



# CT or ultrasound guided percutaneous liver biopsy

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**This leaflet explains the procedure “CT or ultrasound guided percutaneous liver biopsy”. We hope you find the information helpful but you should still discuss the risks and benefits of the procedure with your doctor.**

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## What is a percutaneous liver biopsy?

This is a minimally invasive way of obtaining a tiny piece of liver using a special needle placed in the liver through a nick in the skin. The procedure is carried out under local anaesthetic – i.e. you are awake but the area will be numb. You will normally go home the same day unless you do not have someone to watch over you for the 24 hours following the biopsy, in which case a one night stay in hospital may be necessary.

## Why do I need a liver biopsy?

Investigations have shown an abnormality in your liver but it is not always possible to determine the cause or degree of these abnormalities solely using scans or blood tests. To get a better idea of what is wrong, we need to obtain a small sample of liver tissue and examine it under a microscope.

Do make sure you understand what is involved before you sign the consent form and remember that you can change your mind about having the biopsy at any time.

## Who has made this decision?

The consultant in charge of your care feels this is the best way of getting more information about your liver. Your opinion will be taken into account and if, after talking to your doctors, you do not wish to have the procedure carried out, you can decide not to have the biopsy.

## Who will be performing the biopsy?

A radiologist (X-ray specialist doctor) who is trained to use ultrasound or CT to guide the biopsy needle accurately into the liver will carry out the biopsy.

## Where will the biopsy take place?

In the main X-ray Department (Radiology) in Centre Block in the Royal Berkshire Hospital.

## What happens before the biopsy?

In the two weeks before your liver biopsy you will need to have blood samples taken to make sure your blood clots properly. Blood samples can either be taken in the hospital’s phlebotomy

(blood test) department or at your GP's surgery by one of the practice nurses.

Ideally blood-thinning medication such as Warfarin, Dabigatran, Rivaroxaban, or Clopidogrel are temporarily discontinued prior to the biopsy. This is not always possible or you may be required to take additional short acting blood thinners for a few days before. If you are taking any of these medications and have not received instructions to stop them please contact the X-ray Department on 0118 322 8368.

You will be asked **not to eat for 6 hours nor drink for 2 hours before the biopsy.**

Please take all normal medication other than those mentioned above that need to be stopped for the biopsy.

### **What happens during the liver biopsy?**

You will be asked to undress from the waist up and put on a hospital gown. You will be taken to an X-ray room containing a CT or ultrasound machine. You will be asked to lie on your back on a hospital trolley with your right hand above your head.

The radiologist will scan your liver to decide the best site for the biopsy. He or she will then clean your skin with antiseptic and will inject the skin and deeper tissues with local anaesthetic. This will sting briefly before the area goes numb. The radiologist will make a small incision and insert the biopsy needle while you hold your breath. Then the CT or ultrasound will be used to guide the needle into the correct position to remove the tiny sample from your liver.

Often a small dissolvable plug is placed in the hole the needle has made in the liver. This may reduce the chance of bleeding.

In patients in whom the risk of bleeding is too high even using this technique, a 'transjugular liver biopsy' is a safer alternative. In this approach, the needle is introduced into the liver via a vein in the neck. Any bleeding that occurs is into the vein and so no blood is lost from the circulation.

### **How long will it take?**

The whole procedure takes between 15 and 20 minutes. The biopsy itself however takes only a matter of a few seconds.

### **Will it hurt?**

You will feel stinging as the local anaesthetic is injected. Some people also feel some momentary discomfort as the needle enters the liver. You may feel discomfort after the biopsy has been taken either in your right shoulder or in the stomach. This is fairly common (30%) and you will be offered painkillers to relieve this discomfort. Do let the nursing staff know if the discomfort does not go away.

### **What happens afterwards?**

After the biopsy, you will be asked to remain in bed for 4 hours. The first two hours will be flat and you will not be able to eat or drink. After two hours you will be allowed to sit up and eat and drink.

During this period the nursing staff will take your pulse and blood pressure regularly.

Assuming there are no complications, you will be allowed home after 4 hours.

You will need to be accompanied home by a friend or relative in a car or taxi. You will also need a friend or relative to stay with you overnight.

If you do not have a suitable person to accompany you and stay overnight we will arrange overnight admission to the hospital for you.

The biopsy result will be sent to the consultant in charge of your care – this will take a few days.

## What are the risks and complications?

Percutaneous liver biopsy is a very safe procedure but there are some risks and occasional complications.

The most common complication (30%) is pain, which may take several hours to settle.

Bleeding is usually minimal and of short duration but instances of more serious bleeding do occur (approx 1 in 300) either in or around the liver, into the abdomen or gut.

If the bleeding continues then a further radiological procedure (embolization) or an operation may be needed.

The chance of bleeding causing death is approximately 1 in 10,000.

## Finally...

Hopefully some of your questions should have been answered by this 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, before you sign the consent form.**

## References:

- Griffiths A, Viiala CH, Olynyk JK. Liver Biopsy in the 21<sup>st</sup> Century: Where and Why? Medical Journal Australia 21 Jan 2002 176 2: 52-53
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- Radiology 1984 Sep; 152(3):755-7. CT-guided liver biopsies: eight years' experience. Work in progress. Martino CR, Haaga JR, Bryan PJ, LiPuma JP, El Yousef SJ, Alfidi RJ.
- J R Soc Med 1982 Sep; 75(9):736-41. Needle biopsy of the liver: a review. Losowsky MS.
- Guidelines on the use of liver biopsy in clinical practice – 2004 [www.bsg.org.uk](http://www.bsg.org.uk)

## Contacting us

Radiology Department, Tel 0118 322 7991.

Radiology Day Case Unit, Tel 0118 322 8368 (Monday-Friday 8.30am-5pm).

To find out more about our Trust visit [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

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Dr Matthew Gibson, May 2024.

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