

# PATIENT INFORMATION

## Percutaneous Kidney / Renal Biopsy

### Introduction

This leaflet tells you about the procedure known as percutaneous renal biopsy. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

Whether you are having the percutaneous renal biopsy as a planned or an emergency procedure, you should have sufficient explanation before you sign the consent form.

Radiologists are doctors specially trained to interpret the images and carry out more complex examinations. They are supported by radiographers who are highly trained to carry out X-rays and other imaging procedures.

### What is a percutaneous biopsy?

A needle biopsy is a way of taking a small piece of tissue out of your body, using only a tiny incision, so that it can be examined under a microscope by a Pathologist, an expert in making diagnoses from tissue samples. Because this biopsy is done through the skin, it is called a percutaneous biopsy.

### Why do I need a percutaneous biopsy?

Your kidneys may not be functioning normally, in which case a biopsy is the surest way to work out the exact problem. Occasionally other tests such as an ultrasound scan or a CT scan will have shown that there is an area of abnormal tissue in one

of your kidneys. From the scan, it is not always possible to say exactly what the abnormality is due to, and the simplest way of finding out is by taking a tiny piece of it away for a Pathologist to examine.

### What are the options or alternatives?

The only other way of obtaining a piece of tissue for diagnosis is via an open operation.

### Who has made the decision?

The Consultant in charge of your case, and the Radiologist will have discussed the situation, and feel that this is the best thing to do. However, you will also have the opportunity for your opinion to be considered, and if, after discussion with your doctors, you do not want the procedure carried out, you can decide against it.

### Who will be performing the percutaneous biopsy?

A specially trained doctor called a Radiologist. Radiologists have special expertise in using X-ray and scanning equipment, and also in interpreting the images produced. They need to look at these images while carrying out the biopsy.

Radiographers and Radiology Nurses will be present in the room to assist during the procedure, they will introduce themselves at the start of the procedure.

Occasionally student radiographers or medical students will be present to observe the procedure.

## Where will the biopsy take place?

Generally in the Medical Imaging or ultrasound department.

## Cancelling your appointment

If you are unable to attend your appointment, we would be grateful if you could contact us on **01392 402336**, selecting option one, as soon as possible. We can then offer your original appointment to another patient. A further date and time will then be arranged for you. Please be advised that if you fail to attend your appointment, it may be necessary to remove you from the radiology waiting list.

**Please note: If you have had D&V (diarrhoea and vomiting) you will need to contact us to rebook your appointment unless you have been clear for the past 48 hours.**

## How do I prepare for percutaneous renal biopsy?

- You may need to be an inpatient in the hospital, although many biopsies can be performed as an outpatient.
- You will have had some blood tests performed before the procedure to check that you do not have an increased risk of bleeding.
- You are asked not to eat for 4 hours prior to the procedure. You may drink a little water.
- You will need someone to drive you home and to look after you for 24 hours.
- You should be prepared to stay overnight if necessary.
- If you have any allergies or you have previously reacted to intravenous contrast medium, you must let the doctor know. Intravenous contrast medium is the injection we give you during some scans.

- If you are diabetic, please contact the Medical Imaging Department on **01392 402336** selecting option 2, in-patient enquiries, option 8 for nurses.
- If you normally take any medication to thin your blood (anticoagulation or antiplatelet drugs) such as: **warfarin / clopidogrel / aspirin / non-steroidal anti-inflammatory drugs (NSAIDS / brufen / ibrufen / nurofen) / dabigatran (Pradaxa) / rivaroxiban (Xarelto) / apixaban (Eliquis) / phendione / acenocoumarol** – then these may need to be stopped or altered. Please seek the advice of your hospital consultant or nurse specialist as soon as possible or ask your GP. Or contact the Medical Imaging Department on **01392 402336** selecting option 2, in-patient enquiries, option 8 for nurses.
- After discussion with your GP or referring clinician, and you can safely stop these medications it is recommended that:  
Warfarin is stopped 6 days prior to your procedure.  
Aspirin is stopped 7 days prior to your procedure.  
Clopidogrel is stopped 7 days prior to your procedure.  
NSAIDS are stopped 2 days prior to your procedure.  
Rivaroxaban (Xarelto) and apixaban (Eliquis) are stopped 2 days before your procedure.  
If you are taking dabigatran (Pradaxa) please consult your doctor or telephone the Medical Imaging Department on **01392 402336** selecting option 2, in-patient enquiries, option 8 for nurses.
- Other medication should be taken as normal.

## Can I bring a friend/relative?

Yes, but for reasons of safety they will not be able to accompany you into the x-ray room.

## What actually happens during a percutaneous biopsy?

You will lie on the ultrasound or scanning table, in the position that the Radiologist has decided is most suitable, usually lying on your front. You will usually have a needle put into a vein in your arm, so that the radiologist can give you a sedative or painkillers.

The Radiologist will keep everything as sterile as possible, and may wear a theatre gown and operating gloves. Your skin will be cleaned with antiseptic, and you may have some of your body covered with a theatre towel. The Radiologist will use the ultrasound machine or the CT scanner to decide on the most suitable point for inserting the biopsy needle. Your skin will be then anaesthetised, and the biopsy needle inserted into the kidney or abnormal tissue.

While the first part of the procedure may seem to take a while, actually doing the biopsy does not take very long at all, and the needle may be in and out so quickly that you barely notice it.

## Will it hurt?

Most biopsies do not hurt at all. When the local anaesthetic is injected, it will sting to start with, but this soon passes off, and the skin and deeper tissues should then feel numb. Later, you may be aware of the needle passing into your body, but this is generally done so quickly, that it does not cause any discomfort at all.

There will be a nurse, or another member of clinical staff, standing next to you and looking after you. If the procedure does become painful for you, then they will be able to arrange for you to have more painkillers through the needle in your arm.

## How long will it take?

Every patient's situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. It may be

over in 30 minutes, although you may be in the Medical Imaging Department for about an hour altogether.

## What happens afterwards?

You will be taken back to your ward on a trolley. Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure to make sure that there are no problems. You will generally stay in bed for a few hours, until you have recovered. You may notice some blood in your urine.

## What will happen to the results?

A report of the procedure will be recorded in your notes immediately and also sent to your specialist.

Do not expect to get the result of the biopsy before you leave, as it always takes a few days for the Pathologist to do all the necessary tests on the biopsy specimen. The pathology result will be sent to your specialist.

## What happens next?

All being well, you will be allowed home the next day, or occasionally the same day.

You are advised not to drive for 24 hours and to avoid strenuous exercise for 48 hours.

If you experience any of the following contact the department:

- Your urine becomes more blood stained.
- You have continued bleeding from the wound.
- Your biopsy site becomes red and angry or you develop a fever.
- You develop increasing pain.

If you experience severe pain / dizziness or fainting you are advised to seek urgent medical assistance.

## Are there any risks or complications?

Percutaneous biopsy is a very safe procedure, but there are a few risks or complications that can arise, as with any medical treatment.

- The kidney has a rich blood supply therefore, there is a risk of bleeding from the kidney, though this is generally very slight. If the bleeding were to continue, then it is possible that you might need a blood transfusion. Extremely rarely, an operation or another radiological procedure is required to stop the bleeding.
- 1 In 10 patients will have blood in their urine; this will usually settle by itself.
- 1 In 50 patients may require a blood transfusion.
- 1 In 100-150 patients there is continued bleeding requiring a further procedure to block part of the blood supply to the kidney and stop the bleeding, this is an embolisation.
- 1 In 1000 patients may have severe uncontrolled bleeding that would require removal of the kidney.
- Death following biopsy has occurred but is extremely uncommon.
- You may notice some aching in the muscles of your back for the next few days.
- There is a very small risk of introducing infection or bowel perforation. These are very unusual occurrences.

Unfortunately, not all biopsies are successful. This may be because, despite taking every possible care, the piece of tissue which has actually been obtained is normal tissue rather than abnormal. Alternatively, although abnormal tissue has been obtained, it may not be enough for the Pathologist to make a definite diagnosis. The Radiologist doing your biopsy may be able to give you some idea as to the chance of obtaining a satisfactory sample.

Despite these possible complications, percutaneous biopsy is normally very safe, and is designed to save you from having a bigger procedure.

*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.*

## Valuables

Patients are encouraged to leave their valuables at home. It is the patient's responsibility to ensure all valuables are on their person before leaving the Medical Imaging Department

## Contact us

If you have any queries or concerns please contact us on **01392 402336**.

## How to get to the Royal Devon & Exeter Hospital at Wonford

### Park & Ride

Our Dartline PR3 Park & Ride bus is quick and not expensive.

It runs from Wonford Hospital to Digby. Digby is near Tesco, the railway station and junction 30 of the M5. There are signs along some of the main roads into Exeter pointing to the RD&E park and ride.

The park and ride service runs from Monday - Friday. **There is no service at the weekend.**

Sat Nav - EX2 7PZ.

## By bus

Stagecoach buses H Service run to Wonford Hospital from the high street in the city centre Monday to Saturday. Limited Sunday service. They also run to Wonford Hospital from the Broadfields area.

Stagecoach buses from Exmouth (57), Dawlish (2), Torbay (X46), Teignmouth (2) and Plymouth (X38) stop next to the hospital on Barrack Road.

First Southern National bus X53 from Weymouth, Seaton, Beer and Sidford stops next to the hospital on Barrack Road. Turner's Tours bus 369 from Chulmleigh, Lapford, Morchard Bishop and Crediton stops next to the hospital on Barrack Road and outside the main front entrance of the hospital.

## By car

Follow signposts to the hospital from most of the main routes into Exeter. Follow signposts in the hospital grounds to our car parks.

Car parking is by pay & display, so please bring change.

The number of spaces is limited, so please leave plenty of time to find a space.

### Using Sat Nav to find us?

Tap in postcode: EX2 5DW for RD&E Wonford

For more information on how to get to the hospital, please use the following website:

**[www.rdehospital.nhs.uk/patients/where](http://www.rdehospital.nhs.uk/patients/where)**

For more information on the Medical Imaging, please visit our website:

**[www.rdehospital.nhs.uk/patients/services/medical-imaging](http://www.rdehospital.nhs.uk/patients/services/medical-imaging)**

*Modified with acknowledgment of,  
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