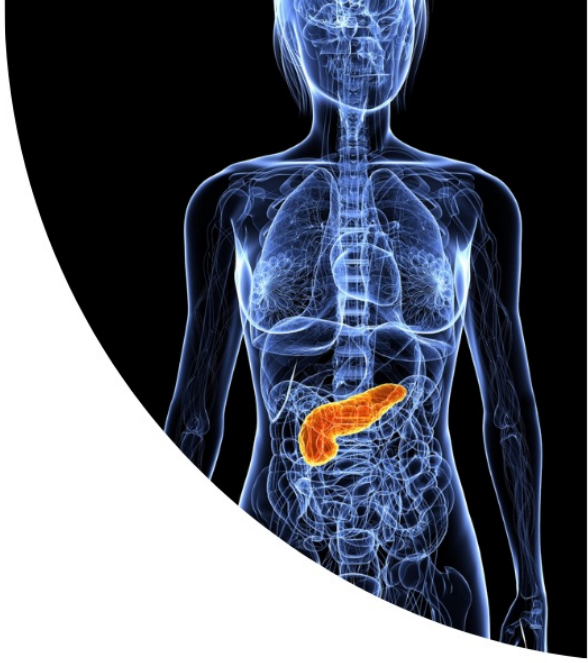
Hunter Gastroenterology



ENDOSCOPIC ULTRASOUND (EUS)

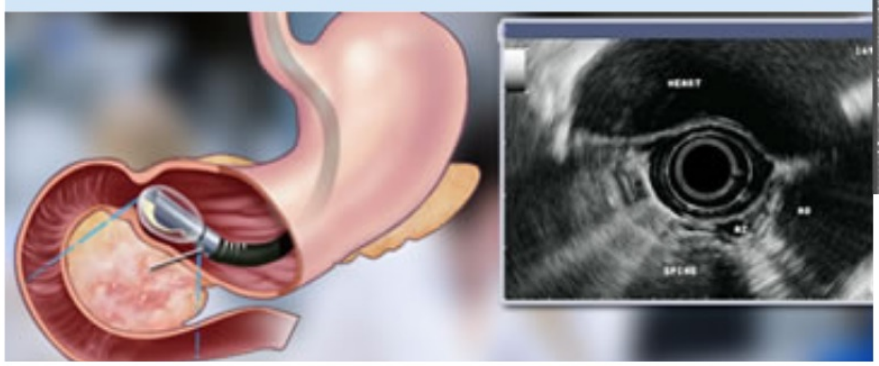
What is EUS?

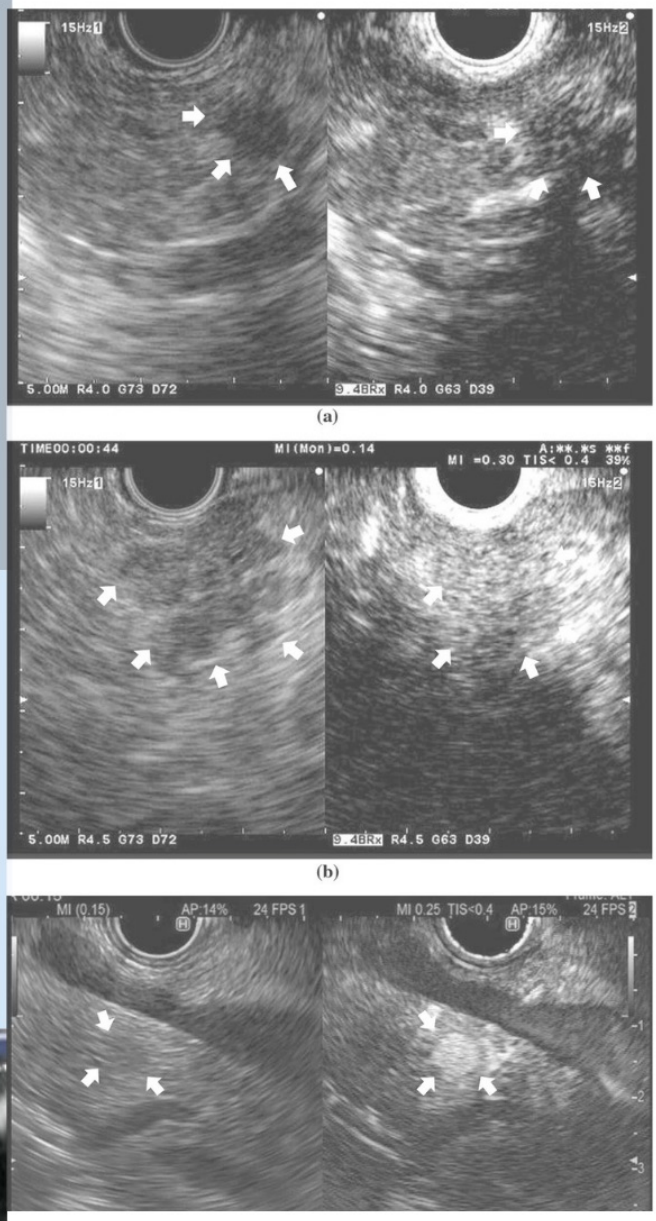
EUS is an advanced endoscopic procedure and specialists who perform EUS undergo dedicated training. The procedure involves passing a thin flexible tube called an endoscope which has a small ultrasound probe built in. This probe functions much like a standard ultrasound machine which uses sound waves to create detailed images. In addition, this endoscope also allows your doctor to pass a biopsy needle into any areas of interest, which is done with real-time ultrasound imaging for accuracy and safety.

Endoscopic ultrasound (EUS) is a procedure which allows your doctor to obtain highly detailed imaging of the inner lining and wall of the gastrointestinal tract (oesophagus, stomach, small bowel, large bowel, rectum), and also the major organs and structures that lie adjacent to the gastrointestinal tract. These may include the pancreas, liver, gallbladder, bile ducts or lymph nodes, depending on the reason for your EUS.

Why EUS?

EUS has many diagnostic and therapeutic uses. Often, EUS is used when another imaging test (such as CT scan or MRI) detects a finding that requires further investigation. Sometimes an endoscopist may see something unusual during a gastroscopy or colonoscopy, and will then refer a patient to a specialist who can perform EUS. The doctor performing your EUS will be able to obtain further information and if necessary, take biopsies, which will assist in your ongoing treatment.





Kitano, M., Yoshida, T., Itonaga, M. et al. Impact of endoscopic ultrasonography on diagnosis of pancreatic cancer. J Gastroenterol 54, 19–32 (2019).

How to Prepare for the EUS

Patient preparation for an EUS is fairly straightforward and is very similar to that of a standard gastroscopy or colonoscopy. You will not be able to eat or drink anything for 6 hours before the procedure. If you are having EUS of the colon or rectum, it is likely your doctor will prescribe a bowel preparation and a clear liquid diet to empty the colon.
Your doctor will need to know about your medical history and current medications. Some medications, such as blood thinning tablets, diabetes tablets and insulin, may need to be stopped or adjusted in the days leading up to the procedure. Your doctor will be able to explain any changes to you. You will also need to inform your doctor of any allergies you have.

It is important you follow your doctor's instructions carefully. If your preparation is not correct then your procedure may have to be rescheduled. Please clarify any questions or concerns you have with your doctor.

During EUS

Generally, EUS is performed under 'deep sedation' by an Anaesthetist. The aim of this sedation is to keep you asleep and comfortable. You are unlikely to experience any pain during the procedure, and it is very uncommon for patients to have any memory of the procedure.

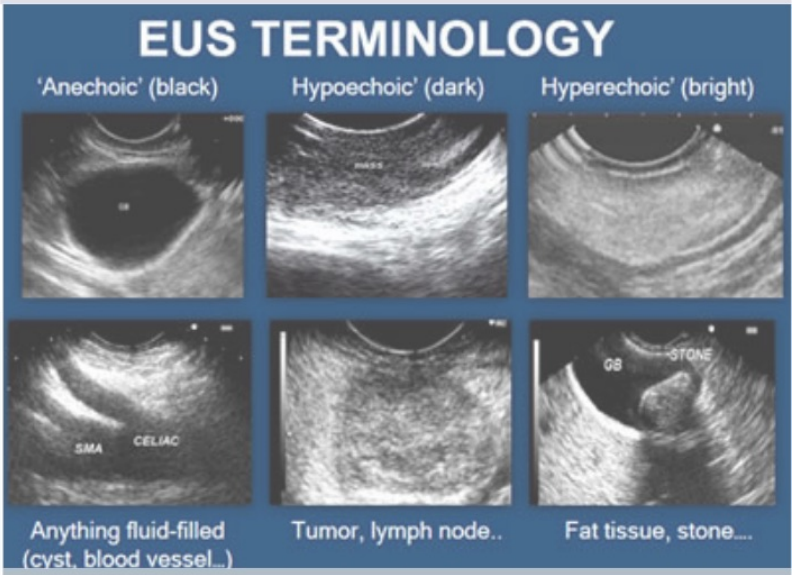
After the Procedure

After the procedure you will spend some time in the recovery unit. Once the sedative medications have worn off you will be allowed to eat and drink. Your doctor will give you some results once you are awake. You will also be provided with a report and further instructions on what to do when you leave the hospital. A copy of the EUS report will also go to the doctor who referred you. Because you have had an anaesthetic, you will be unable to drive for 24 hours. It is also mandatory for you to have a responsible adult with you for 24 hours after the procedure.

Special Instructions:

Why is EUS used for our cancer patients?

EUS is a very useful test for many patients who have cancer of the gastrointestinal system or the organs nearby. Using EUS your doctor can determine the size of a cancer, and see if it has spread to any surrounding organs. Your doctor can also determine the type of cancer a patient may have by passing the biopsy needle through the endoscope. All of this information is used to help your doctors create a treatment plan that is tailored to your specific needs.



What are the possible complications?

Complications from EUS are uncommon. Some patients may notice a sore throat or abdominal bloating and discomfort, but these symptoms are usually mild and short-lived. Rarely, patients may have a reaction to a medication used for sedation, or a complication related to sedation such as a heart attack or stroke. Aspiration of stomach contents into your lungs may occur, but this is also uncommon.

Other complications related to EUS may include bleeding, infection and perforation of the stomach or bowel. The risk of these is again very low, but may be increased slightly if a biopsy is required. Taking biopsies of the pancreas also carries a low risk of causing pancreatitis. Your doctor will explain how these risks may be relevant to you, and can answer any questions or concerns you may have.