University College London Hospitals

Transperineal template guided biopsy of the Prostate
Urology Directorate

Contents
1 Introduction
This leaflet is written for patients, their family and any carers. It provides information on transperineal template guided biopsies of the Prostate. The leaflet goes through the indications, benefits, risks, technique and post-operative care associated with this biopsy technique.

2 What is a Prostate Biopsy?

The prostate gland produces the white fluid that becomes part of the semen. It is located below the bladder and in front of the rectum and is roughly the size of a walnut. A biopsy involves taking small samples of tissue from the prostate gland. These samples are then analysed by a histopathologist (doctor who diagnoses and studies disease using expert medical interpretation of cells and tissue samples).

The biopsy can find out whether any of the prostate cells have become cancerous or, if there is pre-existing cancer, whether the cancer has changed. It can also diagnose other conditions such as benign prostatic hyperplasia, prostatitis or prostatic intraepithelial neoplasia.
3 Why is a prostate biopsy needed?

Your Urologist will recommend a prostate biopsy if they believe there is a suspicion of prostate cancer. There are a number of reasons why they may have this suspicion.

1. A blood test may show a high level of prostate-specific antigen (PSA). This is a common marker for prostate cancer, PSA is a protein released into the blood by the prostate.
2. A previous biopsy may have shown no evidence of cancer but the PSA blood test is still suspicious.
3. There may be a known diagnosis of prostate cancer but treatment is not yet required. The biopsy is performed to monitor the progress of the cancer.
4. A lump or abnormality is found during a digital rectal examination.

4 What does the procedure involve?

The transperineal technique is an alternative method for sampling the prostate compared with the older transrectal method. It involves taking the biopsy through the skin (perineum), which is the area between the scrotum and the rectum. It is usually performed under general anaesthetic or local anaesthetic and/or sedation. The technique can be used to accurately assess the whole prostate for any cancer and when used after an equivocal prostate MRI can clarify if any cancer is present. Mapping involves biopsies taken from all zones throughout the prostate every 5-10mm. Transperineal biopsies can also be targeted to suspicious areas on MRI only.

5 What are the risks?

There are risks in every procedure; however, serious complications with this procedure are rare.

Infection can occur in about 1% of patients. Antibiotics are proscribed during the biopsy to reduce the risk of infection. However if a fever develops, or if there is pain when passing urine, then it is recommended that medical attention is sought. Life-threatening infection (sepsis) is very rare (1 in 500).

Blood in the urine is not uncommon and increasing fluid intake to flush the system should clear out any bleeding. However, if this persists medical attention to clarify the situation should be sought.
Blood in the semen is common and can take up to 3 months to clear. Some men experience problems with erections but rarely need medication to help.

The perineum skin can get bruised in most men but rarely does bruising occur over the scrotum. This bruising can take 2-4 weeks to resolve. It is possible that the biopsy may cause prostate swelling that can lead to difficulty passing urine. This may mean that a catheter is required and you should consult your urologist for their advice. This happens in 5-10% of cases.

Allergic reactions are possible when medication is taken, supplying a detailed medical history of previous allergic reactions will reduce the risk of this occurring. If an allergic reaction appears please consult your urologist or visit the nearest hospital if it is a severe reaction.

6 What will happen if I choose not to have a transperineal template guided prostate biopsy?

We can monitor the prostate problem in association with your GP using PSA blood tests. If you had an MRI we might wish to sometimes repeat this. Your doctor or nurse specialist will discuss this with you.

7 What alternatives are available?
An MRI could be done or repeated or we could monitor the PSA blood tests with your GP’s help.

8 What should I expect before the procedure?
You will usually be admitted to hospital on the same day as your procedure. MRI-targeted biopsies are performed under local anaesthetic whilst mapping biopsies are performed under general anaesthetic or deep sedation. However, if sedation or a general anaesthetic is indicated you will receive an additional appointment for a “pre-assessment” to assess your general fitness, to screen you for MRSA and to do some baseline investigations. Once you have been admitted, you will be seen by members of the medical team which may include the consultant, urology doctor or your named nurse.

You will be asked not to eat and drink for six hours before the procedure.
If you are taking **warfarin**, you must inform the clinic staff at your pre-assessment visit so that you are advised when to stop it before the procedure. It is usual to stop warfarin for 3 days and then do a blood test (INR) before your biopsy. If you are taking **aspirin**, you do not need to stop this. If you are taking **clopidogrel**, you must let the medical staff know because the biopsy may need to be postponed or alternative arrangements made. There are other blood thinning medications that might also need to be stopped. You medical team will inform you of this.

After checking for allergies, you will normally be given an intravenous/intramuscular injection of antibiotic at the time of your anaesthetic.

Please tell your surgeon (before your procedure) if you have any of the following:

- An artificial heart valve
- A coronary artery stent
- A heart pacemaker or defibrillator
- An artificial joint
- An artificial blood-vessel graft
- A neurosurgical shunt
- Any other implanted foreign body
- A regular prescription for warfarin, aspirin or clopidogrel (Plavix®)
- A previous or current MRSA infection
- A high risk of variant-CJD (if you have had a corneal transplant, a neurosurgical dural transplant or injections of human-derived growth hormone).

When you are admitted to hospital, you will be asked to sign the second part of your operation consent form giving permission for your procedure to take place, showing you understand what is to be done and confirming that you want to go ahead. Make sure that you are given the opportunity to discuss any concerns and to ask any questions you may still have before signing the form.

**9. What are the risks of having an anaesthetic?**

If you require a general anaesthetic there are a number of issues which affect the chances of suffering complications, including: age, weight, lifestyle issues and your general state of health. Your anaesthetist and/or your surgeon can give further details. The information on the next page on risks is provided by the Royal College of Anaesthetists.
**Very common (1 in 10) and common (1 in 100) side effects**

- Feeling sick and vomiting after surgery
- Sore throat
- Dizziness, blurred vision
- Headache
- Itching
- Aches, pains and backache
- Pain during injection of drugs
- Bruising and soreness
- Confusion or memory loss

**Uncommon side effects and complications (1 in 1000)**

- Chest infection
- Bladder problems
- Muscle pains
- Slow breathing (depressed respiration)
- Damage to teeth, lips or tongue
- An existing medical condition getting worse
- Awareness (becoming conscious during your operation)

**Rare (1 in 10,000) or very rare (1 in 100,000 or less) complications**

- Damage to the eyes
- Serious allergy to drugs
- Nerve damage
- Death
- Equipment failure

Deaths caused by anaesthesia are very rare, and are usually caused by a combination of four or five complications together. There are probably about five deaths for every million anaesthetics in the UK.

**10 Asking for your consent**

We want to involve you in all the decisions about your care and treatment. If you decide to go ahead with transperineal template guided biopsies, by law we must ask you to sign a consent form before proceeding with the procedure. This confirms that you agree to have the procedure and understand what it involves. Staff will explain all the risks, benefits and alternatives before they ask you to sign a consent form. If you are unsure about any aspect of your proposed procedure, please don’t hesitate to speak with a senior member of staff again.
11. What should I expect on the day of the procedure?

You will be assisted by my staff to get comfortable on the procedure bed. Your legs will be placed in special supports that allow the surgeon to reach the skin behind your testicles. The surgeon will examine the prostate through the back passage (anus) before inserting the ultrasound probe into the rectum. This probe is as wide as a man's thumb and approximately 4 inches long. Local anaesthetic is injected into the skin and inside around the prostate to make it go numb, which helps reduce pain when you wake up after the procedure. In order to take samples (biopsies) of the prostate, a special grid is used so that all areas of the prostate can be included.

After the biopsies have been done, a firm dressing will be applied to the perineum and held in place with a pair of disposable pants. A painkiller suppository is sometimes also given.

The anaesthetic will make you sleep for the whole procedure so you will not feel any pain or discomfort. Sedation will make you drowsy but you will be awake but relaxed. Many patients don't remember much of the procedure afterwards. The surgeon will see you prior to discharge.

12. What happens immediately after the procedure?

You should be told how the procedure went and you should:

- let the medical staff know if you are in any discomfort;
- ask what you can and cannot do;
- feel free to ask any questions or discuss any concerns with the ward staff and members of the surgical team; and
- make sure that you are clear about what has been done and what happens next.

You will go home later the same day provided you are passing urine normally.

You may be given antibiotics to take home depending on local hospital practice at the time which can change depending on advice from the microbiology department.

The average hospital stay is 6 to 8 hours in total.

**Driving after surgery**

It is your responsibility to make sure you are fit to drive following your surgery. You should, however, check with your insurance company before returning to driving. Your doctors will be happy to give you advice on this.
13. What should I expect when I get home?

When you are discharged from hospital, you should:

- be given advice about your recovery at home;
- ask when you can begin normal activities again, such as work, exercise, driving, housework and sex;
- ask for a contact number if you have any concerns once you return home;
- ask when your follow-up will be and who will do this (the hospital or your GP); and
- be sure that you know when you get the results of any tests done on tissues or organs that have been removed.

When you leave hospital, you will be given a discharge summary. This contains important information about your stay in hospital and your procedure. If you need to call your GP or if you need to go to another hospital, please take this summary with you so the staff can see the details of your treatment. This is important if you need to consult another doctor within a few days of being discharged.

It is important that you:

- drink twice as much fluid as you would normally for the first 48 hours;
- maintain regular bowel function;
- avoid physically-demanding activities; and
- complete your three-day course of antibiotics;

Any discomfort can usually be relieved by simple painkillers.
14. What else should I look out for?

If you experience:

- a fever, shivering or develop symptoms of cystitis (frequency and burning on passing urine), you should contact your consultant’s secretary or the hospital ward. If it's not possible to make contact this way, please go to A/E or contact your GP.
- a lot of bleeding in the urine, especially with clots of blood, you should contact your consultant’s secretary or the hospital ward. If it’s not possible to make contact this way, please go to A/E or contact your GP
- a fever outside your surgery opening hours, you must telephone ward you were on so that a doctor can assess you. If it’s not possible to make contact this way, please go to A/E or contact your GP

15. Are there any other important points?

All biopsies are reported and discussed in detail at a multi-disciplinary meeting before any further treatment decisions are made. You and your GP will be informed of the results. We sometimes need to order additional tests as a result of our discussions and, as a result, you may receive appointments for a bone scan or whole body MRI scan afterward.

16. Where can I get more information?

Prostate Cancer UK
Tel: 0800 074 8383
www.prostatecanceruk.org

UCLH Macmillan Support and Information Service
Location: Ground Floor, Huntley Street, London, WC1E 6DH
Tel: 020 3447 8663
Email: supportandinformation@uclh.nhs.uk

Macmillan Cancer Support
Tel: 0808 808 00 00
www.macmillan.org.uk

UCL Hospitals cannot accept responsibility for information provided by external organisations.
17 References


18 Contact details

Clinical Nurse Specialist

Jane Coe
Email: jane.coe@uclh.nhs.uk
Tel: 0203 447 4932

Pathway Coordinator to Professor Emberton, Mr Arya, Mr Hashim U. Ahmed & Mrs Moore
Tel: 020 3447 9194
Fax: 020 3447 9303
Email: prostate@uclh.nhs.uk

Out of hours, please contact your GP or nearest Accident & Emergency Department
19 How to find us
1. University College Hospital
2. University College Hospital Macmillan Cancer Centre
3. UCLH HQ (250 Euston Road)
4. University College Hospital at Westmoreland Street
Space for notes and questions