

EUS (Endoscopic Ultrasonography)

What is EUS?

Endoscopic ultrasonography (EUS) allows a doctor to examine your oesophageal and stomach linings as well as the walls of your upper and lower gastrointestinal tract. The upper tract consists of the oesophagus, stomach and duodenum; the lower tract includes your colon and rectum. EUS is also used to study other organs that are near the gastrointestinal tract, including the lungs, liver, gall bladder and pancreas.

The endoscopist will use a flexible camera called an endoscope that has a built-in small ultrasound probe. They will pass the endoscope through your mouth or anus to the area to be examined and then use the ultrasound waves from the probe to create black and white moving images of the digestive tract.

The procedure requires specialised equipment and at present, this is only available in Edinburgh at the Royal Infirmary, so your procedure will take place there. Your consultant will discuss the arrangements with you beforehand.

Why is EUS performed?

EUS provides different or additional information about your gut than other imaging tests (e.g. CT, MRI). EUS can be used to diagnose certain conditions that may cause abdominal pain or abnormal weight loss.

EUS is also used to evaluate known abnormalities, including lumps or lesions, which were detected at a prior endoscopy or were seen on a CT or MRI scan. EUS provides detailed pictures of the lump or lesion, which can help your consultant determine its origin and help treatment decisions. EUS can also be used to diagnose diseases of the pancreas, bile duct and gallbladder when other tests are inconclusive.



An echoendoscope used for EUS.

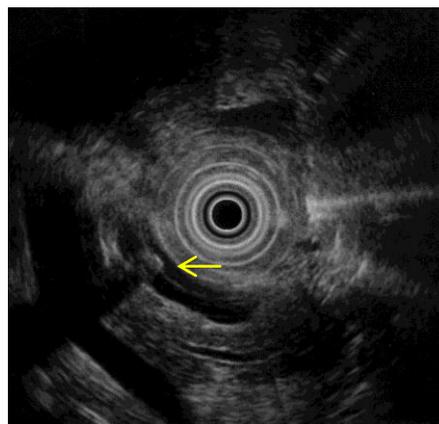
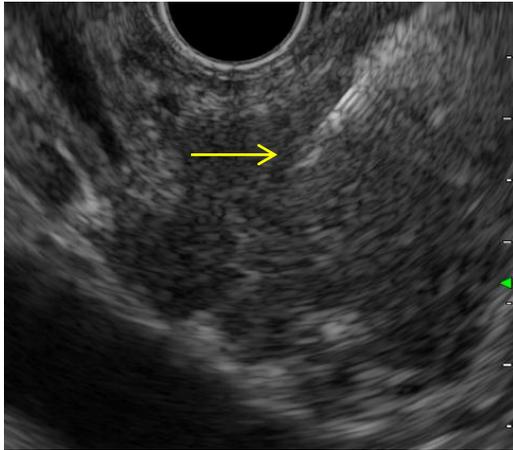


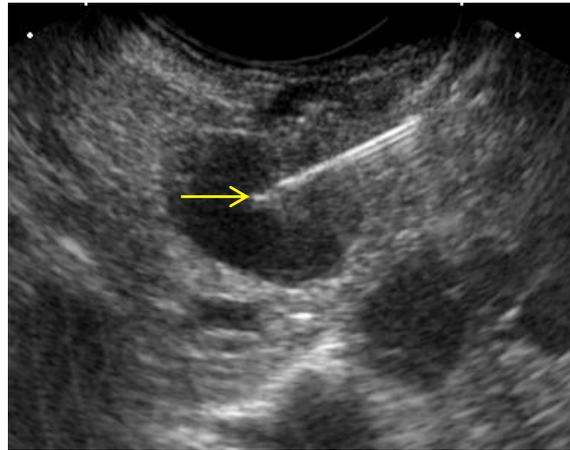
Image of EUS showing a small stone in the bile duct (arrow).

Why is EUS used for patients with cancer?

EUS helps to determine the extent of spread of certain cancers of the digestive and respiratory systems. EUS allows accurate assessment of a cancer's depth and whether it has spread to nearby lymph glands or important structures, such as blood vessels. EUS is also sometimes used to obtain a biopsy of a lesion to confirm its exact nature and determine the best treatment.



EUS-biopsy of a pancreatic cancer.



EUS-biopsy of a small lymph gland.

How should I prepare for EUS?

For EUS of the upper gastrointestinal tract, you should have nothing to eat or drink, usually for six hours before the examination but you will be sent specific instructions with your appointment.

For EUS of the rectum or colon, you will be sent specific details about preparing for the test, but this will usually involve taking a bowel cleansing solution or laxatives to empty the bowel beforehand.

What about any medications I'm taking at present?

You can take most medications as usual until the day of the EUS examination. This includes aspirin. Anticoagulants (blood thinning medicines such as warfarin, heparin, rivoroxaban or apixaban) and clopidogrel may need to be adjusted before the procedure. Insulin also needs to be adjusted on the day of EUS. Check with your doctor in advance regarding these recommendations –especially blood-thinning medicines as these may need to be stopped or adjusted up to 7 days before your EUS.

Check with your doctor about which medications you should take the morning of the EUS examination, and take only essential medications with a small sip of water.

If you have an allergy to latex, you should inform your doctor prior to your test. Patients with latex allergies often require special equipment and may not be able to have a complete EUS examination.

What happens during EUS?

You will usually be given throat spray with a local anaesthetic before the test and you will usually be given sedatives intravenously to help you relax. The doctor will pass the endoscope through your mouth into your oesophagus, stomach and then duodenum. The instrument does not interfere with your ability to breathe. The procedure generally takes 30-45 minutes. Many patients do not recall the procedure afterwards or report it only to be mildly uncomfortable. EUS examination of the lower gastrointestinal tract can often be performed safely and comfortably without medications.

What happens after EUS?

If you received sedatives, you will be monitored in the recovery area until most of the sedative's effects have worn off. Your throat might be a little sore. You may feel bloated because of the air that was introduced during the procedure. You'll be able to eat after you leave the procedure area, unless instructed otherwise. If you received sedatives, you will not be allowed to drive after the procedure and should arrange a lift home in advance. Someone should stay with you at home after the procedure, because sedatives could affect your judgment and reflexes for the rest of the day.

The doctor can usually tell you the preliminary results of the procedure that day, but the results of biopsies may take a week or so.

What are the possible complications of EUS?

Although complications can occur, they are rare when doctors specialising in EUS perform the examination. Bleeding might occur at a biopsy site, but it's usually mild and rarely requires treatment to stop it. You might have a slight sore throat for a day or so.

Other potential but uncommon risks of EUS include a reaction to the sedatives used, aspiration of stomach contents into your lungs, infection, and complications from heart or lung diseases. One major but very uncommon complication of EUS is perforation. This is a tear through the lining of the intestine that might require emergency surgery to repair and occurs in less than 1 in 1000 examinations.

The possibility of complications increases slightly if a needle biopsy is performed during the EUS examination, including an increased risk of pancreatitis (1 in 100, 1%) or infection (1 in 100, 1% approximately). The doctor can discuss these possibilities with you in more detail before your EUS.

IMPORTANT:

This information is intended only to provide general guidance. It's important that you discuss with the doctor details of your specific condition and procedure.