Having a trans-rectal ultrasound (TRUS) and prostate biopsy

This leaflet should help to answer some of the questions you may have about having a trans-rectal ultrasound (TRUS) and prostate biopsy. You should also be posted a leaflet about preparing for your hospital stay which gives information on how to get to the hospital, what to bring with you and what you can expect during your visit. If you have not received a copy of this leaflet, please ask for one from a member of staff caring for you.

What is your prostate gland?
The prostate gland is only found in men and is about the size of a walnut. Your gland lies at the base of your bladder and surrounds your urethra (tube that carries urine and semen out of your body). Its main function is to produce a thick liquid and nutrients, which is mixed with your sperm to become semen.

What is a prostate biopsy and trans-rectal ultrasound?
A prostate biopsy is where small samples of tissue are taken from your prostate gland, using an ultrasound device to guide your doctor or specialist nurse.

Ultrasound devices use high frequency sound waves to create images of internal body structures. The sound waves bounce off tissues and organs and are picked up and then displayed on a screen, similar to a television.

Because your prostate gland is in front of your rectum (back passage), a small ultrasound probe can be inserted into your rectum and create an image of your
prostate gland. This is called a trans-rectal ultrasound or TRUS. The TRUS helps to
guide your doctor or specialist nurse when he/she is performing the biopsy. He/she
will insert a special needle into your prostate gland via your rectum to take the sample
cells. The cells that have been taken are then examined under a microscope for any
abnormalities.

Why do I need a prostate biopsy?
You may have been advised to have a prostate biopsy because:

- your doctor found a lump or abnormality during a digital rectal examination (DRE).
  A DRE is where a doctor feels your prostate gland through your rectum (back
  passage) with his/her index finger
- you have had a blood test showing a high level of PSA (prostate-specific antigen).
  PSA is a protein that is released into your blood from your prostate gland. High
  levels of PSA may indicate cancer.

The biopsy can find out whether any of your prostate cells have become cancerous. It
can also diagnose other conditions such as:

- **benign prostatic hyperplasia** - enlargement of the prostate
- **prostatitis** - inflammation of the prostate, usually caused by a bacterial
  infection
- **high grade prostatic intraepithelial neoplasia (HGPIN)** - a change in the
  cells of your prostate (explained further on page 6).

Your diagnosis will then help your doctor or specialist nurse to plan your future care.

Asking for your consent
We want to involve you in all the decisions about your care and treatment. If you
decide to go ahead, you will be asked to sign a consent form to confirm that you agree
to have the procedure and understand what it involves. It is your right to have a copy
of this form. You should have received the leaflet, **Helping you decide: our consent
policy**, which gives you more information. If you have not, please ask us for one.
What are the risks?

Although serious complications are rare, every procedure has risks. Your doctor or specialist nurse will discuss the specific risks for this procedure with you in more detail:

- **Infection** (Two in 100 men will experience this.) There is a risk of infection at the biopsy site because the rectum wall is not sterile. We give you antibiotics before and after your biopsy to reduce this risk. However, if you develop a fever, or have pain or a burning sensation when you pass urine, you may have an infection. If so, you should seek medical attention from your nearest Accident & Emergency (A&E) Department. You are more likely to develop an infection if you have prostatitis.

- **Bleeding into the urethra or bladder wall (often known as urinary clot retention)** (Five in 100 men experience this.) This can cause a haematoma (blood blister), which can make it difficult for you to pass urine, or make you pass urine frequently. If you are unable to pass urine at all (urinary retention) you should seek medical attention from your nearest A&E Department.

- **Bleeding from the rectum.** This is common and eight out of 10 men will experience this during the first two to three days after the biopsy, but should not last more than two weeks. If you have heavy bleeding or start passing large clots of blood at any time following the procedure, go to your nearest A&E Department.

- **An allergic reaction** to the medicine we give you. Although the risk of this is low (less than one in a 1,000 men will be affected), you can reduce this risk by letting us know if you have had any previous allergic reactions to any medicines or food.

- **Blood in your urine.** Most patients will have some blood in their urine for two to three weeks after this procedure. If this continues for longer, please contact your nearest A&E Department.

- **Blood in your semen.** Most patients will have some blood in their semen for up to six weeks after this procedure. If this continues for longer, please contact your nearest A&E Department or talk to your nurse specialist.

Are there any alternatives?

Having a prostate biopsy is currently the only method available to diagnose your symptoms.

Before the biopsy

Before you have a biopsy, you should let the doctor or specialist nurse know if you:

- are taking any medicines, particularly antibiotics or anticoagulants (medicine that helps to prevent blood clots from forming), including aspirin, warfarin, clopidrogrel (Plavix)
- have allergies to any medicines, including anaesthetic
- have or have ever had bleeding problems
- have an artificial heart valve.

You should continue to take all of your medicines as normal, unless you have been told otherwise by the doctor that organised your biopsy.

Before the biopsy you will be asked to provide a specimen of your urine. This is to check whether or not you have a urine infection.

If there is evidence of a urine infection your procedure may be cancelled and you will be started on antibiotics and re-booked for one to two weeks later.

If we were to do the biopsy while you have a urine infection, the infection could get into your blood stream. This could cause you to be very unwell.
A TRUS may make you feel light-headed. It will help if you have eaten something on the morning of the biopsy.

**Will I have a local or general anaesthetic?**
The biopsy is taken using a local anaesthetic. This is a medicine used to numb a specific area of your body, so it is pain free.

In some circumstances, you may have a general anaesthetic. This makes you temporarily unconscious (asleep), so you do not feel anything during the biopsy. If you have a general anaesthetic the biopsies will be taken via a transperineal approach (please see our leaflet Having a transperineal prostate biopsy). Your doctor or specialist nurse will discuss the options with you before you have a biopsy. For more information, please ask a member of staff for the leaflet, **Having an anaesthetic**.

**During the biopsy**
The biopsy is usually carried out as a day case, which means you will be able to come to hospital, have the biopsy and leave on the same day.

About 30 minutes before your prostate biopsy, you will be given some antibiotic tablets to help prevent infection.

Once in the biopsy room, you will be asked to take off your trousers and pants and then lie on your left-hand side with your knees tucked up against your chest. If you find this position difficult, let the doctor or specialist nurse know.

If you are having the biopsy under general anaesthetic, this will be given through a small needle inserted into the back of your hand. This will make you sleep for the whole procedure, so you will not feel any pain or discomfort.

If you are having the biopsy under local anaesthetic, the ultrasound probe (about the size of a large finger) is covered in gel to make the passage into your rectum easier. A very fine needle is then passed down the length of the probe. Using the ultrasound for guidance, the anaesthetic liquid is injected into the small space around the prostate. You may feel a small stinging sensation while this liquid is being injected. This will help to reduce discomfort during the biopsy.

The prostate biopsy is taken with a device that contains a spring-loaded needle. The needle is inserted into the prostate gland and removes a tissue sample very quickly.

If you are awake, you may feel pressure in the rectum while the ultrasound probe is in place. You may also feel a brief, sharp pain or dull ache as the biopsy needle is inserted into the prostate gland. Please tell the doctor or specialist nurse if you are in discomfort.

Usually 12 biopsy samples are collected, although this may be more if the doctor or specialist nurse wants to take additional samples of a lump or nodule. The whole procedure takes around 5 to 10 minutes.

When the samples have been taken, a small antibiotic suppository will be inserted into your rectum. A suppository is medicine that is designed to be inserted into the rectum. This is another precaution to help reduce the risk of infection after your biopsy.

**After the biopsy**
If you have had a local anaesthetic you can leave the outpatient area as soon as the procedure is finished. You will be asked to rest for about four hours at home after this.
If you had a general anaesthetic, you will go into a recovery room for a few hours after the procedure. You will need someone to help you home, as your muscles may ache and you may feel dizzy and tired because of the anaesthetic.

A general anaesthetic takes 24 to 48 hours to wear off, so please rest for the remainder of the day and the following day to help you recover.

Before you leave, we will give you further antibiotic tablets to prevent infection. You will need to take these for three days. It is important that you follow the instructions we give you about how to take the antibiotics.

When you are at home
You may have mild discomfort in the biopsy area for one or two days after the biopsy. You may also notice some blood in your urine for up to three weeks and blood in your stools for up to two weeks. Your semen may be discoloured (pink or brown) for up to six weeks after the biopsy. This is all normal and nothing to worry about, but you may want to wear a condom if you have sex within this time.

You should:
- avoid alcohol for 24 hours, as this interacts with the general anaesthetic and suppository given at the end of the procedure
- drink plenty of non-alcoholic fluids while you have blood in your urine.

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<th>If any of the following happen, please go to your local Accident and Emergency (A&amp;E) Department:</th>
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<td>your pain increases</td>
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<td>you have a temperature higher than 100.4°F (38°C)</td>
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<td>you do not pass urine for eight hours</td>
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<td>you start to pass large clots of blood</td>
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<td>you have persistent bleeding</td>
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Your results
Your results should be available in 14 days. Please make sure you have an appointment for the follow-up clinic before you go home.

The results of your biopsy could be:

Normal
The prostate gland tissue samples appear normal under the microscope, with no signs of infection or cancer.

Abnormal
- Cancer cells or signs of infection are found during microscopic examination of the tissue sample
- Signs of an abnormal non-cancerous enlargement of the prostate gland (benign prostatic hyperplasia), tuberculosis, lymphoma, or rectal or bladder cancer are present.

Normal prostate biopsy results do not rule out cancer. Because a needle biopsy collects tissue from such a small area, there is a chance that a cancerous growth may be missed. Because of this, your doctor or specialist nurse may wish to monitor your PSA (prostate specific antigen) level for six to 12 months, even if your biopsy result is normal.
Your PSA level may also be monitored if your results indicate benign prostatic hyperplasia or high grade prostatic intraepithelial neoplasia (HGPIN). HGPIN refers to changes in the cells of the prostate. It is not a disease and does not need treatment, but its presence means you are at a greater risk of developing prostate cancer. Because of this, you will be monitored for any further changes.

If you have prostatitis and urinary symptoms you may be treated with antibiotics.

If the biopsy results indicate cancer, you may need further tests to see whether the cancer has spread beyond the prostate gland. These tests may include:

- a PSA test
- a bone scan
- a lymph node biopsy
- an MRI (Magnetic Resonance Imaging) a CT (Computer Tomography) scan.

The doctor or specialist nurse that gives you your biopsy results will organise these tests if necessary and explain them in more detail.

Analysing the cancer cells present can determine how fast the cancer is likely to spread. This analysis is called a Gleason score. Your doctor or specialist nurse will discuss this with you at your clinic appointment if this applies to you.

You may wish to contact organisations offering further information and support. A list is given at the end of this leaflet.

**Please remember that:**

- Not all cases of prostate cancer need to be treated. There are many factors to consider when deciding on a treatment plan.
- If the samples do not contain enough tissue, it is possible that your test results will be inconclusive, which means a definite diagnosis cannot be made.
- A prostate gland biopsy does not cause problems with erections and will not affect your fertility.

**Contacting us**

If you have any questions about this procedure or your results, please contact one of our Prostate Nurse Specialists, **Netty Kinsella**, **Anna Ashfield** or **Sharon Clovis** on **020 7188 7339** Monday to Friday, 8am–5pm. Out of these hours contact Florence ward on **020 7188 8818**.

**PALS** - To make comments or raise concerns about the Trust’s services, please contact our Patient Advice and Liaison Service (PALS). Ask a member of staff to direct you to PALS or:

- **t:** 020 7188 8801 at St Thomas’  
- **t:** 020 7188 8803 at Guy’s  
- **e:** pals@gstt.nhs.uk  

**Knowledge & Information Centre (KIC)** - For more information about health conditions, support groups and local services, or to search the internet and send emails, please visit the KIC on the Ground Floor, North Wing, St Thomas’ Hospital.  
- **t:** 020 7188 3416  
- **e:** kic@gstt.nhs.uk

**Language support services** - If you need an interpreter or information about the care you are receiving in the language or format of your choice, please get in touch using the following contact details.  
- **t:** 020 7188 8815  
- **fax:** 020 7188 5953  
- **e:** languagesupport@gstt.nhs.uk
Cancer information

**Dimbleby Cancer Care** at Guy’s and St Thomas’ Hospital offers information and support for patients with cancer, their relatives and friends. They can provide psychological support, complementary therapies and benefits advice. For more information, please call **020 7188 5918** email **RichardDimblebyCentre@gstt.nhs.uk** or visit one of the drop-in centres:

- Guy’s Hospital – Outpatient Department, Ground Floor, Tabard Annexe (next to the Minor Injuries Unit).
- St Thomas’ Hospital – Lower Ground Floor, Lambeth Wing.

**The Prostate Cancer Charity** provides support and information for men with prostate cancer.

t: 0800 074 8383  w: www.prostate-cancer.org.uk

**Macmillan Cancer Support** provides information and support to anyone affected by cancer.

t: 0808 808 00 00  w: www.macmillan.org.uk

**UK Prostate Link** provides links to quality assessed information about prostate cancer.

w: www.prostate-link.org.uk

**Cancer Research UK** has a patient information website, with information on all types of cancer and treatment options, as well as a book list for further information.

t: 0808 800 4040  w: www.cancerhelp.org.uk