

## **Having a Lung Biopsy**

### **Information for Patients and Carers**

This leaflet tells you about having a lung biopsy. It explains what is involved and what the possible risks are. It is not meant to replace the discussion between you and your doctor but can act as a starting point for such discussions. If you have any questions about the procedure please ask the doctor who has referred you for the test or contact a member of the radiology team on the number below.

### **What is a lung biopsy?**

A biopsy is a way of taking a small sample of tissue out of your lung using a special needle. Lung cells can then be looked at in detail under a microscope. This may help in your diagnosis and treatment.

### **Why do I need a biopsy?**

Other tests that you have already had performed, such as a chest x-ray or CT scan, have shown that there is an abnormal area in your lung. One of the concerns is that this could be cancerous but other conditions can mimic this, therefore in order to make a diagnosis we need to take a sample of this tissue to look at under a microscope.

### **What are the alternatives?**

There are alternatives that could provide the required information however these can be much more invasive and may require a general anaesthetic, therefore your doctors feel that this is the best method of obtaining the information required with the fewest associated risks.

## **What are the risks of a lung biopsy?**

This is a relatively safe procedure but, as with any medical procedure, there are risks involved. The respiratory (chest) doctors and radiologists will have reviewed your case to ensure that it is technically possible from the radiologists point of view and as safe as possible - this includes making sure you are fit enough for this test and to deal with any of the commoner complications should they occur. The radiologist performing the test will discuss the risks and benefits with you and answer any questions on the day, as part of the consenting process.

**Common mild complications:** The most common complication is pain or discomfort around the biopsy area. You can take simple painkillers such as paracetamol to relieve the symptoms. There may also be bruising or swelling around the biopsy site. This will disappear naturally within 2-3 days. The plaster can be removed after 24 hours.

**More serious complications:** It can be common for patients to cough up streaks of blood (1 in 10 patients) which may last for 4 to 6 hours and almost always stops. If there is more bleeding than expected, the doctors may advise you to be admitted for longer monitoring.

Another significant risk is that air leaks out of your lung when the biopsies are taken. This is called a pneumothorax. This can cause a sharp pain in the chest and some breathlessness. The majority of the time the air leak is small and resolves quickly without any treatment. Occasionally (around 1 in 10 patients), a larger pneumothorax occurs and you may need to stay in hospital to have this treated which could include a small tube (pleural vent or chest drain) inserted into the chest under local anaesthetic to drain the air out.

In 1 in 50 cases not enough tissue is obtained at the time of biopsy to make a diagnosis. This may mean the biopsy has to be repeated.

**Very serious complications:** Life threatening internal bleeding or air leak requiring an emergency operation is very rare (1 in 1000 patients).

Air can also leak into the blood circulation following a needle biopsy (air embolism) which can cause chest pain or more seriously heart attack or stroke. This is very rare (1 in 3000 procedures).

Very rarely a patient may develop serious complications which may prove fatal. The risk of death is 1 in 5000 procedures.

## **How do I prepare for the biopsy?**

Your hospital doctor should have checked whether you are taking any medications which might increase your tendency to bleed after the biopsy. These include; warfarin, rivaroxiban, apixiban, clopidogrel (Plavix), ticagrelor or heparin injections. If you are concerned you may be on medications such as these and have not been given instructions about stopping them, please contact us now. You should take all your other medications as normal.

Your hospital doctor should also have arranged for some blood tests before your biopsy. If not, please contact us.

There is no other preparation you need to do.

## **What does the procedure involve?**

You will attend hospital as instructed on your appointment letter. In the radiology department or in the ward a radiologist (specialist in performing biopsies) will explain the procedure, alternatives and risks and answer any questions that you may have and ask you to sign a consent form. You will be awake throughout the procedure and may be given specific breathing instructions. Your radiologist will use a CT scan for guidance to locate the exact site for biopsy. You may be asked to lie on your back, front or side depending on the location of the biopsy and you will need to stay still for the duration of the procedure. The appropriate site to take the biopsy will be cleaned with antiseptic and local anaesthetic will be injected into the skin. The biopsy needle will be placed through the anaesthetised skin into the lung and the sample taken. Usually 1 or 2 samples will be taken. Occasionally, the radiologist may take more if it is required and safe to do so. Your radiologist will explain what is happening during the procedure.

## **Will it hurt?**

When the local anaesthetic is injected, it will sting for a short while but this soon wears off. After this, the area should be numb. Although the pain will be minimised, you may still feel slight pain at the biopsy site. If you experience a lot of pain, please tell the radiologist.

## **What will happen afterwards?**

You will remain in the department or be transferred to a ward where your pulse and blood pressure will be monitored. During some of this time, you will remain in bed. After an hour, a chest Xray is performed. If there are no problems, the majority of patients will be allowed to go home 1 to 2 hours after the procedure, with advice, as long as someone can collect you from hospital and that there is someone at home with you for the first night after the procedure. If this is not possible, you may require admission to hospital. Do not drive for the first 24 hours after the biopsy and check with your respiratory (chest) Consultant before flying. You should be able to go back to work the day after the lung biopsy unless advised otherwise.

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

Usually within 5-7 working days the result will be with the Consultant that sent you for the biopsy. They will be in touch with you. If you have not heard after 2 weeks, please contact the doctor who sent you for the test.

Some of your questions should have been answered by this leaflet but remember that this is only a starting point for discussion about your treatment with us in the radiology department. Make sure you are satisfied that you have received enough information about the procedure. If you wish to discuss anything further, please contact us.

## **Cancellation**

While we make every effort to avoid this where possible, there is always a risk that your procedure may be cancelled at short notice. This is due to either emergency patients who require urgent surgery or other reasons which are beyond our control. We realise that this can cause distress and inconvenience, but in the event that your procedure is postponed, you will be offered a new date as soon as possible.

## **Keeping your Appointment**

If you cannot keep your appointment, or have been given one that is unsuitable, please change it by phoning the number on your appointment letter. Your call will give someone else the chance to be seen and will help us keep waiting times to a minimum.

## **Public Transport and Travel Information**

Bus details available from: Lothian Buses on 0131 555 6363  
[www.lothianbuses.co.uk](http://www.lothianbuses.co.uk)

Traveline Scotland on 08712002233 or [www.travelinescotland.com](http://www.travelinescotland.com)

Train details available from: National Rail Enquiries on 03457 484 950 or  
[www.nationalrail.co.uk](http://www.nationalrail.co.uk)

## **Patient Transport**

Patient Transport will only be made available if you have a medical/clinical need. Telephone **0300 123 1236** \*calls charged at local rate up to 28 days in advance to book, making sure you have your CHI Number available. Hard of hearing or speech impaired? Use text relay: **18001-0300 123 1236\*** (calls charged at local rate). To cancel patient transport, telephone 0800 389 1333 (Freephone 24 hour answer service).

## **Interpretation and Translation**

Your GP will inform us of any interpreting requirements you have before you come to hospital and we will provide an appropriate interpreter. If you are having this procedure as an existing in patient, staff will arrange interpreting support for you in advance of this procedure. This leaflet may be made available in a larger print, Braille or your community language.

## **Contact Information**

**Radiology Department, Western General Hospital, Edinburgh.**  
**Telephone: 0131 5372052 Mon-Friday, 9am-4pm**

**Radiology Department, St John's Hospital, Livingston**  
**Telephone: 01506 524339 Mon-Fri 8am – 4 pm**

**Radiology Department, Royal Infirmary of Edinburgh**  
**Telephone 0131 5363700 Mon-Fri 9am-5pm**