

Department of radiology

Ultrasound examination and biopsy

Introduction

This leaflet tells you about the procedure known as ultrasound guided biopsy. It explains what is involved and what the benefits and risks are.

What is an ultrasound scan and biopsy?

An ultrasound biopsy involves inserting a needle through the skin to take a sample. A small sample of tissue is removed by the needle. The sample of tissue can then be analysed under the microscope to give your doctor more information and help them decide on the diagnosis and best treatment.

An ultrasound scanner uses sound waves to produce images of organs and structures inside your body. The radiologist uses these images to accurately direct the needle into the area that needs to be sampled. The radiologist is a specialist doctor trained to interpret your scan and perform your biopsy.

What to tell the doctor

- If you have any allergies.
- If you have had a previous reaction to intravenous contrast medium (the dye used for some X-rays and CT scanning).
- It is important to tell the doctor or the radiology department **before attending for admission** if you are taking medication to prevent blood clots. Below is a list of some of the medications which are used to thin the blood and help to prevent blood clots.
- If you are currently taking any of these medications, please contact your referring doctor or the radiology department on **0161 446 3325** as soon as possible, as these may need to be stopped prior to your procedure. Failure to do so may result in your procedure being postponed.
 - Apixaban
 - Aspirin
 - Clexane
 - Clopidogrel
 - Dabigatran
 - Dalteparin
 - Enoxaparin
 - Fragmin
 - Rivaroxaban
 - Warfarin



Agreeing to treatment

We will ask you to sign a consent form agreeing to accept the treatment that you are being offered. The basis of the treatment is that you have had The Christie's written description of the proposed treatment and that you have been given an opportunity to discuss any concerns. You are entitled to request a second opinion from another doctor who specialises in treating this cancer. You can ask your own consultant or your GP to refer you. Your consent may be withdrawn at any time before or during this treatment. Should you decide to withdraw your consent, then a member of your treating team will discuss the possible consequences with you.

Is there any preparation for my ultrasound and biopsy?

If you are taking tablets to thin the blood (anticoagulants) such as clexane, warfarin or aspirin, please contact the ultrasound department as soon as you receive your appointment on **0161 446 3322**. **You will need to stop taking this medication before your biopsy.**

Some patients need to be admitted to The Christie for this scan and biopsy but many can be done as outpatients. We will send you a letter giving you the admission details if necessary. To prepare for your scan and biopsy, we will admit you to one of the wards where you will have a blood test. On the day of the scan, the ward staff will give you a hospital gown to wear and you will be escorted to the ultrasound department for your procedure.

What happens during my ultrasound scan and biopsy?

A member of the ultrasound staff will escort you into the scanning room and introduce you to the radiologist. He or she will explain the procedure to you and answer your questions. We will then ask you to sign a consent form.

You will be asked to lie on the scanning couch on your back and the radiologist will put some cold jelly on your skin. The radiologist will perform an initial scan and will run the ultrasound probe over your skin. This should not hurt. The images of your body are displayed as a picture on the monitor. The radiologist will be looking at the ultrasound machine while carrying out your scan.

Once the radiologist has identified the best area to take a small sample they will take a biopsy.

An injection of local anaesthetic will numb the area.

The radiologist will place the biopsy needle into the skin and gently guide it into the area to be sampled.

There is sometimes a noticeable click and you may feel a small jolt as the radiologist takes the biopsy. This is quite normal.

The needle is then removed and the sample is placed on to a slide or into a special sterile bottle for analysis.

A cytologist from the pathology laboratory may also be present in the room to check the sample that is taken.

It may be necessary to repeat the procedure once or twice more to ensure that we have an adequate sample for an accurate analysis.

During the biopsy you might experience some stinging or a stabbing pain depending on the area where the biopsy is taken from, but this does not last.

There may be some bruising following the procedure and this may be uncomfortable for a day or two.

What happens after my ultrasound scan and biopsy?

Sometimes, we will take you back to the ward on a trolley where you will need to rest in bed for a few hours after the procedure. A nurse will carry out routine observations such as checking your pulse and blood pressure. However, many biopsies are done as outpatient procedures so we often ask you to stay in the hospital for half an hour before leaving. The radiologist's report will be sent to your Christie doctor usually within a week.

How long will I have to stay in hospital? Can I go home the same day?

If you have been admitted, you can usually go home the same day after a few hours bed rest on the wards following the procedure. Sometimes, you may need to stay in hospital overnight.

A responsible adult must accompany you home and stay with you for at least 24 hours if you have been admitted.

Is this procedure safe?

Generally, an ultrasound is a very safe procedure. It is less invasive and has a lower risk of complication than surgery. In the majority of cases there are no complications. However, in common with all procedures, there are certain possible risks of which you should be aware. The risks of biopsies include bleeding, damage to organs and infection. The possible damage to organs depends upon the type of biopsy, for instance:

- in a chest biopsy there is a risk of lung collapse
 - in a liver or kidney biopsy, bleeding is more of a risk (although still uncommon)
 - in a pancreatic biopsy there is a risk of inflammation of the pancreas (pancreatitis)
 - in a neck or thyroid biopsy there is a risk of bleeding causing compression of the windpipe, but it is very rare
- There are many other possible risks but these are rare. The benefits of biopsies outweigh the risks because making a diagnosis is essential to help the doctors decide on the best treatment to offer you for your suspected tumour.
 - Occasionally there may be some bleeding under the skin and you may have some bruising or swelling.
 - There is a small risk of infection although a biopsy is always carried out as a sterile procedure.
 - Rarely, you may have significant discomfort which can be controlled by painkillers.
 - In about 1 in 5 cases, the test may not provide adequate cells and may need to be repeated.

What is the benefit of an ultrasound biopsy?

This allows a sample to be taken for analysis under the microscope. It is very important as it can confirm the nature of a suspicious area. This can then provide your doctors with valuable information to help plan the most appropriate treatment for you.

Are there any alternatives to an ultrasound biopsy?

There may be other tests which can be done instead of an ultrasound biopsy. However, they may not be able to provide the specialist information that your doctors need to make a definite diagnosis of your condition, or the tests may be more invasive. You should discuss this with the doctors that are looking after you.

What happens if I decide not to have an ultrasound biopsy?

There may be some uncertainty about the nature of the area needing investigation. Scans and blood tests may not give a clear answer. If you do nothing then you may miss out on important treatment.

What happens if I can't keep my ultrasound appointment?

If you cannot keep your appointment, please contact the ultrasound department straight away to arrange an alternative date.

If you are admitted to hospital before your appointment, please tell the ward staff that you have an ultrasound appointment booked.

If you have any problems or worries, please contact:

From 9:00am to 5:00pm	Radiology nurse on 0161 446 3325 or radiology department on 0161 446 3322
Out of hours and for emergencies:	Ring The Christie on 0161 446 3000 and ask for the on-call radiologist
The Christie Hotline:	0161 446 3658 (24 hours)

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard. If you would like to have details about the sources used please contact **the-christie.patient.information@nhs.net**

For information and advice visit the cancer information centres at Withington, Oldham or Salford. Opening times can vary, please check before making a special journey.



Contact The Christie Hotline for
urgent support and specialist advice
The Christie Hotline: 0161 446 3658
Open 24 hours a day, 7 days a week