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Patient information

## CT Lung Biopsy

This leaflet aims to help you understand why you need a lung biopsy, what is involved, and the possible risks associated with this procedure.



## Introduction

A CT scan will have shown that there is an abnormal area within your chest which may be in the lung or the pleura (lining of the lung).

Your case will have been discussed at a multi-disciplinary meeting and a lung biopsy recommended to help determine the cause of the abnormality so that suitable treatment can be planned for you.

This leaflet has been provided to help you understand the procedure, but it may not answer all your questions so, if you have any concerns please do not hesitate to speak to your doctor or you can ask the radiologist when you come for your biopsy.

## What is a lung biopsy?

The procedure involves removing a small piece of abnormal lung tissue with a biopsy needle through a small cut in the skin.

This is sent to the laboratory to be examined by a pathologist (an expert in making a diagnosis from tissue samples).

The lung biopsy will be performed by a radiologist who will be assisted by a radiographer and a radiology nurse.

It is not always easy to predict how complex or straightforward the procedure will be and therefore how long it could take.

As a guide, expect to be in the Radiology Department for about 45 minutes to one hour.

Much of this time is taken up with preparation.

The procedure is undertaken in the CT scanner. Occasionally it is undertaken in the ultrasound room.

## What are the risks of the procedure?

A lung biopsy is generally a very safe procedure and may save you from having a larger operation to obtain a sample of the abnormal region.

There are a few risks and complications that can arise, and these will be discussed with you in more detail before you sign the consent form.

The most common consequence of a lung biopsy is called a pneumothorax. This is when air from the lung can leak into the space around the lung. This usually requires no treatment other than observation in hospital. If there is a large air leak, the lung may collapse. If this should happen the air will need to be drained either with a needle or a small drainage tube inserted through the skin. You may need to stay in hospital a little longer.

You may cough up a small amount of blood. This will usually settle down. These symptoms should decrease and gradually resolve over a 48-hour period.

You will obtain your results at an appointment your clinical team will arrange for you.

## Preparation for the lung biopsy

If you are taking any blood thinning drugs e.g. Warfarin, drugs known as DOACs (Rivaroxaban, Apixaban etc), Clopidogrel, Aspirin or if you are aware that you have bleeding problems, please tell your doctor as your medication will need to be stopped prior to the procedure.

You will have blood test to check your clotting and a lung function test arranged by your team.

Depending on the prevalence of COVID, you may also need to self-isolate for a week prior to the procedure and have a COVID PCR test two days before. One of your clinical team will discuss this with you.

You may have a light early breakfast on the day of your lung biopsy but please only have clear fluids/water for 4 hours prior to your appointment.

You can take all your medications in the usual manner (apart from your blood-thinning medication). If you're a diabetic, please ensure we are aware of your condition.

The radiologist will explain the procedure to you and ask you to sign a consent form to say you agree to the biopsy being performed.

## During the lung biopsy

You will be asked to lie on the examination table in the position that the radiologist has decided is most suitable.

You may have to lie on your front.

This will depend on the area within the lung that is to be biopsied.

We understand that this is an anxious time for you, but it will help us if you stay very still in this position until the procedure is over.

You will usually be allowed to breathe very gently during the procedure but may be asked to hold your breath for a short time.

Your skin will be cleaned with cold antiseptic solution and sterile drapes placed over this area. Your skin will be numbed with local anaesthetic.

The lining of the lung and the lung itself cannot be anaesthetised so there may be some discomfort during the procedure. Try not to worry in advance as the majority of patients tolerate the procedure well.

We can always give you more local anaesthetic if required. It is not our local policy to sedate patients for lung biopsies.

The radiologist will insert a biopsy guiding needle into the abnormal area within lung and will keep checking the position of the needle with the CT scan. You may be aware of a pushing sensation as the needle is positioned.

The first part of the procedure when the equipment is being prepared may seem to take a while but doing the biopsy itself does not take very long at all.

Once the guiding needle is in place the biopsy needle is passed through it and will make a clicking noise when the biopsy is taken. The radiologist will take up to 3-4 samples through the guiding

needle.

Occasionally, due to the position of the abnormal region within the lung, it may not be possible to obtain a sample. The radiologist will explain this to you and the procedure may be abandoned.

## What happens afterwards?

Nurses on the ward or day unit will carry out routine observations for two hours.

You will need to lie on your back during this time.

You will have a chest X-ray before you go home to ensure there are no complications.

If all is well, you will be allowed home. You should arrange for someone to take you home.

Once home you can eat and drink normally and can take off the plaster the following day.

If you develop any new symptoms of shortness of breath, cough up increasing amounts of blood and develop sudden chest pain, you should go to your nearest A and E department and explain that you have had a lung biopsy.