



High dose rate prostate brachytherapy (HDR)

A guide for patients and their carers



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Christie website

For more information about The Christie and our services, please visit **www.christie.nhs.uk** or visit the cancer information centres at Withington, Oldham or Salford.

Introduction

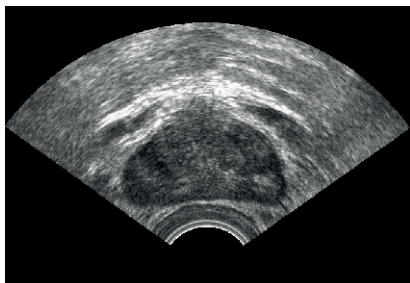
Your oncologist or specialist doctor has recommended that you may benefit from high dose rate brachytherapy (HDR). This information booklet aims to tell you about this treatment.

Radiotherapy can be given for prostate cancer using external beam radiotherapy or internal radiotherapy (brachytherapy) either alone or sometimes in combination.

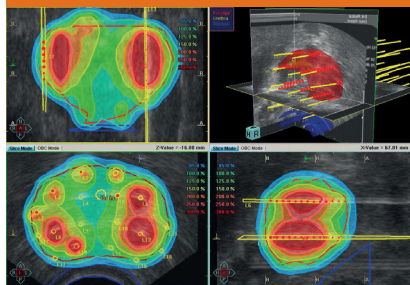
Radiotherapy works by destroying cancer cells in the treated area. Although normal cells are sometimes damaged by radiotherapy, they can repair themselves more effectively than cancer cells. The damage to normal cells may cause some unwanted side effects but these are usually temporary. Prostate brachytherapy techniques aim to minimise any radiation damage to normal tissue surrounding the prostate by placing the radiation directly into the prostate.

Brachytherapy, sometimes known as internal radiotherapy, may be used to concentrate the radiotherapy in a very small area – in this case, as a ‘boost’ in combination with a course of external beam conformal radiotherapy (conformal means shaped to fit the treatment field).

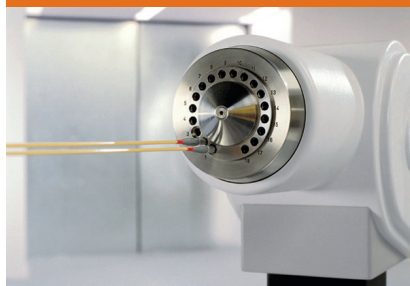
Before the brachytherapy begins you may be given several months of hormone treatment. Sometimes we will advise you to stay on hormone treatment for some time after your radiotherapy too. Your oncologist will advise you about this when they first meet you.



Ultrasound image of prostate



HDR brachytherapy treatment plan



HDR treatment delivery unit

What is high dose rate prostate brachytherapy (HDR)?

High dose rate brachytherapy (HDR) is a temporary implant where hollow needles are placed in the prostate under general anaesthetic to direct a radioactive treatment source into the prostate gland. This is a small radioactive iridium pellet mounted on the end of a cable. The machine will automatically remove the radioactive pellet when the treatment is finished. You are not radioactive once the pellet is removed.

After the treatment the needles are removed from the prostate while you are still under anaesthetic.

The standard combined treatment is:

- Hormone treatment and single brachytherapy HDR implant treatment followed by external beam radiotherapy given daily for 15 days on weekdays only – as an

outpatient. The external beam course will usually begin two weeks after the brachytherapy and will include a visit for a CT planning scan as an outpatient beforehand. The scan and the images are used to guide the treatment and are not used for diagnostic purposes.

- HDR alone. In a selected group of men, for example, those who have previously had external beam radiotherapy to the prostate, HDR brachytherapy can be used to treat local recurrence.

Agreeing to treatment

Consent to treatment

We will ask you to sign a consent form agreeing to accept the treatment that you are being offered. The basis of the agreement is that you have had The Christie's written description of the proposed treatment and that you have been given an opportunity to discuss any concerns. You are entitled to request a second opinion from another doctor who specialises in treating this cancer.

You can ask your own consultant or your GP to refer you. Your consent may be withdrawn at any time before or during this treatment. Should you decide to withdraw your consent then a member of your treating team will discuss the possible consequences with you.

What are the benefits of treatment?

HDR brachytherapy is a way of delivering a relatively high dose of targeted radiotherapy to the prostate gland whilst minimising the dose to the surrounding normal tissues such as bowel and bladder.

Are there any alternatives to this treatment?

High doses of radiotherapy may also be delivered from the outside without additional HDR brachytherapy. Your oncologist will talk through these options and suggest which treatment is best for you.

What will happen if I do not have this treatment?

HDR brachytherapy is given with the aim of curing you. Without treatment it is likely that your disease will continue to grow and may spread from the prostate.

What will happen during the implant?

- You will need to attend a pre-operative clinic as an outpatient before the implant. This will include an ECG (tracing of your heart) and some blood tests in preparation for your treatment. You may drive yourself to this appointment.
- You will be admitted to The Christie on the morning of the treatment. We will inform you before you come to The Christie what time you need to stop eating and drinking before your general anaesthetic. You will remain in hospital overnight afterwards.
- You should **not** drive yourself to this appointment.
- You will have an enema on arrival on the ward to clear the lower part of the bowel.
- Your anaesthetist will see you and this is an opportunity for you to ask any questions.
- You will be taken to the brachytherapy theatre and be given a general anaesthetic. While under anaesthetic a catheter will be inserted through the penis to drain urine from your bladder. Then, fine hollow metal needles will be passed through the skin between your scrotum and anus (perineum) into the prostate gland, guided by an ultrasound probe inside your back passage.
- Once the oncologist is satisfied with the needle positions, the treatment will be planned and you will receive your HDR brachytherapy treatment whilst asleep. You will be connected to a machine in theatre and a radioactive pellet will travel by remote control from the machine into each of the needles in turn. The pellet will stay in each needle for a calculated length of time, according to the treatment plan.

- The machine will automatically remove the radioactive pellet when the treatment is finished. You are not radioactive once the pellet is removed.
- After the treatment, the needles will be removed before you awake. When you wake up you will still have a catheter in your bladder draining blood-stained urine. This is normal.
- In all, the procedure will involve an anaesthetic time of around 2 - 3 hours and you will then be in the recovery area for a while afterwards.
- When you are fully awake you will leave the theatre recovery area and return to the ward. When you are on the ward we will give you painkillers if you need them. However, most patients do not experience much discomfort.
- The catheter draining urine from your bladder will be removed the next morning once you are up and moving about on the ward. You may pass small amounts of blood in your urine for a few days after the procedure. There is no need to worry as this is quite normal.
- We like you to remain on the ward until you can pass urine easily.

What happens after the brachytherapy is completed?

- The area where the implant was placed may feel a little uncomfortable for a few days, particularly if you sit on a hard chair.
- Sometimes you may not pass a bowel movement for a few days or bowel movements may feel a little uncomfortable for a few days. Occasionally this may cause a sharp pain in your abdomen. This will settle on

its own and is rarely severe enough to need active treatment. You can soon return to your normal level of activity.

- We will send you home with some medication to help you pass urine more easily.

You will find dietary advice in another booklet called 'Radiotherapy to the prostate'. This information will help you prepare for your course of external beam radiotherapy which will start approximately two weeks later.

Side effects

Different side effects may take varying lengths of time to resolve following treatment.

- As a result of the hormones and radiotherapy you will typically find that you lack interest in sex and may have difficulty getting and maintaining an erection. This may improve once you stop the hormone therapy. However in some men the ability to get erections is either permanently weakened or lost after treatment.

The frequency of this side effect is not considered to be any worse after HDR brachytherapy than with external radiotherapy alone.

Please discuss any sexual problems that arise with your treating team as various treatments are available to help.

- At first, you will notice a reduced volume of ejaculate which may be dark in appearance or bloodstained but this will clear spontaneously. Eventually you may not ejaculate any semen at all, although this does not stop the sensation of orgasm.
- Inflammation of the prostate gland can cause narrowing of the urethra so that urine cannot pass out easily

(urinary retention). This can occur in less than 5% of men treated with high dose rate brachytherapy. This may happen soon after the brachytherapy. If you find it difficult or impossible to pass urine, you should go to the local Accident and Emergency department. A catheter will be inserted and you should then contact us for further advice. We will arrange for the catheter to be removed (trial without catheter) in a few days and before your external radiotherapy planning scan.

- Sometimes if you cannot pass urine you may have subsequent radiotherapy treatments with a catheter in place.
- Leakage of urine (incontinence) is rare with brachytherapy but may occur in some cases.
- Rectal discomfort (proctitis) may give the feeling of needing to open your bowels, and is a common side effect following radiotherapy. You may notice mucus or blood in the stools, along with an urgency to open your bowels.
- We may give you medication to help with discomfort and problems passing urine. It is also advisable to drink plenty of fluid (about one and a half to two litres a day) but avoid drinks containing caffeine, such as tea and coffee or some fizzy drinks, as these can irritate the bladder. It is safe to drink alcohol in moderation. One or two glasses of cranberry juice a day may help to relieve some of the symptoms. However, do not drink cranberry juice if you are also taking warfarin to thin your blood because it can interact with this drug.
- The commonest additional long term problem is scarring to the urethra which can occur in less than 5% of patients. This is the tube that carries urine from the bladder and out of the penis. Occasionally this can be come scarred and narrowed many months after

treatment which may show itself as difficulty starting to pass urine, occasional spraying of urine and a very weak stream. This is usually easily corrected by a minor operation.

- A common late effect of radiotherapy to the prostate is rectal bleeding. If this occurs you should report it to your treating team.
- In common with all other forms of cancer therapy, there is the possibility of more serious side effects, but these are very uncommon and occur in less than 1% of men treated.

What can I expect after treatment has finished?

- After the brachytherapy and external radiotherapy course is completed the side effects will begin to settle over the following weeks.
- You may feel tired for some time after the treatment. Remember that everyone is different and may react differently to treatment.
- We will write to your GP when you go home after the implant, explaining the treatment you have received and possible side effects.
- You will have regular appointments with your oncology team over the next few years when blood tests (PSA) will be carried out to assess your progress. If at any time between appointments you are concerned please contact us for advice.

Contact numbers

You will have a clinical nurse specialist key worker

My key worker is:

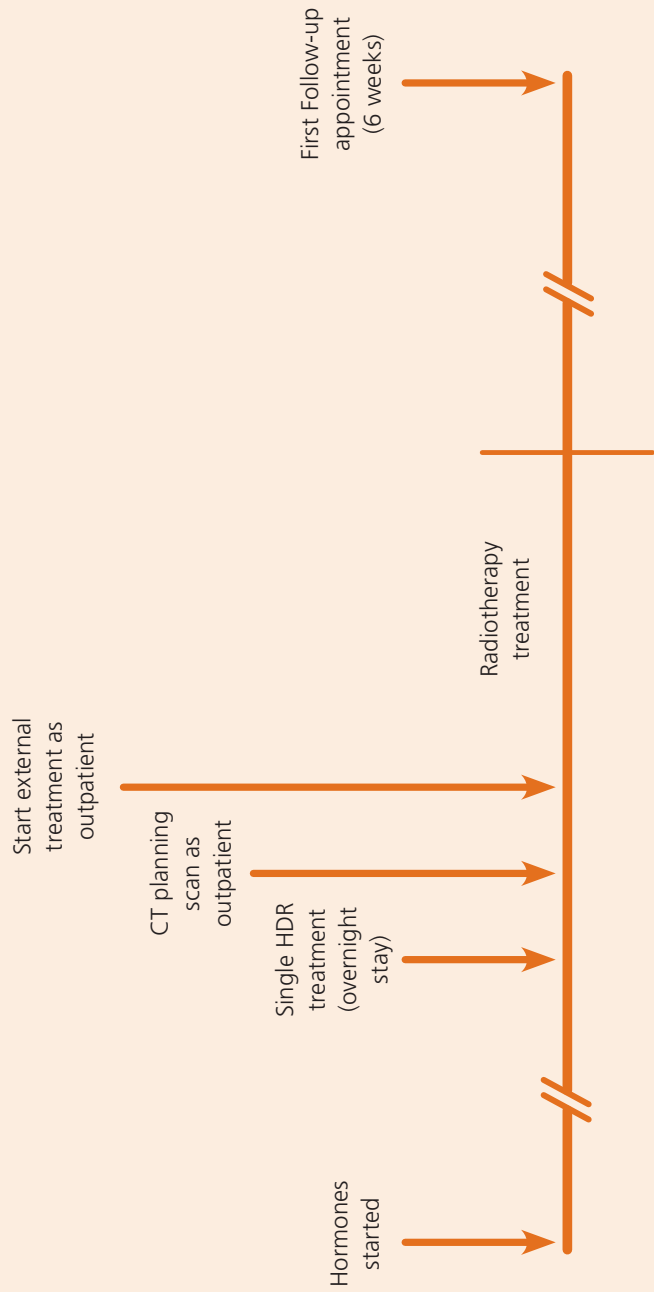
Tel:

Cathy Taylor
Consultant radiographer
Office **0161 446 3048**

Or bleep from switchboard **0161 446 3000**
email: cathy.taylor4@nhs.net

Liz Taylor
Brachytherapy theatre administrator
0161 446 3520

HDR Prostate Treatment Time Line



Further information

Prostate Cancer Charity: publishes a large selection of information and also has a helpline on **0800 074 8383** Mon, Tues, Thurs, Fri 9am–6pm and Wed 10am–6pm
www.prostatecanceruk.org

Christie information: The cancer information centres offer information, advice and support. The centres have a full range of booklets free to patients and their relatives or carers. There are information centres at The Christie at Withington, Salford and Oldham.

Benefits and finance

You may have had to stop work and had a reduction in your income. You may be able to get benefits or other financial help.

- For benefits advice, contact Maggie's centre on **0161 641 4848** or email manchester@maggiescentres.org
The Christie at Oldham has a benefits advice session on Thursday afternoons, call **0161 918 7745**.
- Macmillan Cancer Support can give advice on helping with the cost of cancer on **0808 808 00 00** or www.macmillan.org.uk

Maggie's centre

The centre provides a full programme of free practical and emotional support, including psychological support, benefits advice, nutrition and head care workshops, relaxation and stress management. Contact Maggie's on 0161 641 4848 or email manchester@maggiescentres.org

Maggie's Manchester: Tel: **0161 641 4848** or email manchester@maggiescentres.org

The Robert Parfett Building, The Christie NHS Foundation Trust, 15 Kinnaird Road, Manchester M20 4QL

Maggie's Oldham: Tel: 0161 989 0550 or email oldham@maggiescentres.org

The Sir Norman Stoller Building, The Royal Oldham Hospital, Rochdale Road, Oldham OL2 2JH

Student training

The Christie is a training centre for postgraduate and undergraduate trainees so you may meet male and female students in all areas of the hospital. We train doctors, nurses, radiographers and other therapists in the treatment and care of cancer patients.

Placements at The Christie are an important part of student training, so by allowing them to assist in your care, you will be making a valuable contribution to student education. Students are always supervised by fully qualified staff. However, you have the right to decide if students can take part in your care. If you prefer them not to, please tell the doctor, nurse, radiographer or other therapist in charge as soon as possible. You have a right to do this and your treatment will not be affected in any way.

The Christie Hotline

The service is available 24 hours a day and 7 days a week. The Christie Hotline can provide help and support at every stage of treatment. All patients having radiotherapy can contact the Hotline for support and advice for radiotherapy reactions.

The Christie Hotline 0161 446 3658

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard.

If you would like to have details about the sources used please contact the-christie.patient.information@nhs.net

Contact The Christie Hotline for
urgent support and specialist advice

The Christie Hotline: 0161 446 3658

Open 24 hours a day, 7 days a week

Visit the Cancer Information Centre

The Christie at Withington **0161 446 8100**

The Christie at Oldham **0161 918 7745**

The Christie at Salford **0161 918 7804**

Open Monday to Friday, 10am – 4pm.

Opening times can vary, please ring to check
before making a special journey.

The Christie NHS Foundation Trust

Wilmslow Road
Manchester M20 4BX

0161 446 3000

www.christie.nhs.uk



The Christie Patient Information Service
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