



What is an EBUS?

Endobronchial ultrasound (EBUS) is a test that allows your doctor to look directly into the breathing tubes (trachea and bronchi) in your lungs and look at the glands (lymph nodes) in the chest.

The test is carried out with a modified bronchoscope, which is a long flexible tube no wider than a pencil with a tiny camera and bright light at the end. The EBUS bronchoscope is passed through your mouth and then through your voice box into your windpipe and breathing tubes. Images of the lymph nodes in the centre of the chest are obtained using an ultrasound probe attached to the bronchoscope. These images help to guide the doctor when taking samples from the lymph nodes. Samples from the lymph nodes will then be examined in the laboratory.

Important things to note before your EBUS Procedure

- Read this leaflet carefully
- You must not eat anything for 6 hours before your procedure
 - You may drink clear fluids (i.e. water) up to 2 hours before the procedure
- Bring your medications list
- If you think you are taking blood thinning medication (e.g. warfarin, clopidogrel, apixaban or similar) please read the advice in this leaflet and contact the unit before your procedure
- You will need someone to take you home and supervise you for 24 hours after the procedure
- You must not drive, work, sign legal documents or supervise young children for 24 hours after the procedure

Why do I need an EBUS?

A common reason is to investigate enlarged lymph nodes or abnormal findings on scans such as CT. The test may help diagnose infection, inflammation, or cancer and guide treatment decisions.

Are there any alternatives?

Other imaging, such as x-rays, may give us some information about your lungs and lymph nodes, but there are only two ways of getting samples from the lymph nodes in the centre of your chest - either a surgical procedure (called a mediastinoscopy) or an EBUS procedure.

The surgical procedure is performed under general anaesthetic; would usually involve you being admitted to hospital and is performed through an incision at the top of the chest. EBUS is

generally much more comfortable, does not involve any surgical incisions and does not require you to be admitted to hospital overnight. EBUS is performed under local anaesthetic and sedation and normally takes around 45-60 minutes. EBUS is just as good as the surgical procedure at getting the correct diagnosis.

What happens on the day?

An EBUS is normally a day-case procedure which means that you can come in and go home on the same day.

Please arrive at the appointment time stated on your letter. Your procedure will be carried out as near as possible to this time, however, to ensure safe running of the list due to individual circumstances and emergency cases, there may be delays so please be patient with us.

Please do not bring any valuables with you.

Please do not wear any nail varnish, lipstick or jewellery (tongue and nose studs must be removed).

Please bring a contact number of a friend or relative.

A nurse will check your details including medications with you. They will also perform some baseline observations.

A doctor will go over the procedure with you and answer any questions you may have. You will be asked to sign a consent form at this time.

In the procedure room

A cannula (a small needle) will be inserted into the back of your hand to allow us to give you some sedation.

You will be asked to lie down on an examination couch.

A clip will be attached to your finger to allow us to monitor your oxygen levels and heart rate. We also administer a small amount of oxygen via a tube placed in your nose.

The doctor will spray the back of your throat with an anaesthetic spray to make it numb, as well as giving you some sedation. A mouth guard will then be placed between your teeth to prevent you biting on the scope. The doctor will then pass the scope through your mouth and will spray more anaesthetic to your airways. This may make you cough, which is normal.

Samples will then be taken from the lymph nodes in the middle of your chest via the scope. This will not be painful.

The whole procedure will take approximately 45 - 60 minutes

Transcrisoid local anaesthetic injection

In some cases, a small injection of local anaesthetic is given through the skin at the front of the neck to numb the windpipe more effectively and reduce coughing.

Possible use of Cryo-EBUS

In some cases, a very thin cryoprobe is used to freeze and remove a small piece of tissue. This can provide larger samples and improve diagnostic accuracy.

After the procedure

You will be taken to the recovery area to rest and be monitored by nurses.

You will remain on oxygen for about one hour or until your oxygen levels have returned to normal.

You will not be able to eat and drink for about 2 hours after the test to allow the anaesthetic to wear off. After this you can eat and drink normally.

You will normally be allowed to go home approximately 2 hours after the test has finished. After sedation **it is essential** that a responsible adult comes to pick you up and accompany you home via car or taxi. Public transport is not suitable. Please note the unit closes at 6pm.

Your relative/friend should arrive no later than 5:30 pm.

Sedation can impair your reflexes and judgement for the next 24 hours. We therefore advise you rest quietly with someone to look after you for the next 24 hours.

For 24 hours after your procedure, you must not:

- Drive a car
- Operate any machinery
- Drink alcohol
- Sign any legally binding documents
- Supervise young children

When will I know the results of the test?

When people have sedation, it can impair their memory therefore we tend not to discuss the findings of the test on the day. Any samples that were taken normally take at least one week (sometimes longer) to be analysed. The doctor who organised your test will receive the results of your test and will contact you as required.

Are there any risks to having an EBUS?

EBUS is generally considered a safe and well tolerated procedure; however as with any procedure there are some side effects/risks involved. The national statistic is approximately 1 in 1,000

Common but less serious risks:

- Streaks of blood in sputum – this is normal for a few days after the test
- Sore throat
- Fever

Minor complications which occur less commonly:

- Breathlessness can occur after the procedure but usually settles before you go home
- Spasm of vocal cords
- Air leakage outside the lung, which can be left to settle or sometimes requires tube drainage
- Inflammation of the area sampled

Major complications which occur rarely:

- Major bleeding – if you cough up a large amount of blood (e.g. an egg cup full) then you should contact your doctor straight away
- Stopping breathing
- Unusual heart rhythms (arrhythmias)
- Chest infection (pneumonia)
- Fluid on the lung
- The need to move to intensive care and life support (ventilation)
- Risk of death during or immediately after an EBUS is reported nationally to be approximately 1 in 10,000

Information for people who are on blood thinning medications

- **Aspirin** – Can continue as normal
- **Clopidogrel/Ticagrelor/Dipyridamole** – Must be stopped 7 days before procedure
- **Warfarin** – Must be stopped 5 days before procedure. We will arrange for you to have your INR checked beforehand to ensure it is back into normal range
- **Apixaban/Rivaroxaban/Edoxaban** – Must be stopped 48 hours before procedure

Occasionally if you have a more complex condition (for example a metallic heart valve) your doctor will advise you on what to do with your blood thinning medications.

Important information for patients arriving by ambulance:

To ensure you do not miss your appointment and arrive home in a timely fashion, please when booking your transport, give the following instructions:

For morning appointments: Please arrange for the ambulance to collect you at 9am.

For afternoon appointments: Please arrange for the ambulance to collect you at 12 noon.

Privacy and Dignity

Delivering same-sex accommodation is a long-standing commitment in the NHS as part of the drive to deliver the best possible experience for all patients (DOH 2007). Endoscopy Units within University Hospitals Birmingham NHS Foundation Trust maintain these standards either by operating single sex areas or single sex days.

Eliminating mixed sex accommodation is our priority except where it is in the overall best interests of the patient, i.e. in an emergency (they have a life-threatening condition) or where delays to that patient's treatment would mean deterioration in their condition. Should a patient of the opposite sex require such urgent care during your visit, we will ensure your privacy and dignity is maintained by screening off patients of the opposite sex.

To contact us by telephone before your appointment (**NOTE this number should NOT be used for booking enquires**):

Heartlands Endoscopy Unit

Monday to Friday 8:30am to 5.30pm Excluding Bank holidays
Nursing/Medical enquiries

0121 424 0438

Good Hope Hospital - Scoping Suite Treatment Centre

Monday to Friday 8:30am to 5.30pm
Excluding Bank holidays

0121 424 9506

Queen Elizabeth Hospital Endoscopy Unit

Monday to Friday 8.30 am to 5.30 pm – Excluding Bank holidays

0121 371 3833

For non-urgent messages an out of hour's answerphone is available. If you leave a message and your contact details a member of staff will contact you when the department re-opens.

Accessibility

To view this information in a different language or use text-to-speech reader visit www.uhb.nhs.uk, click the yellow and black circular icon in the bottom right of the web page to open the ReachDeck toolbar and then use the search bar to search by the name of the leaflet. If you require this information in another format such as braille, please email interpreting.service@uhb.nhs.uk.



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