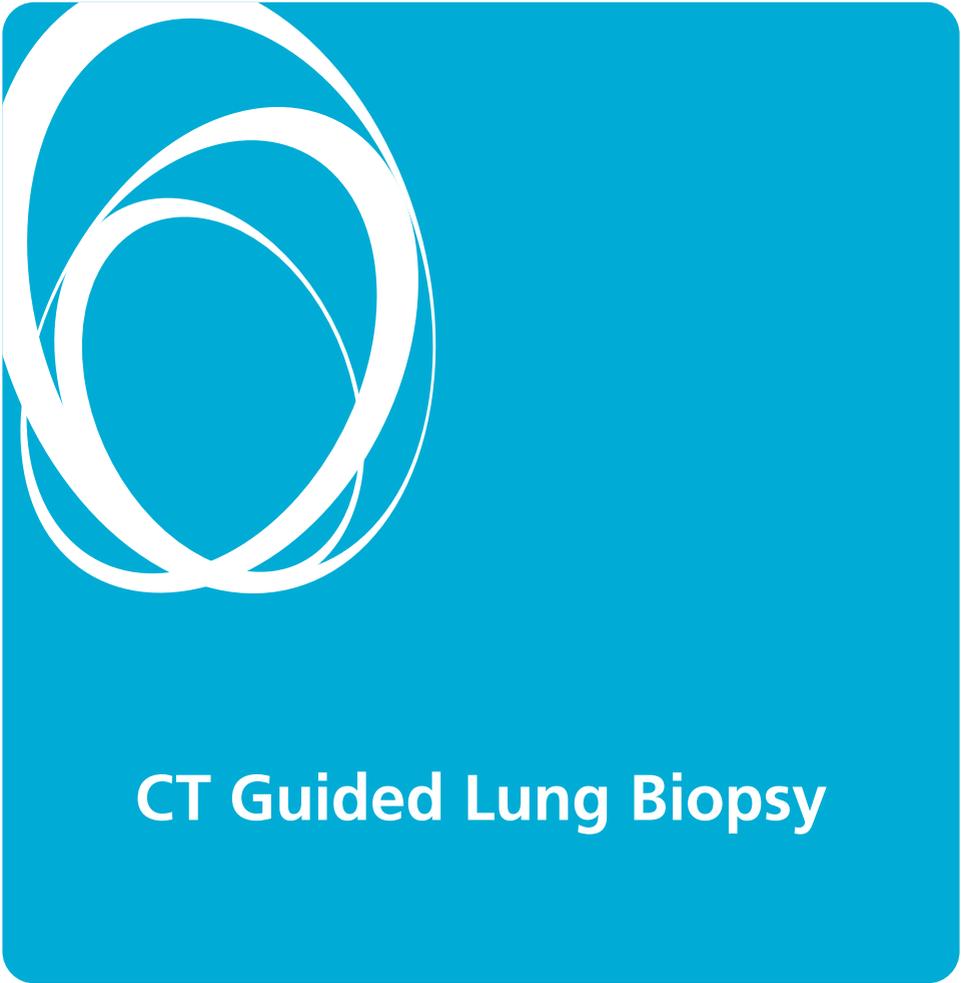




University Hospitals Birmingham
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CT Guided Lung Biopsy

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Introduction

This leaflet tells you about the procedure known as a CT guided lung biopsy. It explains what is involved, and some of the common complications associated with this procedure that you need to be aware of. It is not meant to replace discussion between you and your doctor, but as a guide to be used in connection to what is discussed.

Why do I need to have a biopsy taken?

Other tests you have had, such as a chest X-ray or CT scan of your chest, have shown an abnormal area or shadow. From these tests it is not possible to say what the abnormality is. The best way to find out is to take a small piece of tissue from the abnormal area, using a special needle, and examine this under the microscope. This procedure is called a biopsy.

Who will do the biopsy and where will it be done?

The biopsy will be taken by a radiologist who is a doctor who specialises in using X-ray and scanning equipment and in interpreting X-rays. The biopsy will be done using a CT scanner in the Imaging department to locate the precise area to take the sample from.

However, you will report to the Ambulatory Care on the morning or afternoon of the biopsy and the CT scanner staff will send for you when they are ready.

How do I prepare for the biopsy?

You will have had blood tests before the day of the biopsy to check that your blood clots normally. If you normally take warfarin or clopidogrel or any other blood thinning medication, you will be asked to stop this, usually for seven days before the biopsy. You may need an alternative treatment and if you do, your doctor will explain this to you.

You will also have had a breathing test to make sure that your lungs function normally and could cope if there are any complications after

the biopsy.

In the Imaging department, the radiologist will explain the procedure and ask you to sign a consent form, giving your permission for the biopsy to be taken. You should tell the radiologist if you have any allergies and confirm that you are not taking any blood thinning medication. If you have any questions about the procedure, ask the radiologist at this time.

What happens during a CT guided biopsy?

You will be asked to take off your clothes above the waist and put on a hospital gown. You may need to lay on your back, front or side on the CT scan table, depending on where the area being investigated is, and where the sample is going to be taken from. The radiologist uses the CT scanner to decide on a suitable point to take the sample from and marks this point on your skin with a pen.

Everything will be kept as clean as possible and the radiologist will wear sterile gloves. Your skin will be cleaned with antiseptic and some of your chest covered with a sterile towel. Your skin will then be numbed with a local anaesthetic at the place where the biopsy needle will be inserted. More scans will then be taken to confirm that the correct area has been marked and then the biopsy needle will be inserted.

The radiologist may need to take several samples usually through the same needle to be sure they have enough tissue and then a final scan of the area will be taken to check for any complications.

Will it hurt?

Most biopsies do not hurt. When the local anaesthetic is injected it stings a little to start with but then the area should become numb. The biopsy needle is then passed through this numbed area, between the ribs and into the lung. You may feel a pushing sensation as the needle

passes into the lung. Some people find this uncomfortable, while others feel nothing. When the biopsy is taken, the needle that is used makes a sharp snapping sound, which can be a shock if you are not expecting it.

When the local anaesthetic wears off, the area may feel sore or painful, sometimes for up to a few days. Take some simple pain killers such as paracetamol.

How long will it take?

A biopsy usually takes about 30 minutes from start to finish. You will need to lay still for this time on the CT scanner.

Are there any risks involved in this procedure?

CT guided lung biopsy is a very safe procedure, but there are a few risks and complications that can arise, as with any medical procedure. The main risk is of causing an air leak (pneumothorax) into the space between the lung and the inner chest wall.

A small air leak after a lung biopsy is fairly common and in most cases should not cause any problems. Usually a small leak will get better on its own and you shouldn't need to stay in hospital. However, if you live alone, it may be recommended that you stay in hospital overnight. If a large air leak occurs then the air will need to be drained, usually by putting a small tube through the skin and this will require a stay in hospital. A large air leak is rare, occurring in up to 7 out of a hundred (7%) of lung biopsies.

There is also a risk of the needle causing some bleeding in your lung. If this happens you will cough up some blood. This is usually small amounts but can last for a few days, getting less and less. If you are coughing up a lot of blood (which is not common), you will need to stay in hospital for observation, until it improves.

If you start coughing up a lot of blood, become short of breath or

have severe chest pain when you have gone home you should come back to the hospital (to the Emergency Department) immediately.

What are the benefits of having this procedure?

A biopsy is the best way for us to get a tissue sample from the abnormal area that is in your lung. Looking at this sample under a microscope will give us a lot more information about what is causing your symptoms, and the best way to deal with it.

Are there any alternatives to having this procedure?

Your doctor has recommended this procedure as being the best for you. If you have any concerns then please speak to your nurse or doctor.

What happens afterwards?

After the procedure, you will go back to the ward and the nurses will perform routine checks of your pulse, blood pressure and breathing rate to make sure there are no problems. Usually you will need to stay for 3 to 4 hours after the biopsy. Before you go home you will have a chest X-ray to check for any air leak.

When will I get the results?

The doctor who saw you in clinic will arrange an appointment for you to come back to discuss the results of your biopsy. Unfortunately, not all biopsies are successful. This may be because, despite taking every possible care, the piece of tissue obtained may be too small to make a diagnosis. Sometimes, even with a good sample of the tissue it is not possible to make a definite diagnosis. If this is the case, your doctor will be able to discuss the next course of action.

Can I drive after the biopsy?

No. Someone else must drive you home after the test or accompany you on public transport. You should be able to drive again the next

day if you feel well.

Are there any problems flying in an aircraft after a biopsy?

You should normally not fly for 6 weeks. If this is a problem then discuss it with your doctor.

What about returning to work?

If you work then you should be able to go back the day after your lung biopsy unless advised otherwise.

Glossary of medical terms used in this information

Biopsy - A procedure in which a small piece of tissue is removed and examined under a microscope.

CT Scan - Computed Tomography (CT) uses special X-ray equipment to obtain many images from different angles. Then a specially designed computer programme joins them together to show detailed pictures of the inside of the body.

Pneumothorax - A leak of air from outside the lung.

Radiologist - A doctor who specialises in using X-ray and scanning equipment and in interpreting X-rays.



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