducted a retrospective review of patients who underwent bariatric surgery at our institution between July 2017 and March 2018. TT was defined as minutes between patient exit and next patient entry to the OR. ETT was defined as the time between extubation and next intubation.

Results:
Of 224 patients, 133 met inclusion criteria for this study. 105 underwent laparoscopic sleeve gastrectomy, 23 underwent Roux-En-Y gastric bypass, and five underwent laparoscopic band removal. The average TT was 43 minutes, compared to an average ETT of 70 minutes, for a difference of 27 minutes of non-operative time.

Conclusion:
Our results demonstrate that there is a significant amount of time spent non-operatively that is not currently captured in the TT metric. We recommend employing ETT to better capture non-operative time between patients for optimization of OR protocols. We believe that ETT may be decreased through improved preoperative preparation, attending availability prior to patient arrival, and decreased PACU hold times. Precisely capturing extended turnover time will allow implementation of solutions to streamline OR processes, decrease staff stress, and conserve resources.

A488

Striking Decrease in Insulin Requirement for Type I Diabetes after Roux en Y Gastric Bypass

Vivian Sardone *Iowa City IA*, Marwa Abu El Haija *Coralville IA*[1], Peter Nau *Iowa City IA*
University of Iowa Hospitals and Clinics[1]

Roux en Y Gastric Bypass (RYGB) is an effective treatment for obesity and its related metabolic profile. It is

known to improve hypertension, hypercholestrolemia, Type II diabetes (T2D), and few report improvement in Type I Diabetes (T1D). This is interesting as the pathophysiology of development and treatement of T1D is different than T2D, with the former being an autoimmune disease and latter being a disease of obesity. Here we present case of a 38 year old patient with T1D who is needing minimal amount of insulin 3 months post RYGB.

This is a 38-year-old female with T1D and morbid obesity who underwent RYGB on February 2018. Her additional comorbidities included obstructive sleep apnea, hypertension, gastroesophageal reflux, menstrual irregularity and migraines. She was initially misdiagnosed with T2D and failed metformin therapy. Her brother was diagnosed with T1D and she transferred her care to our center where antibodies were performed at that time. Her glutamic acid decarboxylase (GAD) antibodies was found to be elevated at 118.8 (normal < 5.0 IU/mL) which confirmed diagnosis of T1D. Her diabetes was subsequently well controlled using an insulin pump at a basal rate of 2.9 units/hour (69.6 units per day). Follow up visit showed her regimen consisted of 66.71 units/day of basal insulin and 75 units/day of bolus insulin, hemoglobin A1c 7.8%. She underwent RYGB for obesity and other related comorbodities in 2018. On her three months follow up she was found to have a hemoglobin A1c of 6% and needing 3-4 units/day of insulin.

A489

A Comparison of 5 Year Weight Loss and Major Complications at 30 Days Between Primary RNY Gastric Bypass and Sleeve Gastrectomy Procedures. A Single Surgeon's Experience at a Center of Excellence.

Amjad Ali *Erie PA*[1], Zakariya Ali *Erie PA*, Muhammad Asad *Erie PA*[2], Jawaid Kalim *Erie PA*[2], Fozia Ahmed *Baltimore MD*[3]
UPMC Hamot Medical Center[1] UPMC Hamot[2] Johns Hopkins University[3]

The objective of this study is to evaluate 5-year weight loss and major complications in the first 30 days after primary RNY gastric bypass (RNY) and sleeve gastrectomy (SG) performed by a single surgeon at a community hospital. Methods: A prospective database (Lapbase ®) was maintained on patients undergoing bariatric surgeries by the author. This review covers all primary RNY and SG surgeries performed between July 2000-December 2018. Results: A total of 707 primary RNY and 405 SG were performed during that period. There were 14 leaks (1.9%) after RNY, and 6 (1.4%) after SG, 5 (0.7%) bleedings after RNY and 1 (0.24%) after SG, 35 (4.9%) strictures after RNY and 11 (2.7%) after SG and 1 death each after both procedures due to PE. Average % excess weight loss (%EWL) after RNY was 32 at 3 months, 46.9 at 6 months,

57.5 at 9 months, 63.2 at 12 months, 70 at 18 months, 72.2 at 24 months, 74.2 at 36 months, 77.3 at 48 months and 72.5 at 60 months. Average %EWL after SG procedures was 17 at 3 months, 35 at 6 months, 46.7 at 9 months, 50.9 at 12 months, 54.4 at 18 months, 52.8 at 24 months, 60.8 at 36 months, 59.7 at 48 months and 63.9 at 60 months. Conclusion: This review of a non-randomized prospectively collected data shows lower incidence of major complications except mortality at 30 days (the difference didn't reach statistical significance) and similar 5-year weight loss after SG compared with RNY.

A490

Case report of perforated marginal ulcer 7 months following duodenal switch

Dustin Bermudez *Raleigh NC*[1], Peter Ng *Raleigh NC*[2], Lindsey Sharp *Raleigh NC*[3], Jillian Vari *Raleigh NC*[3], Erica McKearney *Raleigh NC*
Rex Hospital[1] UNC Rex Hospital, Raleigh NC[2] UNC Rex[3]

Background: Marginal ulcers are quite rare with biliopancreatic diversion with duodenal switch (BPD-DS) compared to the gastric bypass. Our practice has performed over 300 BPD-DS procedures in the past 5 years. We describe here our first experience with a perforated marginal ulcer.

History: This 65 year old woman underwent a duodenal switch. She was a smoker preoperatively but quit. For one week she did well and had no evidence of diabetes but. She returned with acute onset abdominal pain. CT scan demonstrated a large fluid collection in the right upper quadrant as well as pneumoperitoneum. Diagnostic laparoscopy revealed a perforated marginal ulcer. This was confirmed with endoscopy. The abdominal cavity was washed out and drains were left. The perforation was repaired primarily and patched with momentum.

Outcomes: Upper gastrointestinal series with fluoroscopy demonstrated no leak on postoperative day 5. She was discharged on post operative day 7 on a full liquid diet. Drains were removed before discharge. Feeding tube remains in place. All vitamin levels tested in the hospital were within normal limits. She smokes 1/2 pack per day of cigarettes right now.

Conclusions: While the incidence of marginal ulcers with BPD-DS is drastically lower than that of a gastric bypass, it is not impossible. The pathophysiology is likely different from that of the gastric bypass. This patient was non-compliant but the real risk factor was her continued smoking. We recommend strong preoperative and postoperative counseling for tobacco dependence.

A491

“ Two birds, one stone” : ITP managed at the time of bariatric surgery.

Varun Jain *Phoenix AZ*[1], James Madura *Phoenix AZ*[1]
Mayo Clinic Hospital, Arizona[1]

There is a growing prevalence of obesity, with a subsequent increase in bariatric surgeries. As a result, the patient population undergoing surgery has become widely varied with multiple additional medical and surgical problems. Some of those additional problems, on occasions, require surgical management. This can sometimes become tricky and pose a challenge in the decision to proceed safely with an elective bariatric procedure. One such consideration is ITP (idiopathic thrombocytopenic purpura), which, if refractory to medical management requires surgical treatment. Low platelets are known to increase the risk of bleeding complications. Besides chronic anemia, thrombocytopenia has been described as a potential hematological alteration after bariatric surgery and this can understandably create a decision dilemma.
Here we present a novel case of a 33 year old lady with medically refractory ITP who underwent surgical management for her ITP along with bariatric surgery, and rather than being a contra-indication for the weight loss procedure, her thrombocytopenia was managed effectively and safely at the same time.

A492

Adjustable Gastric Band to Sleeve Gastrectomy to Roux-en-Y Gastric Bypass: Bariatric Surgery in Evolution

John Morton *Stanford CA*[1], Luis Garcia *Fargo ND*
Stanford School of Medicine[1]

Background: Past studies have examined outcomes after conversion of Adjustable Gastric Band (AGB) to laparoscopic sleeve gastrectomy (SG) or Roux-en-Y gastric bypass (RYGB). Limited data are available regarding patients who undergo conversion from AGB to SG and subsequent conversion to RYGB.

Methods: This study is a retrospective review of patients’ electronic medical records. We present 2 patients with a history of AGB and SG who underwent RYGB at our university hospital due to poor weight loss between 2015 and 2017. Weight loss was assessed 12 months postoperatively.

Results: Both patients were female. Prior to RYGB, patients were 54 and 61 years old with body mass indices of 42.6 and 41.2 kg/m^2. 1 patient underwent all procedures at our hospital, whereas the other underwent AGB and SG elsewhere. In 2010, Patient A weighed 271 lbs. preoperatively and 212 lbs. (%EWL=61%) 12 months after AGB. In 2012, Patient A weighed 267 lbs.

preoperatively and 251 lbs. (%EWL=18%) 12 months after SG. In 2015, patient A weighed 288 lbs. preoperatively and 176 lbs. (%EWL=94%) 12 months after RYGB. Patient B underwent AGB in 2009, SG in 2012, and presented in 2017 for RYGB. Patient B weighed 255 lbs. preoperatively and 194 lbs. (%EWL=61%) 12 months postoperatively. No complications or readmissions were observed for primary or conversion procedures.

Discussion: Few cases of AGB to SG to RYGB conversion have been described. The observed weight loss suggests that RYGB is efficacious and safe in patients with previous history of AGB and SG.

A493

Metabolic Set Point in Obesity: Can this explain weight fluctuations after Laparoscopic Sleeve Gastrectomy?

Nicole Boone *Hartford CT*, Melissa Santos *Newington CT*[1], Meghna Misra *Hartford CT*, Jessica Zimmerman *Hartford CT*, Priya Phulwani *Hartford CT*, Christine Finck *Hartford CT*
Connecticut Children's Medical Center[1]

Obesity is a multifactorial disease. Set point theory describes an internal control mechanism that maintains a specific body weight through regulation of appetite and energy expenditure. Can this explain why some patients experience fluctuating weight gain and loss? This abstract will review a case in adolescent obesity that may highlight the set point theory.

The patient was a 14-year-old female with a BMI of 48.01 kg/m^2, presenting to our multidisciplinary bariatric clinic in April 2016. Her pre-operative course was marked by weight gain and loss. She was started on Liraglutide without any result, and Phentermine/Topamax, which resulted in about 3.4% body weight loss over three months. She underwent a pre-operative workup, including normal cardiac stress test and sleep study. She was cleared by physical therapy for being physically fit. She underwent a laparoscopic sleeve gastrectomy (LSG).

(see table)

Do these results represent regulation of body weight by a set point? Little research is available to demonstrate whether metabolic set point is affected after LSG in adolescents. Many factors affect the set point, including sleep disturbances, stress, and genetics. While little research is available, this patient's experience may indicate internal regulation of weight despite medical and surgical interventions.

A494

Abdominoplasty as integrated approach after massive weight loss performed by general surgeons

Christof Ihle *Torsby*
Torsby Hospital

Introduction
Weight loss after bariatric surgery leaves the patient with a completely changed body
appearance. This can lead to immense frustration. Frequently, formerly obese individuals start a completely new life with respect to physical activity as well as socially. Sagging excess skin can make sportive activities mechanically difficult.
Patients may have large problems with intimacy.
In Sweden´s national health system patients are eligible to body restoring surgery.
The plastic surgery departments in our country cannot keep up with the demand. As
an integrated approach at our bariatric center we therefore introduced abdominoplasty as a standard operation performed by none-plastic surgeons.

Methods
All 150 patients who received an abdominoplasty at our hospital since the year 2014
were analyzed.
Operation type was standard abdominoplasty or fleur-de-lis-abdominoplasty (17% of
all patients).

Results
Mean operating time was 146 minutes. Mean readmission rate was 9%. The complication rate according to the Clavien-Dindo-classification was I 7%, II 3%, IIIa
4%, IIIb (re-operation) 3%. There were no complications of higher grading. These
results are comparable to those published by plastic surgeons.

Conclusion
We strongly believe in an integrated approach to the bariatric patient. These individuals experience a life-changing treatment not only in regard to comorbidities
like metabolic syndrome, but to their lives as human beings. We feel that these
patients should not be left alone with the results of massive weight loss in this respect.
We were able to establish abdominoplasty on a high quality level in the hands of
none-plastic surgeons.

A495

Association of pre-operative behavioral measures with antidepressant medications one year after bariatric surgery

Shawn Hondorp *Grand Rapids MI*[1], Rebecca Preston *Grand Rapids MI*[1], Erin Schroeder *Grand Rapids MI*[2], Margaret de Voest *Ada MI*[2], Minji Sohn *Big Radpis MI*[2], Jon Schram *Zeeland MI*[1]
Spectrum Health System[1] Ferris State University[2]

Many patients hope to discontinue medications following bariatric surgery, yet little is known about factors associated with antidepressant use after surgery. We conducted a retrospective chart review to examine associations between pre-operative measures (e.g., anxiety, depression, and somatic symptom scales of the Personality Assessment Inventory) and change in antidepressant medication prescription from baseline to one-year post-operatively. Of 216 patients (90.0% gastric sleeve), 95 (44.0%) were never prescribed an antidepressant, 90 (41.2%) stayed on the same antidepressant, 20 (9.2%) added, increased, or changed medications, and 11 (5%) decreased or discontinued antidepressant medication. Higher scores on the depression, anxiety, and somatic symptom clinical scales were all significantly associated with antidepressant prescription before and after surgery, but were not significantly associated with changes in these medications. Notably, changes in medication and particularly discontinuation of antidepressant medication were rare, thus small sample sizes limited power to detect smaller effects. Examination of descriptive variables among the few patients who discontinued antidepressant medication (n = 11) revealed significant variability in starting weight (range: 36 to 71 kg/m^2), percent excess weight loss (range: 32% to 108%), and psychological symptom measures. Results provide further evidence that while weight loss surgery does lead to the amelioration of many health comorbidities and therefore a reduction in many medications; few patients discontinue antidepressant medication after bariatric surgery. No predictive variables were identified in the current study, and descriptive analyses suggest that the patients who discontinue antidepressant medication vary significantly in terms of starting weight, weight loss, and baseline mood variables.

A496

IMPACT OF WEIGHT LOSS ON THE BODY COMPOSITION OF PATIENTS 1 YEAR AFTER GASTRIC BYPAS

GLAUCO DA COSTA BALVAREZ ALVAREZ *SANTA MARIA* [1], DEISE SILVA DE MOURA *Santa Maria RS Brazil* [2], LUCIANA DAPIEVE PATIAS *Santa Maria - RS* [1], CRISTINA MACHADO BRAGANCA DE MORAES *Santa Maria* [2], NATHALY MARIN HERNANDEZ [2], RAQUEL PIPPI ANTONIAZZI [2], LUISA COMERLATO COMERLATO *Santa Maria* [2], ANA CRISTINA MACHADO *SANTA MARIA* [1]
Federal University of Santa Maria[1] Franciscana University[2]

Background: Obesity is a multifactorial disease and involves genetic, psychosocial and nutritional

aspects characterized by chronic inflammatory state. Bariatric surgery is a resource used in cases of failure in the clinical treatment for obesity and promotes an efficient reduction in weight. Gastric bypass is the most practiced technique in Brazil, accounting for 75% of the surgeries performed, due to its safety and efficacy, providing a weight loss around 70% to 80% of the initial weight and control of the main associated comorbidities. The objective of this study was to evaluate the impact of weight loss on the body composition of patients submitted to bariatric surgery.
Methods: Longitudinal study carried out in southern Brazil. The sample consisted of 43 subjects who underwent bariatric surgery and returned after 1 year for follow-up visits with a multidisciplinary team. The anthropometric data of weight, height, BMI, body composition (lean mass and fat mass) of the patients were obtained by analyzing the patients' medical records.
Results: The mean age of participants was 39.48 years (± 10.68), with 76.74% women and 23.26% men. The mean weight was 113.47 kg (± 14.66) in the preoperative period, and 71.57 kg (± 11.28) in the postoperative period of 1 year, being the percentage of excess weight loss (% PEP) of 95.53%. The mean BMI was 41.90kg / m^2 (± 4.52) and 26.45kg / m^2 (± 3.57), respectively, before and after surgery. In relation to the lean mass there was a reduction of 32.76kg (± 6.46) to 27.93kg (± 5.72) and a fat mass of 55.39kg (± 8.48kg) to 20.37kg (± 7.47) in the postoperative period. There was a significant weight reduction, BMI, lean mass and fat mass ($P < 0.001$).
Conclusion: Weight reduction through gastric bypass in the 1-year postoperative period had a significant impact on the modification of the body composition of bariatric patients. Approved by the Research Ethics Committee of the Franciscan University: 1,830,670.

A497
Length of Stay Reduction In Primary Roux En Y and Sleeve Gastrectomy Procedures by Clovis Community Medical Center (CCMC) presented by Susan Ghera, RN BSN PHN & Ashley Pinheiro MSN, RN, CNS, ACCNS-AG.
Susan Ghera *Clovis CA*[1], Ashley Pinheiro *Clovis CA*[1]
Clovis Community Medical Center[1]

Review of CCMC's length of stay (LOS) data revealed an opportunity to decrease the number of postoperative inpatient days for bariatric patients. Monthly LOS data retrieved from Premier's database allows us to benchmark ourselves and set goals for quality improvement. For calendar year 2016 the average LOS for RYGB was 2.23 days. When compared to Premier the observed/expected (O/E)

ratio was 1.37. The average LOS for SG was 2.16 days. When compared to Premier the O/E ratio was 1.52. Both patient populations had a LOS longer than like patients within the premier database.
A process improvement (PI) plan was implemented to decrease the LOS for RYGB and SG patients to ≤ 2 days. A counter measure for this PI plan was to maintain an all cause readmissions O/E rate ≤ 1. The plan for improvement began by developing a discharge criteria outlining hydration, mobility and symptom management goals for discharge on postoperative day one (POD 1).
Staff were educated on the discharge pathway and the expectation for communicating patient progress towards discharge with the surgeon. Patients were educated to have an expectation of being discharged on POD 1. After education was implemented, monitoring was conducted and opportunities for improvement were reviewed.
Review of data and project results demonstrated a reduction in length of stay without a significant increase in readmissions, patient satisfaction due to shorter inpatient stay and improved organizational throughput. The metabolic and bariatric committee will continue to monitor and report the outcomes related to this project.

A498

Body Composition as an Important Ancillary Measure in Adolescent/Young Adult Bariatrics

Megan Ratcliff *Duluth GA*[1], April Alexander *Duluth GA*[1], Tasha Temple [1], Debra Proulx *Duluth GA*[1]
Gwinnett Medical Center[1]

Background: Body mass index (BMI) and percent excess weight loss (%EWL) are widely used but imperfect bariatric metrics. They do not differentiate between fat mass (FM) and fat free mass (FFM), and their use among adolescents/young adults (AYA) may be problematic given the possibility of continued height and weight increases during the pubertal stage. Our AYA Program began systematically measuring body composition (including FM and FFM) using bioelectrical impedance in an attempt to better assess and inform treatment.

Methods: A retrospective clinical chart review of patients completing our six-month AYA pre-surgical program from August 2016-February 2018 was conducted (n=13). Clinical data including patient age, sex, height, weight, body composition (Body Fat Mass [BFM], Dry Lean Mass [DLM]), and fitness (treadmill test, push-ups) were reviewed. Dietary adherence (rated as Good, Fair or Poor in Dietitian's clinical note) was classified as 100%, 70-99%, and <70% Good.

Results: Three patient profiles emerged and are presented as case series. Over

the course of treatment, Patient A demonstrated 100% diet adherence with improved fitness resulting in loss of 37.7lbs BFM and 5.7lbs DLM. Patient B demonstrated 70-99% diet adherence with no change in fitness resulting in loss of 8.2lbs BFM and 7lbs DLM. Patient C demonstrated <70% diet adherence with no change in fitness resulting in gain of 4.2lbs BFM and loss of 1.1lbs DLM.

Conclusion: Not all pre-surgical weight loss is equivalent or beneficial. Routine assessment of body composition in AYA bariatric programs provides clinically useful information beyond standard weight metrics.

A499

TREATMENT CONTAINING CHOLECALCIFEROL IS SUPERIOR TO ERGOCALCIFEROL ALONE IN TREATING PATIENTS WITH VITAMIN D DEFICIENCY POST-BARIATRIC SURGERY

Kathleen Kinser *Nashville TN*[1], Matthew Spann *Nashville TN*[1], Chetan Aher *Nashville TN*[1], Cynthia Blalock *Nashville TN*[1]
Vanderbilt University Medical Center[1]

INTRODUCTION
Patients after bariatric surgery may have increased rates of Vitamin D deficiency due to diet changes and malabsorption of the procedures. Current data is unclear regarding if treating Vitamin D deficiency is best managed with cholecalciferol (D3) or ergocalciferol (D2).

METHODS
After approval by the institutional review board, a retrospective chart review was conducted at an MBSAQIP verified center on patients 30 days or more post gastric bypass or vertical sleeve gastrectomy undergoing routine post-surgical follow-up between April 1, 2016 and April 30, 2017. Inclusion criteria included patients with Vitamin D levels under 30 ng/mL being treated with either D2 or D3 with follow-up labs at 3-month intervals after treatment initiation. Exclusion criteria included missing lab values or treatment information, and non-compliance with therapy. In addition, common demographics, medical and surgical history were collected. Analysis of variance was conducted using SPSS Statistics version 24 (IBM-SPSS, Armonk, NY) to identify differences in treatment regimens.

RESULTS
42 patients met criteria and were divided into three treatment categories: no treatment, therapy with D2, therapy with D3. Statistically significant variations were observed between the three groups shown in TABLE 1 ($p = <0.005$). D3 treatment resulted in 39.7% higher levels than with D2. There was no statistically significant difference between post-gastric bypass and post-sleeve gastrectomy patients.

CONCLUSIONS
Treatment of vitamin D deficiency after bariatric surgery with vitamin D3 may be superior to treatment regimens excluding D3. Larger sample sizes in prospective studies are needed to confirm observations of this retrospective study.

A500

Increasing the frequency of sexual life may improve the sexual function and quality of females with obesity in China

Wah Yang *Guangzhou* [1], Luping Sun *Guangzhou* [1], Pik Nga Cheung *Guangzhou* [1], Cunchuan Wang *Guangzhou Guangdong* [1]
The First Affiliated Hospital of Jinan University[1]

Background: It is always embarrassing to talk about sexual function among Chinese population due to conservative tradition, especially for females. Sexual function and quality in Chinese female bariatric surgery candidates was seldom studied.

Objective: To investigate the factors affecting the sexual function and quality in Chinese female bariatric surgery candidates.

Methods: Females with obesity (BMI≥28) met the indications for bariatric surgery in our center were assessed by two comprehensive assessment tools, namely the Female Sexual Function Index (FSFI) and the Sexual Quality of Life - Female (SQOL-F) questionnaires. Females of non-obesity (BMI<28) were also recruited as control. Clinical data was collected and analyzed.

Results: Mean age and BMI of the study group (n=60) and control group (n=77) were (31.40±7.26 years, 37.65±9.35 kg/m^2) and (30.94±12.58 years, 20.97±2.73 kg/m^2), respectively. Mean score of SQOL-F and FSFI in study group and control group were (75.28±21.76 vs 77.51±12.43, p=0.91) and (19.31±8.65 vs 25.29±4.87, p<0.001). Frequency of sexual life in study group (3.78 times/month) was lower than that in the control group (6.03 times/month), and which were positively correlated with SQOL-F (p=0.013) and FSFI (p<0.001). Testosterone (R=-0.296, p=0.023) and progesterone (R= -0.310, p=0.017) were negatively correlated with FSFI. Hypertension, T2DM, smoking, drinking, education, marriage and income were not statistically significant (P□>□0.05) between two groups.

Conclusions: Sexual function of Chinese female bariatric surgery candidates is lower than that of the females with normal BMI. Increasing the frequency of sexual life may improve the sexual function and quality of females with obesity in China.

A501

Impact of preemptive acetaminophen administration on postoperative opioid use and complications in laparoscopic sleeve gastrectomy

Marjan Sadegh *Boston MA*
Brigham and Women's Hospital

Objective: Opioids are commonly used in postoperative care following laparoscopic sleeve gastrectomy (LSG). These agents are not without risk of adverse events. Multimodal and preemptive analgesia methods have been implemented to reduce opioid consumption. This study aims to evaluate the effect of preemptive oral acetaminophen (APAP) on postoperative opioid consumption and complications following LSG.
Methods: We performed a prospective study of sequential patients who received preemptive 975 mg of oral APAP and a historical control who did not. The main outcome evaluated the difference in the hydromorphone equivalent dose consumed within 24 hours after LSG. Secondary outcomes included differences in a postoperative pain intensity, use of antiemetic agents, and hospital length of stay. we applied student's *t*-test or Mann-Whitney *U* test for continuous data and *Chi*-square test for nominal data. Statistical significance was set at p-value of ≤0.05.
Results: Total of 53 patients were identified in the C group and of 37 patients were included in the APAP group. The median 24h-hour HEqD (IQR) in group A vs C was 2.1 mg vs 2.8 mg respectively. Similar trends were seen at the 8 and 16-hour time points. C group reported scores ≥7 more frequently than the APAP group (53% vs 43%). Total hospital length of stay was marginally shorter in the APAP group. All analyzed outcomes were statistically insignificant.
Conclusion: These findings suggest that adding pre-emptive oral APAP, when added to the standard of care, has a statistically insignificant impact on opioid consumption and associated complications in 24-hour postoperatively.

A502

Do the Cleveland Clinic Behavioral Rating System and Flanagan Quality of Life Scale Predict Outcomes After Bariatric Surgery?

Sara Monfared *Indianapolis IN*[1], William Hilgendorf *Carmel IN*[2], Don Selzer *Carmel IN*[1], Jennifer Choi *Indianapolis IN*[1], Ambar Banerjee *Indianapolis IN*[1], Dimitrios Stefanidis *Carmel IN*[1]
Indiana University School of Medicine[1] Indiana University Health North Hospital[2]

Background: Social support is important to optimize bariatric surgery outcomes but limited tools exist for its reliable assessment preoperatively.
Objectives: To assess whether the Cleveland Clinic Behavioral Rating System (CCBRS) completed by a psychologist, and a patient self-report measure, the Flanagan Quality of Life

Scale (FQOLS), can predict weight loss and comorbidity resolution after bariatric surgery. We also examined any associations between these two tools.

Methods: Patients with 1 year follow-up after bariatric surgery at a center of excellence, who also had the CCBRS and FQOLS completed as part of their preoperative psychosocial evaluation, were identified. A logistic regression was performed with patients' CCBRS and FQOLS scores as independent variables, and postop BMI, comorbidities, length of stay, and loss to follow-up as dependent variables. The prediction of CCBRS ratings from FQOLS social support items was also evaluated.

Results: A total of 199 patients were included. Neither the CCBRS nor the FQOLS scores were predictive of postop BMI, comorbidity resolution, length of stay, or loss to follow-up (table 1). There was, however, a significant correlation between the CCBRS and the FQOLS ($p<0.001$) with the FQOLS subscales for family and significant other support being strong predictors of CCBRS scores (table 2).

Conclusion: The two behavioral assessment tools were not predictive of outcomes 1 year after bariatric surgery. The family and significant other support subscales were predictive of CCBRS scores. Longer term assessment of patient outcomes is needed.

A503

Conversion of One-Anastomosis Gastric Bypass to Roux-en-Y Gastric Bypass : A Retrospective, Two-Center Analysis

Joshua Landreneau *Cleveland OH*[1], Andrew Strong *South Euclid OH*[1], John Rodriguez *Cleveland CA*[1], Ricard Corcelles *Abu Dhabi* [2], Matthew Kroh *Abu Dhabi* [2]
Cleveland Clinic[1] Cleveland Clinic Abu Dhabi[2]

Background:
One-anastomosis gastric bypass (OAGB) has become increasingly popular for its relative simplicity but is associated with complications that require revisional surgery. Herein we present a two-center experience of converting OAGB to roux-en-y gastric bypass (RYGB).

Methods:
Patients who underwent conversion of OAGB to RYGB at the Cleveland Clinic or Cleveland Clinic Abu Dhabi from January 2010 to August 2017 were retrospectively reviewed.

Results:
Twelve patients with previous OAGB underwent conversion to RYGB during the study period, with six patients included from each institution. The cohort was 83.3% female with a mean age of 51.3 years and median BMI of 33.2 kg/m^2. Three patients (25.0%) had at least one prior bariatric surgery conversion. The most common

indications for conversion were bile reflux gastritis (50.0%) and nausea/vomiting (25.0%). The median time for OAGB to RYGB conversion was 30 months. Seven (58.3%) were completed laparoscopically, with four converted to open (33.3%) and one (8.3%) with a planned open approach. A handsewn gastrojejunal anastomosis was fashioned in four patients (33.3%). The mean operative time and estimated blood loss was 276 minutes and 160 milliliters. One patient required reoperation for anastomotic leak and one patient had percutaneous drainage of an abscess. The median length of stay was 7 days. There were no mortalities at a median follow-up of 10.2 months.

Conclusions:
OAGB to RYGB conversion can be challenging, though is safe and feasible for the correction of OAGB-related complications. While a laparoscopic approach is possible in most cases, complications are relatively common.

A504

Transversus Abdominis Blocks in Bariatric Surgery

Rami Mustafa *cleveland OH*[1], Tomasz Rogula *Chardon OH*[2], Leena Khaitan *Chardon OH*[1], Ebony Tinsley *Painesville OH*[3], Heba Elghalban *Cleveland OH*[1], hatem soltan *New cairo* [4], Mohamed Sabry *Shebein Elkoom* [4]

University Hospitals of Cleveland, CWRU[1] Cleveland Medical Center[2] Lake Erie college[3] Menoufia University, General surgery Dep[4]

Background:
Bariatric patients are at particular risks of opioids-related respiratory complications postoperatively. Adjuvant pain therapy includes local/regional blocks with the aim to reduce opioid intake. The objective of the study is to asses opioids intake in patients undergoing transversus abdominis plane (TAP) block at the time of laparoscopic bariatric surgery.
Methods: 130 patients underwent standard laparoscopic laparoscopic gastric bypass. TAP block was done with infusion of a total 50 ml of Marcaine 0.5% injected in standardized fashion into preperitoneal space near port sites under laparoscopic guidance. Patients were matched with a control group with similar age, weight, BMI, comorbidities, gender. Patients with prior opiod use, chronic pain, revision or additional surgeries were excluded. Pain scores, sparing morphine consumption, and early recovery items were evaluated at 1, 24, and 48 hours postoperatively. Findings were compared between groups using ASPSS 24, Chi Sq. and T-test.
Results:
After matching, 11 patients out of 130 patients were included in the study with an allocation ratio of 1:1 to the control group. Opioid intake was significantly decreased in a study group ($p<0.005$) with similar or better pain scores.

Conclusions:
TAP block in laparoscopic bariatric surgery decreases opiod intake and provides adequate pain control.
Key Words: Bariatric surgery, TAP, Outcomes

A505
Is Bariatric Surgery to be offered in Adolescence?
MAHENDRA
NARWARIA *ahmedabad*
ASIAN BARIATRICS HOSPITAL

Background:

Bariatric surgery in morbidly obese adolescents is controversial. Many argue that morbidly obese individuals should be of adult age before undergoing bariatric operations, despite the progressive and debilitating course of this increasingly common disease.
Objective:
To examine the safety and effectiveness of adolescent bariatric surgery and to improve treatment recommendations for this age group.

Materials and Methods:

19 consecutive adolescent patients, aged 12-19, underwent Sleeve,Banded Sleeve,
Roux-en-Y gastric bypass,Mini Gastric Bypass between May 2014 and August 2017. Average BMI was 49 kg/m2,range 38-67. All had one or more co-morbidities.Follow-up was obtained up to 1-4 years.

Results:

Postoperative BMI at the maximum time of follow-up, mean 2.26 years (range 1-4 years), was 28
(range 23 to 45). Only one patient did not lose enough weight and was considered a failure. There were no mortality or morbidity. All co-morbidities disappeared. Family and patients were pleased with the surgery.

Conclusions:

Early surgical intervention should be offered to a greater number of adolescents to minimize
the emotional and physical consequences of morbid obesity . QOL will also improve after the surgery in these patients.

A506
30-Day Readmissions of 605 patients submitted to bariatric surgery in a SRC Bariatric Center
Carlos Pizani *São Paulo* [1], Thomaz MONCLARO *São Paulo* [1], Ana Caroline Fontinele *São Paulo* [1], Dirceu Santos *São Paulo* [1], Eduardo Sticca *São Paulo* [1], Marcelo CARNEIRO *Sao Paulo* [1], Sansiro de Brito *São Paulo* [1], Carlos De Souza Filho *São Paulo* [1], PAULO SALLET *SAO PAULO SP*[1], Afonso Sallet *São Paulo* [1]
Instituto de Medicina Sallet[1]

Year after year the rate of complications and mortality after

bariatric surgery has been dropping. The medical community knows that the use of new technologies, high volume centers and expertise of the surgical team, especially concerning diagnosis and treatment of complications is essential to further reduce morbidity and mortality rates. The objective was to analyze complications and hospital readmissions for clinical care or surgical treatment in the first 30 days after surgery. This Observational study included 605 consecutive patients submitted to Laparoscopic Roux-en-Y Gastric Bypass and Sleeve Gastrectomy in a SRC credited center in 2017. All patients were classified through the Clavien-Dindo grade. Of the 82 (13,5%) patients that were admitted to the emergency room, only 21 (3,5%) needed rehospitalization. The main causes were bleeding in 7 patients (34%); small bowel obstruction, postoperative ileus, respiratory disease and thrombosis of the portal system in 3 patients each (14%); and 2 patients (10%) with changes in food passage through the anastomosis: one with foreign body obstruction and one with a stenosis due to edema. Of these, 7 (33%) had Clavien-Dindo I, 9 (43%) Clavien-Dindo II, 2 (10%) Clavien-Dindo IIIA and 3 (14%) Clavien-Dindo IIIB. Only three patients needed surgical treatment, all of them with intestinal obstruction. There was no mortality. We have a low incidence of complications and hospital readmissions (3.5%) when we compare with another bariatric excellence centers. Only 0,5% of patients needed surgical treatment in the first 30 days after bariatric surgery and all of them had a good evolution.

A507

The absence of Caspase 1/11 leads to fat tissue modulation and a anti-tumor activity of Brown adipose tissue against breast cancer cells

Luis Henrique Correa *Brasilia* [1], Lívia Sant'Ana *Brasilia* [1], Aline Martins *Brasilia* [2], Kelly Magalhães [2], Marcos Eberlin [3]
University of Brasilia[1] University of Brasília[2] UNICAMP[3]

Fat tissues can regulate cancer development by modulating inflammatory response. However, the role of NLRP3 inflammasome in white and brown adipose tissues in this context is poorly understood. Here, we aimed to characterize the role of caspase 1/11 and NLRP3 inflammasome components in the lipidomic profile of brown and white adipocytes and their function in breast cancer cells activation. Brown and white adipose tissue were isolated from wild type, caspase-1/11 and NLRP3 knockout mice. White and brown adipocytes tissues from these mice were analyzed by Electrospray Ionization Mass Spectrometry (ESI-MS). Conditioned medium from these adipocytes were used to stimulate breast cancer cells 4T1. Breast cancer cells lipid droplet biogenesis was analyzed by Bodipy or Oil Red staining followed by flow cytometry or

Microscopy analysis, respectively. Breast cancer cells viability was assessed by MTT assay. Our data showed that white adipocytes conditioned medium triggered significant higher levels of lipid droplet biogenesis in breast cancer cells compared to brown adipocytes stimulation or unstimulated cells. The secretion product of brown adipose tissue decreased the viability of tumor cells. ESI-MS data showed that both fat tissues have distinct lipidic metabolites and the absence of inflammasome components changed significantly the profile of these fat cells. Taken together, our data showed white and brown adipocytes presented distinct lipidomic profile and the absence of NLRP3 inflammasome components may influence directly their lipidomic composition and their ability to activate breast cancer cells, suggesting an important mechanism that may be involved in their differential function in carcinogenesis. **Support**: CNPq

A508

Modified duodenal switch, a surgical option for weight regain following Roux-en-Y Gastric Bypass

Carlos Madalosso *Passo Fundo - RS BRAZIL* [1], Alexandre Tognon [2], Fabio Barão *Passo Fundo* [3], Kalil Fontana *Passo Fundo* [1], Iran Moraes Jr [1], Daniel Navarini *Passo Fundo NM*[4]
GASTROBESE CLINIC, HSVP[1] HSVP[2] University of Passo Fundo - UPF[3] Gastrobese Clinic, FMUPF, HSVP[4]

Excessive weight regain after Roux-en-Y gastric bypass (RGBP) is observed in more than 20% of patients in long-term follow-up. Its management is challenging. Laparoscopic single anastomosis modified duodenal-switch (LMDS) is a promising technique but its success demands skilled, highly experienced teams. We present a series of patients who had a conversion to LMDS for weight regain after RGBP. Between April 2016 and June 2017, four patients underwent LMDS 77 to 174 months after an initial RGBP. All patients complained about 24kg to 33kg weight regain and severe labor dysfunction. Additional comorbidities were hip arthrosis, excessive vomiting. One of these patients had a previous conversion from RGBP to open sleeve gastrectomy because of severe neuroglycopenia. One patient had a hiatal hernia repaired and a perigastric ring removed, while other patient developed a postoperative fever which was managed with antibiotics. Hospital stay ranged from 24 to 48 hours. One patient needed two endoscopic dilations of the gastro-gastric anastomosis 30 and 45 days after the operation. BMI decreased from 36,7Kg/m^2 – 42,0Kg/m^2 to 22,0Kg/m^2 – 28Kg/m^2 in 10 to 24 months follow up. All patient complained of occasional heartburn and one patient is currently in on proton pump inhibitor. Evacuatory frequency varies from 1 to five episodes per day. These presented cases show that LMDS is feasible, with acceptable complications, minor side effects and

important weight loss after one year follow up. Further studies are needed to support LMDS as a therapeutic option to treat weight regain after RGBP.

A509

Secondary Hyperparathyroidism and Hypovitaminosis D one year after post-bariatric surgery

Luciana Verçoza Viana *PORTO ALEGRE* [1], Luiza Sperb *Porto Alegre* [2]
HCPA - UFRGS[1] Medical Student - UFRGS[2]

Introduction: Patients with obesity submitted to bariatric procedures have a high risk of secondary hyperparathyroidism (SHPT) (up to 53%) and hypovitaminosis D (33 to 96.7%). These morbidities could imply in future adverse bone conditions. The aim of this study was to evaluate vitamin D deficiency and SHPT in South Brazilian patients after one year of bariatric surgery (Y-en-Roux bypass procedure).
Methods: In this retrospective cohort study (March 2016 to September 2017) vitamin D deficiency was defined as serum 25(OH) vitamin D <20 ng/ml and SHPT as PTH >68 pg/ml post-surgery, in patients with normal serum creatinine and calcium. Bone mineral density (BMD) was estimated by DXA - Lunar (g/cm^2).
Results: From 151 patients who underwent bypass surgery, 83 were included (49.7±10.6 years, 12% non-white ethnicity, 95.2% female, 51.6±17 months of follow-up). Pre-surgery and current BMI were 49±7.4 and 32.8±4.9 kg/m^2, respectively, with 68±16.6% excess body weight lost. Multivitamin supplementation was used in 86.7% and calcium tablets in 53%; 85.5% consumed dairy products. In the last medical visit, 71% of patients were taking vitamin D [23,000IU weekly (P_{25-75}16,000–28,000)] and of them. Mean 25(OH)D was 20.6±7.9 ng/ml at first and 25.6±7.9 ng/ml in the last evaluation (P<0.01). SHPT was identified in 43.4% [PTH = 76.2 pg/dl (P_{25-75} 55.1–93)]. An inverse correlation (P<0.05) was observed between BMD and PTH in lumbar spine (r=-0,375) and total hip (r=-0.243), but not with vitamin D.
Conclusion: Vitamin D deficiency and SHPT were frequent after bariatric surgery, and BMD was inversely correlated to PTH.

A510

COMBINED SURGERY: ABDOMINOPLASTY AND ABDOMINAL SURGERY LAPAROSCOPIC IN ONE SURGICAL TIME AFTER SLEEVE GASTRECTOMY

Renato Roriz-Silva *Porto Velho* [1], RAMON VILALLONGA *BARCELIONA* [2], Sergio Sánchez-Cordero *Igualada* [3], Bernard Cambier *Barcelona* [4]
University of Rondonia and Universitat Autónoma de Barcelon[1] Hospital de

Barcelona,[2] Hospital de Barcelona[3] Esthetische-chirurgie-Belgium[4]

INTRODUCTION
The combined surgery of several procedures in a surgical time, generally plastic surgery and general or gynecological interventions, can alter the morbidity of the patient and the postoperative hospitalization when compared with similar procedures carried out by separated. Nevertheless, in selected cases, we obtain benefits for the patient in terms of costs, reduction of postoperative stay and the inherent risk of two anesthetic interventions. We present two clinical cases of major laparoscopic abdominal surgery combined with plastic surgery after the first intervention of bariatric surgery. The first case is a male who after having undergone a sleeve gastrectomy, a tummy tuck and breast liposuction was proposed, while a cholecystectomy was performed laparoscopically. The second case is a patient who underwent a first-time sleeve gastrectomy and then was proposed to perform a hiatoplasty and Hill intervention due to a diaphragmatic hernia combined with a tummy tuck. The result of both surgeries was satisfactory and the postoperative course of both patients was uneventful, being both discharged from hospital on the third day.
CONCLUSION
The combination of two or multiple abdominal procedures requires careful patient selection to safely combine these procedures, but avoids skin incisions and can reduce the potential risks of multiple anesthesia for each procedure, shorten total hospital stay, surgical time, as well as, reduce costs and postoperative recovery.

A511
LAPAROSCOPIC SLEEVE GASTRECTOMY FOR THE TREATMENT OF PATIENTS WITH MASSIVE HERNIAS WITH LOSS OF DOMAIN

Renato Roriz-Silva *Porto Velho* [1], RAMON VILALLONGA *BARCELIONA* [2], Sergio Sánchez-Cordero *Igualada* [2] University of Rondonia and Universitat Autónoma de Barcelon[1] Hospital de Barcelona[2]

INTRODUCTION
The repair of a complex abdominal hernia has an important morbimortality. We propose laparoscopic sleeve gastrectomy as the first step in the treatment of hernias with loss of domain in patients with morbid obesity.

CLINICAL CASE
This is a 56-year-old male patient with a history of diabetes mellitus and arterial hypertension, with a BMI of 48 kg / m 2 and a large incisional hernia with a previous midline laparotomy. He underwent a sleeve gastrectomy for morbid obesity before the repair of the incisional hernia. In this case, it was proceeded with the placement of 5

trocars in working position away from the infraumbilical eventration and the creation of pneumoperitoneum with the Veress needle. We release the largest curvature of the stomach, from the middle to the upper part with ultrasonic bipolar. A minimal opening of the greater curvature is made in the retrogastric space. All short vessels of the fundus are identified and exposed in the vertical position, and their entire section is made to the left pillar. A 40-F tube is inserted into the pylorus and the stomach is resected with a linear mechanical endostapler. An extra sixth trocar was needed to make the first stapling. The postoperative course was uneventful.
CONCLUSION
Laparoscopic vertical gastrectomy is a safe procedure in obese patients before a major repair of an incisional hernia. The loss of body weight after surgery may be an opportunity for the repair of an incisional hernia with loss of dominance.

A512

Bariatric surgery causes genetic cardiovascular remodeling and improvement in heart rate variability in women with grade III obesity

Marcela Pinhel *Ribeirao Preto - Sao Paulo* [1], Carolina Ferreira Nicoletti *Ribeirão Preto* [2], Natalia Noronha [2], Bruno Oliveira *Ribeirão Preto* [2], Cristiana Cortes-Oliveira *Ribeirão Preto* [2], Wilson Salgado Junior *Ribeirao Preto* [2], Julio Marchini *Ribeirao Preto, Brazil* [2], Doroteia Souza *São José do Rio Preto, SP* [3], Carla Nonino *Ribeirão Preto* [2]
University of Sao Paulo - USP[1] University of São Paulo[2] Sao Jose do Rio Preto Medical School[3]

Introduction: The exact mechanism for increasing cardiovascular mortality (CVD) in obese individuals is not fully understood, however, a reduction in heart rate variability (HRV) may be a potential pathway involved in sudden death. In addition, the expression of genes involved in cardiovascular restoration may be altered in these patients. However, both HRV and the expression of these genes could be remodeled following treatments for significant weight loss, such as bariatric surgery. Methods: Thirteen women with grade III obesity and 9 eutrophic women were selected. Patients with obesity were evaluated before and after 6 months of bariatric surgery and once in control group. Peripheral blood was collected for RNA extraction and analysis. The Polar RS800CX heart rate monitor was used to capture the RR intervals of the electrocardiogram and the Kubios HRV Premium software for calculating the HRV variables. Statistical Analysis: We used the Shapiro-Wilk, t-test or Mann-Whitney U tests and genomic software (GenomeStudio®). All tests were performed in the SPSS 17.0 program, a p value <0.05 was considered significant. Results: After six months of bariatric surgery, there was a significant increase in HRV indices,

including: SDNN, RMSSD, pNN50, LF, SD1, SD2 and Lmean ($p < 0.05$). In addition, there was an increase in the expression of genes (*NFKB1, XIAP, BIRC2, BIRC3, MMP9, TIMP1, TIMP2, BAX* and *TGFB1* $p < 0.001$) involved with postoperative cardiovascular remodeling pathway. Conclusions: Weight loss after bariatric surgery improves HRV and positively modulates genes involved in cardiovascular remodeling, which should be thoroughly investigated as possible biomarkers for CVD.

A513

Results of Bariaric Surgery on BMI and Hypertension after 10 years of follow up in Clementino Fraga Filho University Hospital of Federal University of Rio de Janeiro (HUCFF - UFRJ)

Camila Oliveira *Rio de Janeiro* [1], André Ricardo Santos *Rio de Janeiro* [2], Fernado Ponce Leon [1], Andre Luiz Zacaron *Rio de Janeiro* [1], Antônio Augusto Souza *Rio de janeiro DE*[1] Universidade Federal do Rio de Janeiro[1] Universidade Federal Rio de Janeiro[2]

Introduction

In Brazil, the prevalence of obesity have increased 60% in the las 10 years. Obesity is related to metabolic diseases such as type 2 diabetes, hypertension, cardiovascular disease and cancer. The bariatric surgery is the best treatment for obesity when medical therapy fails. Roux-en-Y Gastric Bypass (RYGB) is one of the most commonly performed surgery to treat obesity, reducing 75% of the excess weight loss in the first year.

Objective

To evaluate the long-term results of weight loss and remission of hypertension in patients submitted to RYGB after 10 years of surgery in a University Hospital in Rio de Janeiro.

Methods

A retrospective review of patient's data was completed in all patients undergoing RYGB between 2000 and 2007. ROC curve was constructed to evaluate weight loss 10 years after RYGB and Pearson coefficient correlation was calculated to assess the relationship between weight loss and remission of hypertension.

Results

The complete data was collected in 34 patients who underwent RYGB. Patients had a mean age of 39.4 ± 10.4 years and a mean baseline BMI of 49.7 ± 11.2 kg/m^2. There was a mean weight reduction of 41.9kg and a mean excess weight loss of 60.3 ± 17.9%. The ROC curve compared base line weight with weight 10 years after surgery with an area under the curve (AUC) = 0.89. The weight loss was associated with the remission of hypertension in 68% of patients. Pearson coefficient revealed strong positive correlation between weight loss and remission of hypertension ($r=0.741$, $p<0.0001$).

A514

Case report: Loss greater than 30% of total bodyweight with the use of an intragastric balloon.

Eduardo Grecco *Santo André* [1], Manoel Galvão Neto *Doral FL*[1], Thiago Souza [1], Luiz Gustavo Quadros *Sao jose do rio preto* [2], Luana Baldim *Santo André* [1], Calisto Paschoa Filho *São Paulo* [1]

Faculdade de medicina do ABC[1] Universidade Federal de Pernambuco[2]

Introduction

The primary endoscopic treatment for obesity is indicated for patients with overweight and mild obesity. The intragastric balloon is the most used endoscopic method due to its good result in this group of patients associated with low morbidity and mortality.

There are different models of intragastric balloons with no significant difference in weight loss between them, with total mean body weight loss around 12-18%.

Case report

Patient VSS, 39 years old, female, with a personal history of hypertension and dyslipidemia. Initial weight of 110 kg and BMI (body mass index) of 43.7. The Spatz model balloon was implanted in april 2017, after refusal of the patient to undergo a surgical procedure.

At the end of the 12-month treatment, the patient had a final weight of 69.5 Kg and BMI of 28, representing a weight loss of 40.5 kg or 36% of the total body weight. There was improvement in blood pressure and cholesterol levels

The patient was asymptomatic during the use of the balloon and presented no complications.

Discussion

The intragastric balloon is an option for the treatment of obesity and reduces the risks and complications in comparison to patients who have undergone bariatric surgery. Although the reported case presented a weight loss above the expected, the use of the intragastric balloon may be an alternative treatment in morbidly obese patients who refuse or have contraindication to the performance of bariatric surgery.

A515

Changes in gene expression modify the resting metabolic rate in women after bariatric surgery

Bruno Oliveira *Ribeirão Preto* [1], Marcela Pinhel *Ribeirao Preto - Sao Paulo* , Natália Noronha , Carolina Ferreira Nicoletti *Ribeirão Preto* , Cristiana Cortes-Oliveira *Ribeirão Preto* , Wilson Salgado Junior *Ribeirao Preto* , Carla Nonino *Ribeirão Preto*

University of São Paulo[1]

Analysis of gene expression related to energy metabolism and subsequent association with the resting metabolic rate (RMR) may elucidate the understanding of genetic factors that contribute to obesity. The aim of this study was to analyze the expression of genes related to energy metabolism and associate it with the RMR in women with obesity before and after bariatric surgery. The sample consisted of 13 women before and after six months of bariatric surgery. The nutritional status was performed using Body Mass Index (BMI). The RMR was determined by the measurement of the oxygen consumed (O2) and carbon dioxide produced (CO2) using the QUARK-RMR equipment. The gene expression analysis was performed in peripheral blood by microarray methodology, BeadChip- Illumina™ and with subsequent validation by the quantitative Real Time PCR method. Data were analyzed by SPSS ($p<0.05$). Differences were observed in weight (115.3±19.4 vs 85.3±13.8kg, $p<0.01$), BMI (42.5±7.0 vs 31.8±5.4 kg/m^2, $p<0.01$) and RMR (2.052±267 vs 1.743±154 kcal, $p<0.01$) after six months of bariatric surgery. There was an increasement in the gene expression of six targets related to energy metabolism after bariatric surgery, genes/fold change respectively, (*CTNNB1*/5.42, *LEP*/2.96, *PPP2CB*/3.35, *RAP1B*/5.51, *GNB4*/2.96, *MLX*/2.19) .The association of genes with the RMR after bariatric surgery, was confirmed by multiple regression analysis (r^2:0.971; p=0.02; CI:901;1655). There was significant weight loss, decreasement of BMI and increasement in the expression of genes related to energy metabolism after of surgical treatment. Understanding this pathway related to energy metabolism, can lead us to develop in the future new treatments for obesity.

A516

Aluminum and arsenic serum concentration decreases after bariatric surgery in obese women

Natalia Yumi Noronha *Ribeirão Preto - SP* [1], Bruno Affonso Parenti de Oliveira *Ribeirão Preto* [1], Marcela Augusta Pinhel *Ribeirão Preto* [1], Carolina Ferreira Nicolleti *Ribeirão Preto* [1], Cristiana Cortes de Oliveira *Ribeirão Preto* [1], Vanessa Oliveira Souza [1], Juliana Kazumi Saeki [1], Fernando Barbosa Junior [1], Carla Barbosa Nonino *Ribeirão Preto* [1]
University of São Paulo[1]

Introduction: Obesity has been linked to lifestyle and recently have been associated to environmental toxicants, it is widely accepted that these xenobiotics have a negative impact on human health and may contribute to the development of diseases and its comorbidities. Metals exposure is a very concerning event, and in this context, arsenic (As) is a metal that is commonly used in industry in combination with sulfur and other metals. The contamination occurs mainly by the respiratory (particulate

matter) and oral (grains, cereals, seafood, drinking water) routes. Aluminum (Al) is also a metal that may reach people through diet. This type of contamination usually occurs due to food packaging and utensils composition, which may contaminate food during preparation and storage processes. This study aimed to evaluate arsenic and aluminum serum concentration in obese women before and after bariatric surgery. **Materials and Methods**: This study enrolled obese women and anthropometric data such as weight (kg) and height (m) were collected. As well as peripheral blood samples after 12 hours fasting for biochemical analysis, serum concentration of metals was determined by inductively coupled plasma mass spectrometry (ICP-MS). Statistical analysis included the Shapiro-Wilk and paired t test (p<0.05). **Results:** A total of 16 subjects participated in the study: IMC_{before}= 43.9±6.1 kg/m^2; IMC_{after}=33.1±4.9 kg/m^2 Age=37.±8.1 years old. Serum concentration of Al and As were different after the surgery (Before-As:13.8±0.9μg/L, After-As:12.6±0.7ug/L, p=0.001; Before-Al:77.7±65.5ug/L, After-Al ;34.1±11.9μg/L, p=0.021). **Conclusion :** Serum concentration of toxic metals are different after bariatric surgery andthis might be a new perspective in obesitytreatment.

A517

Are the size of the sleeve reservoir and anthropometric measurements associated with reflux esophagitis after laparoscopic sleeve gastrectomy (LSG)

Carlos Madalosso *Passo Fundo - RS BRAZIL* [1], Daniel Navarini *Passo Fundo NM*[2], Guilherme Mazzini *Richmond* [3], Fabio Barão *Passo Fundo* [4], Gabriela Ambrós *Passo Fundo* [5], Richard Gurski *Porto Alegre* [3]
GASTROBESE CLINIC[1] UPF, Gastrobese clinic[2] UFRGS[3] UPF; Gastrobese clinic[4] HSVP[5]

Background: Reflux esophagitis (RE) is related to LSG. It has been suggested that a narrow sleeve may lead to RE. This cross-sectional study addresses this issue. Methods: 18 consecutive patients were submitted to LSG and completed one-year evaluation. LSG was calibrated with a 32 F Bougie, and the staple line started 2cm proximally to the pylorus. Based on postoperative upper endoscopy, patients were divided in Group 1: with RE grade B or C; and Group 2: with RE Grade A or absent. Sleeve size and hiatal hernia (HH) were evaluated through 3D CT scan. Results: 16 female, 38 ± 14 yo, 12 ± 0.7 months follow-up. RE occurred in 12 (67%) patients as follows: 6 had no RE, 2 patients had grade A, 7 grade B and 3 grade C. Group 1 had an increased sleeve reservoir and larger HH at CT scan than Group 2 (215 ± 53.8 mm^3 vs. 154 ± 40 mm^3; P = 0.018) and (0.65 ± 0.9 cm vs. 1.8 ± 1.0 cm; P = 0.035)

respectively. Group 1 had a higher abdominal circumference and BMI than Group 2 (98 ± 8.6 cm vs. 86.9 ± 2 cm; P = 0.004). The present study shows that a large sleeve reservoir at CT scan, as well as an increased central adiposity associate to moderate or severe RE, at least as long as one year following LSG. Prospective and long-term studies are needed to support these findings.

A518

Association of Alcohol abuse and Binge Eating Disorder Post Bariatric Surgery

Cristina Freire *São Paulo* [1], Andréa Z Pereira *S.Paulo* [1], Adriano Segal [2], Glaucia Carneiro [1], Maria Teresa Zanella *São Paulo* [1]
UNIFESP[1] USP[2]

Some studies have demonstrated an increase in alcohol abuse after bariatric surgery. The purpose of this study is to determine the prevalence of alcohol abuse in post-bariatric surgery, and test the hypothesis of an association between binge eating disorder before bariatric surgery, and alcohol abuse after-bariatric surgery.
Patients (n=46) submitted to bariatric surgery have gone through clinical and anthropometric assessment before and after surgery. Additionally, they have answered the questionnaires of eating and weight patterns (QEWP-R) to assess the binge eating disorder (BED) before and 12 years after bariatric surgery. They were also submitted to the questionnaire AUDIT, to identify problems related to alcohol abuse, 12 years after surgery.
Alcohol abuse was observed in 1 out of the 46 patients assessed before surgery, and was found in 21.7% (n=10) after surgery through the AUDIT questionnaire. BED before surgery was present in 52.17% (n=24) of patients, and after 12 years in 39% (n=18). Patients with pre-surgery BED (n=24) that developed alcohol abuse was 16.7% (n=6;p=0.384). Among 10 patients that developed alcohol abuse 12 years after surgery, 7 patients also developed post-surgery BED or 70% and a significant association was found between south disorders (p=0.024). Our results have demonstrated a high prevalence of alcohol abuse long after surgery, and that the occurrence of pre-surgery BED is not a predictive factor for the development of alcohol abuse. However, 12 years after surgery the presence of BED has been associated with the development of alcohol abuse.

A519

Single Anastomosis Duodenal Switch: Effects on Weight Loss and Reduction of Weight Related Comorbidities

Rex Farrer *Toledo OH*[1], Matthew Fourman *Toledo OH*[1], Gregory Johnston *Toledo OH*[1], Brenda Bal *Toledo OH*[1]
Mercy St. Vincent[1]

Introduction: Single Anastomosis Duodenal Switch (SADS) is a novel bariatric procedure where a single loop anastomosis is made between the first portion of the duodenum and the jejunum. Our study is an investigational study to determine if SADS results in weight loss and reduction of associated comorbidities compared with traditional bariatric procedures. We also compare the risks of nutritional and vitamin deficiencies.
Objectives:

1. Describe short term weight loss within the first 12 months following a SADS.
2. Describe maintenance of weight loss following SADS at 12 and 60 months
3. Describe reduction following SADS for HTN, HLD, Type II DM
4. Describe quality of life following SADS
5. Describe nutritional deficiencies following SADS

Methodology: This is an ongoing prospective, investigational study following patients who have undergone the SADS procedure. They are being followed at 3 month intervals until a year when they will be followed with annual visits.

Results: The current results are for the first 5 patients at the 3 month follow up. The median weight loss has been 69 lbs. Of our first 5 subjects, none have had DM, all have HLD and all have had HTN.

To date there have been no adverse complications. There have been no post-operative complications and there have been no vitamin or nutritional deficiencies

Conclusion: The SADS is a new bariatric procedure that has the potential to have greater weight loss and reduction of comorbidities than current bariatric procedures with less nutritional deficiencies and greater quality of life.

A520
"Postoperative care of bariatric medical tourism: A public health concern"

LaRae Seemann *Augusta GA*[1], Jaine McKenzie *Augusta GA*[1], Karen Draper *Augusta GA*[1], L. Renee Hilton *Augusta GA*[1]
Medical College of Georgia[1]

Introduction: Despite considerable evidence supporting the efficacy of bariatric surgery, poor insurance coverage in the United States restricts access to the procedure, encouraging medical tourism. There is no long-term postoperative (PO) care from foreign health services for bariatric medical tourists (BMTs). Consequently, BMTs become the responsibility of US physicians after bariatric surgery

abroad. We are using the experience of a patient who returned from Mexico with PO complications to illustrate public health consequences of medical tourism.

Clinical Case: A 33-year-old female patient presented with acid reflux, dysphagia, and vomiting 3 years after undergoing vertical sleeve gastrectomy in Mexico. Postoperatively, she had required numerous surgeries and procedures to manage a sleeve leak. An upper GI obtained at our facility showed sleeve stricture and a hiatal hernia. Endoscopy confirmed these findings. The patient required conversion to a Roux-en-Y Gastric Bypass (RYGB) to relieve obstruction. She recovered well thereafter with resolution of her symptoms. Our center will continue long-term surveillance of her case.

Conclusion: When medical tourism for the purpose of bariatric procedures results in complications, US physicians usually manage the long-term follow up. Even when no complications occur, patients will need long-term bariatric surveillance in the US. The postoperative complications and continued surveillance of BMTs should be viewed comprehensively as a public health concern. Providing adequate insurance coverage for bariatric procedures in the US will help alleviate the negative outcomes of patients seeking more affordable, but often unsafe, procedures abroad without follow-up options.

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Dan, Adrian-MD	Ethicon: Speaker/Trainer/Faculty, Self, Grant Support to institution, private practice or individual; Covidien: Speaker/Trainer/Faculty, Self, Grant Support to institution, private practice or individual; WL Gore: Speaker/Trainer/Faculty, Self, Grant Support to institution, private practice or individual; Intuitive: Speaker/Trainer/Faculty, Self, Grant Support to institution, private practice or individual
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Gandsas, Alejandro-MD MBA	BAXTER: Consultant, Self, Honoraria
Garber, Shawn-MD	Ethicon: Consultant, Self, Honoraria; Obalon: Researcher/Developer, Self, Honoraria; Reshape Life Sciences: Researcher/Developer, Self, Honoraria; Virtual Healthcare Partn: Stock/Shareholder, Self, Stock/Stock Options
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Tronieri, Jena-PhD	Novo Nordisk: Consultant, Self, Honoraria
Varban, Oliver-MD, FASMBS	Blue Cross Blue Shield: Employee/Contract Employee, Self, Salary
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Pomeranz Morgan-MD	A475-Main Presenter
MacIntyre Allan-DO	A475-Co-Author
Mozzo Matthew-MS	A434-Main Presenter
Sanni Aliu-MD	A434-Co-Author
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Jadhav Vaishali-BS	A434-Co-Author
Gutierrez Luis-MS	A434-Co-Author
Worrest Tarin-MD	A361-Main Presenter
Dewey Elizabeth-MS	A361-Co-Author
Husain Farah-MD FASMBS	A361-Co-Author
Wood Stephanie-MD	A361-Co-Author
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Hilgendorf William-PhD HSPP	A320-Co-Author
Morrissette-Johnson Myesha-MA	A320-Co-Author
Hawkins Russell-MD	A398-Main Presenter
Stortz Julie-MD	A398-Co-Author
Carlin Arthur-MD FASMBS	A398-Co-Author
Ayzengart Alexander-MD MPH	A398-Co-Author
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Kular KS	A422-Co-Author
Rutledge Robert-MD	A432-Main Presenter
Kular KS	A432-Co-Author
Therrien Stephanie	A435-Main Presenter
Jones Daniel-MD MS FASMBS	A435-Co-Author
Phillips Blaine-MD MPH	A435-Co-Author
Althuwaini Saad-MD	A335-Main Presenter
Althuwaini Saad-MD	A363-Main Presenter
Rutledge Robert-MD	A275-Main Presenter
Kular KS	A275-Co-Author
Dovec Elizabeth-MD FACS	A399-Main Presenter
Lundberg Peter-MD	A352-Main Presenter
Seoane Jacqueline-BA BS	A352-Co-Author
Wolfe Samantha-MD	A352-Co-Author
El Chaar Maher-MD	A352-Co-Author
Ahrens Margaret-MD	A436-Main Presenter
Liu Shinban-DO	A437-Main Presenter
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Schwack Bradley-MD	A437-Co-Author
Kurian Marina-MD FASMBS	A437-Co-Author
Ren-Fielding Christine-MD	A437-Co-Author
Fielding George-MD	A437-Co-Author
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Febres Gerardo-MD	A476-Co-Author
Bessler Marc-MD	A476-Co-Author
Korner Judith-MD	A476-Co-Author

PhD	
Eisenberg Dan-MD MS	A280-Main Presenter
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Harris Alexander-PhD MS	A280-Co-Author
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Becouarn Guillaume-MD	A309-Co-Author
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Williams Michael-MD	A384-Co-Author
Hallowell Peter-MD FASMBS	A384-Co-Author
Schirmer Bruce-MD	A384-Co-Author
Horsley Benjamin-EMT	A410-Co-Author
Cottam Daniel-MD	A410-Main Presenter
Cottam Austin-BS	A410-Co-Author
Surve Amit-MD	A410-Co-Author
Zaveri Hinali-MD	A410-Co-Author
Medlin Walter-MD	A410-Co-Author
Cottam Samuel-CNA	A410-Co-Author
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Jose Jeremy-MSIII	A438-Co-Author
McCoy FeTausha-OMSIV	A438-Co-Author
Sanni Aliu-MD FACS	A438-Co-Author
Bindal Vivek-MD	A415-Main Presenter
Moon Rena-MD	A284-Main Presenter
Lastrapes Linda-RN	A284-Co-Author
Teixeira Andre-MD FACS FASMBS	A284-Co-Author
Jawad Muhammad-	A284-Co-Author

MD	
Chu Lisa-PhD	A333-Main Presenter
Steinberg Alissa-RD	A333-Co-Author
O'Kane Carley-MSc RD	A333-Co-Author
Toulany Alene-MD FRCPC	A333-Co-Author
Hamilton Jill-MD	A333-Co-Author
Khan Adil-MD	A477-Main Presenter
Doyon Laura-MD	A477-Co-Author
Brams David-MD	A477-Co-Author
Liu Shinban-DO	A478-Main Presenter
Meytes Vadim-DO	A478-Co-Author
Ferzli George-MD FASMBS	A478-Co-Author
Galvez Alvaro-MD	A479-Main Presenter
Galvez Daniel-MD	A479-Co-Author
Onopchenko Alexander-MD	A479-Co-Author
Hassan Ibrahim-FEBS MRCS	A439-Main Presenter
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Dabek Robert-MD	A277-Co-Author
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Durgan Diane-MD MPH	A337-Co-Author
Garber Shawn-MD	A337-Co-Author
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Defnet Ann-MD	A315-Main Presenter
Bedrosian Andrea-MD	A315-Co-Author
Kurian Marina-MD FASMBS	A315-Co-Author
Monpellier Valerie-	A310-Main

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Voorwinde Vera-MSc	A310-Co-Author
Smith Luella	A310-Co-Author
Straalen Maartje	A310-Co-Author
Janssen Ignace-MD	A310-Co-Author
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Chong Lynn-PhD	A411-Co-Author
Ward Salena-MBBS FRACS MS PGDipSurgAnat	A411-Co-Author
Sutherland Tom-MBBS MMed GradDipClinEd FRANZCR	A411-Co-Author
Hii Michael-MBBS BMedSci FRACS PGDipSurgAnat	A411-Co-Author
Yarbrough Donald-MD	A440-Main Presenter
La Vella Erika-DO	A440-Co-Author
Sweeny Andrew-DO	A440-Co-Author
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Draper Karen-MD	A520-Co-Author
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Miller-Matero Lisa-PhD	A441-Co-Author
Schulberg Steven-DO	A442-Main Presenter
Meytes Vadim-DO	A442-Co-Author
Ferzli George-MD FASMBS	A442-Co-Author
Nimer Mohammed	A442-Co-Author

Felte Robert-MD	A443-Main Presenter
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Urban Dakota-MD	A443-Co-Author
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Eribe Inger-RN	A359-Co-Author
Kristinsson Jon-MD PhD	A359-Co-Author
Mala Tom-MD PhD	A359-Co-Author
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Das Sanjna	A407-Co-Author
Sherman Jingjing-MD	A407-Co-Author
Schnelldorfer Thomas-MD PhD	A407-Co-Author
Brams David-MD	A407-Co-Author
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Nepomnayshy Dmitry-MD FASMBS	A407-Co-Author
Majid Saniea-MD FACS FASMBS	A412-Main Presenter
Gonzalez Anthony-MD	A412-Co-Author
Grover Brandon-DO FASMBS	A412-Co-Author
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Still Christopher-DO	A412-Co-Author
Rosenthal Raul-MD	A412-Co-Author
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Ruiz Cota Patricia	A480-Main Presenter
Jimene-Cruz Arturo-	A480-Co-Author

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Novitski Katie-MD MPH	A481-Main Presenter
Flores Robert-MD	A481-Co-Author
DeWitt Andrew-MD FASMBS	A481-Co-Author
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Andersson Ellen-MD PhD	A444-Co-Author
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Prevedello Luca	A376-Co-Author
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Bal Brenda-BSN RN CBN	A519-Co-Author
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Smith Dennis-MD FACS FASMBS	A292-Co-Author
Krzyzanowski Sharon-RN CBN	A292-Co-Author
Kim Keith-MD	A292-Co-Author
buffington cynthia-PhD	A292-Co-Author
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Lopez Ciara-RN	A293-Co-Author
Lapp Lauren-PA-C	A293-Co-Author
buffington cynthia-	A293-Co-Author

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Pearlstein Sarah-MD	A346-Main Presenter
Shayesteh Ali-MD	A346-Co-Author
Allis Deborah-PA	A346-Co-Author
Roslin Mitch-MD	A346-Co-Author
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Ferzli George-MD FASMBS	A446-Co-Author
Liu Shinban-DO	A446-Co-Author
Shehebar Josef-MD	A446-Co-Author
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Bersoux Sophie-MD MPH	A491-Co-Author
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Roust Lori-MD	A491-Co-Author
Camoriano John-MD	A491-Co-Author
Harold Kristi	A491-Co-Author
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Chong Lynn-PhD	A366-Co-Author
Ward Salena-MBBS FRACS MS PGDipSurgAnat	A366-Co-Author
Sutherland Tom-MBBS MMed GradDipClinEd FRANZCR	A366-Co-Author
Hii Michael-MBBS BMedSci FRACS PGDipSurgAnat	A366-Co-Author
Sivakumar Jonathan-MBBS PGDipSurgAnat	A395-Main Presenter
Chong Lynn-PhD	A395-Co-Author

Ward Salena-MBBS FRACS MS PGDipSurgAnat	A395-Co-Author
Sutherland Tom-MBBS MMed GradDipClinEd FRANZCR	A395-Co-Author
Hii Michael-MBBS BMedSci FRACS PGDipSurgAnat	A395-Co-Author
Buchholz Christopher-DO MPH	A285-Main Presenter
Blatt Melissa-MSN	A285-Co-Author
Schmidt Hans-MD	A285-Co-Author
Ewing Douglas-MD	A285-Co-Author
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Novak Andy-PA	A448-Co-Author
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Chen Albert-MD	A448-Co-Author
Podkameni David-MD	A448-Co-Author
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Court Olivier-MD FRCSC	A282-Co-Author
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Preston Rebecca-PsyD	A495-Co-Author
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de Voest Margaret-PharmD	A495-Co-Author
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Gadaleta Dominick-MD FASMBS	A377-Co-Author
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Dove James-BA	A326-Co-Author
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Still Christopher-DO	A326-Co-Author
Petrick Anthony-MD FASMBS	A326-Co-Author
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Patias	
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Machado Ana Cristina-Phd	A496-Co-Author
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Cuevas Víctor-MD	A450-Co-Author
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Mathur Winnie-BPT MBA HA	A381-Co-Author
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Tan Bo Chuan-MD FRCS	A405-Main Presenter
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Stone Andrea-BS	A396-Co-Author
Ferrand Jennifer-PsyD ABPP	A396-Co-Author
Gorin Amy-PhD	A396-Co-Author
Sierra Jessica-PhD	A396-Co-Author
Puhl Rebecca-PhD	A396-Co-Author
Sensale Gina	A396-Co-Author
Tishler Darren-MD FASMBS	A396-Co-Author
Papasavas Pavlos-MD FASMBS	A396-Co-Author

Braun Tosca	A306-Main Presenter
Stone Andrea-BS	A306-Co-Author
Ferrand Jennifer-PsyD ABPP	A306-Co-Author
Gorin Amy-PhD	A306-Co-Author
Quinn Diane-PHD	A306-Co-Author
Puhl Rebecca-PhD	A306-Co-Author
Sensale Gina	A306-Co-Author
Tishler Darren-MD FASMBS	A306-Co-Author
Papasavas Pavlos-MD FASMBS	A306-Co-Author
Ng Janet-PhD	A347-Main Presenter
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Papasavas Pavlos-MD FASMBS	A347-Co-Author
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Staff Ilene-PhD	A347-Co-Author
McLaughlin Tara-PhD	A347-Co-Author
Ferrand Jennifer-PsyD ABPP	A347-Co-Author
Strange Sally-PhD RN CBN	A347-Co-Author
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Duffy Andrew-MD FASMBS	A316-Co-Author
Nadzam Geoffrey-MD FASMBS	A316-Co-Author
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Surve Amit-MD	A408-Co-Author
Zaveri Hinali-MD	A408-Co-Author
Cottam Daniel-MD	A408-Main Presenter
Cottam Austin-BS	A408-Co-Author
Medlin Walter-MD	A408-Co-Author
Richards Christina-MD	A408-Co-Author
Belnap Legrand-MD	A408-Co-Author
Cottam Samuel-CNA	A408-Co-Author
Horsley Benjamin-EMT	A408-Co-Author
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Burkard-Mandel Lauren-BS	A379-Co-Author
Pawlak Mitchell-BS	A379-Co-Author
Ribeiro Carolina-MD	A483-Main

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Perricelli Paula	A483-Co-Author
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Ferraz Loraine-MSc	A483-Co-Author
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North Joann-RN-BC CBN	A484-Co-Author
Zadvinskis Inga-PhD RN	A484-Co-Author
Chipps Esther-PhD RN	A484-Co-Author
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Seip Richard-PhD	A338-Co-Author
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Tishler Emma	A338-Co-Author
Dugan Nick-MD	A338-Co-Author
Papasavas Pavlos-MD FASMBS	A338-Co-Author
Tishler Darren-MD FASMBS	A338-Co-Author
Surve Amit-MD	A357-Co-Author
Zaveri Hinali-MD	A357-Co-Author
Cottam Daniel-MD	A357-Main Presenter
Medlin Walter-MD	A357-Co-Author
Richards Christina-MD	A357-Co-Author
Belnap Legrand-MD	A357-Co-Author
Cottam Austin-BS	A357-Co-Author
Cottam Samuel-CNA	A357-Co-Author
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Umbach Thomas-MD FACS FASMBS	A357-Co-Author
Apel Mathew-MD	A357-Co-Author
Williams Michael-MD	A357-Co-Author
Hart Christopher-MD	A357-Co-Author
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DeBarros John-MD FASMBS	A357-Co-Author
Orris Michael-DO FASMBS	A357-Co-Author
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Budzynski Andrzej-MD PhD	A322-Co-Author
Major Piotr-MD PhD	A322-Co-Author
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Ng Janet-PhD	A427-Co-Author
Seip Richard-PhD	A427-Co-Author
O'Brien Madison-BS	A427-Co-Author
Tishler Emma	A427-Co-Author
Duga Nicholas-MD	A427-Co-Author
Papasavas Pavlos-MD FASMBS	A427-Co-Author
Tishler Darren-MD FASMBS	A427-Co-Author
Billing Josiah-BS	A279-Co-Author
Billing Peter-MD	A279-Main Presenter
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Ho Pui Lam Adriana-MS RDN CD CEP	A279-Co-Author
Harris Eric-MD	A279-Co-Author
Kaufman Jedediah-MD	A279-Co-Author
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McLaughlin Tara-PhD	A287-Co-Author
Tishler Darren-MD FASMBS	A287-Co-Author
Papasavas Pavlos-MD FASMBS	A287-Co-Author
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Cottam Samuel-CNA	A409-Main Presenter
Cottam Daniel-MD	A409-Co-Author
Cottam Austin-BS	A409-Co-Author
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Zaveri Hinali-MD	A409-Co-Author
Richards Christina-MD	A409-Co-Author
Medlin Walter-MD	A409-Co-Author
Andreasik Ginny-RN BSN CBN	A451-Main Presenter
Wheeler Karen-MSN RN FNP-BC	A451-Co-Author
David Andrea-MS RD LDN	A451-Co-Author
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Pisarska Magdalena-MD	A311-Co-Author
Wysocki Michal-MD	A311-Co-Author
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Malczak Piotr-MD	A311-Co-Author
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Dros Jakub	A311-Co-Author
Kacprzyk Artur	A311-Co-Author
Chlopas Katarzyna	A311-Co-Author
Budzynski Andrzej-MD PhD	A311-Co-Author
Major Piotr-MD PhD	A311-Co-Author
Ozmen Mahir-MD	A302-Main Presenter
GULDOGAN Emir-MD	A302-Co-Author
Gündoğdu Emre-MD	A302-Co-Author
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Masrur Mario-MD	A452-Co-Author
Gangemi Antonio-MD FACS FASMBS	A452-Co-Author
Sanchez-Johnsen Lisa-PhD	A452-Co-Author
Hassan Chandra-MD	A452-Co-Author
Giulianotti Pier	A452-Co-Author

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Ozmen Mahir-MD	A283-Main Presenter
GUNDOGDU EMRE	A283-Co-Author
Güldogan Emir-MD	A283-Co-Author
OZMEN Fusun-MD MSci PhD	A283-Co-Author
Harrison Jon-MD	A382-Main Presenter
Christopher Wade-MD	A382-Co-Author
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Dewire Jane-MS	A294-Co-Author
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Needleman Bradley-MD FASMBS	A294-Co-Author
Noria Sabrena-MD PhD FRCSC FASMBS	A294-Co-Author
Poa Christina-MD	A288-Main Presenter
Creange Collin-MD	A288-Co-Author
Pergamo Matthew-MD	A288-Co-Author
Ren-Fielding Christine-MD	A288-Co-Author
Fielding George-MD	A288-Co-Author
Schwack Bradley-MD	A288-Co-Author
Naeem Zaina-BA	A297-Main Presenter
Yang Jie-PhD	A297-Co-Author
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Pryor Aurora-MD FASMBS	A297-Co-Author
Spaniolas Konstantinos-MD	A297-Co-Author
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Billy Helmuth-MD	A323-Co-Author
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Rojas Mendez Javier-MD	A485-Co-Author
Ramos Mayo Alan E-MD	A485-Co-Author
Flores Villalba Eduardo	A485-Co-Author
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Ghera Susan-RN BSN PHN	A497-Main Presenter
Pinheiro Ashley-MSN RN CNS ACCNS-AG	A497-Co-Author
Lawless Mary Ellen-MA RN	A454-Main Presenter
Vacha Sheila-AA	A454-Co-Author
Dachtler Vicki	A454-Co-Author
Madal Mary-MBSCR	A454-Co-Author
Yuhasz Karen-AA	A454-Co-Author
Perzynski Adam-PhD	A454-Co-Author
Thomas Charles-BA	A454-Co-Author
Leon Janeen-MSRDN LD	A454-Co-Author
Mead Elaine-BS in Healthcare Administration	A454-Co-Author
Seeholzer Eileen-MD MS	A454-Co-Author
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Popov Violeta-MD PhD	A327-Co-Author
Noor Benjamin-MD	A327-Main Presenter
Ou Amy-MD	A327-Co-Author
Thompson Christopher-MD MSc FACG FASGE AGAF	A327-Co-Author
Davis Daniel-DO FACS	A371-Co-Author

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Kastner Lauren-MD	A371-Main Presenter
Leeds Steven-MD	A371-Co-Author
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Kerlakian George-MD	A420-Co-Author
Tymitz Kevin-MD	A420-Co-Author
Meister Katherine-MD	A420-Co-Author
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Fass Ronnie-MD	A486-Co-Author
Seeholzer Eileen-MD MS	A486-Co-Author
Bardaro Sergio-MD FACS	A486-Co-Author
Oh Sung Jin-MD	A274-Main Presenter
Husain Farah-MD FASMBS	A274-Co-Author
Jeong In Ho-MD	A274-Co-Author
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Tishler Darren-MD FASMBS	A362-Co-Author

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Sharp Lindsey-MD FASMBS	A490-Co-Author
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Ma Pearl-MD	A212-Co-Author
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Faler Byron-MD	A169-Co-Author
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Ordoñez Ortega Samuel-Bariatric surgeon	A250-Co-Author
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Thomsen Gert Frank-MD MR	A239-Co-Author
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Thompson Kyle-PhD	A269-Co-Author
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Lomberk Gwen-PhD	A117-Co-Author
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Weiner Matthew-MD	A270-Co-Author
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Ward Salena-MBBS FRACS MS PGDipSurgAnat	A153-Co-Author
Sutherland Tom-MBBS MMed GradDipClinEd FRANZCR	A153-Co-Author
Hii Michael-MBBS BMedSci FRACS PGDipSurgAnat	A153-Co-Author
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Orlovskaia Julia-MD	A237-Co-Author
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Martens Kellie-PHD	A237-Co-Author
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LaLonde Leah-MS	A247-Co-Author
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Hamann Aaron-PsyD	A247-Co-Author
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Young Michele	A268-Co-Author
buffington cynthia-PhD	A268-Co-Author
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Surve Amit-MD	A124-Co-Author
Cottam Daniel-MD	A124-Main Presenter
Ng Peter-MD FACS FASMBS	A124-Co-Author
Sharp Lindsey-MD FASMBS	A124-Co-Author
Bermudez Dustin-MD	A124-Co-Author
Menozzi Sophia-	A124-Co-Author
Cottam Austin-BS	A124-Co-Author
Ambrose John Ambrose-	A124-Co-Author
Medlin Walter-MD	A124-Co-Author
Richards Christina-MD	A124-Co-Author
Belnap Legrand-MD	A124-Co-Author
Cottam Samuel-CNA	A124-Co-Author
Horsley Benjamin-EMT	A124-Co-Author
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Trombetta Leroy-MD	A197-Co-Author
Kallies Kara-MS	A197-Co-Author
Kothari Shanu-MD FASMBS	A197-Co-Author
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Fernandes Gustavo-	A188-Co-Author
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Bastos Andrea	A188-Co-Author
Riccioppo Daniel-MD PhD	A188-Co-Author
Pajecki Denis-MD	A188-Co-Author
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Zaveri Hinali-MD	A128-Co-Author
Surve Amit-MD	A128-Co-Author
Cottam Daniel-MD	A128-Main Presenter
Ng Peter-MD FACS FASMBS	A128-Co-Author
Sharp Lindsey-MD FASMBS	A128-Co-Author
Bermudez Dustin-MD	A128-Co-Author
Menozzi Sophia	A128-Co-Author
Cottam Austin-BS	A128-Co-Author
Ambrose John Ambrose	A128-Co-Author
Medlin Walter-MD	A128-Co-Author
Richards Christina-MD	A128-Co-Author
Belnap Legrand-MD	A128-Co-Author
Cottam Samuel-CNA	A128-Co-Author
Horsley Benjamin-EMT	A128-Co-Author
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Monclaro Thomaz-MD	A275-Co-Author
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Santos Dirceu-MD	A275-Co-Author
Sticca Eduardo-MD	A275-Co-Author
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De Souza Filho Carlos-MD	A275-Co-Author
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Bin Sylvie-MD	A108-Co-Author
Pattou Francois-MD	A108-Co-Author
Disse Emmanuel-Md PhD	A108-Co-Author
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Hassinger Taryn-MD MSc	A104-Co-Author
Schirmer Bruce-MD	A104-Co-Author
Hallowell Peter-MD FASMBS	A104-Co-Author
Kirby Jennifer-MD PhD	A104-Co-Author
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Hubbard Matthew-MD	A133-Co-Author
Duffy Andrew-MD FASMBS	A133-Co-Author
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Ryder Beth-MD	A143-Co-Author
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LUCCHESE MARCELLO-MD	A185-Co-Author
Rosa Michele-MD	A185-Co-Author
Rovati Marco-Md	A185-Co-Author
Sukkar Samir Giuseppe-MD	A185-Co-Author
Formiga Andrea-MD	A185-Co-Author
Ernesti Ilaria-MD	A185-Co-Author
zappa marco-MD	A185-Co-Author
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Reddy Satyajit-MD	A242-Co-Author
Bashir Riyaz-MD	A242-Co-Author
Edwards Michael-MD FACS FASMBS	A242-Co-Author
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Edwards Michael-MD FACS FASMBS	A177-Co-Author
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Yenumula Pandu-MD	A134-Co-Author
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Fino Nora-MS	A160-Co-Author
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Fluck Marcus-BS	A142-Co-Author
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Chan Walter-MD MPH	A168-Co-Author
Thompson Christopher-MD MSc FACG FASGE AGAF	A168-Co-Author
Aminian Ali-MD FASMBS	A137-Main Presenter
Nor Hanipah Zubaidah-MD	A137-Co-Author
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Brethauer Stacy-MD FASMBS	A137-Co-Author
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Alqahtani Aayed-FRCSc FACS	A121-Main Presenter
Alqahtani Yara-MD	A121-Co-Author
Elahmedi Mohamed-MBBS	A121-Co-Author
Alqahtani Aayed-FRCSc FACS	A170-Main Presenter
Alqahtani Yara-MD	A170-Co-Author
Al-Darwish Abdullah-MD	A170-Co-Author
Elahmedi Mohamed-MBBS	A170-Co-Author
Patta Thiago-MD	A276-Main Presenter
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Passero Michael-MD	A145-Co-Author
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Seip Richard-PhD	A271-Main Presenter
Stone Andrea-BS	A271-Co-Author
McLaughlin Tara-PhD	A271-Co-Author
Tishler Darren-MD FASMBS	A271-Co-Author
Pocai Alessandro-PhD	-Main Presenter
Aldawish Mohammed-MD	-Main Presenter
Friedman Jeffrey-MD FACS FASMBS	-Main Presenter
Friedman Jeffrey-MD FACS FASMBS	-Main Presenter
Pudalov Lauren-PsyD	-Main Presenter
Pudalov Lauren-PsyD	-Main Presenter
Krause Steven-PhD MBA	-Co-Author
Pudalov Lauren-PsyD	-Main Presenter

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Fourman Matthew-MD	-Co-Author
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wolin-riklin carol-MA RD LD	A255-Main Presenter
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Koball Afton-PhD ABPP	A258-Main Presenter
Kallies Kara-MS	A258-Co-Author
Ramirez Luis-MPH	A258-Co-Author
Molasoko Jean-Marie-MD FASMBS	A260-Main Presenter
NARWARIA MAHENDRA-MSGI	A261-Main Presenter
Liu Julie-BS	A263-Main Presenter
Montalvan-Panzer Mireya-MSHS CCRC	A263-Co-Author
Fennoy Ilene-MD	A263-Co-Author
Woo Baidal Jennifer-MD MPH	A263-Co-Author
Lynch Lori-MSN APRN CPNP CBN	A263-Co-Author
Ranish Elizabeth-RD CSP CDN CNSC	A263-Co-Author
Sysko Robyn-Ph D	A263-Co-Author
Zitsman Jeffrey-MD	A263-Co-Author
Snowdon-Carr Vanessa-DClinPsy BSc(Hons)	A253-Main Presenter
Sogg Stephanie-PhD	A253-Co-Author
Doyle Jacqueline-ClinPsyD	A253-Co-Author
Grupski Allison-PhD	A253-Co-Author
Schiavone Maximo Agustin-MD	A259-Main Presenter
Farinelli Maximiliano-MD	A259-Co-Author
Paleari Nicolas-MD	A259-Co-Author
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Garcia Maria Eugenia	A259-Co-Author
Gomez Gottschalk Marta-MD	A259-Co-Author
Asti Virginia-Licenciada	A259-Co-Author
Linzoain Maria Gloria-MD	A259-Co-Author
MARTINEZ DUARTEZ	A259-Co-Author

PEDRO-MD	
Peterson Ninoska-PhD	A251-Main Presenter
Ames Gretchen-PhD	A251-Co-Author
Koball Afton-PhD ABPP	A251-Co-Author
Nabilek Zoltan-PsyD	A251-Co-Author
Griggs Cornelia-MD	A521-Main Presenter
Perez Numa-MD	A521-Co-Author
Pratt Janey-MD FACS FASMBS	A521-Co-Author
Yang Wah-MD	A256-Main Presenter
Hu Songhao-MD	A256-Co-Author
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