Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

# Having an EUS (Endoscopic ultrasound) v9

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# Having an EUS (Endoscopic Ultrasound)

## Patient Information

## Endoscopy Department


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**Please read through this leaflet carefully as soon as possible. Do not leave it to just before your appointment, as this may cause problems preparing for your test.**

This leaflet has been written to provide information, explain the benefits and risks of the procedure and to allay any fears you may have. If you have any further queries, your doctor and the endoscopy staff will do their best to answer them for you.

**Please contact the Gastroenterology department immediately if you:**

- are diabetic
- have suffered a heart attack, stroke, or TIA within the last 3 months
- are on kidney dialysis
- are taking warfarin or acenocoumoral (Sinthrome®)
- are taking clopidogrel (Plavix®) or dipyridamole (Persantin® or Asasantin®)
- are taking ticagrelor (Briliique®) or prasugrel (Efient®)
- are taking other anti-coagulants (Dabigatran or Pradaxa®, Apixaban or Eliquis®, Rivaroxaban or Xarelto®, Edoxaban or Lixiana®)
- are unable to attend your appointment time

**Endoscopy Unit at Royal Albert Edward Infirmary:** 01942 822450

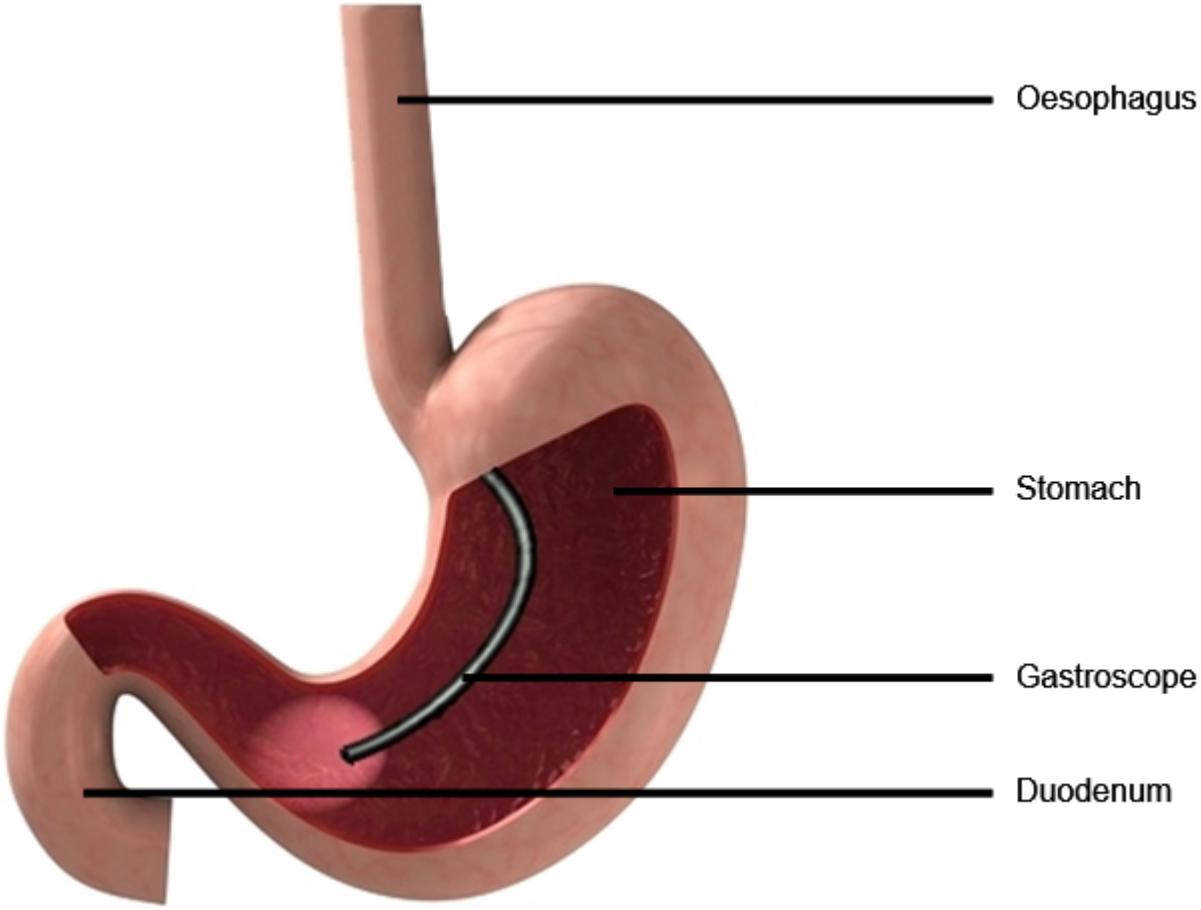
Your doctor has advised that you have an Endoluminal ultrasound. This procedure is otherwise known as an EUS for short.

## What is an EUS?

This is an examination of your oesophagus (gullet or food pipe), stomach and the first part of your small bowel called the duodenum; also, the gall bladder, bile ducts and pancreas.

The instrument used for this investigation is called an endoscope. It is a flexible tube with a diameter less than that of your little finger. The endoscope lights up the lining of your upper digestive tract and has a sensor on the end to capture video images which are relayed back to a television screen. A special probe at the tip of the endoscope emits high frequency sound waves, which are used to assess the organs mentioned above.

During the investigation, the endoscopist may need to take some tissue samples known as biopsies from the lining of your upper digestive tract for further analysis. This is completely painless. The samples may be retained for further tests. Photographs may be taken for your medical records.




## Why do I need to have an EUS and what are the benefits of an EUS?

You have been advised to undergo this investigation to find the cause for your symptoms, help with treatment and if necessary, to decide on further investigation. There are many reasons for this investigation, but the commonest are to either assess a cancer that has already been found or to look for diseases of your bile ducts and pancreas. Your doctor will explain the reason that you are having this test to you in detail.

## What anaesthetic or sedation will I be given?

It is important that you are comfortable during the procedure to ensure that the endoscopist can perform the procedure successfully.  You can choose to have intravenous sedation, a local anaesthetic throat spray or a combination of the two. For EUS, it is recommended that this procedure be performed with sedation for comfort reasons.

## About local anaesthetic throat spray

A local anaesthetic drug can be sprayed into the back of the throat to make it numb.  It can taste very bitter but works rapidly.  It has a similar effect to a dental injection and allows the camera to pass through your throat without you feeling it.

The benefit of choosing throat spray is that you are fully conscious during the procedure. You can go home unaccompanied almost immediately after the procedure, and you are permitted to drive.

The only constraint is that you must not have anything to eat or drink until the sensation in your mouth and throat has returned to normal.  This is usually within 1 hour.

## About intravenous sedation

Sedative drugs can be administered into a vein in your arm, which will make you drowsy and relaxed for the EUS.

These drugs will NOT make you unconscious like a general anaesthetic.  You will be in a state called cooperative sedation, which means that, although drowsy, you will still be able to hear what is said to you and will be able to follow simple instructions during the

investigation.  Sedation may also prevent you from remembering anything about the procedure afterwards.

You will be connected to a pulse oximeter by a finger probe, which measures your oxygen levels and heart rate during the procedure.  Your blood pressure may also be recorded. You will receive oxygen into your nose via special tubes throughout the test if you receive sedation drugs.

**If you choose to have sedation, you must arrange for a friend or relative to collect you from the Endoscopy Unit and we recommend that they stay with you afterwards. You must not drive, ride a bike, operate machinery, climb ladders, or sign important documents for 24 hours following sedation.  If you are not able to make these arrangements, we will not be able to give you sedation.**

## Getting ready for the procedure

**Do not have anything to eat for at least six hours before the procedure. This is to ensure that your stomach is empty, and the doctor has a clear view.  You can drink small amounts of water for up to two hours before your appointment time.**

Please continue to take your usual medication, except for those drugs that are listed at the beginning of this leaflet.  You will be asked to remove any tight clothing, ties, dentures, and spectacles. Please do not bring large amounts of money or valuables with you.

When you come to the department, please tell the doctor or nurse about any medical problems that you may have, any medicines you are taking and any possible allergies or bad side effects to medication you may have had in the past.  It would be very helpful if you could bring a list of all your medication with you.

## What will happen when I arrive?

When you arrive for your EUS, you will be greeted by our reception staff and be asked to sit in the waiting room. Your named nurse will ask you to come through to the preparation area shortly before your procedure.  We will need to check your identity and go through any medical conditions, medication, and allergies, to ensure it is safe to proceed. We will also ensure arrangements have been made for your journey home.  Your blood pressure and pulse will be checked prior to the procedure.

You will meet your endoscopist before you go through to the endoscopy room.  He/she will go through your consent form again and answer any questions you may have.  If you have already signed your consent form, we will confirm that you have not changed your mind.

If you have decided to have sedation, a plastic tube, known as a cannula, will be inserted into a vein in your hand or arm, to allow the drugs to be injected.

## What happens in the procedure room?

You will be escorted into the procedure room, where the other nurses helping the endoscopist will introduce themselves to you.  You will have the opportunity to ask any final questions.

If you have any dentures, you will be asked to remove them at this point.  Any remaining teeth will be protected by a small plastic mouth guard, which will be inserted immediately before the examination commences.

If you are having local anaesthetic throat spray, this will be sprayed on to the back of your throat.  The nurse looking after you will then ask you to lie on your left side and will place the oxygen monitoring probe on your finger.  A drape will be placed over your clothes to protect them from saliva and other secretions.  If you have decided to have sedation, the drug will be administered into a cannula in your vein, and you will quickly become sleepy.

## What happens during the procedure?

The endoscopist will introduce the endoscope into your mouth and ask you to take a big swallow when it is at the back of your throat.  He or she will then advance the endoscope carefully down your oesophagus, into your stomach and then into your duodenum.

Your windpipe is deliberately avoided, and your breathing will be unhindered.  Any saliva or other secretions produced during the investigation will be removed using a small suction tube, again rather like the one used at the dentist.

Biopsies and photographs may be taken during the procedure.  The procedure usually takes between 5 to 20 minutes but may take longer if extra procedures are required.

## What happens after the procedure?

You will be escorted to the recovery area and allowed to rest for as long as is necessary.

If you chose to have throat spray, you will be offered a cold drink when the sensation in your throat has returned to normal.

If you have received sedation, your oxygen levels, blood pressure and heart rate will be recorded.  It usually takes about 30 minutes for the initial effects of sedation to wear off, but some people may feel fully alert immediately after the procedure.  However, the drugs remain in your blood system for about

24 hours, and you can intermittently feel drowsy with lapses of memory.  You will need someone to escort you home and supervise you for this 24 hour period.

## Will I be told the results straight away?

Before you leave the department, the nurse or doctor will explain the findings on your EUS, and any medication or further investigations required.  He or she will also inform you if you require further appointments.  If biopsies were taken, they will need to be sent to the pathology lab for further analysis.  It may take up to a fortnight for these results to be available.

**Sedation can make you forgetful, and you may decide that you would like to have a family member or friend with you when you are given this information.**

## What are the risks and side effects to this procedure?

As with most medical procedures, there are some risks involved.  Your doctor will have felt that the benefits of this procedure outweigh the potential risks before he/she suggested that you should have it carried out.

You may experience bloating and abdominal discomfort for a few hours after the procedure because air is used to inflate the stomach.  This can often be relieved by belching.  You may have a sore throat for 24-48 hours.  You must tell the nurse if you have any loose teeth,

caps, or crowns, as there is a risk that they can become dislodged during the procedure.

If you choose to have sedative drugs, these can cause your breathing to slow down, or result in a fall in your blood pressure. This is the reason we do not give high doses of the drugs for the procedure. We monitor your breathing and oxygen levels carefully throughout the procedure and this rarely becomes a problem. In any case, an antidote to the sedative drugs that we use is always available and this can reverse its effects immediately.

**There is a risk of causing bleeding, but this is rare. Occasionally, this may necessitate blood transfusion or further procedures to stop the bleeding.**

**There is a risk of causing a tear (otherwise known as a perforation) in the gullet or stomach with the camera. This risk is very small and can occur in 1 in 1000 cases.**

**If needle sampling (FNA) is required during the procedure, there are additional risks depending on the location. Complications include bleeding, perforation and inflammation of the pancreas (pancreatitis). The risk for each of these complications is around 1 in 100 cases.**

If you are worried about any of these risks, please speak to your doctor or a member of the team before you are due to have this treatment.

## Are there any alternatives to this procedure?

A test known as MRI scan is an alternative to Hepatobiliary EUS.  This is an examination of the hepatobiliary tract (bile ducts, pancreas, gall bladder) using a strong magnetic field.  It can provide similar information to an EUS, but it there are some disadvantages:

- Direct views of the lining of your digestive tract with an EUS can provide more information
- Needle samples cannot be taken

If EUS has been advised to assess a cancer of the upper GI tract or some rarer conditions of the gullet and stomach, there is no alternative to EUS.

If you have questions regarding this alternative test, please ask your doctor.

## Cancellations

If you are unable to keep this appointment, please phone us as soon as possible, using the numbers given on the first page of this leaflet.  This will allow us to give your appointment to another patient and rearrange another one for you.



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