

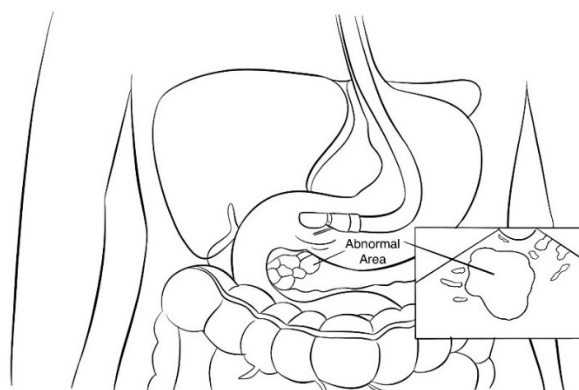


Endoscopic Ultrasound (EUS) +/- Fine Needle Aspiration / Biopsy (FNA / FNB)

Procedure Information Sheet

What is Endoscopic Ultrasound (EUS)?

EUS uses an endoscope (flexible scope with a light source and camera) with an internal ultrasound scanner. The endoscope is passed through the mouth into the stomach and/or duodenum (first part of the small intestine). EUS may also be performed by passing the endoscope from the anus into the large bowel if the disease occurs there.



Why do I need this procedure?

EUS may be needed for one or more of the following:

1. To perform a detailed examination of the pancreas or bile ducts (pipes draining bile from the liver)
2. Disease seen or suspected from other imaging such as computed tomography (CT)
3. To further investigate growths seen on the previous endoscopy of the gullet, stomach or intestine

Tissue samples can be obtained using a specialised needle during the procedure.

What are the preparations?

You might be asked to stop some medications (such as blood thinners) for several days before the procedure. You should not eat (or drink anything EXCEPT for plain water) for at least 6 hours before the procedure. You are allowed to drink plain water or take your usual medications (unless otherwise instructed) until 2 hours before the procedure. Your doctor may advise you to fast longer if you have certain medical conditions or for certain procedures. During fasting, you will be advised on withholding or modifying the dosage of your diabetic medications. To reduce the risk of bleeding, your doctor may advise you to stop consuming any blood thinners (sometimes up to two weeks) prior to the procedure/surgery. Your doctor may also advise replacing it with an alternative temporary treatment. Please continue to take all your other usual medications, unless otherwise instructed by your doctor.

You may be given antibiotics after the procedure to reduce the risk of infection if tissue samples are taken.



How is the procedure performed?

EUS is usually carried out in the Endoscopy Centre or the Operating Theatre. General Anaesthesia is usually not required for this procedure. Moderate sedation, a drug-induced state of reduced consciousness, is used before and/or during the procedure to help ease discomfort, pain and anxiety. You will be given medicine through an intravenous line. Your heart rate, breathing and blood pressure will be closely watched throughout the procedure. While most will fall asleep during sedation, some people may be drowsy but have periods of awareness during the procedure. You should feel little or no pain. You may not remember the procedure at all or have a vague memory of it.

Your doctor will then insert the endoscope through your mouth or anus to the area of concern and proceed with imaging as well as tissue sampling as needed. It may be necessary to remove and reinsert the endoscope to complete the procedure.

Air (or clean water) will be injected into the digestive tract for better visualisation of the target area. Excess air and water will usually be suctioned out at the end of the procedure for your comfort and safety.

The whole procedure is expected to take about 60 minutes. It may be longer depending on the level of complexity or difficulties encountered.

What are the risks and complications of the procedure?

As with all surgical procedures, complications may arise during or after the surgery. Some of the possible complications include, but are not limited to:

Common risks and minor complications:

- Pain, redness or bruising at the cannula injection site (usually arm).
- Sore throat – expected to improve within a few days

Less common but more significant risks and complications:

- Perforation (tear or hole in the wall of the gullet/stomach/intestine requiring emergency surgery) **< 1%**
- Significant bleeding **< 1%**
- Infection **0% to 8%**
- Pancreatitis (inflammation of the pancreas, if the pancreas is sampled/punctured with a needle) **0% to 2%**
- Incomplete procedure due to technical reasons, e.g. not able to pass the scope to the required region
- Heart attack, chest infection or stroke (may require admission and emergency treatment).
- Allergy (anaphylaxis) to medications given at the time of procedure.

Moderate sedation is generally safe. The risks are rare and some possible side effects are: decreased rate of breathing, changes in heart rate and blood pressure, headache, nausea and vomiting, and inhalation of stomach contents into the lungs.

If significant complications occur, you may need a prolonged hospital stay, additional procedures/surgery or have long-term disability.

What do I expect after the procedure?

You will be in the recovery area for about 1 to 2 hours until the effect of the sedation wears off. Your medical team will inform you when you can resume eating and drinking (usually soon after waking up).



What do I expect after the procedure? (continued)

You may experience some cramps or bloating because of air entering the bowel during the procedure. This should resolve once you pass wind (flatus). Getting out of bed and moving around usually helps this process.

The examination findings will be told to you either at that time or discussed in more detail during a separate follow-up appointment at the Specialist Outpatient Clinic (SOC). This is especially if biopsies were taken during the procedure as the results will take several days to return.

What are the other Options?

While other options for imaging are available (such as ultrasound, CT scan or Magnetic Resonance Imaging (MRI)), they might not be able to provide the information your doctor requires to treat you. EUS also allows biopsies to be taken, unlike the above options. Please ask your doctor if you wish to find out more.

What will happen if I do not undergo the procedure?

Delays in diagnosis or treatment can result, leading to your condition worsening. This can even become life-threatening in some situations.

DISCLAIMER: This information sheet mentions some of the more common or important risks of surgery/ procedure. This list is **NOT** meant to be, and **CANNOT** be exhaustive.

