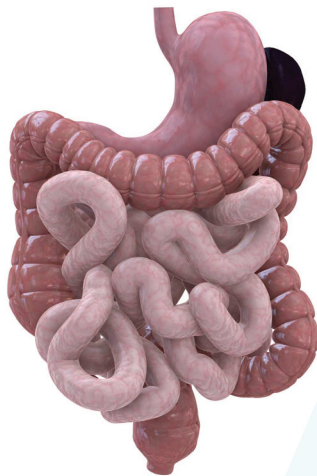
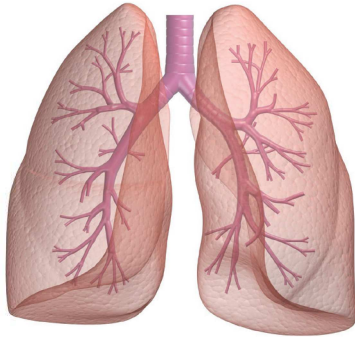


Endoscopic Ultrasound:

Window to internal organs proves crucial tool in cancer diagnosis and staging



With the acquisition of endoscopic and endobronchial ultrasound, Lancaster General Health is offering a sophisticated imaging technique for diagnosing cancers of the digestive tract and lungs, planning treatment options, and evaluating benign conditions of surrounding tissues and organs.

The new technology enhances Lancaster General Health's cancer program by bringing to the community a service that previously had been available at tertiary medical centers, according to hospital officials.

"Endoscopic and endobronchial ultrasound significantly improves the capability and depth of our oncology program," says Stacey Youcis, Vice President of Operations, of the first units in Lancaster County. "We no longer have to refer patients suffering from certain cancers and other benign conditions for this important procedure. They can remain in the county for their care."

The merging of endoscopy and ultra-sound allows physicians to get a close-up view of the targeted organs in real-time, producing high-quality images in greater detail and depth than other imaging techniques.

Endoscopic ultrasound (EUS) -

Gastroenterologists insert a flexible endoscope, with a small ultrasound device built into the end, through the esophagus or anus.

"EUS can provide clinically valuable information for the management of a variety of medical conditions. EUS has an ability to

differentiate the layers of the GI tract and produce high-resolution images of the gastrointestinal wall, as well as the surrounding structures," says Dr. Sadiya Cheshty, M.D., of Lancaster Gastro-

enterology Inc. "EUS looks beyond the surface of the structures involved so that we're able to obtain more and better information about the upper and lower digestive tracts and nearby organs."

Endobronchial ultrasound (EBUS) -

Pulmonologists insert a special bronchoscope, which also is fitted with an ultrasound device, through the windpipe and into the airways to assess a patient's

lymph nodes and determine if lung cancer is present or has spread.

"The main advantage that we have with endobronchial ultrasound is that we will be able to biopsy lymph nodes located outside of the airways with a greater degree of certainty than with a regular bronchoscope," says Steve Lando, M.D., Director of Pulmonary Medicine.

The role of endoscopic ultrasound

Because of its exceptionally high degree of image accuracy and safety, the role of EUS and EBUS continues to expand as more hospitals acquire the technology and the expertise to perform the procedure.

With pancreatic cancer cited as the fourth leading cause of cancer deaths in the United States, and esophageal and rectal cancers on the rise, EUS "is gaining importance in the detection and management of a variety of cancers and benign diseases of the digestive system," says Dr. Ketan Kulkarni,

M.D., of Regional Gastroenterology Associates of Lancaster, LTD.

"EUS has an ability to differentiate the layers of the GI tract and produce high-resolution images . . .," said Sadiya Cheshty, M.D.

"You can imagine that if you have the endoscope adjacent to the pancreas, for

example, you get quite a different view from the inside of the body than you would from a CT scan or MRI. That difference can be critically important to the outcome of patients."

A way to rule out surgery

A significant advantage of EUS and EBUS over other imaging techniques is that they can provide the same diagnostic information to physicians that previously might have required a surgery to obtain.

continued

Using the ultrasound as guidance, physicians can perform fine-needle aspirations with a greater degree of certainty to collect tissue and fluid samples from the lungs, lymph nodes, and abdominal organs, providing critical information for timely answers.

“Many patients with lung cancer also have emphysema, and for them, any surgical procedure entails a risk,” says John Joseph, M.D., of Conestoga Pulmonary & Sleep Medicine, and one of the first physicians to use the technology. “EBUS allows us to get the same information with less pain and less risk and do it as an outpatient.”

Help in determining treatment options

EUS and EBUS also have a role in determining treatment options for various cancers, the physicians say.

“Patients are benefiting, not just from endoscopic ultrasound’s diagnostic capabilities, but from the information it gives oncologists to help them devise more effective treatment plans,” says Dr. Kulkarni. “In many instances, EUS can help determine which patients should undergo therapy prior to surgery. If you do not do preoperative radiation or chemotherapy in certain patients, it can be a risk down the road.”

When surgery is called for, the information provided by EUS and EBUS is a blueprint, showing more clearly the location of blood vessels, lymph nodes and the depth of tumors, which helps the surgeon avoid the unexpected once the operation is under way.

“EUS creates a partnership of caregivers to better serve the patient,” says Dr. Cheshty. “The information we obtain from EUS and convey to the medical oncologist and surgeon helps ensure a continuum of care. EUS adds a new dimension to endoscopy. It is helpful not only to gastroenterologists, but also to internists, surgeons and oncologists who treat GI cancers.”

EUS “is gaining importance in the detection and management of a variety of cancers and benign diseases of the digestive system,” says Ketan Kulkarni, M.D.

EUS and EBUS are performed on an outpatient basis, taking one to two hours with the patient under sedation. Patients can generally go home a few hours after the procedure.

The evolution of endoscopic ultrasound

Endoscopic ultrasound started as primarily a research tool in the early 1980s, but as the technology evolved, academic and tertiary medical centers began to use it clinically. With continuing refinement and evidence of its superior imaging qualities, it is starting to gain acceptance in community hospitals.

“Lancaster General Health is committed to offering the breadth of oncology services to meet our community’s growing needs,” says Ms. Youcis. “We want to keep on the cutting edge of technology for our patients, adding new capabilities once the technology has progressed to make it an appropriate investment for a community hospital.”

The hospital officials and specialists noted that EUS and EBUS do not replace standard endoscopy, bronchoscopy, and other imaging technologies, but are tools to be used at the appropriate time.

The role of endoscopic ultrasound:

- Stage lung and gastrointestinal cancers, including esophageal, gastric, rectal, lower colon, and pancreatic cancers. EUS can detect small pancreatic cancers that can’t be visualized with a CT-scan.
- Detect bile duct stones.
- Evaluate abnormalities or tumors in the gallbladder, liver, lymph nodes, smooth muscles, and other organs.
- Diagnose benign diseases of internal organs such as pancreatitis and sarcoidosis.
- Find out the causes of conditions such as abdominal pain, abnormal weight loss, and fecal incontinence.
- Diagnose and drain pancreatic cysts.

In many instances, it’s complementary to a CT-scan, but in other cases, such as esophageal, rectal, pancreatic, and lung cancer, it’s an essential part of the workup.

Tara Casher, Manager of Endoscopy Services, says she expects the unit will handle up to 15 EUS/EBUS procedures a month.

For more information on these procedures, please contact Tara Casher, Manager of Endoscopy services, (717) 544-8013.