

Prostate boost- high dose rate brachytherapy

Information for patients

What is high dose rate (HDR) brachytherapy?

Brachytherapy is internal radiotherapy. The aim of the treatment is to kill any active cancer cells in your prostate. Treatment is given via temporary implants that are inserted into your prostate and then connected to the brachytherapy machine. The implants must be inserted under an anaesthetic which is carried out in an operating theatre. You will be admitted to a ward on your brachytherapy treatment date.

You will have 1 brachytherapy treatment combined with a course of external beam radiotherapy. The brachytherapy will be given either before or after the course of external beam radiotherapy. Your oncologist will let you know. You will not be radioactive after either of these treatments.

Preparation for your treatment

During the week before your brachytherapy treatment you will have:

- A pre-anaesthetic assessment
- Blood tests and an electrocardiogram (ECG) to monitor your heart beat

Please do not eat and drink after midnight on the day of your anaesthetic.

Day 1 of Brachytherapy (Tuesday)

Please take your medicines and tablets as usual unless instructed otherwise by medical staff.

You should bring an overnight bag with you.

You should arrive at the Cancer Assessment Unit at the Western General Hospital for 7.30am on the day of your procedure. You will be met by nursing staff and reviewed by an anaesthetist before you are taken to the operating theatre. An enema will be given to you to use.

In theatre you will be given a spinal anaesthetic. In case of any difficulties with spinal anaesthesia, you will be given a general anaesthetic. Your oncologist will then insert a thin tube (a catheter) to drain urine from your bladder. An ultrasound probe will then be inserted into your back passage and will guide the oncologist as to where to insert the implants. The implants are fine hollow tubes and are inserted into the prostate through the perineum, which is the skin between your scrotum and anus.

Once the implant procedure is completed, and after a short period of observation, you will be taken to the CT (computed tomography) scanner. The scan will take about 10 minutes and these images will be used to accurately plan your brachytherapy treatment. This involves calculating how long the radioactive source needs to stay in each implant tube to give the necessary radiation dose. This can take up to 4 hours. You will have to lie flat on a trolley during this time.

When your treatment plan is complete you will be brought to the brachytherapy suite. The radiographers will perform some necessary checks and measurements on the implant tubes within you. They will then leave the room to switch the machine on whilst watching you on a closed circuit TV. Communication can take place through an intercom. Treatment will take

between 20 and 40 minutes. It is delivered by a small radioactive source which travels into the applicator by remote control and is completely painless. The machine will automatically remove the radioactive source when the treatment is finished. The radiographers will come into the room and disconnect your implants from the machine.



brachytherapy machine

Patient in treatment room



Radiographers commencing treatment and observing patient

Your oncologist will remove the implants before your return to the ward. You will not need a general anaesthetic or sedation for this. There may be a little bleeding from where the implant applicators have been removed, but this will stop once gentle pressure from the oncologist is applied.

You will be taken back to the ward where you can eat and drink as normal. Your catheter will be left in place for a few hours after treatment. In some cases, the catheter may be left in overnight.

Discharge Criteria

Before you can go home, you will need to meet the following criteria:

- You are fully mobile
- You can eat and drink normally
- You can pass urine
- There is minimal bleeding from the implant site
- Your breathing, temperature, heart rate and blood pressure are normal
- You have the medication that you need
- You are aware of who to contact in an emergency out of hours.

Completion of Brachytherapy

You may find that there is blood in your urine or stools for a few days after the procedure and it may sting or have a slight burning sensation. This is a normal side-effect.

If your prostate is swollen after the treatment and is causing you difficulty to pass urine then you should contact the Cancer Treatment Helpline on **0800 917 7711** or go to your nearest Accident and Emergency department.

You may find that your bowel movements are a little uncomfortable for a few days after treatment and can be accompanied by a sharp pain. This should settle with time and you can eat whatever you like after brachytherapy.

Brachytherapy Team

The brachytherapy team consists of:

- Clinical oncologist
- Radiographers
- Physicists
- Nurses.

Contact Details

HDR Brachytherapy Suite: **0131 537 3602**

Genitourinary (GU) Cancer Nurse Specialist: **0131 537 3186**

If you have any questions about the treatment or its side effects, please speak to your oncologist or any member of the treatment team.

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