

# EUS machine provides critical information, treatment

Abdominal pain can stem from a variety of treatable, non-life-threatening gastrointestinal conditions. Still, to rule out a more serious problem, both the physician and patient want the latest in abdominal imaging techniques to make a prompt, firm diagnosis.

Endoscopic ultrasound (EUS) is a new tool that allows gastroenterologists at Sinai Hospital to precisely locate and diagnose a multitude of gastrointestinal lesions. EUS combines an endoscope, or thin flexible tube with a light and lens, with an ultrasound probe, which enables the physician to see structures within and beyond the gastrointestinal wall, such as the pancreas, liver and gallbladder. The EUS allows gastroenterologists to determine whether a lesion is cancerous, and, if so, whether the cancer has spread.

In the case of pancreatic cancer, accurate diagnosis and staging needs to be available quickly.

Niraj D. Jani, M.D., director of the Endoscopic Ultrasound and Gastrointestinal Oncology Lab at Sinai Hospital, says the EUS allows him to precisely locate and diagnose a variety of lesions in the pancreas, as well as perform a biopsy.

There will be an estimated 37,680 new cases of pancreatic cancer in the United States this year, and 34,290 deaths, according to the National Cancer Institute. Early diagnosis dictates proper management.

Jani's enthusiasm stems from the success stories he has had with the EUS, ranging from diagnosing esophageal cancer in an early treatable stage to ruling out a possible mass in the pancreas.

"EUS allows us to give an early diagnosis of pancreatic cancer, determine whether surgery is an option and see if the cancer has spread," Jani says. "It also can distinguish pancreatic cancer from other benign conditions of the pancreas."

At Sinai, gastroenterologists work with medical, surgical and radiation oncologists in a multidisciplinary approach to care. Tissue

diagnosis and early staging is instrumental in dictating whether a patient will receive chemotherapy and radiation or proceed directly to surgery.

Gastroenterologists trained in the EUS, like Jani, also can use it for therapeutic treatments, such as a celiac-plexus block and neurolysis. Patients with chronic pancreatitis or advanced pancreatic cancer may have significant reduction in their pain with these therapies. Using the EUS, Jani is also able to place gold markers, or fiducials, easily and precisely into various tumors for CyberKnife® therapy. Sinai Hospital is

one of the few hospitals in the nation with two CyberKnife systems, which are robotic arms that direct radiation into hard-to-reach or previously inoperable tumors. It is painless and noninvasive.

An EUS procedure normally lasts between 30 to 60 minutes, and is done on an outpatient basis. Patients can also see Jani or other members of the Division of Gastroenterology at Sinai for an upper endoscopy, colonoscopy, percutaneous endoscopic gastrostomy (PEG) or endoscopic retrograde cholangiopancreatography (ERCP). For more information about these procedures or the endoscopic ultrasound, call 410-601-WELL (9355).



Niraj Jani, M.D., is director of the Endoscopic Ultrasound and Gastrointestinal Oncology Lab at Sinai Hospital.



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