

Taking a sample of your lung with the guide of a CT scan (CT guided lung biopsy)

Department of Radiology

Information for Patients

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Introduction

If you are an outpatient please read your appointment letter carefully to check which hospital your appointment is at. This leaflet tells you about your examination. Please read it carefully as it contains important information and instructions.

What is a lung biopsy?

A lung biopsy is a procedure to get a sample of lung tissue so it can be examined closely under a microscope.

A special needle is passed from the skin into the lung to get a sample of the lung tissue. This is then sent to someone who specialises in making a diagnosis from tissue samples (pathologist) to be examined.

A CT scan uses X-rays to make detailed images of the inside of your body including the lungs. The doctor will use the CT scan to check the biopsy needle goes into the part of your lung that needs to be examined.

Why do I need a lung biopsy?

Previous X-rays or scans have shown an area of your lung may be abnormal.

The doctor in charge of your care feels that getting a sample of that part of lung will help make the correct diagnosis and help them decide what treatment you might need.

The doctor who referred you for the biopsy should have already talked to you about the reason why they feel it is needed, and whether there is any alternative to a biopsy.

**Health information and support is available at www.nhs.uk
or call 111 for non-emergency medical advice**

Visit www.leicestershospitals.nhs.uk for maps and information about visiting Leicester's Hospitals
To give feedback about this information sheet, contact InformationForPatients@uhl-tr.nhs.uk

Do I need to take my normal medicines?

If you are on medication from your doctor, please continue to take it as normal with the exception of medication that thins the blood.

Important information about medication that thins the blood

If you are taking medication that thins the blood (anticoagulants or antiplatelets) it may need to be stopped or replaced with a different one for a few days. You will be given advice by the doctor or nurse from the clinic.

Please also see the 'Checklist for CT Guided Biopsy Patients', which is included with this leaflet, for further instructions. You should re-start taking your normal blood thinning medications as per these instructions.

These drugs include rivaroxaban, warfarin, clopidogrel (Plavix)/ticagrelor (Brilinta), prasugrel (Effient) or dalteparin /heparin injections.

How do I get ready for the procedure?

- Do not eat for 4 hours before your biopsy.
- You can have a few sips of clear fluid up to 2 hours before the biopsy.

If you have diabetes it is important to have a normal breakfast. You may need to adjust your medication. Please contact your normal diabetes care provider for advice.

Occasionally it is necessary for patients to be admitted to hospital after the biopsy. For this reason we ask that you prepare an overnight bag and bring this with you.

What happens before the procedure?

You may have some blood tests done before the biopsy to check that you are not at an increased risk of bleeding, unless they have been done quite recently.

What happens when I arrive at the hospital?

- When you arrive at the hospital, you will be booked in (admitted) to the angiography department. A nurse will help you get ready for your biopsy.
- You will be asked to put on a hospital gown.
- A needle may be put into a vein in your arm so that you can be given medication if needed.
- The radiologist will come and talk to you about the biopsy and answer your questions.
- You will be asked to sign a consent form.

What happens during the procedure?

- The biopsy will take place in the Radiology (X-ray) Department in a CT scanner.
- The radiology team will take you to the CT scanner.
- You will be asked to lie on the CT scanning table in the position that the radiologist has decided is most suitable. It is important that you stay very still in this position until the procedure is over. If you are uncomfortable please let the doctor know.
- Everything for the biopsy will be kept clean (sterile). Your skin over the biopsy site will be cleaned with antiseptic and you will have some of your body covered with sterile sheets.
- The skin and deeper tissues over the lung will be numbed with local anaesthetic. This will sting at first before the skin goes numb.
- You may feel a pushing sensation when the biopsy needle is put in. It should not be painful. If you do feel pain please tell the radiologist and they may give you more local anaesthetic.
- The radiologist will use the CT scan to guide the biopsy needle into the abnormal lung.
- You will need to stay still during the procedure. You may feel some discomfort or pressure when the biopsy sample is taken. The biopsy needle may make a small clicking noise when it takes the sample.

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.

The biopsy needle often makes a small clicking noise when it takes the biopsy. The radiologist will need to take 2 to 3 samples.

How long will it take?

The average time for this procedure is about 30 to 45 minutes.

Who will be doing my procedure?

A doctor who specialises in imaging and X-ray treatments (an interventional radiologist) will do the procedure.

There will also be a nurse and a radiographer in the room. There may also be a healthcare assistant.

As we are a teaching hospital a student may also be in the room. If you do not want this, you can ask that a student is not in the room when you have your examination.

Will it hurt?

You may feel some pain or discomfort. When the local anaesthetic is injected it will sting to start with but this wears off and the skin and deeper tissues should then feel numb.

Later you may be aware of a pushing sensation as the needle is positioned but this is generally done so quickly that it does not cause much discomfort.

If the procedure does become painful you should tell the person performing the biopsy and they may give you more local anaesthetic.

What happens after the procedure?

- After the procedure you will be taken to the angiography department.
- A nurse will check your pulse, blood pressure and temperature to make sure that there are no signs of any problems.
- You will usually have to stay there for a few hours until you have recovered.
- You will almost certainly have a chest X-ray before you go home. You will not be sent home until it is considered safe to do so.
- **Do not drive yourself home after the procedure.**

What if I need help and advice after the procedure?

If you have any problems after the procedure please speak to the staff in the discharge lounge.

If you have any problems relating to your biopsy procedure once you have left hospital please contact your GP or call NHS 111 for advice. You can also contact the your lung nurse specialist. You will already have been given their contact details.

Aftercare of your wound site

Keep your wound dressing dry for 3 days. Remove your dressing after 3 days.

A small amount bleeding or oozing is expected in the first 24 hours but it usually dries up.

Contact your GP or the NHS helpline on 111 for advice, if there is

- any swelling,
- bleeding,
- oozing around the biopsy site,
- or if the skin around the site starts to show inflammation such as a reddish colour.

Are there any risks or complications?

As with any procedure or operation, complications are possible. We have included the most common risks and complications in this leaflet, although they will be different for each person. Your risks will be discussed with you before you sign the consent form.

- **Pain or discomfort** - you might have pain around the biopsy site for the first few hours. You can take your usual simple painkillers (e.g. paracetamol) for any discomfort from the biopsy.
- **Bruising** - There may be soreness around the biopsy site and some bruising.
- **Bleeding** - Any biopsy carries a small risk of bleeding. If you cough up some blood after the procedure please do not be alarmed as this will stop shortly.
- **Infection** - the risk of infection of the skin or deeper tissue is low. If the area around the biopsy site becomes hot and red or you feel unwell with 'flu-like' symptoms, this may mean you have an infection. **If this happens see your GP urgently or call the NHS helpline on 111 for advice.**
- **Air around the lung** - It is possible that air may get into the space around the lung. If this happens then the air may need to be drained, using either a needle or a small tube put in through the skin. This is only needed in less than 1 in 20 patients.

At all times during and after the procedure the staff will be monitoring your responses to this treatment in order to minimize the effects of any complications.

Despite these possible complications a lung biopsy is normally very safe and can save you from having a bigger procedure which would have higher risks.

How do I get the results?

It usually takes at least 2 working days for the full results to come back from the pathologist. These will be sent to the doctor who referred you for the biopsy.

You may already have an appointment to see a doctor in an outpatient clinic. Otherwise, you may receive an appointment to see a doctor in an outpatient clinic, or you may be telephoned with the results.

Do all biopsies provide a diagnosis?

The radiologist doing your biopsy may be able to let you know if they have been able to get a suitable sample. Lung biopsies get an answer in 9 out of 10 patients.

There is a small risk (about 1 in 10) that the biopsy sample may not be sufficient for testing or can give a definitive diagnosis. In this case you may need to have the procedure again. If this happens your doctor will talk to you about the options.

What are the risks from radiation in this procedure?

The main risk from having X-rays is an increase in the risk of getting a cancer in the future. This risk is thought to be very small. We are all exposed to natural background radiation every day of our lives. This comes from the sun, food we eat, and the ground. Each examination gives a dose on top of this natural background radiation. The risks of radiation are slightly higher for an unborn child so we must ask some patients aged 10 to 55 years about their periods and possibility of being pregnant.

The benefits of this examination are likely to outweigh any potential risk and the risk from not having the examination could be greater. We will take all safeguards to minimise the amount of X-rays you receive.

What if I need to talk to someone?

If you have any questions or concerns, or cannot make the appointment:

Please call the radiology department on **0116 258 8765** and select option 7. Monday to Friday 9am to 5pm, excluding bank holidays.



If you have any problems after the procedure please speak to the staff in the angiography department.

If you have any problems relating to your biopsy procedure once you have left hospital, please contact your GP for advice or call the NHS helpline on 111.

Any questions?

If you have any questions you can write them down. This is to remind you to ask when you come for your treatment.

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
على هذه المعلومات بلغة أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل
જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿੱਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ 'ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ।

Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email equality@uhl-tr.nhs.uk