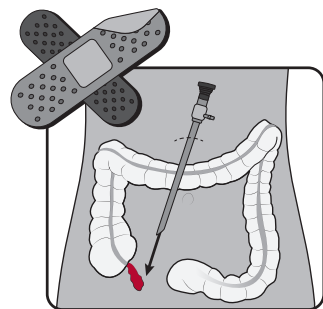





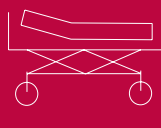




Section of

# Minimally Invasive Surgery

Michael Awad, MD, PhD, in the WISE Center.



This section is dedicated to developing and adopting the latest technological advancements and advancing research on outcomes, techniques and biomaterials. Minimally invasive specialists perform a wide range of laparoscopic and open procedures for gastrointestinal conditions such as swallowing disorders, gastroesophageal reflux disease, adrenal gland tumors and morbid obesity. Their goal is to increase patient benefit by decreasing the size of surgical incisions, which result in less pain and faster recovery. This section is active on the frontiers of research and also offers a one-year fellowship.

	<b>2,208</b> operating room cases		<b>218</b> office procedures
	<b>17,341</b> visits		<b>51</b> clinical research studies
	<b>9</b> faculty		<b>\$113,544</b> research funding



## Clinical and Educational Leaders

From left: Jeffrey Blatnik, MD, Sara Holden, MD, and Arnab Majumder, MD.

Section Chief of Minimally Invasive Surgery **Michael Brunt**, MD, was named Pruett Family Professor of Surgery in July 2021. Brunt is a nationally recognized laparoscopic surgeon, researcher and educator. He received the Distinguished Clinician Award from the School of Medicine in 2009. His research has produced significant advances in patient outcomes, including the development of evidence-based recommendations for cholecystectomy and prevention of bile duct injuries. He has taught the Capstone Preparation for Internship Course for 4th year medical students, which he helped establish, since its inception in 2012.

“I am incredibly honored to have been named the next Pruett Family Professor of Surgery,” says Brunt. “Rather than an individual achievement, I consider this much more a recognition of the entire Section of Minimally Invasive Surgery faculty and the increasing role of the Section as a clinical and educational leader in the Department of Surgery.”

The Section of Minimally Invasive Surgery, established by the Department of Surgery in 2007, provides excellent clinical care using the latest technology and techniques. Clinical services in the section are divided into three components: foregut disease, bariatric surgery and abdominal wall surgery.

Brunt and **Michael Awad**, MD, PhD, who is Director of the Robotic Surgery Program for BJC HealthCare, lead the foregut surgery service. The Weight Loss Surgery Program is led by **J. Chris Eagon**, MD, **Shaina Eckhouse**, MD, and **Francesca Dimou**, MD, MS. **Jeffrey Blatnik**, MD, **Sara Holden**, MD, and **Arnab Majumder**, MD, deliver expert care in abdominal wall hernia

repair in the section. Establishing these service areas has allowed faculty to focus on their surgical specialties, increase clinical activity across the section, and formalize resident and fellow training in each area.

“Organizing our services by disease makes sense for our faculty and has clear advantages for our patients,” says Brunt. “We have established care pathways for each patient, whether you are on the foregut service, abdominal wall service or bariatric surgery service.”

The section continues to grow as a leader in education at the School of Medicine. Awad, Blatnik and **Bethany Sacks**, MD, MEd, serve as associate program directors for the General Surgery Residency. As Director of the Washington University Institute for Surgical Education (WISE), Awad leads the WISE ACS-AEI Education Fellowship. Sacks, who is implementing the Gateway Curriculum as Director of the Integrated Surgical Clerkship for medical students, was inducted to the Washington University Academy of Educators in 2020.

Brunt is a past president of the Society of Gastrointestinal and Endoscopic Surgeons (SAGES). He is immediate President of the Central Surgical Association and President of the Fellowship Council. Brunt received the 2021 Lifetime Achievement Award from the Barnes-Jewish Hospital Medical Staff Association. This award recognizes a surgeon who has made significant contributions over a long and accomplished career at Barnes-Jewish Hospital and Washington University School of Medicine in St. Louis. He also received the Distinguished Alumnus Award for Johns Hopkins University earlier this year.

# Minimally Invasive Surgery Highlights



Michael Awad, MD, PhD.

## Clinical

Washington University minimally invasive surgeons have expertise in per oral endoscopic myotomy (POEM) for the treatment of achalasia, a rare swallowing disorder. **Michael Awad, MD, PhD**, who has offered therapeutic endoscopic procedures for achalasia and other conditions since 2012, has introduced a new device into the operating room to measure the success of achalasia surgery. The EndoFLIP system utilizes a balloon catheter to measure the distensibility of the lower esophagus sphincter during surgery, providing intraoperative assessment of treatment in real time. “Previously, we have only had subjective clues as to the adequacy of the surgery, such as the visual appearance of the esophagus sphincter before and after the treatment,” says Awad. “For the first time, we now have objective information to help guide us, hopefully resulting in even further improvements in outcomes for these patients.”

## Research

Eliminating unintentional bias in surgical clerkship grading is the focus of recent research from residents and faculty in the Section of Minimally Invasive Surgery. The research team, which included Director of the Integrated Surgical Clerkship for medical students **Bethany Sacks, MD, MEd**, and **Michael Awad, MD, PhD**, Director of the WISE Center, implemented a structured oral examination to assess third-year medical student knowledge of general surgery topics, which including taking patient histories and physical exams, diagnosis, laboratory and radiographic interpretation, and treatment planning. The structured examination created concrete grading criteria, eliminating unintentional bias in grading students underrepresented in medicine. General surgery resident **Katharine Caldwell, MD, MSCI**, presented the research at the 2021 Annual Meeting of the Central Surgical Association.



Bethany Sacks, MD, MEd.

## Education

The Fellowship Council has announced a new Foregut Fellowship designation, recognizing the increasing importance of specialized training in foregut disease. Washington University School of Medicine in St. Louis received this designation in the first year it was available. “The Advanced GI/MIS/Foregut Fellowship offers a strong, broad case mix and a diverse experience for our fellows,” says Program Director and Chief of Minimally Invasive Surgery **Michael Brunt, MD**, the Pruett Family Professor of Surgery. The program includes experience in benign foregut disease, bariatric and metabolic surgery, and abdominal wall procedures, including robotic approaches, in addition to clinical research, quality improvement and resident training opportunities.



Michael Brunt, MD.



## Quality Improvement in Bariatric Surgery

From left: Francesca Dimou, MD, MS, J. Chris Eagon, MD, Shaina Eckhouse, MD, Jayme Sparkman, ANP-BC.

When **Shaina Eckhouse, MD**, joined the Department of Surgery as a minimally invasive surgeon and patient safety officer in 2015, it was her goal to improve the quality of outcomes in bariatric surgery. Barnes-Jewish Hospital has been an accredited Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Center of Excellence since 2005. As patient safety officer, Eckhouse continued that tradition of excellence by formalizing the bariatric surgery quality improvement process in the Section of Minimally Invasive Surgery.

“Investing in quality improvement projects leads to improved patient outcomes, reduced gaps in care, increased return on investment and accountability to regulatory agencies,” says Eckhouse.

Eckhouse and Bariatric Surgery Program Director **J. Chris Eagon, MD**, have led initiatives to reduce surgical site infections, readmission rates and bariatric length of stay. A recent study by Eckhouse, Eagon, and other members of the Washington University Weight Loss Surgery Program,

published this year in *Surgical Endoscopy*, found that the team’s protocol for reducing surgical site infections is successful, safe and feasible. As part of the MBSAQIP BSTOP (Bariatric Surgery Targeting Opioid Prescriptions) program, the section has reduced opioid use in weight loss surgery and reduced length of stay for bariatric patients.

“We are invested in improving care and outcomes for our patients,” says Eckhouse, who is Surgery Liaison for the Barnes-Jewish Hospital Perioperative Services Leadership Team. “Each of these initiatives is a team effort, and they have led to multiple manuscripts and opportunities within the department and across the institution.”

In 2017, Barnes-Jewish West County Hospital received accreditation as an MBSAQIP Center of Excellence. Washington University weight loss surgeons have since migrated bariatric surgery outpatient clinics to the West County location.

More recently, Eckhouse, BJH Bariatric Coordinator **Beth Kramer**, Patient Safety

Coordinator **Deirdre Epstein**, and General surgery resident **Britta Han, MD, MEd**, have developed a project focused on driving early ambulation following weight loss surgery. Returning to physical activity after bariatric surgery is essential to achieving the best possible outcome. In partnership with hospital nursing staff and therapists, Washington University minimally invasive surgeons are encouraging patients to walk sooner and more frequently in the postoperative period.

“We are trying to build on the success of the early ambulation project by improving ambulation throughout the hospital stay and correlating these improvements with patient outcomes,” says Eckhouse.

Another quality improvement project in the section, led by **Francesca Dimou, MD, MS**, culminated in the development of a bariatric surgery patient journey guide. The weight loss surgery team continues to collect data following the implementation of the journey guide, with hopes that it will improve outcomes and recovery.