

Percutaneous biopsy

Radiology Department



[Patient information leaflet](#)

The leaflet tells you about having a computerised tomography (CT) guided percutaneous biopsy. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your clinician, but can act as a starting point for such discussions. If you have any questions about the procedure please ask the consultant who has referred you for the test or the Radiologist who is going to perform it.

The Radiology Department

The radiology department may also be called the x-ray or diagnostic imaging department. It is the facility in the hospital where radiological examinations of patients are carried out, using a range of equipment.

Who does what?

Radiologists are specialist doctors trained to interpret x-rays and carry out more complex examinations.

They are supported by specialist radiographers, who are highly trained to carry out x-rays and other imaging procedures.

Radiology Nurses are specialist nurses who will assist the Radiologist and care for you throughout the procedure until you are handed back to the ward nurses, who will collect you from CT.

Prior to this diagnostic test being performed, the Radiologist will explain fully the whole procedure and allow you to ask any questions you may have regarding the test.

A written consent will be required. (You should have sufficient explanation before you sign the consent form)

What is a CT guided percutaneous biopsy?

A needle biopsy is a way of taking a small piece of tissue out of your body, using only a tiny incision, so it can be examined under a microscope by a pathologist, an expert in making diagnoses from tissue samples. Because this biopsy is done through the skin, it is called a percutaneous biopsy.

Why do I need a percutaneous biopsy?

Other tests that you have probably had performed, such as an ultrasound or CT scan, will have shown that there is an area of abnormal tissue inside your body. From the scan, it is not always possible to say exactly what the abnormality is and so a biopsy will be taken for a pathologist to examine a small piece of tissue to determine the cytology/histology of the sample.

Are there any alternatives to a percutaneous biopsy?

There are no alternatives, but further treatment options would depend on the outcome of the biopsy.

Who has made the decision?

The consultant in charge of your case, and the Radiologist performing the CT guided biopsy will have discussed the situation, and feel that it is the best thing to do.

You will have an opportunity to ask any questions you may have and the procedure will be fully explained to you prior to written consent being obtained.

Before your appointment

Please contact the CT department if you are diabetic, taking any blood thinning drugs, have renal impairment or if you know that you are allergic to x-ray dye(iodine). If you are asthmatic, please bring your inhaler or asthmatic medication with you to your appointment.

Who will be doing the percutaneous biopsy?

A specially trained doctor called a radiologist. Radiologists has special expertise in using x-ray and scanning equipment, and also interpreting the images produced. They need to look at the images whilst carrying out the biopsy.

How do I prepare for percutaneous biopsy?

You will have been allocated a day bed on either the Medical Day Unit (MDU), Day Surgery Unit (DSU) or the Surgical Short Stay Unit (SSSU). The location will be written on the appointment letter accompanying this patient information leaflet.

You will be asked to **attend the ward three hours** prior to your appointment to allow bloods to be taken and the results available prior to the procedure.

You will be routinely screened for MRSA (Methicillin-resistance Staphylococcus Aureus) prior to the planned procedure.

You will be asked not to eat for four hours but can drink water up to one hour prior to the procedure, unless otherwise advised.

You will be asked to put on a hospital gown and a cannula will be placed in a vein usually on the back of the hand.

If you have any allergies, you **must** let the staff looking after you know. If you have previously reacted to intravenous contrast medium (the dye used for kidney x-rays and CT scans) then you must tell the radiographers.

Can I bring a relative or friend?

Yes, but for reasons of safety, they may not be able to accompany you into the examination room, except in very special circumstances.

You must have someone to collect you and drive you home after your four hours bed rest and you will need to have someone with you over night.

What actually happens during a percutaneous biopsy?

You will be asked to lie on the ct scanning table, in the position that the radiologist has determined is more suitable.

If you have not already a cannula placed in the back of your hand or arm, then one may be inserted at this point.

The Radiologist will keep everything as sterile as possible, and may wear a theatre gown and operating gloves. Your skin will be cleaned with antiseptic, and you will be covered with a sterile drape. The radiologist will use the CT scans to decide on the most suitable point for inserting the needle.

The Radiographers will accurately mark this point with an indelible pen using the centring lights on the scanner to guide them. Your skin will then be anaesthetised, and the biopsy needle inserted into the abnormal tissue.

While the first part of the procedure may seem to take a while, actually performing the biopsy does not take very long at all, using the CT scans to accurately guide the needle into position.

You must keep as still as possible during this stage, if it becomes too uncomfortable please let us know.

Will it hurt?

Most biopsies do not hurt at all, although unfortunately bone biopsies may be painful. When the local anaesthetic is injected, it will sting to start with, but this soon passes off, and the skin and deeper tissues will soon feel numb. Later, you may be aware of the needle passing into your body, but this is generally done so quickly, that it does not cause any discomfort at all.

There will be a nurse and radiographer looking after and monitoring you throughout the procedure.

How long will it take?

Every patient's situation is different, and it is not always easy to predict how complex or how straight forward the procedure will be. It may be over in thirty minutes, although you may be in the x-ray department for about an hour altogether.

What happens afterwards?

You will be taken back to your ward on a trolley accompanied by a nurse.

Nurses on the ward will continue to carry out observations, such as your heart rate and blood pressure to make sure there are no problems.

You will stay in bed for four hours until you have recovered and allowed to go home.

If you have a lung biopsy, it is routine to have a chest x-ray prior to going home.

What happens next?

All being well, you will be allowed home either on the same day, or the next.

Do not expect to get the results of the biopsy before you leave, as it always takes a few days for the pathologist to complete all the necessary tests on the biopsy specimen.

Are there any risks or complications?

Percutaneous biopsy is a very safe procedure, but there are a few risks or complications that can arise, as with any medical intervention.

If your liver is being biopsied, there is a risk of bleeding, although this is generally very slight. If the bleeding were to continue, then it is possible that you may need a blood transfusion.

Extremely rarely an operation or another radiological procedure is required to stop the bleeding.

If you are having a lung biopsy performed, then it is possible that air can enter the space around the lung. This generally does not cause any real problem, but if it causes the lung to collapse, the air will need to be drained with a needle or small tube, inserted into the skin.

There is also a small risk of infection, as with any interventional procedure.

Unfortunately, not all biopsies are successful. This may be because, despite taking every precaution, the piece of tissue which has actually been obtained 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.

The radiologist performing the procedure may be able to give you some idea as to the chance of obtaining a satisfactory sample.

Despite these possible complications, percutaneous biopsy is normally very safe, and is designed to save you from having a bigger procedure.

In conclusion

Some of your questions should have been answered by this leaflet, but this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure, before you sign the consent form.

Privacy and dignity

Sometimes tests, although necessary, can be embarrassing or undignified for patients but we promise to do everything we can to make you as comfortable as possible during your visit to the department.

Patient surveys

We value your opinion on our service and in order to deliver, maintain and improve this service we ask you to complete a short patient questionnaire survey found with your appointment letter.

Completion of these surveys is entirely voluntary.

Questions and contacts

Following the examination, if you experience any problems please contact the CT Department between 08:30 and 17:00. Outside these times please contact your GP.

If you have any questions or would like to know more about this procedure, please telephone the CT department on:

01483 464151 (Direct line)

01483 571122 Extension **4151 / 4414**

If you are unable to keep your appointment notify the CT scanner clerical staff as soon as possible.

For further information about Diagnostic Imaging Services at Royal Surrey County Hospital NHS Foundation Trust, please contact:

Royal Surrey County Hospital NHS Foundation Trust
Egerton Road
Guildford
Surrey
GU2 7XX

www.royalsurrey.nhs.uk

Key references and other sources of information

British society of Interventional Radiology

- www.bsir.org/media/resources/BSIR_Patient_Leaflet_-_Percutaneous_Biopsy.pdf

Radiation Dose

- www.gov.uk/government/publications/ionising-radiation-dose-comparisons/ionising-radiation-dose-comparisons

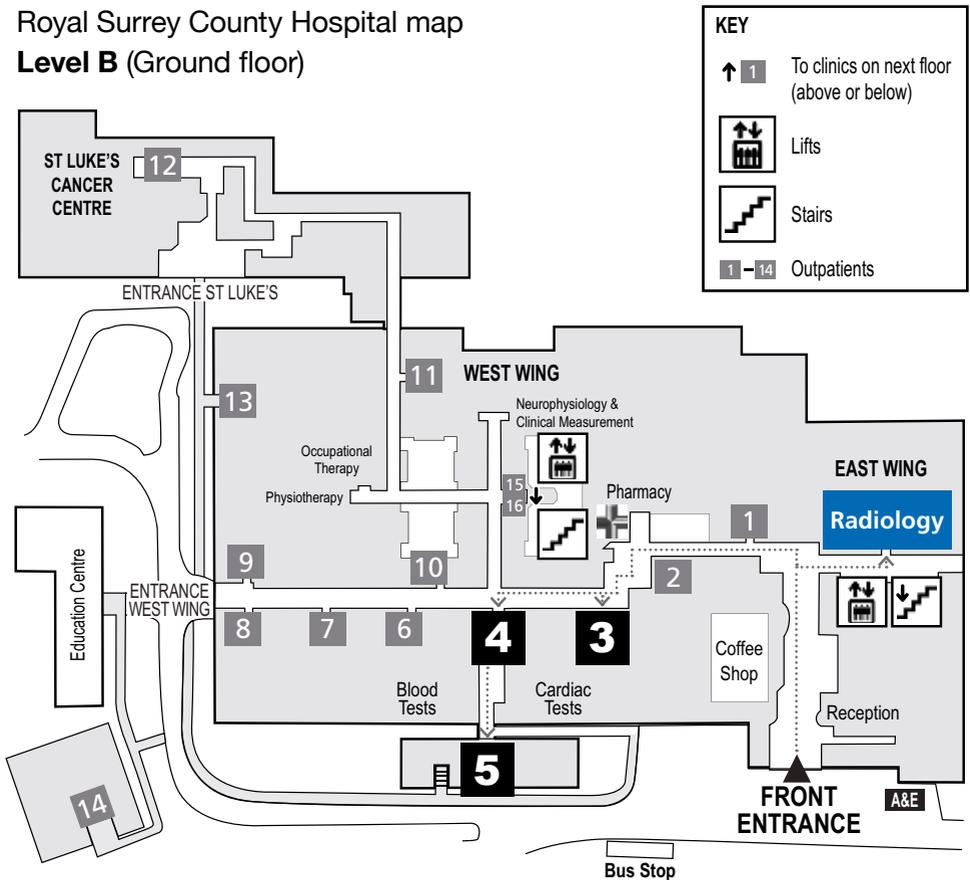
NHS choices – CT Scans

- www.nhs.uk/Conditions/ct-scan/Pages/Introduction.aspx

How to find the Radiology Department

Royal Surrey County Hospital map

Level B (Ground floor)



Data sharing reference information is available on Royal Surrey County Hospital patient information leaflet entitled:

Your Healthcare records – your information, PIN120703–562

Royal Surrey County Hospital NHS Foundation Trust

Egerton Road

Guildford

Surrey

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www.royalsurrey.nhs.uk

Radiology Department contact details

If you have any questions or would like to know more about this procedure, please telephone the CT Department on:

Telephone: 01483 464151 (Direct line)

Telephone: 01483 571122 **ext** 4151 / 4414

If you are unable to keep your appointment, please contact us as soon as possible.

PALS and Advocacy contact details

Contact details of independent advocacy services can be provided by our Patient Advice and Liaison Service (PALS) who are located on the right hand side as you enter the main reception area. PALS are also your first point of contact for health related issues, questions or concerns surrounding RSCH patient services.

Telephone: 01483 402757

Email: rsc-tr.pals@nhs.net

Opening hours: 9.00am–3.00pm, Monday to Friday

If you would like information documents in large print, on tape or in another language or form please contact PALS.

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