

Deep (inpatient) percutaneous image guided biopsy

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Aim of the patient information

This patient information leaflet tells you about having a deep image guided percutaneous biopsy. It explains what is involved and what the possible risks are. It is not meant to replace discussions between you and your doctor but can act as a starting point. If you have any questions about the procedure, please ask the doctor who has referred you or the Interventional Radiology department.

What is percutaneous biopsy?

A biopsy is a procedure aiming to take a tissue sample with a special needle. It allows a sample of tissue to be sent to a laboratory to be assessed under a microscope. This allows a diagnosis to be made and a treatment plan to be decided. This is typically performed through a very small incision under local anaesthesia using ultrasound, X-ray, or computed tomography (CT) guidance.

What are the benefits?

Often the doctors looking after you are unsure of what is causing your symptoms or need more information. This maybe as a result of other examinations you have had such as blood tests or other imaging techniques such as CT or MRI (Magnetic Resonance Imaging). They have recommended that you have a biopsy to find out what is causing your symptoms. This will help them decide on the most suitable treatment for you.

Are there any risks?

Percutaneous biopsy is a very safe procedure, but as with any medical procedure there are some risks and complications that can arise. The risks detailed below are generalised and may not all apply to your procedure. The risks specific to your particular case will be discussed with you prior to proceeding with the test.

Performing a biopsy can introduce an infection. Usually this can be treated with antibiotics. Any infection can spread into the blood (sepsis) which can make you very unwell.

A small bruise (haematoma) around the site of the biopsy can occur, but this is quite normal. The bruise might be sore for a few days but will disappear in a few weeks.

There is a small risk of bleeding. During deep biopsies in e.g. the liver, if the bleeding were to continue, then it is possible that you might need a blood transfusion. Very

rarely, an operation or another radiological procedure is required to stop the bleeding. In extremely rare cases severe bleeding can lead to death.

Depending on the location of the biopsy there may be important structures nearby e.g. liver, bowel, lung, kidney. This is why this procedure is performed using image guidance so these can be avoided. It is very important that you try to remain as still as possible, as there is a small risk that these structures could be injured.

Unfortunately, some biopsies fail to give an answer. Despite taking every possible care, sometimes the sample obtained is part of the normal tissue rather than the abnormal tissue. Alternatively abnormal tissue has been obtained but it may not be enough for the pathologist (an expert in making diagnoses from tissue samples) to make a definite diagnosis. If this happens it will be up to the doctor looking after you to decide how to proceed.

If X-rays are used during your examination, you will receive a dose of radiation as a result of the X-rays used. There is a possible risk of cancer induction from exposure to X-rays. However, we are constantly exposed to radiation from the air we breathe, the food we eat, the ground and from space. This is known as background radiation and has a cancer risk of around 1 in 10,000 per year. Having the procedure could result in you receiving an additional dose of radiation equivalent to a few months to a year of background radiation. The associated risk of possible cancer induction from receiving a dose of radiation equivalent to a few months to a year of background radiation is considered to be very low. Your doctor has agreed that this procedure is the best examination for you compared with others and that the benefit of having it outweighs the risks from radiation.

Despite these possible complications, the procedure is normally very safe and should assist your doctors in planning your care.

Are you required to make any special preparations?

It depends on the location of the biopsy as to whether you are a day case patient or require an overnight stay. This will be detailed in your appointment letter. The procedure is carried out under local anaesthetic.

You will be asked to attend the ward early in the morning so all required paperwork can be completed. You will also be asked not to eat for four hours before the procedure, although you may take small sips of water if needed.

You should have someone to drive you home following the procedure. Someone should be at home with you for 24 hours following your discharge. If you do not, please let the Interventional Radiology department know.

You may be sent a blood form and asked to arrange a blood test prior to the procedure to check your bloods are within safe limits to have the procedure.

If you are taking anti coagulation or anti platelet medication, such as warfarin, you will be given instructions detailing if this medication needs to be stopped and for how long. If you have not been given this information, please contact the Interventional Radiology department. Unless advised otherwise please continue to take all other medication e.g. for blood pressure.

If you have previously had a reaction to the dye (x-ray/CT contrast agent) or a local anaesthesia, please contact the Interventional Radiology department.

What happens during the percutaneous biopsy?

The procedure will be explained to you, including the risks and you may be asked to sign a consent form. Please feel free to ask any questions that you may have and remember that even at this stage, you can decide against going ahead with the procedure if you so wish.

On the ward you will be asked to get undressed and put on a hospital gown. A small cannula (thin tube) may be placed into a vein in your arm in case you need any medication.

The imaging used and your position will depend on the location of the biopsy. You may have monitoring devices attached to your arm and finger.

The procedure is performed under sterile conditions and the interventional team members performing your procedure will wear sterile gloves and may also wear a sterile gown. Your skin at the region of interest, will be cleaned with a cold antiseptic and you will be covered with sterile drapes.

The clinician will use an ultrasound probe, X-rays or the CT scanner to decide on the most suitable point for the biopsy. Local anaesthetic will be injected into the skin to numb the area. A small incision will be made. The specialised biopsy needle will be introduced under image guidance. When the biopsy is taken the needle makes a 'click' noise similar to a stapler. Usually, 1 to 3 biopsy samples will be taken depending on how satisfied the person performing your biopsy is with the samples obtained. Once completed a small dressing will be placed over the wound, which can usually be removed after 48 hours.

Will it hurt?

When the local anaesthetic is injected, it will sting for a short while, but this soon wears off. The amount of discomfort felt depends on the location of the biopsy. The deep tissue within the abdomen cannot be numbed and some patients feel discomfort when the needle is inserted, however, this usually wears off once the biopsy is completed. Patients undergoing a liver biopsy may experience pain in their right shoulder, which should also wear off. If required painkillers can be given.

How long will it take?

Every patient is different, and it is not always easy to predict, however, expect to be in the radiology department for about an hour.

What happens afterwards?

Your biopsy results will be sent to your doctor. Results can take up to 7 to 10 days. Your doctor will inform you of the results.

If you are an inpatient or day case, you will be taken back to your ward. Nursing staff will carry out routine observations. You will generally be required to stay in bed, initially lying flat. If you have an issue lying flat, please contact the Interventional Radiology department. After which you will be allowed to sit up, then to walk around the ward, until you have recovered and are ready to go home usually 4 to 6 hours post procedure. You will be informed following the procedure regarding dressing care and when normal daily activities should recommence.

If you have any concerns after discharge; for non-urgent issues please contact your GP or 111, for urgent issues please come to A&E.

Finally, some of your questions should have been answered by this patient information leaflet but remember that 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.

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