



CT guided lung biopsy

This leaflet explains what a CT guided 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.

What is a CT guided lung biopsy?

This is a minimally invasive way of obtaining a tiny piece of tissue from your lung using a special needle placed into the lung under CT guidance. The procedure is carried out under local anaesthetic, i.e. you are awake but the skin is numbed. You will normally go home the same day unless you do not have someone to watch over you for the 24 hours following the biopsy, in which case a one night stay in hospital may be necessary.

Why do I need a lung biopsy?

Your other tests, such as chest X-rays and CT scans, have shown an abnormality inside your chest. These other tests cannot tell exactly what the abnormality is or what treatment, if any, is necessary. The simplest way of finding out is by taking a tiny piece of tissue to examine in the laboratory. The alternative to a CT guided biopsy is an open operation to remove part of the lung, which is far more invasive.

Who has made this decision?

The consultant in charge of your care, following discussions with other specialists, consider this is the best way of diagnosing your lung problem.

Who will be performing the biopsy?

A radiologist who has undergone specialist training and who regularly performs this and other similar procedures will carry out the biopsy.

Where will the biopsy take place?

In the CT scanner in the X-ray department (Radiology) of the Royal Berkshire Hospital.

What happens before the biopsy?

In the weeks before your lung biopsy you will need to have blood samples taken to make sure your blood clots properly. Blood samples can either be taken in the hospital's phlebotomy (blood test) department or at your GP's surgery.

Ideally, blood-thinning medication such as Warfarin, Apixiban, Dabigatran, Rivaroxaban, or Clopidogrel are temporarily discontinued prior to the biopsy. This is not always possible or you may be required to take additional short-acting blood thinners for a few days before. If you are taking any of these medications and have not received instructions to stop them please contact the X-ray Department on 0118 322 8368.

You will be asked **not to eat for 6 hours nor drink for 2 hours before the biopsy.**

Please take all your normal medication other than those above that have been stopped for the biopsy.

What happens during the lung biopsy?

You will be asked to undress from the waist up and put on a hospital gown. You will then be taken into the CT scanning room and asked to lie on the CT table.

Skin markers will be placed on your chest and some preliminary scans carried out. Once the exact needle path has been determined, the radiologist will then clean your skin with antiseptic and will inject the skin and deeper tissues with local anaesthetic. This will sting briefly before the area goes numb. The radiologist will then insert the biopsy needle and several limited scans are performed to guide the needle into position and the biopsy sample taken. Once an adequate sample has been obtained the needle will be removed.

How long will it take?

The whole procedure takes between 15 and 20 minutes.

Will it hurt?

You will feel stinging as the local anaesthetic is injected. Some people also feel some momentary discomfort as the needle enters the lung.

What happens afterwards?

After the biopsy, you will be monitored in the X-ray recovery area for approximately 2 hours and a chest X-ray will be performed to rule any significant complications such as a pneumothorax (see below). Assuming there are no complications, you will be discharged as long as you are accompanied home and can spend the next 24 hours with a friend or relative. If you do not have a suitable adult to accompany you home, then we can arrange for you to stay the night in hospital. It takes a few days to analyse the sample in the laboratory. The result will be sent to the consultant in charge of your care.

What are the risks and complications?

A CT guided lung biopsy is generally a safe procedure but some there are risks and occasional complications.

The most common complication is a pneumothorax; this is when air leaks into a space between the chest wall/ribcage and the lung. Most pneumothoraces are small and get reabsorbed over a few days and will not delay you going home. However, in around 4% of cases the lung collapses causing breathlessness and a small plastic tube (a chest drain) will need to be inserted to drain this air. You will need to stay in hospital until the lung has re-inflated.

There is a small risk of bleeding inside the lung. Usually, this just causes some specks of blood in your sputum and will settle on its own.

Extremely rarely, air gets transported into the blood system (air embolism) during the procedure which can be serious and occurs in approximately 0.2% of cases.

We recommend that you do not fly for six weeks after the biopsy, in view of the slightly increased risk of your lung collapsing.

Contacting us

Radiology Department, Tel 0118 322 7991.

Radiology Day Case Unit, Tel 0118 322 8368 (Monday-Friday 8.30am-5pm).

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

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