A Conversation with Richard Kozarek, MD
PAGE 3

Liver, Pancreas and Biliary Surgical Center of Excellence
PAGE 4

Therapeutic Endoscopy Center of Excellence
PAGE 9

Visit Us at Digestive Disease Week 2013
PAGE 14

Digestive Disease Fellows: Where Are They Now?
PAGE 15
The mission of Virginia Mason’s Digestive Disease Institute is to optimize patient care through innovations in research, education, and a multidisciplinary approach to treatment of digestive and liver diseases.

Areas of Emphasis

Education | Ian Gan, MD, is launching a new fellowship in pancreatic cancer research and planning to transmit a live endoscopy continuing medical education (CME) course in fall 2013.

Research | Headed by Kris Kowdley, MD, the Digestive Disease Institute’s clinical research program is partnering with Virginia Mason’s Benaroya Research Institute on unique investigations in hepatology and inflammatory bowel disease (IBD), with plans to add studies across the spectrum of digestive disease.

Quality Improvement | Director Otto Lin, MD, is analyzing colonoscopy data tracked in automated documentation software versus traditional dictation methods and assessing quality and consistency of endoscopic retrograde cholangiopancreatography (ERCP) cannulation data.

Development and Innovation | Lily Chang, MD, is advancing cutting-edge techniques, building on the success of our early esophageal submucosal dissection work. The Digestive Disease Institute is also beginning exploration of per oral endoscopic myotomy (POEM) in tissue lab.

Centers of Excellence (CoE)

Esophageal Center of Excellence | Director Donald Low, MD, is hosting three international groups at Virginia Mason to learn how to adapt esophageal cancer resection care pathways at their organizations. He is also advancing robotic instrumentation techniques for esophageal resection.

Inflammatory Bowel Disease Center of Excellence | Created in 2012, Michael Chiorean, MD, has assembled a care team into a new clinical structure so that patients can participate in research and receive the best IBD treatment in the area. The center hosted its first CME in March 2013.

Liver Center of Excellence | A national leader in hepatology clinical practice and complex liver disease research, director Kris Kowdley, MD, is mentoring two hepatology fellows and hosting the largest annual hepatology CME on the West Coast.

Liver, Pancreas and Biliary Surgical Center of Excellence | Scott Helton, MD, is leading the Digestive Disease Institute’s hepatopancreatobiliary (HPB) fellowship, now in its final stages of accreditation, and establishing database modules to analyze cost, effectiveness and quality outcomes of all HPB surgical patients.

Pancreatic Center of Excellence | Co-directors Vincent Picozzi, MD, and Michael Gluck, MD, are leading pancreatic cancer and pancreatitis work groups where they recently designed and launched multidisciplinary pathways for pancreas mass lesions and pancreas cysts. Their focus now is on synergizing multiple database and research projects.

Therapeutic Endoscopy Center of Excellence | Director Andrew Ross, MD, is leading optimization of patient flow in Virginia Mason Medical Center’s new Jones Integrated Procedural Center, training advanced endoscopy fellows and transmitting live cases to audiences around the world.
A Conversation with Richard A. Kozarek, MD

Executive Director of the Digestive Disease Institute at Virginia Mason Medical Center

Q. You chose to be a gastroenterologist because you were told it was the most interesting specialty, true? How has your practice changed over the years?

A. Definitely true. I’ve experienced transitions in technology and in our understanding of the pathophysiology of many disease processes. Many of the dogmas that we took to be universal truths were simply false. An obvious example is the discovery that H. pylori is the major cause of peptic ulcer disease and is highly associated with gastric cancer, which may be prevented by treating H. pylori instead of going to surgery. I’ve also observed growing subspecialization within gastroenterology. Hepatologists now recognize that autoimmune disorders are associated with the liver and infectious forms of hepatitis, and they’ve developed successful vaccinations and drug therapies that are helping whole generations of people lead hepatitis-free lives. In IBD, our understanding of genetic and immunologic mechanisms has led to biologic medications and immuno-suppressives—and perhaps in the future—changes in the bacterial biomass within the gut lumen to modulate immune response. Motility has also become a topic unto itself in gastroenterology, and programs now exist for GI malignancies and nutrition in diseases such as chronic pancreatitis, sprue, IBD, and in the broader context of obesity. The specialization is endless.

Q. What excites you about current and emerging technologies in treating digestive diseases?

A. Advanced imaging has produced a revolution and virtually eliminated the need for laparoscopic and open surgical explorations to diagnose patients. New endoscopic accessories such as those used to control bleeding, facilitate pancreaticobiliary stone removal and treat superficial mucosal malignancies have also transformed gastroenterology into a subspecialty that rivals or complements surgery in many ways.

Q. How have relationships between gastroenterologists and GI surgeons changed?

A. Historically a gastroenterologist was a diagnostician who pointed things out to the surgeon: here’s a bleeding vessel to oversew or a polyp that needs resection. That’s all different now. Today our therapeutic endoscopists treat many disorders, working so closely with GI surgeons that the line between us is very indistinct. I could say the same thing about the interventional radiologists. We are all part of the same institute.

Q. What aspects of gastroenterology have stayed true?

A. The physician-patient relationship has stayed true. That’s the most rewarding aspect of my career.

Q. What do you see in the future?

A. We cannot continue to spend up to 17 percent of the country’s gross national product on health care, so we will attempt to do more with less. This will require patient education and the promotion of healthier lifestyles, plus evidence-based medicine to ensure appropriate care. We will engage in a decades-long process of eliminating waste in medicine and reduce the dramatic variation in care that exists geographically and within specialty practices. Then there’s the advancement of knowledge. I believe that science has the ability to cure at least a subset of IBD. That doesn’t mean that people will be on expensive biologics for the rest of their lives; it will mean a formal cure. Truths we hold dear today may disappear. For instance, better stool assays, genetic studies and cheaper alternative tests may replace our extensive spending on screening colonoscopy for adenomatous polyps. Our Digestive Disease Institute will evolve to meet the needs of our patients.
At the core of the center are five surgeons devoted to caring for patients with diseases of the pancreas, liver and bile duct. Together, the team delivers high-value care to patients with simple and complex hepatopancreatobiliary (HPB) disease.

Better Cancer Outcomes Through Multidisciplinary Care

Pancreas: Pancreas cancer patients receive highly individualized treatment at Virginia Mason.
The center works closely with Vincent Picozzi, MD, oncologist and director of Virginia Mason’s Pancreatic Center of Excellence, to aggressively treat pancreatic cancer, leading to:

- An eight-day median length of stay for patients undergoing a pancreatoduodenectomy, among the lowest in the world.
- Mortality incidence of <1% over the past seven years.
- Rapid work up and timely treatment due to nurse navigators and consensus-derived, evidence-based care maps. Patients are seen within 24 hours of request and major surgery is scheduled within five days.
- Superior health care value for patients.

The Pancreas Cancer Workgroup meets regularly to focus on eliminating waste and providing appropriate, timely and high-quality care.

**Liver:** All patients with hepatocellular carcinoma and intrahepatic cholangiocarcinoma are discussed in a weekly multidisciplinary liver and GI tumor conference chaired by Kris Kowdley, MD, director of the Liver Center of Excellence. The conference assesses and makes treatment decisions by consensus, guided by the Barcelona Clinic Liver Cancer staging system. Treatment options include percutaneous and laparoscopic microwave ablation, transhepatic arterial embolization, biologic targeted therapy, and open and laparoscopic liver resection. While Virginia Mason does not perform liver transplantation, the liver team assesses and manages transplant patients and refers them to transplant centers as appropriate.

According to GI oncologist Bruce Lin, MD, “Our multidisciplinary tumor boards offer the opportunity for surgeons, oncologists, pathologists, hepatologists, radiologists and gastroenterologists to share their expertise on what treatment will work best for a particular patient, whether it be local or regional treatments or surgical resections.”

**Colorectal:** For patients with colorectal cancer metastases, the team applies treatment paradigms including a combined approach to neo-adjuvant and adjuvant chemotherapy, hepatic volumetry estimates using 3-D virtual imaging, portal vein embolization to increase the volume of the predicted liver remnant, sequential staged hepatectomy, and laparoscopic and robotic liver resection.

**Quality and Safety Begin with Strong Education and Training**

The Liver, Pancreas and Biliary Surgical Center of Excellence offers educational programs that attract exceptional fellowship program candidates from around the world. Launched in 2012 and approved by The Fellowship Council, the HPB Surgical Fellowship provides a one-year concentrated experience. Adnan Alseidi, MD, EdM, fellowship director, has developed novel curricula to address HPB surgical training’s increasingly complicated models and paradigms. A current member of the Fellowship Council of the American HPB Society and board member of the Association of Surgical Education, Dr. Alseidi is deeply committed to surgical education. “Quality and safety in clinical care begin with strong education and training,” he says.

Current fellow Sameer Damle, MD, has acted as the primary surgeon for 60 major, complex liver, biliary and pancreas cases in his first six months of training. Together, Dr. Damle, general surgery residents and the HPB surgical faculty prospectively discuss all patients undergoing HPB surgery in a weekly indications conference. The conference focuses on judgment, clinical decision making and appropriateness of care, as well as preparing residents for oral board examinations. Faculty are given the opportunity to critique and evaluate...
Willard Raymor previously had his hepatic hilum resected and a hepaticoduodenostomy for biliary papillomatosis. Richard Kozarek, MD, gastroenterologist and executive director, Digestive Disease Institute, was treating him for recurrent disease in his right and left hepatic ducts with endoscopic radiofrequency when he discovered a carcinoma. Referred to Scott Helton, MD, Mr. Raymor faced an extensive (80 percent) liver resection for his rare bile duct tumor. When his doctors predicted that his liver remnant would be too small, interventional radiologist Mehran Fotoohi, MD, embolized Mr. Raymor’s right portal vein to prompt his liver remnant to grow. Within a month, Mr. Raymor’s small left liver segments (II+III) doubled in size, reducing the risk for post-operative liver failure. As a Jehovah’s Witness, Mr. Raymor could not accept a blood transfusion. Undaunted, Dr. Helton organized a blood team, keeping Mr. Raymor at the center of care for the high-risk operation. Observing many departments working together, Willard said that his philosophy and beliefs were truly respected. Though uncertain about his future, he approached surgery feeling supported by the team. Mr. Raymor’s liver resection surgery lasted 10 hours. Though he anticipated a one- to two-week hospital stay, he returned home after five days. As he recovered, regular check-ins with Frank Hernandez, HPB surgery support team member, resolved his questions and assured an uncomplicated recuperation.

Believing that his days were numbered before the surgery and now back at work living his normal, everyday life, Mr. Raymor’s convictions are clear: “Virginia Mason is on my speed dial. I wouldn’t consider going anywhere else for my care.”
Research Pushes HPB Frontiers

Bart Rose, MD is a post-doctoral research associate and surgical resident partnering with hepatologist Kris Kowdley, MD, and hepatobiliary surgeon Flavio Rocha, MD, on a collaborative project with Memorial Sloan-Kettering Cancer Center to test biomarkers in bile of patients with suspected or confirmed cholangiocarcinoma.

“The best part of my position is collaborating with experts in the field to discover new methods to improve outcomes for a rare cancer with limited treatment options,” says Dr. Rose. The research is underway at Virginia Mason’s Benaroya Research Institute where Dr. Kowdley leads an NIH-sponsored lab focused on liver research. Funding is provided through a young investigator award to Dr. Rocha from the American Society of Clinical Oncology and the Cholangiocarcinoma Foundation.

Dr. Rocha has also received a Digestive Disease Institute research award for his study, “Utility of CEACAM6 as a Marker of Malignancy in Pancreatic Cyst Fluid.” He aims to characterize CEACAM6 expression in pancreatic cyst fluid and determine if CEACAM6 levels in pancreatic cyst fluid are predictive of malignancy.

Additional clinical research includes several multi-center clinical trials of chemoembolization for liver tumors and an analysis of Virginia Mason protocols for treating pancreatic cancer. A liver registry and tumor bank have also been established for patients undergoing biopsy or resection for benign or malignant disease.

To invite a surgeon from the Liver, Pancreas and Biliary Surgical Center of Excellence to present to your group, call us at (206) 341-1830.

If you would like to attend a CME course at the Digestive Disease Institute, please call (206) 341-0142 or visit cme@vmmc.org.
Liver, Pancreas and Biliary Surgical Center of Excellence: Selected Recent Publications

Therapeutic Endoscopy Center of Excellence

The Therapeutic Endoscopy Center of Excellence is a West Coast leader in the endoscopic management of complex gastrointestinal, biliary and pancreatic disorders. From managing disorders of the pancreaticobiliary tree to the minimally invasive treatment of early cancers of the GI tract, the center employs cutting-edge technology to produce the best possible clinical outcomes. “Patients come in with a problem and leave with a plan,” says Andrew Ross, MD, the center’s medical director.

New Jones Integrated Procedure Center Embraces Teamwork

Virginia Mason’s new Integrated Procedural Center (IPC) combines advanced therapeutic endoscopy and interventional radiology under one roof. Using lean principles of the Virginia Mason Production System, the space was built with input from patients, physicians, nurses and other key stakeholders.

“Throughout the design process, we referred back to the patient experience for guidance,” says interventional radiologist Mehran Fotoohi, MD. “Our hospital is home to some of the world’s most renowned experts within the fields of GI, hepatobiliary surgery and interventional radiology.

With the collaboration between these experts and the technology that’s now available, the care is second to none.”

The IPC’s design embraces multidisciplinary clinical practice. “A large percentage of patients requiring interventional endoscopic services may also require the skills of interventional radiology or vice versa,” says Dr. Ross. “By co-locating services, we bring Team Medicine to the patient’s bedside in a single clinical setting.”

The IPC also features an integrated video system that streams endoscopic procedures in real time over Internet2, bringing high-quality learning opportunities to providers around the world. Dr. Ross notes, “In highly complex cases, our
Therapeutic Endoscopy Center of Excellence

The video system also enables virtual consultation between Virginia Mason providers. “A provider anywhere within the medical center can view what’s happening in the procedure room and provide an immediate consultation, thus reducing unnecessary appointments for the patient,” states Debbie Tombs, RN, director of GI procedures.

Fellowships and Live Endoscopy Courses Prepare Future Leaders

The Therapeutic Endoscopy Center of Excellence teaches physicians, nurses and patients worldwide about advanced therapeutic endoscopy. The center’s Advanced Endoscopy Fellowship is a one-year opportunity for trainees to learn all aspects of practice. Virginia Mason’s reputation as a high-volume, high-complexity center for advanced endoscopy compelled current fellow Bryan Balmadrid, MD, to apply. “I don’t believe there is a better clinical experience for advanced endoscopy training than Virginia Mason. The team has great senior leaders in Dr. Kozarek and Dr. Gluck, combined with a cast of faculty who are stars in their own right. Now they have combined their volume and their leadership with a new state-of-the-art endoscopy center.”

For Dr. Balmadrid, the center’s research and academic activity in addition to being a busy clinical institution was a pleasant surprise. Fellows and providers engage in multiple clinical research activities and publish articles and book chapters in addition to regularly presenting at conferences and events globally.

The Digestive Disease Institute’s annual Live Therapeutic Endoscopy CME course features lectures and transmission of live advanced endoscopy cases from the IPC to an auditorium of enthusiastic learners. Featuring experts in interventional radiology, surgery and pathology, attendees observe complex cases in real time, learn about endoscopic techniques and devices, and gain insight into Virginia Mason’s multidisciplinary care models.

Quality and Research

Multiple teams contribute constantly to quality improvement initiatives in endoscopic practice. Currently in development is a standardized multidisciplinary care pathway for Barrett’s esophagus, while existing pathways for pancreas mass legions and pancreas cysts are already in place.

Dr. Otto Lin, director of quality, is working with analysts to track outcomes of all ERCPs per-

Therapeutic Endoscopy Breakthroughs at Virginia Mason

1983
First in world to perform endoscopic drainage of pancreatic pseudocysts.

1988
First in U.S. to use tunable dye laser lithotripsy to treat choledocholithiasis.

1991
First in world to report endoscopic transpapillary therapy for disrupted pancreatic duct and pancreatic fluid collection. Initially used in mid-1980s, first in world to report percutaneous computerized tomography-guided catheter drainage of infected acute necrotizing pancreatitis.

1992
First in world to place metallic, self-expanding stents in the duodenum. First in region to use endoscopy to treat pancreatic duct stones and obstructive pancreatitis.

1994
First in world to treat pancreatic ascites endoscopically.

1998
First in U.S. to report using extra corporeal shock wave lithotripsy for treatment of pancreatic stones.
formed at Virginia Mason. This effort will eventually enable the institute to report important quality metrics for this procedure. Databases are also used for tracking patients undergoing screening colonoscopy and endoscopic treatment for Barrett’s esophagus, and for managing complications from bariatric surgery.

Providers within the Therapeutic Endoscopy Center of Excellence also strive to answer important clinical questions through research. Dr. Michael Gluck, associate director of the Pancreatic Center of Excellence, has engaged in several projects in the management of severe acute pancreatitis. Most efforts have focused on dual modality drainage (DMD), a common endoscopic and percutaneous approach to managing infected and symptomatic walled-off pancreatic necrosis. In analyzing this approach in more than 100 patients, DMD has been associated with a complete elimination of pancreaticocutaneous fistulae, minimal morbidity, complete avoidance of surgical necrosectomy, and reduction in hospital stay and resource utilization, all while maintaining single-digit mortality. Future studies will examine whether the technique preserves pancreatic tissue and resulting endocrine and exocrine function. “This work proves that the care of walled-off necrosis has gone from a surgically aggressive approach to a minimally invasive technology. We’ve changed our way of thinking, and in the process, we’ve reduced the morbidity and mortality of patients,” states Dr. Gluck.

**Evaluating Cholangiocarcinoma with Confocal Laser Endomicroscopy Technology**

Education director Ian Gan, MD, is the principal investigator on an ongoing multicenter study comparing the performance of regular tissue sampling with probe-based confocal laser endomicroscopy (pCLE) in the diagnosis of cholangiocarcinoma and indeterminate biliary strictures. The new technology allows visualization of mucosal epithelium at a microscopic level in real-time and has been used successfully to evaluate Barrett’s esophagus, gastric cancer and colon polyps. In the future, pCLE could prove invaluable in cases of indeterminate biliary strictures in which a tissue diagnosis remains elusive.

**pCLE images of biliary epithelium showing the normal reticular pattern of biliary mucosa (1) and changes suggestive of cholangiocarcinoma including thick white bands (2a), dark clumps (2b) and epithelium (2c).**

---

**Some members of the GI Endoscopy Team:** (from left) Juli Olivers, RN, Katie Raybuck, RN, Christine Tweedale, RN, Bryan Balmadrid, MD, Jenny Davis, RN, Marie Lund, RN, Erika Kirkpatrick, RN, Ian Gan, MD, Teresa Monahan, RN, Angela Wanderer, RN, and Michael Gluck, MD
With leadership from Lily Chang, MD, and Andrew Ross, MD, the Therapeutic Endoscopy Center of Excellence has brought new endoscopic techniques from the bench to the bedside. A multidisciplinary team trained for a year to learn the intricacies of using endoscopic submucosal dissection (ESD) to remove early malignancies from the GI tract. The advantage of this technique over traditional endoscopic mucosal resection is the en-bloc removal of the tumor, which allows for more precise histopathological staging. The team’s first step was to observe experts performing ESD in the United States and Asia. Then they completed extensive training in animal models, culminating in procedures for Virginia Mason patients in the fall of 2012.

Dr. Ross performed one of the first ESD cases at Virginia Mason. His patient, Bill Roach, was originally diagnosed with stomach cancer in his hometown of Missoula, Montana. Mr. Roach was then referred to Virginia Mason where he expressed his keen desire to avoid open surgery. During the procedure, Dr. Ross removed a tumor approximately the size of a hand from the antrum of Mr. Roach’s stomach. Six months after the initial procedure, Mr. Roach has not experienced a recurrence of his initial tumor.

It takes a team to ensure the success of new endoscopic procedures, including the nurses. “The physicians depend on the nursing staff to have a thorough understanding of the purpose, equipment and processes involved in any new procedure. A core group of GI endoscopy nurses trained as content experts in ESD before our first procedures. These nurses observed and assisted on animal models and worked with the equipment representatives, Pharmacy and Anesthesiology. With each additional ESD procedure we add more GI endoscopy nurses as content experts. With time, every nurse will be skilled in this exciting new technique,” adds Katie Raybuck, RN.

Mr. Roach described his experience at Virginia Mason this way: “What a great institution. My whole family was treated extremely well and the outstanding care I received made this a memorable experience.”

To invite a physician from the Therapeutic Endoscopy Center of Excellence to present to your group, call (206) 341-1830.

If you would like to attend a Live Endoscopy CME course at the Digestive Disease Institute, please call (206) 341-0142 or visit cme@vmmc.org.
Therapeutic Endoscopy Center of Excellence: Selected Recent Publications


The Digestive Disease Institute is dedicated to quality, innovation, research and education. Please join faculty presenting at Digestive Disease Week 2013 in Orlando, Florida.

**SATURDAY, MAY 18**

- Dual Modality Drainage of Infected Walled-Off Pancreatic Necrosis is Associated with Reduction in Resource Utilization Over Standard Percutaneous Drainage | Michael Gluck, MD*, Andrew Ross, MD, Shayan Irani, MD, Ian Gan, MD, Richard Kozarek, MD
- Hepatic and Extrahepatic Complications to Worry About in NAFLD | Kris Kowdley, MD*
- Therapeutic Approaches in NAFLD | Kris Kowdley, MD*
- Drug Induced Liver Injury | Kris Kowdley, MD*
- Non-Alcoholic Fatty Liver Disease: 2013 Update | Kris Kowdley, MD*
- Serum MicroRNA: Novel Prognostic Biomarkers in Primary Sclerosing Cholangitis Patients Treated with High-dose Ursodeoxycholic Acid | Yu Li, PhD, Nihal Shah, MD*, James Nelson, PhD, Kris Kowdley, MD
- Video Capsule Endoscopy and Double Balloon Enteroscopy in the Evaluation of Obscure Gastrointestinal Bleeding | Bryan Balmadrid, MD*, Gulseren Seven, MD, Richard Kozarek, MD, Andrew Ross, MD, Shayan Irani, MD, Michael Gluck, MD, Johannes Koch, MD, Ian Gan, MD
- Delayed Outcomes Following Fistula Closure Using the Over-the-Scope Clip (OTSC) | Shayan Irani, MD*
- Clip Retention Following Endoscopic Placement of the Over-the-Scope Clip (OTSC) | Shayan Irani, MD*

**SUNDAY, MAY 19**

- Combination Therapy for Barrett’s Esophagus with Advanced Histopathology: Promising Short Term Results | Bryan Balmadrid, MD*, Shayan Irani, MD, Ian Gan, MD, Andrew Ross, MD
- Can Patient and Pain Characteristics Predict Manometric Sphincter of Oddi Dysfunction (SOD) in Patients with Clinically Suspected SOD Enrolled in the EPISOD Trial? | Richard Kozarek, MD
- A Solution for the Migrating Stent: Use of the OTSC Device to Hold Fully Covered Esophageal Stents in Place | Shayan Irani, MD*, Richard Kozarek, MD
- Surgical Myotomy Should Be Considered as Primary Treatment in Elderly Patients with Achalasia | Donald Low, MD, Artur Bodnar, MD*, Sheraz Markar, MD
- Management of Duodenal Polyps and Ampullary Adenomas: Dangerous Waters or Clear Sailing? | Shayan Irani, MD*
- Basil Hirschberg Lecture: “Interventional Gastroenterology: Past, Present, Future” | Richard Kozarek, MD*

**MONDAY, MAY 20**

- Psychosocial Characteristics and Pain Burden of Patients with Suspected Sphincter of Oddi Dysfunction (SOD) Enrolled in the EPISOD Trial | Richard Kozarek, MD
- Reduction in Colectomy and Health Care Related Costs in Ulcerative Colitis Patients Treated with Adalimumab Compared with Standard Therapy | Michael Chiorean, MD*
- Dual Modality Drainage for Infected and Symptomatic Walled-Off Pancreatic Necrosis: Clinical Outcomes in 98 Consecutive Patients | Andrew Ross, MD*, Ian Gan, MD, Shayan Irani, MD, Richard Kozarek, MD, Michael Gluck, MD, Mehran Fotoohi, MD, Robert Crane, MD, Ellen Hauptmann, MD, Justin Siegal, MD, David Robinson, MD
- Endoscopic Management of Severe Bleeding Encountered at/after Drainage of Pancreatic Fluid Collections | Shayan Irani, MD*, Richard Kozarek, MD, Ian Gan, MD, Michael Gluck, MD, Andrew Ross, MD
- Endoscopic Mucosal Resection for the Treatment of Duodenal Carcinoid Tumors: a single Center Experience | Andrew Ross, MD, Vincent Picozzi, MD, Sam Haut, MD
- Combined Surgical/Endoscopic (Hybrid) Management of Acute Esophageal Perforation: A New Technique of Intra-Operative Stabilization of Endoscopically Placed Stents | Artur Bodnar, MD*, Andrew Ross, MD, Shayan Irani, MD, Ian Gan, MD, Donald Low, MD

**TUESDAY, MAY 21**

- AGA Speaker: Pancreatic Necrosis: Scoping — Endoscopic Necrosectomy and Dual Modality Drainage — Where Angels Fear To Tread | Richard Kozarek, MD*
- Video: Endoscopic Management of Severe Bleeding Encountered at/after Drainage of Pancreatic Fluid Collections | Shayan Irani, MD*, Richard Kozarek, MD, Ian Gan, MD, Michael Gluck, MD, Andrew Ross, MD
- Endoscopic Mucosal Resection of Duodenal Carcinoid Tumors: A Single Center Experience | Shayan Irani, MD*
- A Comparative Analysis of Plastic Versus Metal Endoscopic Biliary Stents in Locally Advanced, Resectable Pancreatic Cancer Patients Undergoing Extended Neoadjuvant Therapy | Rachel Heneghan, MD*, John Rose, MD, Adnan Alseiidi, MD, Thomas Biehl, MD, Ravi Moomma, MD, Flavio Rocha, MD, John Ryan, MD, Ian Gan, MD, Michael Gluck, MD, Shayan Irani, MD, Andrew Ross, MD, Vincent Picozzi, MD, Richard Kozarek, MD, Scott Helton, MD
- Video: A Solution for the Migrating Stent – Use of the OTSC Device to Hold Fully Covered Esophageal Stents in Place | Shayan Irani, MD*, Richard Kozarek, MD
- Video: Video Capsule Endoscopy and Double Balloon Enteroscopy: Hide and Go Seek | Andrew Ross, MD*

* Presenters
The Digestive Disease Institute has mentored many talented professionals through its five fellowship programs. Here’s how a few of our recent graduates are contributing to medicine today.

**Madhan Kuppusamy, MD**  
*Ryan Hill Research Foundation Fellow, 2008–2010*

Now a senior clinical fellow in thoracic surgery at Royal Brompton and Harefield NHS Foundation Trust in London, Dr. Kuppusamy tells us, “The thoracic fellowship with Virginia Mason’s Digestive Disease Institute refined my specialist clinical and operative skills. Guidance by Dr. Low and the team immensely improved my abilities in research, publication, presentation and multispecialty collaboration skills. My experience not only gave me the perspective of a very different and efficient health care system, it boosted my confidence to make constructive changes in daily practice to achieve better results in patient care.”

**Rahul Pannala, MD**  
*Advanced Therapeutic Endoscopy Fellow, 2009–2010*

As assistant professor of medicine and pancreas clinic director at Mayo Clinic in Scottsdale, Arizona, Dr. Pannala performs a spectrum of therapeutic endoscopic procedures, caring for patients with pancreaticobiliary problems including pancreatic cancer, acute and chronic pancreatitis and cholangiocarcinoma. “Virginia Mason Medical Center is an outstanding example of improved patient care directly resulting from a multidisciplinary approach to complex GI problems. The close collaboration between GI, interventional radiology and pancreatic surgery has led to innovative approaches in the care of patients with pancreatic necrosis. I continue to foster these multidisciplinary collaborations to deliver the best possible care to my patients,” says Dr. Pannala.

**Phillip Carrott Jr., MD**  
*Ryan Hill Research Foundation Fellow, 2010–2011*

Dr. Carrott is finishing a cardiothoracic surgery residency at the University of Virginia, where he is in the general thoracic track and pursuing a position in thoracic surgery at an academic center. “The collaborative atmosphere at the institute is a model for the nation. It is refreshing to have such a close working relationship between medical and surgical disciplines. Now that I know that it’s possible, I will expect to work together in a similar way in my future position,” says Dr. Carrott.

**Mitch Schreiner, MD**  
*Advanced Therapeutic Endoscopy Fellow, 2010–2011*

Currently with Southwest Gastroenterology in Albuquerque, New Mexico, Dr. Schreiner states, “Being part of Team Medicine opened my eyes to the importance of a multidisciplinary approach to care for patients, especially those with pancreaticobiliary disease. At Virginia Mason, patient care is not a competition amongst the different subspecialties, but rather a competition against a problem where all the providers are on the same team. I have brought this attitude to my current practice and frequently find myself visiting interventional radiology and the surgical specialists to review films, plan cases, and carry out a procedural plan. This approach enabled me to perform the first combined endoscopic ultrasound and interventional radiology dual drainage procedure for walled-off pancreatic necrosis in New Mexico. Seeing my patient do well on follow-up has been incredibly satisfying, and both the patient and I have Virginia Mason to thank for it,” says Dr. Schreiner.
The Digestive Disease Institute at Virginia Mason is a multidisciplinary coalition of providers from:

- Gastroenterology and Hepatology
- General Thoracic Surgery
- Pathology
- Interventional Radiology
- Hematology/Oncology
- Hepatopancreatobiliary Surgery

The Digestive Disease Institute treats:

- Acute Pancreatitis
- Ascites
- Autoimmune Hepatitis
- Barrett’s Esophagus
- Benign Hepatic Tumors
- Bile Duct Strictures
- Bile Duct Disorders
- Biliary Duct Cancer
- Celiac Disease
- Chronic Pancreatitis
- Cirrhosis
- Colitis and Chronic Ulcerative Colitis
- Colorectal Cancer
- Colorectal Polyps
- Constipation
- Crohn’s Disease
- Cystic Fibrosis
- Esophageal and Gastric Varices
- Esophageal Cancer
- Fatty Liver Disease
- Gallstones and Bile Duct Stones
- Gastroesophageal Reflux Disease (GERD)
- Gastroparesis (Delayed Gastric Emptying)
- Hemochromatosis
- Hepatitis B, Hepatitis C and Chronic Hepatitis
- Hepatorenal Syndrome
- Inflammatory Bowel Disease (IBD)
- Intraductal Papillary Mucosal Neoplasm (IPMN)
- Liver Cancer
- Neuroendocrine Tumors
- Nonalcoholic Steatohepatitis (NASH)
- Pancreatic Cancer
- Pancreatic Cysts
- Pancreatic Necrosis
- Pancreatitis
- Primary Sclerosing Cholangitis
- Swallowing and Motility Disorders
- Ulcerative Colitis

**WHY REFER YOUR PATIENTS?**

- We treat complex patients who may be untreatable in your area
- Multidisciplinary care in GI, hepatology, surgery, oncology, interventional radiology and nutrition
- GI Cancer Care Coordination Team will provide your patient with personalized attention
- Clinical trials may offer new hope to patients with no other treatment options

You may refer a patient to the Digestive Disease Institute by calling (206) 223-2319 or go to VirginiaMason.org/DDI.

Biographies of our providers are available online. Read about them at VirginiaMason.org/DDI-Team