

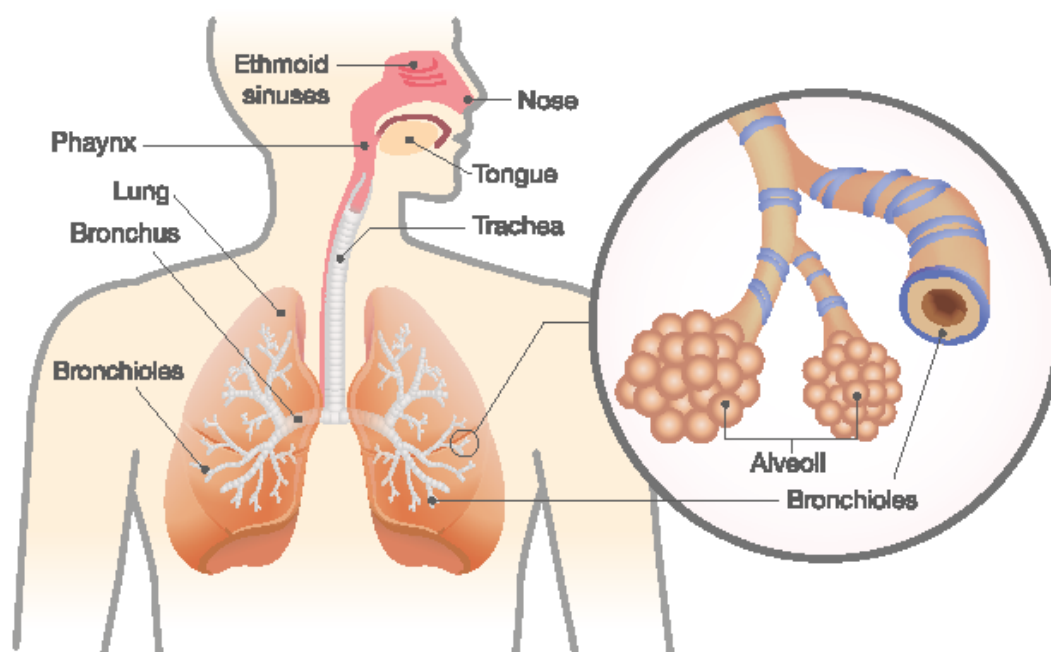
## Endobronchial ultrasound (EBUS)

### Other formats

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- 01392 402093 (for Mid Devon, East Devon and Exeter services)
- 01271 314090 (for North Devon services)
- rduh.pals@nhs.net

### Respiratory System



### Some background information

The air you breathe in goes to your lungs. These are like sponges, containing tubes that branch out. The branches get smaller and smaller the deeper they go. Eventually they end in sacs, surrounded by small blood vessels. Here carbon dioxide in the blood gets swapped for oxygen from the air. We call the network of tubes the airway. The main tube leading from your nose and throat is called the trachea. It divides into two, one branch for each lung. Each branch then branches out further.

Each of the larger branches is called a bronchus, all together they are called bronchi. There are small, bean-shaped structures in each lung, close to the airways. They are lymph glands. Lymph glands are part of your immune system. They are filters that catch germs, damaged cells, and other harmful stuff in your body. They also store special white blood cells that help fight infection. The condition of your lymph glands may give doctors important information about the health of your lungs. To check the condition of your lymph glands doctors take small samples from them. These are called biopsies. Here's how it's done.

## What is an EBUS?

An EBUS is a special procedure used to take biopsies of body tissue from lymph glands inside the chest. The procedure is carried out using a special kind of bronchoscope. A bronchoscope is a thin flexible kind of 'telescope' which can be passed through the mouth and into the airways, to allow doctors to see inside the lungs and carry out the procedure. During the procedure ultrasound is used to help the doctor see the structures just outside the airways. The bronchoscope also contains a very fine needle. This needle is used to take the biopsies.

## What preparation is needed?

The test will usually be in the afternoon. You may have breakfast before 8am and take your usual morning medication, except for blood thinners. You may have sips of clear fluid up to 11am on the day of the test. Nothing to eat or drink after 11am.

**If you are taking warfarin / aspirin / clopidogrel / Apixaban / Dabigatrin / Rivoroxaban / Edoxaban (or any other medication which thins the blood), this may need to be stopped.**

If you are not sure if you are on a blood thinning medication, please discuss this with the doctor/nurse at the earliest opportunity. An up-to-date blood test may be needed to check your blood is clotting adequately.

**Before stopping any medication, please check with your doctor or specialist nurse.**

If you have any questions regarding the test, you will have another opportunity to ask the doctor prior to the procedure. You will be asked to sign a consent form.

## How is the procedure performed?

- You will be made comfortable on a couch.
- Sedation will be given to you into the vein on the back of your hand to make you feel sleepy; this may also make your mouth feel dry.
- The back of your throat will be sprayed with local anaesthetic (throat spray) which tastes bitter.
- A soft plastic tube (nasal prong) will be placed just inside your nostril to give you some extra oxygen.

- A plastic clip will be placed over a finger to monitor your pulse rate and oxygen levels; other equipment may be used to monitor you during the test.
- A plastic mouth guard will be placed in your mouth and once the anaesthetic has taken effect, the bronchoscope is passed into your mouth and down into your trachea (windpipe).
- The bronchoscope transmits pictures through a camera attachment on to a TV monitor for the doctor to look at.
- The bronchoscope may make you cough.
- Once the bronchoscope is in position the doctor uses ultrasound pictures to take biopsies. This is painless.
- The biopsies are sent to the laboratory for analysis. The bronchoscope is then gently pulled out.
- The procedure itself usually takes about 30 minutes. However, it may take up to four hours for the whole appointment - to prepare, give time for the sedative to work, for the EBUS itself, and to recover.

## How will I feel after the procedure?

You will not be allowed to eat or drink until the local anaesthetic in your throat has worn off which takes approximately one hour.

You may cough up a small amount of blood, this should stop within 24-48 hours. If it continues seek advice from your GP. Any hoarseness of your voice or sore throat will ease within a few days.

**You will need to be collected following the procedure. Do not drive or operate machinery for 24 hours.**

The effects of the sedation wear off after 24 hours and you should be able to resume normal activities.

## What are the risks or complications?

- Major complications are rare but include infection, bleeding, obstruction of the airway and major respiratory depression, which may occur in approximately one in 1,000 cases.

Mortality rate (risk of death from the procedure) is very low, approximately one in 5,000

There is a very small risk (one in 1000) of dental damage associated with passing the bronchoscope through the mouth.

## What happens next?

- The biopsies taken during the procedure will be sent to the laboratory for analysis. The biopsies can take seven to ten days to be processed.
- You may be contacted by telephone by the doctor or specialist nurse or brought back into clinic to discuss the results.
- We always recommend that when you come into the clinic you are accompanied by a relative or friend who would also be able to hear the information given to you.

### For further information about EBUS, please contact:

A lung specialist nurse on 01392 402168

### PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern, please contact PALS:

- 01392 402093 (for Mid Devon, East Devon and Exeter services)
- 01271 314090 (for North Devon services)
- [rduh.pals@nhs.net](mailto:rduh.pals@nhs.net)

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