

Radiology Department

Radiology Biopsy

Introduction

You have been advised by your hospital consultant that you need to have a biopsy performed in the Radiology (X-ray) Department under ultrasound, CT, or fluoroscopic control. This information tells you about having a biopsy, what is involved, and what the possible risks are.

This leaflet may not answer all your questions, so if you have any queries or concerns, please contact us using the telephone number on your **appointment letter** or ask the ward staff. If you feel unhappy with any part of your care within the x-ray department, please ask to speak to a senior member of staff.

Please read this leaflet carefully to ensure you are completely prepared for the examination.

Please contact the x-ray department if your weight is equal to or more than 205Kg (32 stone) as you may require an alternative examination.

Referral and consent

You will be asked to sign a pink consent form confirming that you understand the procedure and are aware of the risks and benefits involved. Where practical this is usually done on the ward before you come to the Radiology Department or in an outpatient clinic environment before your



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admission to hospital for the procedure.

The biopsy is normally done as a planned procedure and you should have plenty of time to discuss the situation with your doctor or the nurse specialist looking after you before you sign the consent form. When you arrive for the procedure, you will also discuss the procedure with the radiologist, (a doctor who specialises in X-rays and scans), who will be performing the procedure who will again sign the consent form with you.

In rare cases a biopsy may be performed as an emergency and there may be less time for discussion, but you should still have had sufficient explanation before you sign the consent form. If after discussion with your hospital doctor or radiologist, you do not want the procedure carried out, then you can decide against it.

If the radiologist feels that your condition has changed or that your symptoms do not indicate such a procedure is necessary, then they will explain this to you and they will communicate with the referring doctor who will review your situation as soon as possible. At all times the radiologist and referring doctor will be acting in your best interests.

Points to remember

- You will usually be admitted for the procedure as a day case. Occasionally it is necessary for patients to stay overnight in hospital after the biopsy. For this reason, we advise that you prepare an overnight bag and bring this with you.
- Please bring with you to your appointment any sprays or inhalers that you are taking. **Please bring a list of any regular medications you are taking**
- We also ask you to leave any valuable possessions on the ward.
- If you are diabetic, please note that you are required to starve before the examination. You may be given an early morning appointment or alternative medication will be given on the ward. Please tell ward staff in advance if this is the case.
- **If you are taking any blood thinning drugs e.g., Warfarin, or, if you are aware that you may have bleeding problems, please notify us as soon as you have received your appointment so that the radiologist (X-ray doctor) who will be performing your examination can be notified. They will need to discuss this with**

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your hospital consultant before your appointment can be confirmed. Your medication may need to be stopped before the procedure.

Why do I need this procedure?

A biopsy of an internal organ such as the lung, liver or kidney may be performed to obtain a specimen to allow special testing to enable your doctors to make a detailed diagnosis of your condition. Previous X-rays or scans may have shown a lump or mass in a part of your body.

From the X-rays and scans it is not always possible to say exactly what the abnormality is. The simplest way of finding out is by taking a tiny piece of it away for a pathologist to examine.

What is a biopsy?

A biopsy is a way of taking a small piece of tissue out of your body using only a tiny cut in the skin and a thin needle. The biopsy will then be examined under a microscope by a pathologist (an expert in making a diagnosis from tissue samples). This method of taking a biopsy is sometimes referred to as a percutaneous biopsy.

The biopsy will be performed by a radiologist who will be assisted by a radiographer and / or a radiology nurse. It is not always easy to predict how complex or how straightforward the procedure will be and therefore how long it will take. As a guide, expect to be in the Radiology Department for about 45 minutes to one hour. However much of this time is taken up by preparation rather than the procedure itself. You will normally be expected to rest on the ward for at least four hours after the procedure. If you have been admitted specifically for this procedure as a day case patient, you should then be able to go home. In some cases, you may be asked to stay overnight.

The biopsy will take place in the Radiology Department in the CT Department, Ultrasound or Fluoroscopy Department. Which imaging modality used will depend upon the location, type, and accessibility of the tissue to be biopsied, and will be decided by the radiologist before your appointment is made.

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What is a CT scan?

A CT scan is an X-ray examination that gives much more information than a normal X-ray. It produces detailed 3D images of your organs and blood vessels.

What is Fluoroscopy?

Fluoroscopy is a process that uses X-rays to produce a real time moving image on a television monitor.

What is Ultrasound?

An ultrasound scan is an examination that uses sound waves to take pictures of the part of the body being examined. It does not involve X-rays.

Preparation

- You will have had some special blood tests, to check your blood clotting ability four to five days before your appointment or occasionally on the same day as your appointment, to check that you do not have an increased risk of bleeding.
- Vitamin K may be required before the procedure if your blood clotting ability is lower than desired. The procedure may have to be postponed until your clotting ability has improved.
- You may have a light very early breakfast on the day of your appointment. Please **do not eat or drink** anything, except a little water if necessary, for **four hours before** your appointment.
- You may need a cannula (small tube) inserted into a vein in your arm to allow access for fluids and for administering medication such as antibiotic prophylaxis.
- You will need to wear a hospital gown. The Porters will collect you from the ward and bring you to the X-ray Department, on your bed, for the procedure.

During your examination

The procedure will be explained to you by the radiologist. You will be able to ask any further questions that you may have.

Biopsy

- You will be asked to lie on the examination table. It is important that you stay very still until the procedure is over. If you are uncomfortable, please let the doctor know.
- The ultrasound, fluoroscopy unit or the CT scanner will be used to decide on the most suitable place for inserting the biopsy needle. This area may be marked with a pen.
- Everything will be kept sterile, and the radiologist will wear sterile gloves. Your skin will be cleaned with cold antiseptic solution and sterile drapes will be placed over this area. Then your skin will be numbed with local anaesthetic. When the local anaesthetic is injected, it will sting to start with, but this soon wears off, and the skin and deeper tissues should then feel numb.
- The radiologist will insert the thin biopsy needle whilst looking at the images to ensure accuracy of positioning. 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 radiologist performing the biopsy and they may give you more local anaesthetic.
- The first part of the procedure when the equipment is being prepared may seem to take a while, but the biopsy itself does not take very long at all. Once in place the needle often makes a small clicking noise when the biopsy is taken; this should not alarm you. The radiologist may need to take two to three samples.
- When the procedure is finished, a small plaster will be placed to cover the incision and you will be returned to the ward.

Risks of the procedure

As with any procedure or operation, complications are possible. We have included the most common risks and complications in this leaflet. The possibility of these occurring will vary for each patient and the possibility of these happening to you will be discussed with you before you sign the consent form.

- **Bleeding:** Any biopsy carries a small risk of bleeding. On rare occasions, this may become severe.
- **Infection:** Occasionally there may be infection in the area surrounding the biopsy site. This can usually be treated with antibiotics.

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- **Damage to underlying tissues:** Rarely, as the biopsy needle passes through the body to the target area, surrounding tissues may be damaged.
- Unfortunately, not all biopsies are successful. This may be because, in spite of taking every possible care, the piece of tissue which has been taken is normal tissue rather than abnormal. Alternatively, although abnormal tissue has been obtained, it may not be enough for the pathologist to make a definite diagnosis. If you need any further investigations, they will be discussed with you in clinic
- There may be soreness around the biopsy site and some bruising.
- Despite these possible complications, the procedure is normally very safe. 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.
- X-rays are a type of radiation. We are all exposed to natural background radiation every day of our lives; this comes from the sun, food we eat, and the ground. Exposure to X-rays carries a small risk, but your doctor feels that this risk is outweighed by the benefits of having the test. We will take all safeguards to minimise the amount of X-rays you receive.

Safety

Patients aged 12-55 years – could you be pregnant? The risks of radiation are slightly higher for the unborn child so you will be asked to confirm that you are not pregnant before the examination can proceed.

After your examination

- The radiology nurse will continue to look after you until you are sent back to the ward
- Once you have returned to your ward, nurses will carry out close and regular observations, such as taking your pulse, blood pressure and temperature, to make sure that there are no problems. You will stay in bed for at least four hours. You should tell the nurses if you feel pain or a raise in your body temperature. You may be given more antibiotics.
- You should drink plenty of fluids and eat normally

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- If you have any problems after the procedure, please speak to the staff on the ward or contact your GP or emergency doctor if problems occur when you have returned home

How do I get the results?

The results will not be given to you immediately. They will be sent by the pathology department to the doctor who referred you to us for this examination who will then discuss them with you at a future out-patient appointment in clinic.

Other sources of information:

For information about the effects of X rays and information about radiology departments visit the NHS website: <https://www.nhs.uk/conditions/x-ray/>

For further information about biopsy, please visit the NHS website : <https://www.nhs.uk/conditions/biopsy>

Please note that the views expressed in these websites do not necessarily reflect the views of UHCW NHS Trust

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact the telephone number on your appointment letter and we will do our best to meet your needs.

The Trust operates a smoke free policy.

To give feedback on this leaflet please email feedback@uhcw.nhs.uk

Document History

Department:	Radiology\CT
Contact:	27161
Updated:	May 2022
Review:	May 2024
Version:	4.3
Reference:	HIC/LFT/1299/11