While many gastrointestinal issues can be easily diagnosed and treated with standard endoscopic procedures, some require a much closer look with specially designed equipment. For several of Atlanta Gastroenterology’s physicians, including Dr. John Suh, two specific procedures – EUS and ERCP – enable them to help patients who are suffering from chronic GI pain that is difficult to diagnose.

The EUS, or endoscopic ultrasound, is a procedure that allows a physician to get images and information about the digestive tract and surrounding tissue and organs using a thin, flexible, lighted scope known as an endoscope. “Traditional endoscopy uses a long fiber optic camera that helps you to visualize the intestinal track,” explains Dr. Suh, who completed a fellowship in advanced endoscopy at Harbor-UCLA Medical Center as part of his training. “But with the advances in technology, we realized by adding an ultrasound device to the end of the endoscope, we could visualize not only the layers of the esophagus, the stomach, the small intestine and the colon, but also a little bit beyond them.”

The endoscope used for the EUS procedure has a small ultrasound probe on the tip along with a tiny camera. The probe – or transducer – creates images from the sound waves that bounce off body tissues and make echoes. The echoes are then sent to a computer to create pictures. “This technology is much better than traditional ultrasounds,” states Dr. Suh. “It allows us to get much closer to the organs being examined and it gives us more accurate and detailed images of the upper and lower digestive tract and the surrounding organs, lymph nodes and blood vessels.

“Another advantage of the endoscopic ultrasound compared to the traditional diagnostic imaging is the ability to take a biopsy,” he explains. “When we see masses or lesions like a cyst, we can insert a thin needle through the wall of the stomach or the small intestine to get some tissue samples or cells, in a process called fine needle aspiration (FNA). The cytopathologist can then look at

When Are EUS and ERCP Procedures Used?

EUS may be used to:
• Evaluate stages of cancer
• Evaluate chronic pancreatitis or other pancreatic disorders
• Study abnormalities or tumors in the pancreas and nodules in the intestinal wall
• Obtain tissue specimen for a biopsy of the tumors or nodules

ERCP is performed to:
• Check persistent abdominal pain or jaundice
• Find gallstones or diseases of the liver, bile ducts, or pancreas
• Remove gallstones from the common bile duct if they are causing an obstruction, inflammation or infection, or pancreatitis
• Open a narrowed bile duct
• Obtain a tissue sample for a biopsy
the specimen under the microscope to help establish a diagnosis.” Because this procedure allows the physician to take a biopsy of neighboring organs, it may be much less of a risk for patients. “The EUS allows me to take a biopsy at closer proximity to the lesion, as opposed to the CT-guided method, which requires using a needle to travel a longer distance within the body, sometimes even going through different organs to reach the target. This technique is especially useful for masses or lesions in the pancreas.”

The EUS also allows the physician to look at the layers of the intestinal tract to help detect stages of cancer and provide better treatment. “For esophageal and stomach cancers,” he says, “you can actually see all the way through the different layers of the walls of the stomach or esophagus. It also allows an evaluation of the surrounding lymph nodes and blood vessels to see if the tumor is involving them.”

The ERCP—endoscopic retrograde cholangiopancreatogram—combines endoscopy with fluoroscopy to diagnose and treat certain problems of the biliary and pancreatic ductal system. By injecting dye into the biliary and pancreatic ducts that can be seen on an X-ray, the physician can introduce a variety of tools through the endoscope to make a diagnosis and treat certain problems in the biliary system or the pancreas. “With ERCP, I can remove a gallstone trapped in the bile duct as well as assess and treat scarring or leaks in the bile or pancreatic duct by placing stents. I can also take small specimens from the bile or pancreatic duct to rule out malignancy.”

Despite the differences in the EUS and the ERCP, the preparation is virtually the same. Before the procedure, the patient is given a sedative. The physician then slowly guides the endoscope into the mouth, closely examining the inside of the intestinal tract on a monitor as the endoscope is moved through the upper portion of the digestive tract. The entire procedure usually takes 30 to 90 minutes.

“Patients generally wake up in an hour,” says Dr. Suh, “and usually, they can go home the same day of the procedure.” There are occasions where a patient may need to be admitted to the hospital overnight for observation, he adds. “As a rule, I recommend an overnight stay if I’ve treated problems in the pancreatic duct.” Even though the procedures are primarily performed in a hospital setting, 95 percent are done as an outpatient procedure.

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John Suh, M.D., M.P.H.
Board Certified, Internal Medicine and Gastroenterology

**Education**
- B.A., Johns Hopkins University, Baltimore, MD
- M.P.H., Health Policy and Management, Emory University’s Rollins School of Public Health, Atlanta, Ga
- Graduate Research Assistant, Centers for Disease Control
- Intern, Institute for Diversity in Health Management
- Consultant, Healthcare Microsystems
- M.D., University of Alabama School of Medicine, Birmingham
- Residency, University of Michigan Medical Center, Ann Arbor
- Fellowship in Gastroenterology, University of Southern California Medical Center, Los Angeles
- Fellowship in Advanced Endoscopy, Harbor-UCLA Medical Center, Los Angeles

**Memberships**
- American Gastroenterology Association
- American College of Gastroenterology

**Locations**
- Decatur and Emory Midtown