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very best care for  
our patients in  
every way*



## **Endoscopic Ultrasound Scan (EUS) (Diagnostic or Interventional)**

An Information Guide

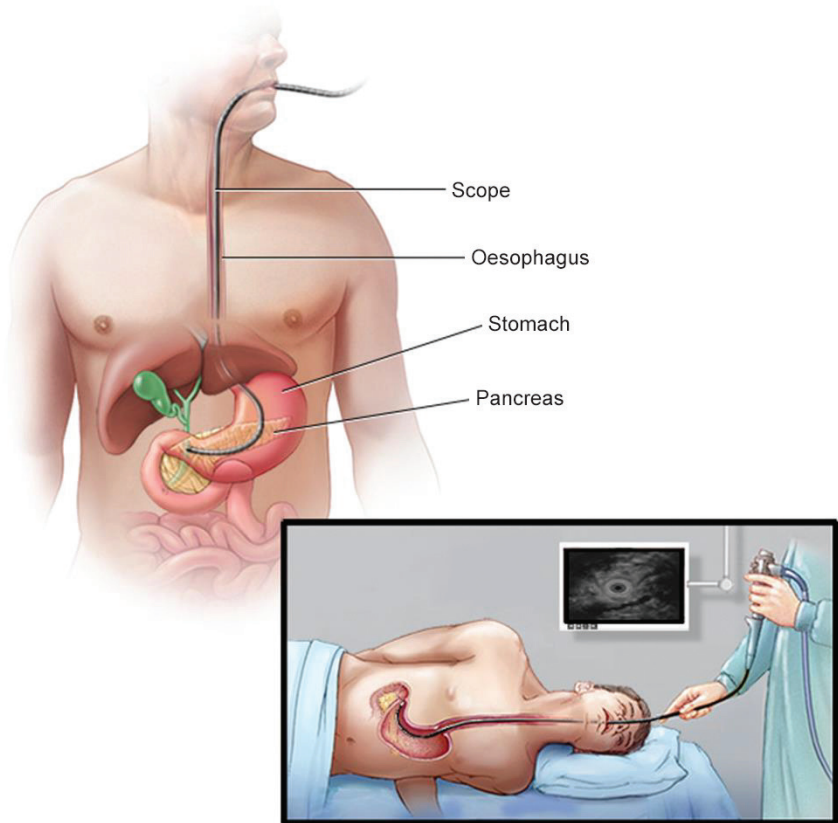


***Advice Leaflet***  
Medical Division

Please read this information leaflet carefully. It gives relevant information about your test and how to prepare for it. This leaflet will help to explain the procedure and allay some of the anxieties that you may have about it.

If you have any concerns or questions, the endoscopist or endoscopy nurse who assesses you before the procedure will be happy to discuss them with you.

You have been advised to have an Endoscopic Ultrasound Scan (EUS) to help find and treat the cause of your symptoms or illness.



## **What is Endoscopic Ultrasound (EUS)?**

EUS is an investigation that uses a thin flexible tube (an endoscope) with a small ultrasound (US) probe attached to the tip. This brings the US probe closer to the organs inside your abdomen to provide clearer images.

This tube is inserted via the mouth into your gullet (oesophagus), stomach and upper part of the small intestine (duodenum). EUS is a similar test to a gastroscopy but is more detailed and assesses the gut in an in-depth manner.

## What are the benefits?

EUS is used to evaluate the cause of your symptoms relating to the oesophagus, stomach or duodenum. It is also performed for problems occurring in the gall bladder and bile duct, the pancreas, nearby tissues and blood vessels. High quality ultrasound images allow us to obtain accurate information. This enables appropriate treatment and helps avoid unnecessary interventions, such as surgery. Some of the reasons for performing EUS are:

- To diagnose and find the extent and spread of tumours of oesophagus, stomach, duodenum, bile duct and pancreas.
- To diagnose lumps or bumps beneath normal-looking inner lining of the gut.
- To identify blood vessel abnormalities using a colour scanner.
- To look for gallstones
- To diagnose chronic pancreatitis or to find a cause of pancreatitis.
- To obtain a small sample of tissue (biopsy) without the need to resort to surgery. The biopsy is performed by passing a long special needle into the endoscope, under ultrasound guidance and into the abnormal tissue. This process is called Fine Needle Aspiration or Biopsy (FNA or FNB). This is useful as some tumours are otherwise not easily accessible.
- For treatment, EUS can perform safe drainage of cysts in the pancreas or guide the removal of small tumours in the oesophagus and stomach.
- For performing a Cystogastrostomy – insertion of a stent in a pseudocyst of the pancreas that follows an attack of pancreatitis (performed in X-ray department).

## Are there any significant risks or complications?

Risks of EUS are rare and mild (0.1%). When FNA or FNB is performed, risks are slightly higher but still rare (0.5–1%). If complications occur, you may require admission to hospital for observation, blood transfusion or surgery. The risks are:

- **Perforation** - Making a hole in your oesophagus, stomach, or duodenum. The risk is slightly higher if there is an abnormal narrowing (stricture).
- **Bleeding** - There may be bleeding due to FNA or FNB, or from minor damage caused by the endoscope. This usually stops on its own and is rarely severe.
- **Infection** - If you have FNA or drainage of a cyst, you will be given treatment with antibiotics to prevent infection.
- **Pancreatitis** - Pancreatitis can occur when FNA of the pancreas is performed but it is usually mild and settles itself, rarely can be severe.
- **Sedation** - You may have a reaction to the sedative which causes breathing difficulties. However, your oxygen levels are monitored throughout the procedure and oxygen is administered via a nasal cannula. There is also a small risk of inhaling secretions such as saliva that may cause pneumonia; this risk is reduced by the nurse using a suction device to clear any secretions.
- **Discomfort/Bloating** - Mild discomfort caused by air blown into the stomach to allow it to be viewed. You may have a sore throat for 1-2 days.
- **Damage to teeth and bridge work** – This risk is rare. The nurse will place a plastic mouthpiece to keep your mouth open for the test and to protect your teeth and the endoscope. Inform the nurse/endoscopist if you have loose teeth.

- **Incomplete or inadequate Procedure** - This can happen due to technical difficulty, food or a blockage, complications during the procedure, or discomfort. Although the majority of procedures provide necessary information, biopsy samples obtained may be inadequate and the procedure may need repeating.

EUS is very safe and the risk of death is extremely small.

**The team in the endoscopy unit is highly trained in preventing and dealing with any complications.**

## **Are There Any Alternatives?**

At present the only other available alternative is surgery or externally guided biopsy by using US or CT scan.

## **Before the Test**

**On the day of the test all other medication should be taken as usual e.g. for blood pressure, heart conditions and epilepsy.** This should be with a small amount of water.

**If you are diabetic, please bring your medications/insulin.** If you have any queries regarding your medication please ring the endoscopy unit as soon as possible, as your appointment time may need to be changed.

**If you are having FNA or FNB, a blood test is necessary to check your clotting and blood count.** You will receive a request form to have a blood test either at your GP practice or in the out-patient department a few days prior to the procedure. If you have not received this form then please contact the endoscopy unit.

**IF YOU HAVE NOT DISCUSSED STOPPING THE FOLLOWING MEDICATIONS WITH YOUR CONSULTANT IN CLINIC PLEASE RING THE ENDOSCOPY UNIT IMMEDIATELY.**

- Ticagrelor, Prasugrel, Dipyridamole and Clopidogrel
- Warfarin
- Apixaban, Rivaroxaban, Dabigatran and Endoxaban
- Any other blood thinning medication, other than Aspirin which does not need to be stopped for the procedure.

This is to reduce the risk of bleeding during the test

**Please do not bring any valuables to the hospital**

**If you have any loose teeth** please attend the dentist for treatment before your procedure. Failure to do so may result in your appointment being cancelled.

### **The Preparation**

To allow a clear view the stomach must be empty. You must not have anything to eat or drink for at least 6 hours before the test (except for your usual medication which should be taken with a sip of water more than 2 hours before the test).

### **On arrival please report to the reception**

Please remember that your appointment time is not the time you will have your test carried out. There will be a waiting time between your admission and having your test done.

A nurse will check your personal details, explain the procedure and ask you a few routine questions. They will also want to know about any previous endoscopy you may have had, any other medical conditions which you may suffer from and any medication which you may be taking. Your nurse will take and

record your blood pressure and pulse, and if necessary your blood sugar.

**Please inform the nurse if you have had any allergies or bad reactions to drugs or to other tests.**

If you have any worries or questions at this stage do not be afraid to ask. The staff will want you to be as relaxed as possible for the test and will not mind answering the queries.

You will be asked to read and sign a consent form, so if you wear glasses for reading please bring them with you. There is no need to undress, but you will be asked to remove glasses immediately prior to the procedure.

## **Sedation**

A small needle will be placed in the back of your hand and the sedation will be injected through it. Sedation may make you sleepy and you may not remember much about the procedure. You will remain in the unit for approximately 1-3 hours, but the effects of the sedation persist for up to 24 hours. This is not a general anaesthetic.

## **During the Procedure**

**A nurse will stay with you throughout the test.**

In the endoscopy room, your dentures will be removed and returned safely to you on completion of the procedure. Your throat may be sprayed with a local anaesthetic and a needle (cannula) inserted in your hand for sedation to be administered. You will be made comfortable on a trolley resting on your left side. Your pulse rate and oxygen levels will be monitored during the test by placing a small probe on your finger. A small nasal sponge will be placed in your nostril to give you oxygen during the test. To keep your mouth slightly open, a plastic mouthpiece



will be put gently between your teeth/gums. You will then be given some sedation through the cannula to relax you. Any antibiotics may also be administered through this cannula.

Once sleepy, the special endoscope will be inserted into your mouth and the procedure started. When the endoscope is passed into your stomach, it will not cause you pain, nor will it interfere with your breathing at any time. Any saliva building up in your mouth will be removed using a small suction tube.

The endoscopist will be able to examine the relevant organs using the scanner at the end of the scope and if necessary perform a FNA or FNB all under EUS guidance. Any samples obtained during the procedure are prepared on a slide for analysis by colleagues from the Pathology department who may also be present in the room. As we are a training unit, there may be other doctors, nurses or pharmaceutical representatives also present in the room.

The entire procedure lasts between 15-45 minutes depending on the complexity and whether biopsy is performed. On completion the endoscope is withdrawn quickly and easily.

### **After the Procedure**

A nurse will take you to the recovery area on a trolley and another nurse will take over your care. Your blood pressure, pulse and oxygen levels will be monitored at regular intervals for a period of time. When you are fully awake you will be given a drink and a snack. The back of your throat may feel sore for the rest of the day. You may also feel a little bloated if any air remains in the stomach. Both these discomforts will pass.

If you are on a special diet for a medical condition we may not be able to meet your dietary requirements and would advise you to bring sandwich/biscuits with you.

## **Results**

You will see a doctor or a nurse after the EUS who will tell you the results of the test. The results will also be forwarded to your consultant who requested the test and your doctor (GP). Results of any biopsies taken will also be forwarded to them when available.

**Following sedation:** It is essential that a responsible adult comes to collect you from the unit. They must be able to stay with you for 12 hours to make sure you do not have any problems. If you do not have anyone to stay with you, you must contact the Endoscopy booking office on the telephone number stated on your appointment letter. Once home, it is important to rest. By the next day you should feel fine but sedation lasts longer than you think.

For 24 hours following sedation you should not:

- Drive a vehicle
- Operate machinery
- Drink alcohol
- Sign any legally binding document
- Do any excessive exercise

## **Contact Numbers**

If you have any questions regarding the test please ring the Endoscopy Unit.

**Royal Blackburn Teaching Hospital 01254 733191.**

If you have problems after the procedure when you have gone home, we will provide you with contact information for advice at the time of discharge.



## English

### Our Service

If you have any further questions about your condition, treatment or procedure please telephone:

Emergency Department Telephone:	01254 734023
Urgent Care Centre Telephone:	01254 734023
Urgent Care Department Telephone:	01282 804050
Minor Injuries Unit Telephone:	01254 359036
Main Hospital Switchboard:	01254 263555

Royal Blackburn Teaching Hospital
Royal Blackburn Teaching Hospital
Burnley General Teaching Hospital
Accrington Victoria Hospital
East Lancashire Hospitals NHS Trust

## URDU اردو

اگر آپ کے پاس آپ کی حالت، علاج یا طریقہ کار کے بارے میں مزید سوالات ہیں تو ٹیلی فون

ایمرجنسی ڈیپارٹمنٹ ٹیلی فون	01254 734023
ارجنٹ کیئر سینٹر ٹیلی فون	01254 734023
ارجنٹ کیئر محکمہ ٹیلی فون	01282 804050
معمولی زخموں کی یونٹ ٹیلی فون	01254 359036
مرکزی ہسپتال سوئچ بورڈ	01254 263555

رائل بلیک برن ہسپتال
رائل بلیک برن ہسپتال
Burnley جنرل ہسپتال
Accrington وکٹوریہ ہسپتال
مشرق لنکاشائر ہسپتالوں NHS ٹرسٹ

## POLISH

### Nasz serwis

Jeśli masz jakieś pytania na temat stanu, leczenie procedury prosimy o kontakt telefoniczny:

Emergency Department telefon	01254 734023
Telefon Urgent Care Centre	01254 734023
Departament Urgent Care telefon	01282 804050
Drobnych urazów telefon	01254 359036
Główny Szpital Centrala	01254 263555

Szpital Królewski Blackburn
Szpital Królewski Blackburn
Burnley General Teaching Hospital
Accrington Victoria Hospital
East Lancashire Hospitals NHS Trust

The Customer Relations Team can be contacted by patients, carers and their families who require help with problems or have concerns about services provided by East Lancashire Hospitals NHS Trust. Please telephone: 0800 587 2586 – there is a facility to leave a message on this number.

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<https://www.elht.nhs.uk/services/endoscopy>



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