

Taking a sample of your liver by a needle through the skin (percutaneous liver biopsy)

Radiology Department

Information for Patients

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Introduction

Please read all of this leaflet. It tells you about your examination. It has important information and instructions.

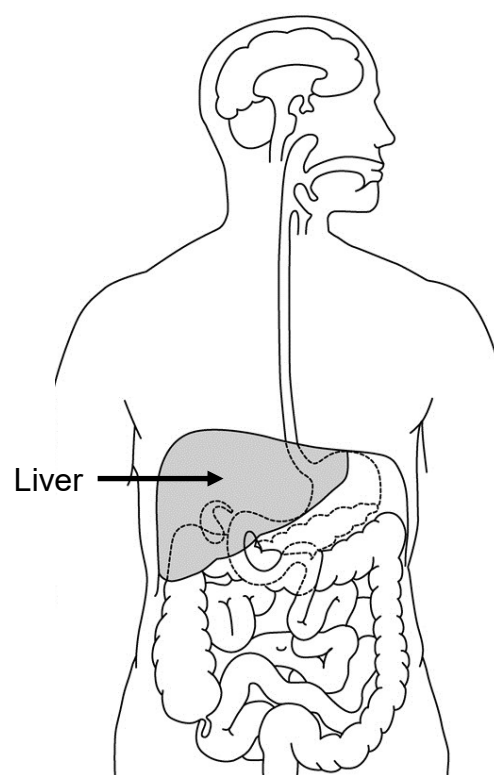
What is a percutaneous liver biopsy?

This is a procedure to get a small sample of tissue from your liver. Percutaneous means ‘through the skin’. We take liver biopsy samples through a tiny cut in the skin.

We pass a special needle through the skin and into the liver. We get a sample of the liver tissue. We send the sample to someone who specialises in making a diagnosis from tissue samples (pathologist). They look at it closely under a microscope.

Why do I need a liver biopsy?

You have had tests that show there may be an abnormality in your liver. The doctor in charge of your care feels that getting a sample of liver will help make the correct diagnosis. This will help them decide what treatment you might need.



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Asking for your permission (consent)

The doctor who referred you should have talked to you about the reasons for this procedure and any other options.

You have been referred to a hospital doctor or a doctor who specialises in imaging and X-ray treatments (a radiologist). They will check that you know why the procedure is being done, the potential risks and the chances of success.

You will sign a consent form to confirm this. This may be on an iPad or a paper form. **You should feel that you know enough before you sign the consent form.**

If after talking to the hospital doctor or Radiologist you do not want to have the procedure then you can decide to say no.

If the Radiologist feels that your health problem has changed they will talk to you about if the procedure is still needed. They may ask for the doctor who wanted you to have the procedure to talk to you and review your condition.

Do I need to take my normal medicines?

If you are on medicine from your doctor please take it as normal unless you are on blood thinners or take medicine for diabetes.

What if I am taking blood thinners?

If you are taking medicine that thins the blood (anticoagulants or antiplatelets) you may need to stop taking it or take a different one for a few days.

Please call the radiology department for advice as soon as possible. The phone number to call is on your appointment letter. It is also at the end of this leaflet. We will ask you what blood thinning medicine you are taking, how much you take (the dose), and what you are taking it for.

Common examples of these drugs include aspirin, warfarin, clopidogrel (Plavix®), apixiban (Eliquis), edoxaban (Lixiana), rivaroxaban (Xarelto), ticagrelor (Brilinta), dalteparin, enoxaparin and heparin. If you are on Dalteparin or Heparin injections then these need to be stopped for 24 hours (1 day) before your procedure.

You may have already been given instructions on blood thinners by the doctor who referred you for this procedure. Please still call the radiology department so we can check this.

What if I have diabetes?

If you have diabetes you may need to adjust your diabetes medicine.

In particular, if you take a sodium-glucose co-transporter-2 (SGLT2) inhibitor (drugs ending in '-flozin' such as dapagliflozin, canagliflozin or empagliflozin), current guidelines recommend stopping this medicine on the day before and the day of your procedure. Please talk to your normal diabetes care provider if you need advice about the eating and drinking instructions in this leaflet.

Important information

Please tell the X-ray staff when you arrive if:

- You are allergic to rubber (latex), have any other allergies or have asthma.
- You have diabetes.

How do I get ready for the biopsy?

- Do not eat for 6 hours before your procedure.
- **6 hours before your procedure:** you can still drink clear liquids like water, squash, or see-through drinks that are not fizzy. This is up to 2 hours before the procedure.
- **When there is 2 hours to go** before your procedure, you can take sips of water up to 170ml per hour. This is until you are about to go for your procedure. If you are in hospital the nursing staff can give you a cup with 170ml water.
- The procedure can be done as an inpatient (overnight stay in hospital) or as a day-case. This will depend on your health and home circumstances.

Who will be doing the procedure?

- A doctor who specialises in imaging and X-ray treatments (an interventional radiologist) will do the procedure.
- A radiographer will move and control the special X-ray equipment.
- A nurse and maybe a healthcare assistant will work with the radiologist and care for you.
- A student may also be in the room. This is because we are a teaching hospital. If you do not want this, you can ask that a student is not in the room when you have your procedure.

What happens during the procedure?

- We will ask you take off your clothes and put on a hospital gown.
- We will put a thin tube (cannula) into a vein in your arm. This will happen either on the ward or when you get to Radiology for your biopsy. This is so that we can give you medicines if needed.
- Your biopsy will be done in the Radiology department.
- You will lie down on the X-ray or scanning table. The radiologist will decide on the best position for you to lie down your biopsy. 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.
- We put a blood pressure cuff (strap) on your arm. We also put a small peg on your finger. These will all be attached to a monitoring machine. This is so we can check your blood pressure, your heart rate and your heart health.
- We will keep everything clean (sterile). We clean your skin with antiseptic. This may feel cold. We cover some of your body with sterile sheets.

- We use an ultrasound machine or CT scanner to help decide on the best place for inserting the biopsy needle.
- We inject some local anaesthetic into the skin where we will put the biopsy needle. This may sting to start with. This soon wears off and the skin should then feel numb.
- If the procedure does become uncomfortable you should tell the member of staff who will be with you during the procedure.
- We put a biopsy needle through a tiny cut in your skin. We then use the ultrasound or CT scan to guide the needle into the abnormal tissue in your liver. You may feel a pushing feeling when the biopsy needle is put in. It should not be painful. If you do feel pain please tell us. We may be able to give you more local anaesthetic.
- We may ask you to stop breathing (hold your breath) for a few seconds when we take the sample.
- You should usually not be aware of any pain from the biopsy needle. When we take the biopsy you may feel some pressure or pushing. You may also hear a clicking sound.
- We may take 2 or 3 biopsy samples.
- Sometimes, we cannot take a biopsy sample from the area that we need it from. We will talk to you if this happens.

How long will the procedure take?

- Every patient's situation is different. It is not always easy to know how complex or how straight forward the procedure will be.
- The first part of the procedure when we are getting the equipment ready may seem to take a while. Doing the biopsy itself does not take very long at all.

Will it hurt?

You may feel some pain or discomfort. When the local anaesthetic is injected it stings to start with. This soon wears off and the skin and deeper tissues should then feel numb often done so quickly that it does not cause much discomfort. Please tell us if the procedure does become painful.

What happens after the procedure?

You will be taken back to your ward or a day case clinic. Nurses will do routine checks, such as taking your pulse, blood pressure and temperature. This is to make sure that there are no problems. They will also look at the skin entry point to make sure there is no bleeding from it.

You usually need to stay in bed for a few hours until you have recovered. You may be allowed home on the same day, or kept in hospital overnight. If you have any problems after the procedure please speak to the staff on the ward or your radiology nurses.

You will need someone to drive you home.

How do I get the results?

You will not get the results straight away.

We will send your biopsy sample to the laboratory for a pathologist to test and look at.

We will tell you how to get your results after your biopsy.

What if I need to talk to someone after the procedure?

If you have any problems after the procedure please speak to the nurses and doctors looking after you on the ward or the radiology staff.

If you have any problems relating to your biopsy procedure once you have left hospital, please contact your GP for advice.

Are there any risks or complications?

As with any procedure there is a risk of complications. Below are the most common risks and complications. The chance of these happening is different for each person. We will talk to you about your risks before you sign the consent form.

- **Bleeding:** fewer than 1 in 320 patients will have significant bleeding after a biopsy. This usually shows within 3 to 4 hours. The bleeding often stops on its own. If it goes on for longer, you may need a blood transfusion. You may need surgery or a procedure (angiography) to find and treat the site of bleeding if it is serious or does not stop on its own.

- **Damage to nearby body parts (perforation):** This can happen in up to 1 in 1000 patients.

The biopsy needle could pierce organs that are close to the liver. These include the kidney, small intestine and gallbladder. This may need treatment but does not usually cause a serious problem.

The biopsy needle could go into the lung area. Air could build up in the space between the lung and chest wall (pneumothorax). This could cause the lung to deflate. It can cause pain and difficulty breathing. We do a chest X-ray if you get these symptoms. If it shows a pneumothorax we may need to put in a tube to drain the air out. This will let the lung expand again.

- **Discomfort:** 1 in 4 patients have discomfort. This is usually dull and mild. It may be worse during breathing. It usually lasts for only a short time (a few hours to less than 24 hours). Less commonly, patients have mild discomfort that lasts longer than 24 hours.
- **Low blood pressure:** low blood pressure or fainting may happen right after a biopsy. If your blood pressure stays low or gets lower, this can be a sign of bleeding.
- **Bile peritonitis:** this is a condition where bile from the liver leaks inside your tummy (abdomen). This can irritate the lining of the abdomen. This happens in about 1 in 1000 (0.09%) of patients. It usually gets better on its own. If the leak is because of an injury to your gallbladder, you may need to have an operation to take your gallbladder out.



- **Infection:** the risk depends on how complex your health condition is. The general risk for a wound infection is fewer than 1 in 100 (less than 1%). Patients with primary sclerosing cholangitis (PSC) or biliary obstruction (blockage of the tubes draining your liver) can have a higher risk (between 6 and 14 patients in 100). This is because these health problems mean there is a higher risk of bacteria being released into the blood as a result of the biopsy. We sometimes give antibiotics for these patients to help stop them getting an infection.
- **Risk of death:** there is a risk of death from having a percutaneous liver biopsy. This could be directly caused by the procedure. Or, it could be from complications in the next few days or weeks. This risk is between 1 and 3 patients in every 1000 percutaneous liver biopsies (0.1 to 0.3%). The risk to each patient depends on many things like your age and health.

Are all biopsies successful?

Not all biopsies are successful.

This can be if we could not get biopsy tissue from the abnormal tissue. We may have taken your biopsy tissue from normal liver tissue instead.

Or, it could be that we have not been able to get enough abnormal tissue for the pathologist to make a definite diagnosis.

The radiologist doing your biopsy may be able to give you some idea about the chance of getting a good enough sample.

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, but not on bank holidays.



اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
على هذه المعلومات بلغةٍ 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

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