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DIGEST THIS

NEWS FOR GASTROENTEROLOGISTS & GI SURGEONS

Cleveland Clinic No. 2 in the U.S. – Gastroenterology & GI Surgery

BEST HOSPITALS
U.S.News & WORLD REPORT
NATIONAL
GASTROENTEROLOGY & GI SURGERY
2016-17

Dear Colleagues,

"If you always do what you always did, you will always get what you always got."

– Albert Einstein

There is no doubt, as I reflect upon my first year at the helm of Cleveland Clinic's Digestive Disease & Surgery Institute, that one of my new team's biggest strengths is their drive. This drive to innovate, to push for progress and to lead is apparent in each of the stories we feature in this issue of *Digest This*.

For instance, our entire team in Cleveland and Florida is now utilizing TaTME (cover) to help bring minimally invasive surgery to rectal cancer patients who would not otherwise be suitable for laparoscopy.

Always striving to improve care and quality of life for patients, we've also compared LHM and POEM for achalasia and found higher levels of acid exposure (and thus potentially more reflux) in patients with the less-invasive procedure. And we've helped quantify why NIFC is preferable to IOC to reduce bile duct injury in cholecystectomy.

We've also launched an innovative behavioral medicine program to help address the range of biological, social and psychological influences that affect patients' gastrointestinal disorders.

Last but not least, we are proud to highlight four exceptional members of our Digestive Disease & Surgery Institute who are helping lead teams within our institute and on the national level — all with the common goal of making further strides in the battle against digestive diseases.

It has been a privilege to get to know many of you in my first full year in my new role, and I look forward to another robust year ahead. As always, thank you for your trust and continuing referrals.

Sincerely,

Conor Delaney, MD, PhD

Chairman | Digestive Disease & Surgery Institute

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Feb. 14–18

11th Annual
Advanced Transanal Surgery Workshop and Wet Lab and TaTME Cadaver Lab

Feb. 14

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Feb. 15

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Feb. 16–19

6th Annual
Gastroenterology and Hepatology Symposium

Feb. 16–18

ccfcme.org/ddiweek

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DIGEST THIS

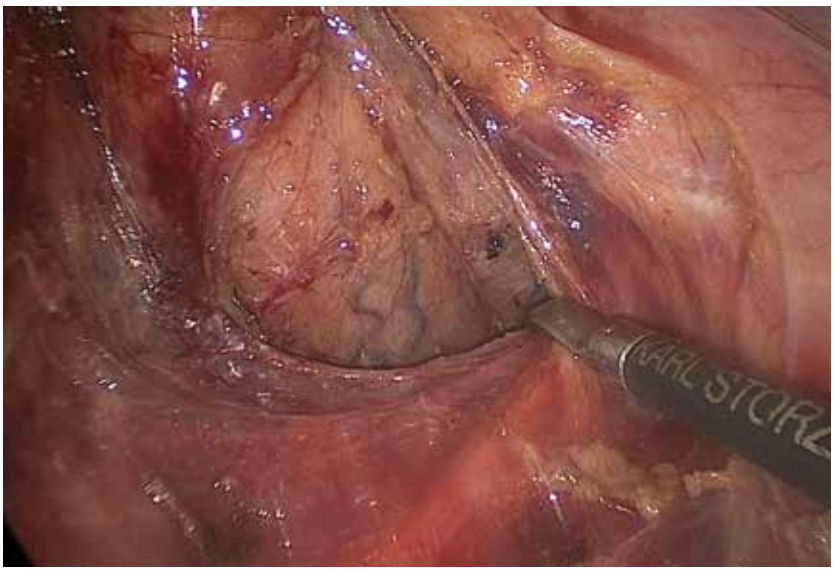
THE LATEST NEWS FOR GASTROENTEROLOGISTS & GI SURGEONS FROM CLEVELAND CLINIC | WINTER 2017

FEATURED ARTICLE

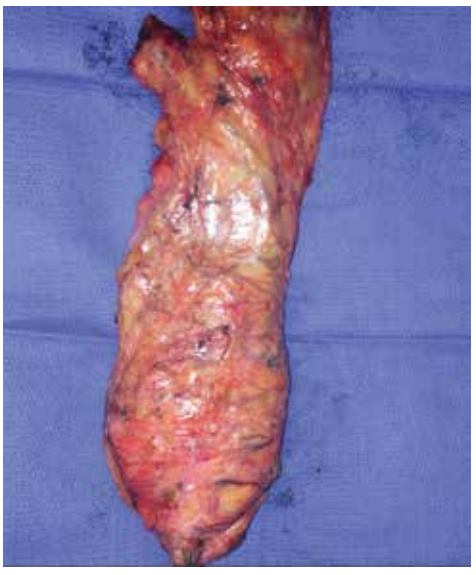
TaTME for Rectal Cancer Gains Momentum

Expands indications for laparoscopic surgery

While it is still early in the evolution of transanal total mesorectal excision (TaTME), the technique is gaining traction as the go-to procedure in select cases, Cleveland Clinic colorectal surgeons report.



Laparoscopic view demonstrating the moment of connection between the abdominal and pelvic dissections. (Image courtesy of Karl Storz.)



Transanal total mesorectal excision (TaTME) specimen demonstrating an intact mesorectal fascia with adequate cancer margins.

"Early research suggests that the oncological quality of the TaTME operation for rectal cancer is at least as good as traditional laparoscopic surgery," reports **Conor Delaney, MD, PhD**, Chairman, Digestive Disease & Surgery Institute.

TaTME offers several advantages:

- Expands a minimally invasive approach to certain patients previously considered challenging for laparoscopy
- Offers the same benefits of reduced postoperative pain, faster recovery, shorter length of stay and earlier return to work as seen with laparoscopy
- Is more efficient than robotic surgery

TaTME evolution

"Over the past 20 to 30 years, total mesorectal excision (TME) has proved to be the optimal radical procedure for rectal cancer, reducing local recurrence rates from 30 percent or higher to as low as 3 percent in the hands of leading surgeons," Dr. Delaney states.

Combining TME with the newer concept of operating through natural orifices, surgeons developed an alternate way of doing rectal cancer surgery — transanal TME performed laparoscopically, Dr. Delaney explains, adding that the surgery is somewhat complicated and requires meticulous technique.

Cleveland Clinic colorectal surgeons, including Dr. Delaney, Meagan Costedio, MD; Jean Ashburn, MD; Bradley Champagne, MD (Cleveland Clinic Fairview Hospital); and Dana Sands, MD, Cleveland Clinic Florida (Weston), perform TaTME.

A workaround in men

The bony confines of the male pelvis, which make laparoscopy more challenging for rectal cancer, are an additional impetus for the development of TaTME, notes Dr. Champagne.

"Data increasingly demonstrate that achieving a clear distal or circumferential resection margin in rectal cancer is the most important element to prevent recurrence," he says. How does one achieve this in a narrow male pelvis?

Robotics can help, but studies have not demonstrated real improvement in oncologic outcome, and robotics increase costs, Dr. Champagne notes. As a result, the idea to perform transanal TME for low rectal dissections gained followers.

Current indications for TaTME

"The true opportunity with TaTME is to help bring minimally invasive surgery to patients who, because of tumor characteristics or body habitus, would not otherwise be suitable for laparoscopy," Dr. Delaney explains.

Indications for TaTME include a tumor staged at T3 or less, a tumor low in the rectum, a narrow pelvis, and when the surgeon believes a traditional laparoscopic approach will be too technically challenging. TaTME is classically considered for obese male and female patients.

Operative technique

Transanal and laparoscopic teams work simultaneously during a TaTME procedure, which begins with a specially designed port inserted into the rectum. A laparoscope is then inserted into the abdomen, and the operation is completed from above.

"TaTME is an exciting new technique that by virtue of the anatomical precision it offers, allows experienced surgeons to bring minimally invasive surgery to more patients with rectal cancer and potentially improve the overall standard of care," Dr. Delaney says.

Dr. Delaney, 216.444.5576 | delanec@ccf.org

Learn more: consultqd.clevelandclinic.org/TaTME

DIGEST THIS

ENDOSCOPY

Risk of Reflux After Achalasia Treatment: **POEM vs. Heller Myotomy**

A new study comparing two common treatments for achalasia — laparoscopic Heller myotomy with fundoplication (LHM) and peroral endoscopic myotomy (POEM) — found higher levels of acid exposure in patients who had the less-invasive POEM procedure.

Madhu Sanaka, MD, Medical Director of the Center for Advanced Endoscopy, compared the standard LHM and POEM, an increasingly popular, alternative, novel approach with efficacy equal to LHM. "There hasn't been a well-designed study comparing pH testing after POEM vs. LHM until now," says Dr. Sanaka, who presented his research at ACG2016.

Dr. Sanaka and his team studied 31 POEM patients and 88 LHM patients, testing their pH levels two months post-treatment. While POEM patients showed no statistically significant increase in reflux symptoms, they did have higher abnormal pH study findings than LHM patients (48 percent versus 14 percent).

Most POEM patients are managed with an anti-reflux medication. This is often unnecessary for LHM patients because LHM includes a fundoplication — a surgery to tuck the lower sphincter and prevent reflux.

"It's important to know that POEM patients have higher levels of acid exposure and may thus have more reflux," stresses Dr. Sanaka, who learned POEM from its inventor, Haru Inoue, MD, and has performed more than 90 to date. "This study can help patients make more informed decisions about which course of treatment is right for them."

The next stage of this research is to determine the factors that predict increased acid exposure. "I want to know what subset of patients are at the most risk, and what characteristics predispose them to this," he says.

Dr. Sanaka, 216.444.3423 | sanakam@ccf.org

WWW Learn more: consultqd.clevelandclinic.org/poemvsheller

DIAGNOSIS

Treating the Whole Patient

Judith Scheman, PhD

A new behavioral medicine program underway at Cleveland Clinic's Digestive Disease & Surgery Institute aims to address the range of biological, social and psychological influences that affect patients' gastrointestinal disorders.

Physical and psychological symptoms are often intertwined when it comes to digestive disorders, explains **Judith Scheman, PhD**, who heads the new program. Anxiety can trigger digestive issues, for instance, and digestive issues can trigger anxiety.

Dr. Scheman offers services that range from anxiety treatments before procedures such as colonoscopy to coping skills for dealing with such chronic conditions as inflammatory bowel disease and gastroparesis. She teaches patients how changing their brains can change their bodies via stress modification, sleep hygiene, relaxation and cognitive behavioral therapy.

"I offer a range of therapies," Dr. Scheman says, "and although such treatments require a time investment from patients initially, they may reduce the need for frequent doctor visits in the long run."

Changing healthcare laws are requiring providers to focus more on outcomes, and research shows that addressing biopsychosocial issues improves physical health outcomes. Studies clearly show that unresolved preoperative distress is associated with postoperative pain and delayed functional recovery.

"I am currently working with patients who've recently had surgery," she says. "I think that many of them might not need me now had I had the opportunity to work with them before surgery."

Dr. Scheman, 216.444.2875 | schemaj@ccf.org

WWW Learn more: consultqd.clevelandclinic.org/behavioral

VITAL STATISTICS

A sampling of Cleveland Clinic Digestive Disease & Surgery Institute volumes and outcomes. For more outcomes data, visit **clevelandclinic.org/outcomes**.

OUTCOMES SNAPSHOTS

1%
Despite increasing patient acuity (average American Society of Anesthesiologists score 2.9), our colorectal surgeons achieved an in-hospital mortality rate of 1% for patients undergoing laparoscopic resection and 2% for those having an open colectomy.

100
With one of the highest-volume living donor liver programs in the U.S., our transplant team has performed 100 living donor transplants with excellent graft and patient survival.

80%
Stage-specific, five-year, disease-free survival rates for rectal cancer patients exceed national averages: stage I = 80%, stage II = 70%, stage III = 58% and stage IV = 18%.

156
Number of esophagectomy procedures for esophageal cancer from 2013 to 2015. The combined morbidity and mortality risk-adjusted rate was among the best in the country.

75%
Over the past 5 years, the use of single-port procedures has increased from 30% to 75% for laparoscopic appendectomies.

47%
Laparoscopic Roux-en-Y gastric bypass was the most common bariatric surgery performed at Cleveland Clinic (47%) in 2015. Laparoscopic sleeve gastrectomy continued to grow, and was the second most popular (34%).

SELECTED VOLUMES (2015)

Total admissions
12,142

Patient days
78,476

Evaluation and management visits
118,896

Endoscopic procedures
79,437

Inpatient surgical visits
8,123

Outpatient surgical visits
10,294

Minimally invasive surgical procedures
6,827

CLEVELAND CLINIC FLORIDA

Use of Near Infrared Fluorescent Cholangiography to Reduce Bile Duct Injury in Cholecystectomy

The use of near infrared fluorescent cholangiography (NIFC) to improve the visualization of critical extrahepatic structures can decrease the likelihood of bile duct injuries during laparoscopic cholecystectomy.

NIFC IS PERFORMED with a fluorescent imaging system incorporated into a laparoscope, explains **Raul J. Rosenthal, MD**, Chairman of General Surgery at Cleveland Clinic Florida. A common fluorescent dye known as indocyanine green (ICG) is given intravenously 45 to 60 minutes prior to the procedure. When illuminated by infrared light, the dye fluoresces, allowing the surgeon to clearly visualize all biliary anatomy in real time and operate without causing injury to the bile ducts.

NIFC has distinct advantages over IOC.

Multiple benefits clearly evident

Cleveland Clinic investigators in Florida and Ohio have conducted multiple clinical trials on NIFC to validate its effectiveness and understand how it compares with intraoperative cholangiography (IOC). NIFC is preferable to IOC for 10 reasons:

- It can be accomplished in 100 percent of patients.
- It is far less expensive.
- It is faster.
- It is highly specific.
- It is an excellent teaching tool that residents at all levels can use.
- No incision is required.
- It is safe.
- There is no user learning curve.
- There is no radiation exposure.
- It enables real-time surgery.

Cleveland Clinic recently initiated a multicenter clinical trial comparing NIFC to standard white-light imaging in visualizing and identifying the main biliary and hepatic structures during laparoscopic cholecystectomy. Results are expected in late 2017.

Dr. Rosenthal, 954.659.5239 | rosentr@ccf.org

Learn more: consultqd.clevelandclinic.org/NIFC

LEADERSHIP CORNER

Scott R. Steele, MD

Chairman | Colorectal Surgery

"My first priorities are to get to know the staff and determine how we can work together, as a collaborative team, to improve the way colorectal disease is treated. We will continuously seek better ways, through our own experience and high-quality research, to improve patient outcomes."

Specialty interests: Clinical outcomes research, minimally invasive surgery, colorectal cancer

Other roles: Co-editor, *Diseases of the Colon & Rectum*; 25 years in the U.S. Army, including two deployments to Iraq and two to Afghanistan

Matthew Kroh, MD

Chief | Digestive Disease Institute | Cleveland Clinic Abu Dhabi

"The impact of medical care is global. We are pushing through barriers that separate country, time and practice. The Cleveland Clinic model of excellence in clinical care, research and education is universal. I believe in this mission and look forward to the opportunity to practice it in the best way we know in a totally different environment."

Specialty interests: Advanced laparoscopic surgery, bariatric surgery, gastrointestinal surgery, surgical endoscopy, single incision laparoscopic surgery, robotic surgery

Other roles: Associate Professor of Surgery, Cleveland Clinic Lerner College of Medicine

Carol Burke, MD

President | American College of Gastroenterology

"Being selected to this position by my peers is the pinnacle of my career. I joined the ACG as a trainee member, and the college has become like a family to me. It has provided me research support, superb education, collegiality and an opportunity to work with an organization making a difference in the field of gastroenterology."

Specialty interests: Colorectal polyp and cancer prevention, hereditary polyposis and nonpolyposis colorectal cancer

Other roles: Vice Chair, Department of Gastroenterology and Hepatology; Director, Center for Colon Polyp and Cancer Prevention; Head, Section of Polyposis, Sanford R. Weiss, MD, Center for Hereditary Colorectal Neoplasia

Stacy Brethauer, MD

President | American Society for Metabolic and Bariatric Surgery

"There is still a widespread perception that bariatric surgery is a last resort, and quite the opposite is true. It should be considered earlier in the disease for obesity, diabetes and metabolic syndrome. We know that the earlier you intervene in a chronic disease, the more effective the treatment can be and the longer it can last."

Specialty interests: Advanced laparoscopy and endoscopy, bariatric operations

Other roles: Staff physician in the Section of Laparoscopic and Bariatric Surgery, Cleveland Clinic; Director, Bariatric Surgery, Cleveland Clinic Fairview Hospital; Associate Program Director, Advanced Laparoscopic and Bariatric Surgery Fellowship Program