The Dudley Group
NHS Foundation Trust

CT guided lung biopsy explained

Lung Investigation Service

Patient Information Leaflet

Introduction

This leaflet tells you about the procedure known as a CT (computerised tomography) 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 conjunction with 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 carried out using a CT scanner in the X-ray department so that we can locate the precise area to take the sample from. A CT scanner uses special X-ray equipment to obtain many images from different angles. Then a specially-designed computer program joins them together to show detailed pictures of the inside of the body.

How am I prepared for the biopsy?

When you come into hospital for the biopsy, a blood test will be done to check that you do not have an increased risk of bleeding, if this has not been done in clinic.

If you are taking medication to thin your blood (e.g. warfarin, rivaroxaban), you should tell your consultant as soon as possible as you will need to stop taking the drug a few days before and go onto a different type of treatment instead. You may need to be admitted to hospital for this.

In the X-ray 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, you can ask the radiologist at this time.

What happens during a CT guided biopsy?

First you will need to remove all your clothes to the waist and put on a gown. Then you will be asked to lie on the CT scanner table. You may need to lie on your back or front, 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 an anaesthetic at the place where the biopsy needle will be inserted. More scans will be taken to confirm that the correct area has been marked and then the biopsy needle will be inserted. The radiologist will usually need to take several samples from the same place 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. Later, when the biopsy needle is inserted you may feel the sensation of something passing into your body but it is generally so quick that it is not very uncomfortable at all. 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.

How long will it take?

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

Are there any risks?

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. If a large air

leak occurs, the air will need to be drained, either with a needle or by putting a small tube through the skin.

There is also the risk of the needle causing some bleeding in your lungs. If this happens, you will cough up some blood (Haemoptysis). If you are coughing up a lot of blood, 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 go home, you will need to come back to the hospital immediately.

It is recommended that you arrange for someone to accompany you home and stay with you for 24hrs in case of any problems or concerns.

What are the benefits?

A biopsy can be the best way for us to get a tissue sample from the abnormal area that is in your lungs. 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 alternative procedures?

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

What happens afterwards?

After the procedure, you will go back to the day case area and the nurses will perform routine checks on your pulse and blood pressure to make sure there are no problems. Usually you will need to stay for three to four hours after the biopsy. Before you go home, you will have a chest X-ray to check for any air leaks.

When you go home, we advise you to have a responsible adult stay with you overnight. If this is not possible, please discuss this with us.

When will I get the results?

The consultant 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 is 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 consultant 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.

Can I travel on an aeroplane after a biopsy?

You should normally not fly for six weeks. If this is a problem, discuss it with your consultant.

What about returning to work?

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

Other information

It is important that you make a list of all the medicines you are taking and bring it with you to all your follow up clinic appointments.

If you are known to take any ‘blood thinners’ (anticoagulant medication) these will need to be stopped prior to the procedure you will be guided on the length of time when the biopsy is being booked.

If you have any questions at all, please ask your hospital doctor or nurse. It may help to write down questions as you think of them so that you have them ready. It may also help to bring someone with you when you attend your outpatient appointment.

Glossary of terms used in this leaflet

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

CT scan – computerised tomography (CT) uses special X-ray equipment to obtain many images from different angles. Then a specially-designed computer program 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.

If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

Clinical Nurse Specialist Team on

01384 456111 ext. 2752 (9am to 5pm, Monday to Friday)

This leaflet can be downloaded or printed from:

http://www.dgft.nhs.uk/services-and-wards/

If you have any feedback on this patient information leaflet, please email dgft.patient.information@nhs.net

This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.

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Aceasta brosura poate fi pusa la dispozitie tiparita cu caractere mari, versiune audio sau in alte limbi, pentru acest lucru va rugam sunati la 0800 073 0510.

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