

Having a percutaneous lung biopsy

This leaflet explains what a percutaneous lung biopsy is, what happens during the procedure and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

You should have time to discuss your situation with your own consultant and the radiologist (X-ray specialist) who will be doing the biopsy, and perhaps even your own GP. You should be happy that you understand what the procedure involves as you will be required to sign a consent form prior to undergoing the biopsy.

Why do I need a percutaneous lung biopsy?

Other tests that you have probably had performed, such as a chest X-ray or a CT scan, will have shown that there is an area of abnormal tissue inside your chest. From these tests, it is not always possible to say exactly what the abnormality is due to, and the simplest way of finding out is by taking a tiny piece of tissue to examine in the laboratory.

What is a percutaneous biopsy?

A percutaneous biopsy is a way of taking a tiny piece of tissue out of your body, by passing a needle through the skin (percutaneous means 'through the skin') into the abnormal area within your lung; a pathologist - an expert in making diagnoses from tissue samples - will examine this tissue over the next few days using a microscope.

Who has made the decision for me to have the biopsy?

The medical consultant looking after you, and the radiologist doing the biopsy, will have discussed your case, and considered that a biopsy would be the best way to diagnose your lung problem.

What does the procedure involve?

The procedure is carried out in the CT scan room, in the X-Ray Department. You will lie on either your tummy or on your back, while the radiologist identifies the areas of lung to perform the biopsy. Your skin will be cleaned and then numbed with local anaesthetic; the biopsy needle is then passed through the skin into the abnormal tissue within the lung. The CT scanner will be used to confirm that the needle is in the right position before the sample is taken. More than one sample may be needed.

Will my tablets affect my biopsy?

The doctor referring you for a biopsy should know what tablets you are taking, but it would do no harm to remind him/her, to check that you can continue to take them. Those patients taking warfarin or blood thinning medication should not undergo biopsy unless the warfarin has been stopped for a few days beforehand. Please contact the X-ray Department nursing staff for advice and instruction by phoning 0118 322 8368.

How long will it take?

The preparations for performing the biopsy take the longest period of time, while the biopsy itself is usually over within 15 minutes. Every patient's situation is different, and it is not always easy to predict how complex or how straightforward your procedure will be. You should be in the X-ray Department for about 2 hours altogether.

Will a diagnosis always be made?

Unfortunately, not all biopsies are successful. This may be because although abnormal tissue has been obtained, it may not be adequate for the pathologist to make a definite diagnosis. The radiologist doing your biopsy may be able to give you some idea as to the chance of obtaining a satisfactory sample.

Will it hurt?

When the local anaesthetic is injected, it will sting initially, before the skin and deeper tissues begin to feel numb. Later, you may be aware of the needle passing into your body, but this is generally done swiftly, so that it does not cause significant discomfort. There will be a nurse, or another member of clinical staff beside you during the procedure, to help the doctor and to look after you.

What happens after the biopsy?

You will be taken back to the recovery area in the x-ray department, or to your ward, on a trolley. Nurses will carry out routine observations, and monitor your pulse and blood pressure to make sure that there are no complications. You will also be asked to lie still in bed, and try not to talk, or cough. A chest X-ray will generally be taken one hour after your biopsy.

What are the risks or complications?

Percutaneous biopsy is a very safe procedure, but there are a few risks or complications that can arise, as with any medical treatment.

When a lung biopsy is performed, a small amount of air can get into the space around the lung; this is generally not a problem, but rarely, it can cause the lung to partially collapse. The air would then need to be promptly drained, either with a needle, or a small drain, put

in through the skin. This may lead to you having to stay in hospital until the lung has re-inflated.

There is also a small risk of bleeding inside the lung. Usually, this merely causes you to produce some specks of blood in your sputum; however, the nurses will keep a very close eye on you after the procedure, and regularly check your pulse and blood pressure, until you are ready to be discharged home.

We would stress that the vast majority of our patients are allowed home within an hour or two of the procedure.

Because we will be inserting a needle into your chest, we suggest that you do not fly for six weeks after the biopsy, in view of the very slight increased risk of your lung collapsing.

What if I have already left the hospital?

Very occasionally, problems develop after you have gone home. For this reason we ask that someone is able to stay with you overnight and you need to make the necessary arrangements. You will be given a leaflet before you go home explaining what you should do if you develop shortness of breath, or pain after you have left hospital. This will usually involve a visit to the Accident and Emergency Department for a check chest X-ray.

Summary

Despite some possible complications, percutaneous biopsy is normally very safe, and is designed to save you from having a bigger procedure, such as an open operation. It is a routine part of our work here in the X-ray Department and many such procedures are performed every week.

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure, before you sign the consent form.

Radiology (X-ray) Nurses: 0118 322 8368

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