



University Hospitals Birmingham
NHS Foundation Trust



Information for patients having a percutaneous renal biopsy

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Introduction

This leaflet is about the procedure known as a kidney biopsy. Its aim is to explain what is involved and the possible risks. If there are any areas that are not clear or there are any questions you need answering then there are telephone numbers at the back of this booklet for you to contact the urology nurse specialists. It is important that you understand the procedure and its effects on you.

What is a percutaneous kidney (renal) biopsy?

A biopsy is a procedure in which a small piece of kidney tissue is removed using a special needle. This allows the doctors to look at the tissue sample under a microscope to determine what it is. This will allow an accurate diagnosis and treatment plan for you. As this biopsy is done through the skin, it is called a percutaneous biopsy.

Why do you need a biopsy?

Other tests that you may have already had performed, such as an ultrasound scan computed tomography (CT) scan or magnetic resonance imaging (MRI), have shown that there is an area of abnormal tissue inside your kidney. It is not always possible to say exactly what the abnormality is, and the simplest way of finding out is by taking a tiny sample and to look at it under a microscope.

Who will perform the biopsy?

A specially trained doctor called an interventional radiologist. They have special expertise in using imaging to guide the needle to the abnormal area in the kidney

Where will the biopsy take place?

In the radiology department – either in the ultra sound room, CT scanner or a special X-ray room.

Pre-admission clinic

You will receive an appointment to attend a pre-admission clinic before your biopsy, so all of the necessary investigations can be performed such as blood tests to check that you do not have an increased risk of bleeding or are at risk of any infection. However some biopsies are arranged at very short notice, you should inform the doctor if you are taking medication that prevents clotting of the blood such as warfarin, aspirin, dipyridamole or clopidogrel.

You should stop taking warfarin three–five days, aspirin one day, or clopidogrel seven days prior to your biopsy (but the precise timing of when you should stop will be discussed with you, according to the reason for taking these drugs).

You may be asked not to eat for four hours before the biopsy, although you may still drink clear fluids such as water up to two hours before the procedure.

Admission to hospital

If you agree to have the biopsy, you will be asked to sign the hospital's consent form on the day of the procedure which will state that you have received information about the procedure and have discussed it with the doctor.

You should make sure you are satisfied that you have received enough information about the procedure before you sign the consent form.

What is the procedure for biopsy?

You will be asked to get undressed and put on a hospital gown. You may be given a sedative (a drug to relax you) to relieve anxiety. You may need to have a needle put into a vein in your arm, so that the radiologist can give you a sedative or painkillers. If a CT scan is performed an injection of contrast is required to outline the abnormality in your kidney.

Because your kidneys are located near your back, you will be asked to lie flat on your front with a cushion placed under your stomach for support. Getting into the correct position is an important part of the procedure. If you think that you may have a problem lying on your front, please tell the interventional radiologist.

A biopsy is performed under sterile conditions and the interventional radiologist will wear sterile gloves to carry out the procedure.

An ultrasound scan or CT scanner will be used to locate the best point of insertion of the biopsy needle. The site is then marked and the skin over your back just below the ribs is cleaned with an antiseptic solution, and covered with a sterile towel. Some local anaesthetic is injected into the skin; this may sting a little at first. More local anaesthetic is then injected around the kidney. Once the area is completely numb, the biopsy needle will then be passed. You may be aware of the needle passing into your body and experience a pushing sensation which can be uncomfortable but it is not usually painful.

Because kidneys move when you breathe, you are usually asked to stop breathing for a few seconds while the biopsy is taken. You may hear a clicking sound when the biopsy needle is activated. Sometimes it may be necessary to pass the biopsy needle several times to be sure enough tissue is obtained.

Once the biopsy is done, the injection site will be covered with a small dressing and you will return to the ward or Day Case Unit for observation.

How long will the procedure take?

Everyone's situation is different and it is not easy to predict how straightforward or complex a procedure will be. Preparation for the biopsy might take several minutes but the needle is in your body for a very short time. The whole procedure may be over in less than 30 minutes.

What happens after the kidney biopsy?

Following the biopsy you will return to the ward or Day Case Unit. You will need to lie flat in bed for at least four hours to reduce the risk of bleeding. You may wish to bring in a book or a music player for this time. Your pulse and blood pressure will be monitored and the dressing observed for signs of bleeding. It is not uncommon for your urine to be blood stained after the biopsy and this usually settles within 24 hours. You can eat and drink as normal after the procedure. As the anesthetic wears off you may have some discomfort which is usually eased by painkillers.

If you come into hospital for the biopsy in the afternoon you may need to stay in overnight. However, if the sample (biopsy) was done early in the morning, you may be able to go home later in the day.

Being discharged home

You must have someone to take you home and stay with you overnight. You should not drive home or drive for 2 days after the biopsy. You should avoid strenuous activity and heavy lifting for 2 weeks after the biopsy. You can shower and bathe as normal once you are home.

What are the risks of having a kidney biopsy?

As with any procedure there are some risks or complications that can arise from a kidney biopsy. Your doctor has recommended the procedure because the information provided will help the management of your case.

- Back discomfort is experienced by 10% of patients following a biopsy. This is caused by bruising around the kidney and will usually settle with painkillers and rest
- Just over 3% of patients have visible blood in their urine after biopsy, usually this settles by itself. If you have visible blood in the urine, clots can form in the bladder and a bladder catheter may be required temporarily to help you pass urine
- In less than 1 in 200 patients, the bleeding may be heavy enough to require a blood transfusion
- In around 1 in 400 patients, an embolisation procedure may be required to stop the bleeding. This procedure is performed in the X-ray department and involves passing a tube from the groin into the kidney to allow the radiologist to block the bleeding vessel

If complications occur it is usually in the first few hours after biopsy whilst you are in hospital. It is rare for problems to occur later, however if you do experience any of the following you should seek medical advice:

- Bright red blood in your urine
- Unable to pass urine
- Tummy (abdominal) pain
- Biopsy site becomes red or angry looking
- High temperature (fever)
- Worsening pain in your back or biopsy site and painkillers do not help

Follow up

The biopsy samples will be examined by the pathologists and the results are usually available after 2–3 weeks. You will have an appointment made to come to the cancer centre (even if there was no cancer found) for these results.

Contact numbers

For further advice please contact:

Urology Specialist Nurses

Tel: 0121 371 6926

Macmillan-Cancer

Tel: 0808 808 2020

www.macmillan.org.uk

Kidney Cancer UK

Tel: 0247 647 0584

www.kcuk.org

Cancer Help UK

www.cancerhelp.org.uk



The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.

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