

## **Percutaneous Liver Biopsy**

### **What is a liver biopsy?**

In a liver biopsy, the doctor will take a very small piece of your liver (about 1/50,000th of your liver) to send for further tests. Most liver biopsies are examined under the microscope by a pathologist.

Sometimes, a piece of liver is sent to microbiology to see if there is any infection in the liver. Your doctor will explain to you why he/she thinks you need a liver biopsy. A liver biopsy may be done to look for the cause of liver abnormalities, to assess if, and how much, the liver is damaged and/or to help in planning treatment.

### **Are there any alternatives to a liver biopsy?**

There is no other procedure that will give your doctor the same information as a liver biopsy. The clinicians can get a lot of information about your liver from the blood tests and imaging (with ultrasound, Fibroscan or CT and MRI scanning) but a biopsy will provide more information, such as the microscopic structure of the liver and the pattern of damage; in some cases, looking at the liver through a microscope is the only way of finding the cause for the liver problem.

### **How is the liver biopsy done?**

A biopsy can be done through the side (percutaneous) or, through a long needle inserted through a small cut in the neck and, under X-ray, guidance, passed into the liver (transjugular biopsy).

Before the liver biopsy is done, the doctor or nurse will check your blood to make sure that clotting is within acceptable limits and the biopsy done safely. Generally, you will be seen in the pre-screening clinic and have your bloods taken, MRSA screen and complete a health screening questionnaire. If you are taking certain medicines, drugs or tablets that may affect bleeding and clotting you may be asked to stop them for a few days or a week or two before the biopsy.

The pre-screening nurse may telephone you to check your drugs and tablets with you before you come to hospital.

Sometimes, perhaps because of liver disease, the blood does not clot as well as is needed and you may be given some blood factors (plasma) to help your blood clot. Sometimes you may also need platelets to be given. If it is unsafe to do the biopsy, the doctor will not proceed with the biopsy.

If you are nervous, do ask the doctor about having sedation before the biopsy. Please let us know about this as early as possible because injected sedation is not always available.

## Information for Patients

---

In order to give injected sedation, an extra nurse or doctor needs to be present to give you the injection and monitor you during the procedure therefore telling us in advance will help us plan for this. You may also be able to take a 'relaxing' tablet by mouth before the procedure, if we know to prescribe it in advance.

You will be asked to give written consent to the biopsy before it is carried out. Please do not hesitate to ask the doctor if you have any questions at all.

Most biopsies are now done with ultrasound so you will be taken to the Imaging department; you may walk down or be taken on your bed or on a trolley.

The doctor will explain the procedure to you before doing the actual biopsy.

During the biopsy, you will have to lie flat on your bed or trolley. The ultrasound will be used to show the doctor exactly where your liver is and the best place for the biopsy. The liver is normally situated on your right side just under the lower ribs.

The biopsy is often taken here at the right side of the chest or in the front at the top of your tummy.

The doctor will put some disinfectant on your skin and then inject a local anaesthetic. This may sting before the skin goes numb. You may also feel the local anaesthetic deeper inside before it works. It takes a few minutes to have its full effect. The doctor will then take the biopsy. This usually takes only a few seconds. You will be asked to hold your breath for a few seconds while it is being done. Sometimes the doctor needs to take 2 or 3 samples to be sure to have enough to analyse.

When the biopsy is done, a plaster will be put on your skin at the biopsy spot. You will have to lie on the bed or trolley for at least 4 hours. During that time, the nurse will take your blood pressure and pulse. This will be every 15 minutes for the first 2 hours, then less frequently. You will be able to eat and drink a little during this time.

### Will it hurt?

The procedure may be uncomfortable for you and there may be some pain either at the site of the biopsy or in your right shoulder. Normally, the pain is controlled by local anaesthetic but sometimes you might need to take tablets to control the pain.

The doctor will write you a prescription for this. If you are in pain, please do ask the nurse for pain relief.

### What are the complications?

The vast majority of liver biopsies are done without any serious complication.

The most common complication is pain and this can usually be controlled with pain killers. Bleeding is a potential problem, and for this reason the doctor will check that your blood clots normally and the nurse will take your blood pressure and pulse after the procedure. Bleeding may

## Information for Patients

---

affect 1 in 200 liver biopsies. Often this settles by itself, but we know that 1 in 4 patients who bleed may require a blood transfusion. Very rarely (perhaps less than 1 in 500 of the patients who have this problem) an operation is required to stop the bleeding.

As the doctor is unable to see the whole liver when performing a biopsy, there is the possibility that the needle might injure other organs, such as the gall bladder or, very rarely, the kidney or bowel. This happens in less than 1 in 1000 cases. Sometimes, needle injury to other organs does cause problems, however very severe complications are extremely rare.

### What should I do before the liver biopsy?

It is important that you understand what is involved with a liver biopsy and why the liver biopsy is being done. If you do have any questions or uncertainties, you must ask the doctor who will be pleased to answer any of your concerns.

Generally, you will be seen in a pre-screening clinic before your biopsy to check your blood clotting, MRSA screen and complete a health screening questionnaire.

It is important that you tell your doctor about all the tablets you take.

If you are taking tablets containing aspirin/dipyridamole/non-steroidal anti-inflammatory drugs (such as ibuprofen) you may need to stop them one week (7 days) before the biopsy. Clopidogrel/prasugrel needs to be stopped 2 weeks (14 days) before biopsy, please see note below.

Warfarin may need to be stopped 5 days before liver biopsy, please see note below. If you have had cardiac surgery/stents then you may need to be converted onto an injection of heparin, this will be assessed/discussed with you at your consultant appointment prior to pre-screening.

If you are taking Rivaroxaban/Dabigatran or Apixaban this will also need to be stopped before your biopsy but will be discussed with you at your consultant appointment.

If you are allergic to anything (tablets, plasters or other agents), again, please be sure to inform the doctor before the procedure.

It is sensible not to eat or drink much in the 3 hours prior to the biopsy. You should also go to the toilet before you have the liver biopsy as you will have to lie on your bed for at least 4 hours afterwards.

### After the liver biopsy

You will need to be in hospital for at least 4–6 hours after the biopsy. This may require admission either overnight or may be done as a day case.

After the liver biopsy, you will need to stay in your bed for 4–6 hours, then if everything is satisfactory you may be free to go home. Please arrange for someone to collect you on discharge rather than drive yourself. You must have a responsible adult with you on the first night following your biopsy and be within a 30 minute drive from a hospital.

## Information for Patients

---

If you have received sedation you should not drive or operate machinery for at least 36 hours. Please ask about what arrangements will be made for you to be informed of the biopsy report. It is important that you do not do anything strenuous within 36 hours after liver biopsy.

If you have any discomfort, you can usually take paracetamol, but, if the pain is severe, let the hospital know.

If you have any other untoward effect, which may be related to the liver biopsy please ring one of the contact numbers or ask to speak to the Liver Medical Registrar via switch 0121 627 2000. Please also read the patient discharge advice sheet.

## Research

Sometimes we would like to use any of the biopsy that is not needed for clinical purposes for research. We would only do this with your written approval. Furthermore, all such research is approved both by the Trust and an independent Research Ethics Committee.

## Contacts

Ambulatory Care Ward 0121 371 3100  
Liver Outpatients Department 0121 371 4414  
Pre-screening Service 0121 371 5651  
Ward 726 0121 371 7303/7305/7307

## Department address and contact information:

**The Liver Unit Queen Elizabeth Hospital Birmingham**  
Mindelsohn Way, Edgbaston  
Birmingham B15 2GW Telephone 0121 627 2000

If you require this information in another format, such as a different language, large print, braille or audio version please ask a member of staff or email [interpreting.service@uhb.nhs.uk](mailto:interpreting.service@uhb.nhs.uk)