

## Radiology

# Transjugular Liver Biopsy

### Introduction

You have been advised by your hospital consultant that you need to have a transjugular liver biopsy. This information explains what is involved and what the possible risks are.

This leaflet may not answer all your questions, so if you have any concerns, please ask the ward staff.

If you feel unhappy with any part of your care within the X-ray department, please ask to speak to a senior member of staff.

Please read this leaflet carefully to ensure you are well prepared for the examination.

Please contact the X-ray Department if your weight is equal to or more than 205Kg (32 stone) you may need an alternative examination.

### Points to remember:

- Please bring any sprays or inhalers that you are taking with you to the X-ray Department.
- Please leave any valuable possessions on the ward.
- If you are taking **any anticoagulation or antiplatelet medications**, please tell the ward staff, as these medications may need to be stopped before the procedure.

### What is a transjugular liver biopsy?

A liver biopsy is a procedure that involves taking a tiny specimen of the liver for examination under a microscope.



## Patient Information

In most cases, a liver biopsy is taken by passing a small needle through a small incision at the skin on your abdomen into the liver. This is called a percutaneous liver biopsy.

A transjugular liver biopsy is an alternative way of obtaining the liver specimen by passing the needle through the jugular vein in the neck. This method is normally used in patients who have clotting disorders or ascites, i.e. fluid in the abdomen, which increase the risk of bleeding after a liver biopsy.

### **Why do I need a transjugular liver biopsy?**

The doctors looking after you have decided that you need a liver biopsy to obtain more information about your liver problem. The information gained from the biopsy will help the doctors to tailor the treatment for your condition.

### **Referral and consent**

The doctor who looks after your liver disease will discuss transjugular liver biopsy and alternative treatment options, including the reason for the procedure and any risks. Your doctor will then refer you to an Interventional Radiologist who performs transjugular liver biopsy.

You will be given verbal and written information about the procedure either in clinic or on the ward. You will have the chance to ask any questions or discuss your concerns about it before giving your consent.

You may be asked to sign the consent form on the ward or in the Interventional Radiology suite before the procedure. It is important that you understand the procedure before giving your consent, therefore if you have any questions, please ask the doctor on the ward or the Interventional Radiologist.

You can reject the procedure or withdraw your consent at any time before the procedure.

In some circumstances, your condition might change in between the referral from your doctor and the procedure date. You will be assessed by the Interventional Radiologist on the day to see whether it is still appropriate to carry out the biopsy. Any change of plan will be discussed with the referring doctors, and this will be explained to you.

### **How do I prepare for a transjugular liver biopsy?**

- You will be admitted to the hospital before the procedure.
- You will need up-to-date blood test, in particularly to check whether you have increased risk of bleeding. Blood samples will also be sent to the blood bank in case you need a blood transfusion for the procedure.
- If your blood test shows that you have increased risk of bleeding, you may be given medications or blood products infusion to correct that before the procedure.
- If you are on any anticoagulation medications, such as Apixaban, Rivoroxaban, Dabigatran, Warfarin, etc, these will need to be stopped for a specific length of time. You may need a temporary medication, often a Clexane (heparin) injection to prevent blood clot, while you are withholding your anticoagulation medication. Please contact the Interventional Radiology Department for specific instructions.
- If you are on any antiplatelet medications, such as Aspirin, Clopidogrel, etc., these will need to be stopped for 5 days before the procedure.

The contrast medium used during the procedure contains iodine and is excreted by the kidneys in your urine. Please inform the Interventional radiologist or radiographer:

- If you are allergic to iodine, have any other allergies or suffer from asthma.
- If you have reacted previously to the injection used for kidney X-rays or CT scanning.
- If you have known kidney problems.

The procedure is normally performed under local anaesthesia, although you may be given sedation, and rarely general anaesthesia if necessary.

In preparation for general anaesthesia/ sedation:

- Please do not eat for the 6 hours before your procedure time.
- You can drink water only during this time but must stop 2 hours before your procedure time.
- You can take your normal medications (excluding anticoagulation, antiplatelet medications, and medications for diabetes) with water only on the day of your procedure.

## Patient Information

- If you are diabetic, please tell the doctor or Interventional Radiology Department. Instructions for your diabetic medications while you are fasting will be given to you.

### **Before your procedure**

- You will meet the Interventional Radiologist who will perform your procedure, when you can ask any further questions. Your consent will be reconfirmed before starting the procedure.
- If it is decided for you to have a general anaesthesia, you will also be seen and assessed by the Anaesthetist.
- If you decide to go ahead with the procedure, you will then be moved into the Interventional Radiology theatre.
- You will require a cannula in your vein for medications or intravenous fluid you may need during the procedure.

### **During your examination**

- You will be brought into the Interventional Radiology theatre, where you will be asked to lie onto the X-rays table.
- Your blood pressure, heart rate and oxygen levels will be monitored by an interventional radiology nurse who will stay with you throughout the procedure.
- The skin of your neck will be cleaned with antiseptic, and the rest of your body will be covered with a sterile drape.
- The Interventional Radiologist will inject local anaesthetics into the skin of your neck to numb the area. This will take away pain, but you should still expect to have a sensation when the tube is passed through the vein your neck. Please let your nurse know if you feel pain during the procedure so that more local anaesthesia or sedation can be given to you.
- Instruments including a small tube (catheter) and a biopsy needle will be passed through the incision on your neck into your liver under X-ray guidance.
- A few specimens will be taken and sent to the pathology laboratory for microscopic examination.

## Patient Information

### Recovery

- You will be moved to the Interventional Radiology recovery area.
- You will have your blood pressure, pulse and oxygen level monitored in the recovery area.
- Once you are awake and the above observations are stable, you will be transferred back to the ward, where the nurses will continue to perform these observations at regular intervals.
- You will be advised to stay in bed for several hours for these observations.
- You may feel some stiffness in your neck, discomfort in your abdomen or pain in your shoulders. These are related to the procedure and will normally improve with pain relief medications. Please seek help from ward staff if these are severe.

### Risks of the procedure

As with any procedure or operation, complications are possible. We have included the most common risks and complications below. The probability of these complications and the risks will be discussed with you before you sign the consent form.

Transjugular liver biopsy is generally a safe procedure. The overall risk of complication that requires further treatment is low (1–2%).

- **Puncture site complication** – You can get bruising or swelling under the small cut in your neck. This will resolve without treatment. However, if you notice increasing swelling at these sites, please seek medical attention.
- **Bleeding in liver** – The procedure can cause injury to the blood vessels within the liver leading to bleeding within or outside the liver. If this happens, you may require a blood transfusion or further procedure to stop the bleeding. In general, the risk of transjugular liver biopsy is lower than a percutaneous liver biopsy.
- **Injury to other liver structures or bile leak** – other liver structures such as bile duct can be injured during a liver biopsy. This is rare but may require further treatment if it occurs.
- **Need for further liver biopsy** – Occasionally, the specimens taken from your liver may not give enough information, or if your doctor want to follow up on your response to any treatment, a repeat liver biopsy may be required.

## Patient Information

- **Allergy to intravenous contrast medium** – Allergic reaction from contrast medium used during the procedure can range from rash, breathlessness or severe anaphylaxis, which is rare. Please inform your doctor or Radiology staff if you have any known allergies.

Despite these possible complications, the procedure is normally very safe. You will be monitored closely by interventional radiology and ward staff during and after your procedure, so that any complications can be identified as early as possible and treated appropriately.

## Radiation Risks

- The procedure is performed with X-rays guidance. X-rays is a type of radiation. We are all exposed to natural background radiation every day of our lives; this comes from the sun, food we eat, and the ground. Exposure to X-rays carries a small risk, but your doctor feels that this risk is outweighed by the benefits of having the procedure. We will take all safeguards to minimise the amount of X-rays you receive.
- **Patients aged 12 – 55 years - could you be pregnant?** The risks of radiation are slightly higher for the unborn child so you will be asked to confirm that you are not pregnant before the examination can proceed.

## How will I get my results?

The biopsy specimens will be sent for pathology laboratory for examination. The examination will take a few days to a few weeks.

Once the results are available, your doctor will discuss these with you.

## Other sources of information:

For information about the effects of X rays and information about radiology departments visit the NHS website: <https://www.nhs.uk/conditions/x-ray/>

For information about the effects of X-rays read the National Radiological Protection Board (NRPB) publication: “X-rays how safe are they?” on the Health Protection Agency website: [www.hpa.org.uk](http://www.hpa.org.uk)

Please note that the views expressed in these websites do not necessarily reflect the views of UHCW NHS Trust.

## Patient Information

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact the number on your appointment letter and we will do our best to meet your needs.

The Trust operates a smoke free policy.

### **Did we get it right?**

We would like you to tell us what you think about our services. This helps us make further improvements and recognise members of staff who provide a good service.

Have your say. Scan the QR code or visit:  
[www.uhcw.nhs.uk/feedback](http://www.uhcw.nhs.uk/feedback)



#### **Document History**

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