



**University
Hospitals Sussex**
NHS Foundation Trust



Percutaneous lung biopsy

Patient information

What is a percutaneous biopsy?

Percutaneous means through the skin. A percutaneous biopsy is a way of taking a small piece of tissue out of your body, using a needle, through a tiny cut in the skin. The tissue can be examined under a microscope by a pathologist, an expert in making diagnoses from tissue samples.

Why do I need a percutaneous biopsy?

Other tests that you have had performed, such as chest x-ray or a CT scan, will have shown that there is an area of abnormal tissue inside your lung/chest. From the scan, 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 it away for a pathologist to examine.

Who has decided I should have a percutaneous biopsy?

The consultant in charge of your case, and the consultant radiologist doing the biopsy will have discussed the situation, and feel this is the best thing for you. However, you will also have the opportunity to discuss this with your consultant, and if you decide you do not want to have this carried out, then we will respect your views.

Who will be doing the percutaneous biopsy?

A specially trained doctor called a radiologist. Radiologists have special expertise in interpreting the images produced by the CT scanner and x-rays. They need to look at these images while carrying out the biopsy.

How do I prepare for a percutaneous lung biopsy?

Most patients (around 90%) will arrive in the morning and leave around 4pm. Since roughly 1 in 10 may need to stay overnight, we advise all patients to bring an overnight bag. You may have a light breakfast and take any medication that you have been prescribed.

We do ask that all patients make arrangements to be taken home by car, and ensure that someone stays with them for the first night at home following a biopsy.

If you are on anti-coagulants (tablets that thin the blood like warfarin, clopidogrel, abixaban or rivaroxaban), your consultant should have arranged for these to be stopped in advance. If you are not sure, then feel free to discuss with your consultant.

What happens during a percutaneous biopsy?

You will lie on the CT or ultrasound scanning table, in a position that the radiologist has decided is the most suitable. The radiologist will use the CT or ultrasound scanner to decide on the most suitable point for inserting the biopsy needle.

The radiologist will keep everything sterile (to reduce the chances of getting an infection). Your skin will be cleaned with antiseptic and you may have some of your body covered with a theatre towel. Your skin will be made numb with a local anaesthetic. The biopsy needle is inserted into the abnormal tissue. It may be necessary to pass the needle several times to obtain samples, which will be sent for pathological examination.

While the first part of the procedure may seem to take a while, the biopsy itself does not take very long. The needle may be in and out so quickly that you barely notice it.

Will it hurt?

Most biopsies do not hurt at all. When the local anaesthetic is injected, it will sting to start with, but this soon passes, and the skin and deeper tissues should then feel numb. Later, you may be aware of the needle passing into your body, but this generally done so quickly that it does not cause any discomfort at all.

How long will it take?

Every patient's situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. It may be over in 30 minutes, although you may be in the x-ray department for about an hour.

What happens afterwards?

You will be kept under observation for two hours after the procedure. You will generally stay in bed for an hour, until you have recovered. You should tell the nurses if you are in pain or feel short of breath. You will have a chest x-ray one hour after the procedure, unless the radiologist decides it is not necessary.

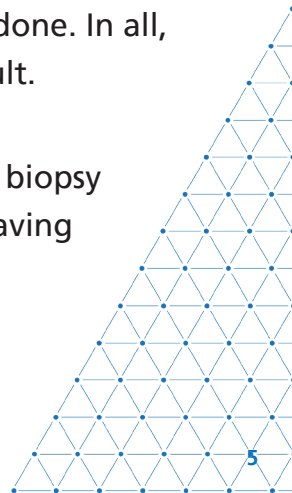
All being well, you will be allowed home on the same day. Do not expect to get the results of the biopsy before you leave, as it takes up to two weeks for the pathologist to do all the necessary tests on the biopsy specimens.

Are there any 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 treatments;

- It is possible that air can get into the space around the lung, known as a pneumothorax. This generally does not cause any real problems, although it may cause some discomfort on breathing or some shortness of breath. While 1 in 4 patients have a small pneumothorax, this resolves without any further treatment in most patients. However, if it causes the lung to collapse (about 1 in 12), then it may be necessary to drain the air, either with a needle or else with a small tube, put in through the skin. If this happens, you will need to stay in hospital and have a tube inserted until the lung has re-inflated.
- Occasionally you may cough up a little blood (1 in 10). This may seem alarming, but rarely is of any consequence and soon settles down in nearly all patients.
- Unfortunately, not all biopsies are successful. There are several reasons this may happen. Sometimes the results are inconclusive because not enough tissue was taken, or the wrong bit of tissue was sampled. Sometimes it is because the lung deflates early in the procedure meaning the biopsy cannot be done. In all, around 5% of procedures will not produce a result.

Despite these possible complications, percutaneous biopsy is normally very safe, and is designed to save you having a bigger procedure.



How to find us

Royal Sussex County Hospital (BN2 5BE)

CT scanner is located on Level 5 of Thomas Kemp Tower Block. Access is not available through the Accident and Emergency entrance so please follow these directions:

Come to the front door of the hospital on Eastern road, go up the slope in front of you and either take the lift to Level 2 or continue to the back of the building and go up the flight of stairs.

Once on Level 2 follow the signs to the Accident and Emergency Department. You will be directed to the Thomas Kemp Tower Block along a long corridor (most of which is underground). You will access the Thomas Kemp Tower Block on Level 3 and you can either take the lift or stairs to Level 5 and follow the signs to the x-ray department.

Princess Royal Hospital (RH16 4EX)

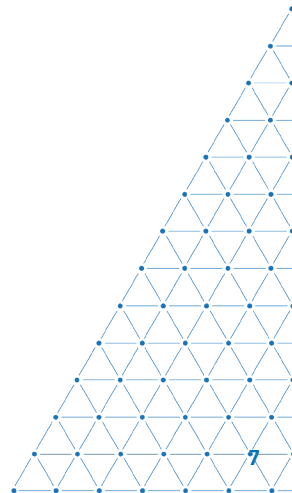
CT scanner is located on the ground floor of the hospital in the Imaging (x-ray) department. Enter through the main entrance of the hospital, continue past the refreshment area and turn left. Go past the lifts and x-ray is at the end of this corridor on the left hand side.

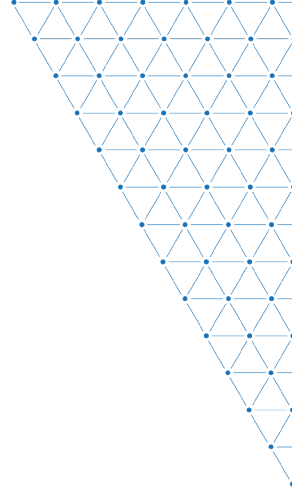
You may be contacted with directions to attend a different ward for assessment and preparation prior to your procedure in the CT scanner.

Advice Line for CT enquiries:

01273 523040

Monday to Friday 08.00 – 16.00





**This leaflet is intended for patients receiving care
in Brighton & Hove or Haywards Heath**

Ref. number: 294.3
Publication date: 08/2021
Review date: 08/2024

© University Hospitals Sussex NHS Foundation Trust Disclaimer:
The information in this leaflet is for guidance purposes only and is in no way
intended to replace professional clinical advice by a qualified practitioner.

