Image Guided Kidney (Renal) Biopsy
Interventional Radiology

This leaflet provides information about the procedure, what to expect on the day, the potential risks and important information for afterwards.

Prior to the procedure, you may have a pre-assessment or telephone consultation, where you will have the opportunity to ask further questions.

Please note that this leaflet is not meant to replace discussion between you and your doctor. You should raise any questions you may have with the doctor who has referred you or with the doctor who will be performing the procedure.

What is a kidney biopsy?

A kidney (renal) biopsy is a procedure used to take a small sample of tissue from the kidney, or a mass related to the kidney, for examination under a microscope. This helps doctors diagnose kidney conditions, assess the severity of kidney disease and guide further treatment.

The biopsy is performed using ultrasound or CT imaging to accurately guide a needle into the kidney, allowing the tissue sample to be taken safely and precisely.

Why do I need a kidney biopsy?

You may need a kidney biopsy to:

- Investigate abnormal kidney blood tests or urine results
- Assess a kidney mass or lesion to help determine its nature and guide further management
- Diagnose kidney disease
- Assess inflammation, scarring, or damage within the kidney
- Monitor known kidney conditions
- Help guide treatment decisions

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How do I prepare for a kidney biopsy?

You will have a pre-assessment telephone consultation with a nurse before your admission and may be asked to have blood tests before the procedure.

You should stop eating 6 hours prior the procedure, however you can drink 1 cup of clear water per hour until the procedure starts.

As it's a day case procedure, you need to arrange for an adult to collect you from the department and someone to stay with you overnight.

The procedure will take place in the Interventional Radiology (IR), within the Radiology Department at St. Peter's Hospital. When you arrive, you will be given a hospital gown to change into, and a staff will insert an IV cannula.

The doctor will discuss the procedure with you; answer any questions you may have and ask you to sign the consent form if you are happy to proceed.

The procedure will likely be performed under local anaesthetic. Intravenous pain relief and light sedation may also be given, to ensure you are as comfortable as possible.

If you are feeling unwell closer to the day of the procedure, please let the team know.

How is a kidney biopsy performed?

You will usually lie on your front (prone position), or occasionally on your side, depending on which kidney is being biopsied.

Ultrasound or CT imaging is used to identify a safe area of the kidney. The skin is cleaned and numbed with local anaesthetic. A small incision is made, and a biopsy needle is carefully inserted into the kidney under image guidance. You may be asked to hold your breath briefly while the sample is taken.

One or more small tissue samples may be obtained. The procedure itself usually takes 15–30 minutes.

After the biopsy, pressure is applied to the site and a dressing is placed.

What are the potential risks and complications of a kidney biopsy?

A kidney biopsy is a common and generally safe procedure. However, as with all medical procedures, there are some risks and potential complications:

Pain or discomfort - Mild pain or tenderness at the biopsy site is common and occurs in up to 30-40% of patients. This is usually short-lived and can be managed with simple pain relief.

Bleeding - Blood in the urine is common after the biopsy and occurs in up to 5-10% of patients. This usually settles within 24-48 hours.

Significant bleeding requiring treatment occurs in around 1-3% of cases. Very rarely, a blood transfusion or further procedure may be required. In rare cases (<1%), ongoing bleeding may require additional procedures or surgery.

Bruising or haematoma - Bruising or a collection of blood around the kidney can occur in up to 5% of patients and usually resolves without treatment.

Infection - is rare (<1%) but may require antibiotics if it occurs.

Injury to nearby structures - Damage to nearby organs or blood vessels is very rare (<0.5%), as imaging guidance is used to minimise this risk.

What happens afterwards?

After the procedure, you will be monitored closely in a recovery area.

You will usually need to lie in bed for 4-6 hours after the biopsy.

Your blood pressure, pulse, urine output, and comfort will be checked regularly.

You should avoid strenuous activity, heavy lifting, and exercise for 5-7 days after the procedure.

Mild discomfort is common and can be managed with simple pain relief (avoid anti-inflammatory medication unless advised).

You should seek urgent medical advice if you experience:

- Increasing pain in your back or abdomen
- Visible blood in the urine that does not settle
- Dizziness or fainting
- Fever or chills

Follow-up arrangements and biopsy results will be discussed with your referring consultant.

Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty. If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email asp-tr.patient.advice@nhs.net. If you remain concerned, the team can also advise upon how to make a formal complaint.

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We can provide interpreters for a variety of languages, information in larger print or other formats (e.g. audio) - please call us on 01932 723553.

You can use Text Relay to turn telephone communications into text. Use the Relay UK app on your phone, tablet or PC. You can also use Relay UK via Minicom or Uniphone.

اگر نیاز به ترجمه دارید، لطفا با شماره 01932 723553 تماس بگیرید.

ਜੇ ਤੁਹਾਨੂੰ ਤਰਜਮੇ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਇਸ ਨੰਬਰ ਤੇ ਫੋਨ ਕਰੋ: 01932 723553

اگر آپ اس کا اردو زبان میں ترجمہ چاہتے ہیں، تو براہ کرم اس فون نمبر 01932 723553 پر رابطہ کریں

Se precisa de uma tradução por favor contacte: 01932 723553

আপনার অনুবাদের দরকার হলে এখানে যোগাযোগ করুন : 01932 723553

यदि आपको अनुवाद की ज़रूरत है तो कृपया इस नंबर पर फोन करें: 01932 723553

Jeżeli chcemy, aby te informacje w innym języku, proszę zadzwonić 01932 723553

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