

for your digestion

June 2011 Vol. I, Ed. II

Endoscopic ultrasound: a new tool in the fight against cancer

By Jonathan Gonenne, M.D., Eugene Gastroenterology Consultants, P.C.

Endoscopic ultrasound (EUS) is a relatively new endoscopic technique that provides highly accurate imaging of the gastrointestinal (GI) tract and surrounding structures. It is most often used for diagnosis and preoperative staging of gastrointestinal (GI) malignancies, such as esophageal, gastric, pancreatic and rectal cancers.

In a typical week, we see people with:

- abnormal pancreatic masses or lymph nodes detected by CT scan
- chronic abdominal pain with concern for pancreatitis or common bile duct stones
- newly diagnosed esophageal or rectal cancer with questions of local vs. metastatic disease
- incidental nodules or bumps in the GI tract found by other gastroenterologists who ask the question "what is this?"

What is EUS?

The equipment is similar to the standard endoscopy tools that we use. The key difference lies at the tip of the scope, where there is an ultrasound transducer covered with a water-filled balloon.

With this ultrasound probe, we measure different frequencies of sound waves (5 to 20 MHz), depending on whether the target is far from the intestine (lymph node) or near (intestinal mass). Two different EUS scopes are employed. The radial EUS scope offers a 360° view of the intestines and surrounding tissue, providing a "road map" of the anatomy.

The emitted sound wave travels into the surrounding tissues, reflects off of structure interfaces and travels back to the transducer and EUS unit, where it is processed to produce the image that we view. The linear EUS scope has an additional channel in the scope that allows for fine-needle aspiration (FNA) biopsy.

Who benefits?

As mentioned, patients with concerning masses discovered during endoscopy (i.e. an incidental nodule in the stomach) or frank cancers on a standard biopsy may need further work-up. For suspicious lesions

lining the GI tract, EUS can distinguish between benign tumors (i.e. lipomas, leiomyomas, or even blood vessels) and precancerous lesions (i.e. gastrointestinal stromal tumors/GIST, carcinoid tumors). For known polyps or cancers, EUS can assess the depth of the lesion and help determine whether next steps should include surgery or chemo/radiation.

The ability to sample a lesion with FNA during EUS is an additional indication for this procedure. During the staging procedure, or on standard imaging studies (i.e. CT scan), lymph nodes or mass lesions near the upper or lower GI tract may be identified. A small-gauge needle (19 to 25 gauge) can be passed through the GI tract to biopsy these lesions. This helps to distinguish between local cancers and metastatic disease, and it can identify lymphoma vs. inflammatory lymph nodes.

In addition to the gastrointestinal tract, the EUS provides important information about pancreatic masses. Using ultrasound, we can determine if the lesion is fluid-filled (cystic) or solid. Then, depending on the situation, we can perform biopsies and send the material to the lab to help distinguish between benign and precancerous cysts, as well as identify pancreatic cancer.

Less invasive uses

Other applications of EUS include a less invasive way of identifying stones in the common bile duct, as well as assessing the pancreas for signs of chronic pancreatitis.

Hopes are high for turning EUS into a therapeutic tool, as ongoing studies show promise in the delivery of chemotherapeutic agents directly into cancerous lesion via EUS guided injections, as well as ablating precancerous pancreatic cysts.

It is a safe procedure with a complication rate similar to standard endoscopy (<1%), and may offer a less invasive means to obtain diagnosis than surgery.

We invite your comments and suggestions for topics in future editions. Also, if you would rather receive this newsletter electronically or not at all, email newsletter@eugenegi.com.



Dr. Jonathan Gonenne, boogie boarding in Hawaii.

About Jonathan Gonenne, M.D.

Cheerful and hardworking, Jonathan Gonenne has introduced many new technologies to Lane County, including capsule endoscopy, cholangioscopy and endoscopic ultrasound. "I enjoy the variety that each day brings and the opportunity to make a difference with each patient I meet," says Dr. Gonenne. A natural collaborator, he works closely with the NSC Cancer Care Alliance, a group of specialists who work together to provide coordinated care from cancer diagnosis to treatment and management. In his free time, Dr. Gonenne plays tennis, skis, plays harmonica and does his best to keep up with his wife and three daughters.

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Patient experience

From a patient's standpoint, the procedure is similar to standard, upper endoscopy or colonoscopy. The patient receives conscious sedation or general anesthesia for the EUS, which typically lasts one hour. It is an outpatient procedure done at the hospital, with recovery time around one hour. There is no special prep, but we do ask the patient to refrain from eating or drinking six hours prior to the procedure. We work closely with our radiology and pathology colleagues, and if a biopsy is performed, we are able to give a preliminary diagnosis that same day. Afterward, patients are provided with the information gathered during the procedure. We then work closely with surgeons and oncologists to relay the information and attempt to coordinate needed treatment in a timely and efficient manner.

To refer a patient, or find out if a patient would benefit from EUS, contact Dr. Gonenne 541-868-9500.

Our sincerest appreciation



Nila Bates

"Nila's energy, drive, compassion, commitment, wisdom and candor will be missed."

The physicians and staff of Eugene Gastroenterology Consultants and Oregon Endoscopy Center would like to thank Nila Bates for more

than 12 years of dedicated service.

Nila became office manager in 1999 and has served tirelessly and faithfully. She is deeply respected within and outside the office for her fierce dedication to patient care and EGC/OEC.

During her tenure, Nila oversaw many important transitions in our practice: reorganization of EGC, starting Oregon Endoscopy Center (both at University Campus and RiverBend), collaboration with Northwest Specialty Clinics, implementation of EMR, moving

EGC/OEC to RiverBend campus, establishing in-office anatomic pathology laboratory and ultrasound.

Nila has helped EGC/OEC grow from five to nine providers, and has been instrumental in securing our reputation as one of the premier referral centers for digestive diseases in Oregon. Nila's energy, drive, compassion, commitment, wisdom and candor will be missed. We wish Nila all the best in the next phase of her life with ample time to enjoy the fruits of her labor.

Melissa Woods will be our office manager effective July 1, 2011, coming to us from South Hilyard Clinic. Although Nila is a tough act to follow, we know Melissa will lead EGC/OEC with integrity and passion. Please join us in welcoming Melissa to our practice.



Melissa Woods

