Prostate high dose rate (HDR) brachytherapy
Radiotherapy Department
Patient information series

№18
If you need a large print, audio or translated copy of the document, please contact us on:

020 3447 3711 (Direct line)
020 3456 7890 ext 73711/bleep 1458
0845 155 5000 ext 73711/bleep 1458

We will try our best to meet your needs.
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Introduction
This booklet has been written to provide a guide for patients who have been referred for High Dose Rate (HDR) prostate brachytherapy. The booklet describes:

• What HDR prostate brachytherapy is.
• Your preparation for treatment.
• How your treatment is planned and delivered.
• The side effects you may experience during and after treatment, and how best to cope with them.

If you have any further questions or concerns, please speak to a member of your medical team. Please be aware that other radiotherapy centres may have different techniques.

What is HDR prostate brachytherapy?
HDR prostate brachytherapy is a form of high dose radiotherapy given at a short distance. A computer-controlled machine called a Microselectron pushes a single radioactive iridium wire into small flexible tubes which have been placed into your prostate gland. The doctors can accurately give a high dose of radiation to your prostate gland, and minimise the dose to surrounding healthy tissue.
Patient preparation and booking

All your clinic appointments will be booked by the brachytherapy radiographer. On the Monday before your treatment you will have an appointment with Dr Payne (Consultant Clinical Oncologist) and the Urology-oncology clinical nurse specialist. The treatment will be discussed with you and you will be asked to sign a consent form.

You will be given a prescription for bowel preparation (medication to clear your bowels). You must bring this medication into hospital with you on your admission day. You will also meet with the brachytherapy team in the radiotherapy department.

You will attend the preadmission clinic to have routine preanaesthetic blood tests, and an electro-cardiogram (ECG).

When you have your HDR treatment you will be required to lie flat and keep as still as possible at all times, with supports under your legs. This is to ensure that the small flexible tubes do not move. If you have difficulty lying flat or have a history of back problems, you must inform a member of the medical team. If you cannot lie flat you may not be eligible for this type of treatment.

On the Sunday before the HDR treatment you will be admitted to University College Hospital. You will be seen by a doctor and consented for an anaesthetic by an anaesthetist.

You may have a light breakfast on the Sunday morning before your admission. Once on the ward you will start bowel preparation. It is important your bowels are empty so we can get clear images of your prostate gland when your treatment is planned. From 11:00 onwards you can have clear fluids only (water or black tea/coffee). From 14:00 on the day of treatment you must be nil by mouth.

On the morning of the HDR treatment you will have an enema to completely clear your bowels. You will also be given elastic stockings to wear. This is to prevent any blood clots caused by lying still.
The implant procedure

On the Monday morning, around 08:00, you will be brought down to the brachytherapy suite in the radiotherapy department. You will meet the anaesthetic and brachytherapy teams before being placed under general anaesthetic, or having a spinal anaesthetic.

An ultrasound probe will be inserted into your rectum. This allows the doctors to see clear images of your prostate gland. A square template is stitched (sutured) onto your skin in the perineum (the area between your scrotum and your anus). This template has holes through which small flexible tubes are inserted into your prostate gland.

Whilst anaesthetised, a urinary catheter will be inserted into your bladder. A bag of irrigation fluid will be attached to the catheter to rinse any blood clots from your bladder.

Once this has been done, you will be woken up and taken for a radiotherapy CT planning scan. Following the scan you will be transferred back to the brachytherapy recovery room where there will be a wait of approximately one to two hours.

During this time, your Clinical Oncologist and the Radiotherapy Physicists will plan your treatment from the CT scan. Once your treatment is planned and approved the data is transferred to the brachytherapy unit. We will then deliver the brachytherapy treatment.
HDR treatments
You will receive one treatment which should be finished by 14:00. The radiation treatment takes between five and ten minutes. You are not radioactive at any time while in your hospital room, or when you are at home. There is never any radiation exposure to your family or to hospital staff.

Directly after the HDR treatment the template and the tubes are removed. The urinary catheter may be left in place for one to two days to ensure there are no problems with emptying your bladder. After treatment your urine may be pink due to blood. Your urine needs to be clear before you are discharged from hospital. The external beam radiotherapy treatment will be scheduled to start approximately two weeks after the HDR treatment. The dates for the external beam radiotherapy will have been given to you.

On the ward
When you are back on the ward you will have support pads under your legs and bottom. It is important that we keep your pelvis as still as possible for the duration of your treatment. This will ensure that the flexible tubes do not move, and the radiotherapy treatment can be given accurately.

You may have an intravenous infusion in your arm. This will allow us to give you fluids and pain medication if required.

You may experience some pain in your lower back due to the position you are in. We will be able to raise your upper body slightly to make you more comfortable. If you are experiencing pain you must tell the nursing staff, as pain medication will have been prescribed for you.

We usually start with mild pain medicine, but we have many different types of pain relief to help control your pain, if you need it. The doctor will have prescribed some night-time sedation for you. If you would like to have this please let your nurse know.
You will be prescribed medicine to make it easier for you to empty your bladder. This will usually start on the Monday night. The medicine is called Xatral® (Alfuzosin). It may make you dizzy as it can cause your blood pressure to drop. This is why it is started at night. You will have a supply of Xatral® which you should continue to take until you have completed your brachytherapy and external beam radiotherapy treatment. If you run out, go to your GP for a repeat prescription.

On the Tuesday morning you will usually be seen by Dr Payne or one of her team. If your urine is clear at this time your urinary catheter will be removed. Once the catheter has been removed you will go for urine tests. These are to make sure you can empty your bladder. If you have no blood in your urine and are able to fully empty your bladder you will be discharged home.

**What are the side effects of HDR prostate brachytherapy?**

Your Consultant will advise you of any side effects that you may experience following the HDR treatment. If you are worried or anxious about the procedure, please do not hesitate to ask for further help. We are here for you. These side effects may include:

- Pain and a burning sensation when passing urine. This is normal and will resolve over time.

- Pain and temporary swelling in the area between the scrotum and the anus (perineum).

- Bruising of the perineum after the flexible tubes have been removed. This will heal normally.

- Blood in the urine (haematuria) and/or blood in sperm (haematospermia). This is normal. However, if you notice an increase in blood or you cannot empty your bladder, call the urology-oncology clinical nurse specialist (Monday to Friday) or your GP (at weekends) as soon as possible.

- You may notice blood or mucous in your stools. This is normal and will heal over time.
Late side effects

There may be longer term side effects of HDR brachytherapy. Late side effects can occur months or years after radiotherapy has finished. There is an increased risk (about one in twenty men) of developing a narrowing or stricture of your urethra, which may slow your urinary stream. This may be treated by internal dilatation (stretching) under anaesthetic. Some men become impotent (are unable to have an erection), but this is also seen as commonly with external beam radiotherapy treatment alone. Dr Payne will have an in-depth consultation with you to explain these potential late side effects.
**Useful contact numbers**

**Local**

**Brachytherapy Radiographer**
Eleanor Gill
Direct telephone: 020 3447 3782
Main switchboard: 0845 155 5000
ext 73782
bleep 1128

Alternative switchboard: 020 3456 7890
ext 73782
bleep 1128

Email: eleanor.armstrong@uclh.nhs.uk

**Macmillan Information and Support Radiographer**
Mark Williams
Direct telephone: 020 3447 3711
Main switchboard: 0845 155 5000
ext 73711
bleep 1458

Alternative switchboard: 020 3456 7890
ext 73711
bleep 1458

Email: mark.williams@uclh.nhs.uk

**Dr Payne’s Secretary**
Direct telephone: 020 3447 9105

**Dr Mitra’s Secretary**
Direct telephone: 020 3447 9090
National Prostate Cancer Support Association
Helpline: 0845 601 0766
Email: helpline@prostatecancersupport.info
Website: www.prostatecancersupport.co.uk

The Prostate Cancer Charity
Freephone Helpline: 0800 074 8383
Email: info@prostate-cancer.org.uk
Website: www.prostate-cancer.org.uk

Prostate Action
Telephone: 020 8788 7720
Email: info@prostateaction.org.uk
Website: www.prostateaction.org.uk

Prostate Cancer Research Centre
Telephone: 020 7679 9366
Email: info@prostate-cancer-research.org.uk
Website: www.prostate-cancer-research.org.uk

Prostate Cancer Federation
National Helpline: 0845 601 0766
Email: info@prostatecancerfederation.org.uk
Website: www.prostatecancerfederation.org.uk

Continence Foundation
Telephone: 0845 345 0165
Monday to Friday, 09:30 to 12:30
Email: continence-help@dial.pipex.com
Website: www.continence-foundation.org.uk
The Impotence Association
Telephone: 020 8767 7791
Email: info@impotence.org.uk
Website: www.impotence.org.uk

Macmillan Cancer Support
Cancer Line freephone: 0808 808 0000
Monday to Friday, 09:00 to 21:00
Textphone: 0808 808 0121
Monday to Friday, 09:00 to 18:00
Email: cancerline@macmillan.org.uk
Website: www.macmillan.org.uk

CancerHelp UK
Freephone Helpline: 0808 800 4040
Monday to Friday, 9:00 to 17:00
Website: www.cancerhelp.org.uk

Cancer Research UK
Website: www.cancerresearchuk.org

Carers UK
Freephone: 0808 808 7777
Wednesday to Thursday
Email: adviceline@carersuk.org
Website: www.carersuk.org

Health Talk Online
Website: www.healthtalkonline.org

National Library for Health
Covers all aspects of health, illness and treatments
Website: www.library.nhs.uk
**NHS Direct**  
Telephone: 0845 4647  
Available 24 hours  
Website: www.nhsdirect.nhs.uk

**NHS 24**  
Telephone: 08454 242424  
Website: www.nhs24.com

**NHS Choices**  
Website: www.nhs.uk

**Patient UK**  
Comprehensive, free, up-to-date health information  
Website: www.patient.co.uk
Space for notes and questions