

## What is a lung biopsy?

Your doctor has referred you for a lung biopsy. A lung biopsy is where a small piece of tissue is removed from the lung or chest wall so that it can be checked for any abnormalities or diseases.

The procedure is performed by a specialist doctor, called a radiologist, using CT to guide the positioning of the biopsy needle. The cells are then sent off to be examined by a specialist doctor, called a pathologist, under a microscope. The information from this procedure helps your doctor with a diagnosis, and if necessary, plan treatment you may require. A lung biopsy may not give a definitive answer, for various technical reasons.



## How long will the procedure take?



The preliminary CT imaging and preparation including cleaning the skin and giving local anaesthetic may take about 10 minutes. The actual biopsy takes less than a minute, although a few samples may be required. The whole procedure is usually completed in 20-30 minutes.

You will be observed after the biopsy by our nurse for up to 4 hours.

## Is there any special preparation required?

You will be required to fast (go without food and water) for 4–6 hours before a lung biopsy. If you are diabetic, it is recommended that you book an early morning appointment, please do not have your morning insulin.

Our staff will make the procedure as comfortable as possible for you. You may wish to ask a relative or a friend to attend the appointment with you if you think that you may need support before or after the procedure; however, they will not be allowed to stay with you during the procedure. You will need someone to drive you home.

When booking your appointment, it is essential that you inform our staff if you have any allergies, take blood thinning medication, or are pregnant or breastfeeding.

Please list, or bring, all of your prescribed medications, including those medications that you buy over the counter at the pharmacy, herbal remedies and supplements.

If you take blood thinning medication, you may need to stop taking these for a few days or reduce your dose. **It is very important that you do not stop any blood thinning medications or change the dose without consulting with our radiology clinical staff and your own doctor.** They will give you specific instructions about when to stop and re-start the medication. These drugs are usually prescribed to prevent stroke or heart attack, so it is very important that you do not stop taking them without being instructed to do so by your doctor or our clinical staff, or both. Aspirin is usually not stopped.

In the days prior to the procedure, a blood test may be required to check your blood clotting. You should continue with pain medication and all other medications as usual.

## What do I need to do on the day of the procedure?

On the day of your appointment, please ensure you bring:

- Your referral form (if you have it)
- All previous relevant scans or x-rays
- Medicare and healthcare cards (e.g. DVA card or concession card)
- List of all medications

## What happens during the procedure?

You will be asked to complete some forms. A clinical staff member will explain the benefits, risks, and recovery expectations of your procedure; you will have time to ask questions. If you agree to the procedure, you will be asked to sign a consent form. You will then be asked to change into a gown.

You may be given some sedation before and during the procedure if needed.

A preliminary CT scan is carried out to plan the best way to perform your biopsy. A CT radiographer will be present during the preliminary scanning, and the radiologist may also be present. Once the plan is decided, the nurse or radiologist will clean the surface of the skin where the needle will be inserted using an antiseptic solution, and a sterile drape will be applied to the area to reduce the risk of infection. The radiologist and nurse will dress themselves in sterile gloves and possibly, a gown.

The biopsy is usually carried out with you holding your breath from time to time, under the radiologist's instruction. You may hear a clicking noise when the samples are taken. It is common for two to three samples to be collected. After sufficient tissue samples are obtained, firm pressure is applied with a gauze bandage to the entry site on the skin where the biopsy needle was inserted. You will then be taken to a recovery room, where you will be monitored by our nurses until you are fully recovered.

### **Are there any after effects from the treatment?**

There may be some bruising in the area that has been biopsied, and it may feel a bit tender for several days. You may also experience left-sided neck or shoulder pain which is referred pain from the lung.

### **What happens after the procedure?**

Our nurse will observe you for up to 4 hours during which time you will rest. Your blood pressure, pulse rate, oxygen levels and breathing will be monitored. You may also have a chest X-ray before you are discharged.

Our staff will provide you with clear written instructions on ways to look after yourself following the biopsy. This includes information such as avoiding strenuous activity for a few days, arranging a follow-up appointment with your referring doctor and how to look after the biopsy site.

### **What are the benefits?**

If there is an area of concern in your lung, biopsy samples of this area are taken for examination by a pathologist. A CT-guided biopsy is a method of gaining accurate information without the need for an operation to surgically remove the tissue for testing.

### **Are there any risks?**

In referring you for this procedure, your doctor believes that the benefits of this procedure for you are greater than the risks.

Before the biopsy, our doctor, the radiologist, will discuss the procedure with you in detail, including any risks specific to you. You will be provided with the opportunity to ask questions. It may be necessary to do a formal consultation to ensure this procedure is the most appropriate for you.

There are some risks and complications associated with a lung biopsy. The use of CT to guide the procedure minimises these risks.

- Bleeding or bruising at the site can occur and it may take several weeks for this to disappear.
- Many patients will cough up a small amount of blood during or after the procedure; this stops spontaneously and is not a major problem.
- After the biopsy, you may experience pain at either the biopsy site or the left side of your neck or shoulder (referred pain) which may last for a couple of days after the procedure; this may require simple 'over the counter' pain medication such as paracetamol.

- It is possible that a small puncture can occur in your lung, called a pneumothorax. This is relatively common. It often gets better on its own, but sometimes needs further treatment, which might mean you have to stay in hospital
- There is a very small risk of infection.
- If you sometimes faint during medical procedures, please tell the nurse or radiologist before the biopsy starts.
- Some people may have an allergy to injected drugs (e.g., local anaesthetic), or the procedure may not be possible due to medical and/or technical reasons.

### **When do I get the results?**

The radiologist will send a report outlining the procedure to your referring doctor (this could be your family doctor, a surgeon or other specialist). It is important that you make a follow-up appointment with your referring doctor so that they can discuss the results with you.

The pathologist who studies the biopsy samples will provide a detailed report to your referring doctor. The pathology results are usually available and sent to your doctor within 3 days. Usually your doctor will already have made arrangements to discuss the results with you.

### **I still have questions, who can I ask?**

Medical information can be complex, and you may receive information that you do not fully understand. It is important for you to consider the risks and outcomes of the procedure as well as your personal needs before making a decision to undergo the procedure.

If you have read this information and are still unsure if this is the correct procedure for you; before making a booking, you should discuss your questions or concerns with your referring doctor in the first instance. Your regular GP and/or your family may also be a useful resource. Your referring doctor can answer questions about the risks and benefits of not having the procedure and other options for treatment.

If you have questions before your appointment about what is involved on the day, our staff would be happy to assist. Please contact the imaging centre where you have made your appointment.