

A Patient's Guide to Prostate Brachytherapy using Permanent Implants

Patient Information Series No 51

Consent

It is a legal requirement to have a signed Consent Form from you before the start of your treatment.

If you have already been given one of these forms, please bring the completed form with you when you come for your first appointment.

If you have not been given a form, it will be given to you at your first appointment.

Identification

Please note that it is a legal requirement for the staff to check your name and details against your treatment sheet and your hospital name band each time you attend.

Please wear your name band at all times whilst in hospital.

Fathering a child

Patients must not father a child during a course of brachytherapy (radiotherapy) or for some months afterwards. **Please discuss this with your cancer specialist.**

If you think there is a chance, however small, of your partner becoming pregnant during your treatment, it is extremely important that you discuss this with your oncologist, radiographer or nurse as soon as possible.

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Contents

Introduction	4
What is brachytherapy?	4
What does this treatment involve?	5
Is it suitable for all patients with prostate cancer?	5
What happens when I have the volume study?	6
When will the treatment be given?	6
What happens when I come for treatment?	7
Is it possible for the seeds to come out?	7
What about any side-effects?	8
What about any long term side-effects?	9
Special instructions for when you are back at home	10
Additional help and support	12
Contacts	13

Introduction

This leaflet aims to explain what happens when you have brachytherapy to treat your prostate gland.

Whilst it doesn't cover all the issues, it is intended as a guide to help you to understand more about this particular treatment and the procedure involved.

The cancer specialist is in charge of your care, and throughout this leaflet we will refer to him/her as the oncologist¹. There will also be a team of other hospital staff caring for you.

What is brachytherapy?

Brachytherapy is a form of radiotherapy given by introducing a radiation source directly into the area we wish to treat.

In the case of the prostate gland, we can do this with permanent implants of radioactive iodine 'seeds'.

This leaflet explains about using permanent implants.

The advantage of brachytherapy is that the radiation treatment concentrates in the prostate gland. The sensitive structures nearby (in particular the bladder and the rectum) receive a much lower dose, which reduces the likelihood of complications.

¹ Throughout this leaflet the term 'oncologist' will refer to both your cancer specialist (oncologist) and any doctors working within his/her team.

What does this treatment involve?

There are two stages to your treatment:

- Stage one is when we measure the complete size and shape of your prostate; this is called the volume study (see page 6).
- Stage two is your actual treatment, when we put low energy radioactive iodine 'seeds' directly into your prostate gland. Iodine seeds look like silver grains of rice. The radiation given out by these seeds is nearly all absorbed within your prostate gland, and therefore does not present a significant radiation risk outside your body.

Is it suitable for all patients with prostate cancer?

No, this treatment is suitable only for patients who have very early prostate cancer, with no evidence of spread beyond the prostate gland.

It is not suitable for patients who have recently had an operation to enlarge the urine passage through the prostate (known as a TURP), because this would greatly increase the risk of incontinence.

It is also not suitable where there is any risk of early spread of cancer through the edges of the prostate gland. This can be predicted from a combination of your PSA level, Gleason Score and scan findings.

Your oncologist will explain this to you in more detail if you wish.

What happens when I have the volume study?

The first thing we will do is measure the shape, size and volume of your prostate gland.

- It is very important that the iodine seeds are placed evenly in your prostate gland with enough seeds to cover the entire gland in all three dimensions.
- The most accurate way of achieving this is with a transrectal prostate ultrasound. This may be done with a local or general anaesthetic, as it involves placing an ultrasound probe inside your back passage (rectum), and either a special gel or a urinary catheter through the urethra to your bladder.
- During the procedure, we will identify the position of your urethra and bladder base, and scan the length of your prostate gland to calculate its volume. From this we can work out exactly how to distribute the iodine seeds within your prostate gland.
- At the end of the study, we will remove the catheter (if used). For an hour or two afterwards you may find it is uncomfortable when you urinate.

Your oncologist will talk through the findings of the volume study with you. If your prostate gland is too large or is too awkward a shape for us to implant the seeds, you may be advised not to proceed with this treatment. Your oncologist will discuss this with you and discuss other options.

When will the treatment be given?

We will give you your treatment 4 - 6 weeks after your volume study.

What happens when I come for treatment?

Your treatment will be given under a general anaesthetic, so you will be admitted to hospital the day before. Whilst under the anaesthetic, you will have another ultrasound scan to ensure that we can place the seeds where we have planned.

After this we will evenly space a series of strands of seeds within your prostate. Around 80 - 100 seeds will be inserted. When this is done the implant is complete.

You may feel uncomfortable when you next pass urine and you may have slight bruising around the site of your implant, but the pain is not normally severe. Please ask your nurse if you need any pain relief.

You will return to a side room on the ward, where you will recover from your anaesthetic. Once recovered you will be allowed to get out of bed and walk around, but **you must remain in your room**. We ask that you bring in your own nightwear. You will be expected to stay overnight.

Is it possible for the seeds to come out?

There is a small risk that a seed will move into your bladder or urethra and you will pass it in your urine.

We need to check this, and so after the implant you will not be allowed to use the toilet in the ward but will be asked to pass all urine into a bottle or commode. This will then be checked to ensure no seed has been passed whilst you are in hospital.

For what to do if this happens at home please see page 10.

What about any side-effects?

The most common side-effect following your implant is the feeling of discomfort when passing urine. This can start in the first few days after treatment.

For some patients it can be quite severe requiring medication, while a small number (around 10%) will require a urinary catheter (a small flexible tube used to drain urine from your bladder).

If this happens to you, don't worry as it is usually a temporary measure for a few weeks whilst your prostate gland is still swollen from the treatment. If you are concerned about this, please contact the oncology team looking after you at Mount Vernon Hospital.

In the first few days following the implant, you may also have:

- Blood-stained urine which usually clears up in a few days.
- Discoloured semen which can last for a few weeks.
- Bruising in the treated area, which can spread to your inner thighs and penis.
- Discomfort spreading to the tip of the penis.

We will give you an additional leaflet (number 51a) 'What to expect after Prostate Brachytherapy using Permanent Implants', when you go home from hospital. This will give further details of symptoms from permanent implants.

What about any long term side-effects?

Erectile dysfunction

About 30% of men who have brachytherapy treatment with permanent implants will find it difficult to maintain an erection in the years following treatment due to the damage to blood vessels and nerves needed for erections. If you are having hormone treatment or have had difficulty with erectile dysfunction (ED) before treatment then your risk for ED following treatment is higher.

Following brachytherapy treatment you may find that you ejaculate less fluid than before. Some drugs you may be taking to help reduce urgency and discomfort when urinating may also temporarily reduce the amount of fluid you ejaculate. This can also be a permanent side effect of brachytherapy treatment for prostate cancer.

Proctitis

As late as 2-3 years following brachytherapy treatment, about 10% of men have mild bowel problems such as inflammation (proctitis). Proctitis can cause some bleeding from your rectum and you may find that you need to empty your bowels more often. Any treatment of the bowel in the years following brachytherapy may be more difficult due to changes in the tissue of the bowel so it is important to contact your oncologist first if you need any further investigations.

Urethral Stricture

There is a risk of scarring around the ureter (urine tube) causing a reduced urinary stream. Around 5% of men may need to undergo a minor procedure to dilate this if it becomes troublesome.

Special instructions for when you are back at home

Radiation safety is a concern of many patients. However, iodine seeds are low energy radioactive materials and the body tissues absorb most of the radiation that they emit.

Also, the strength of the radiation from the seeds reduces with time. The radiation level outside your body, arising from the seeds, is not much greater than the normal background level that exists in the natural environment. The risk to other people around you is therefore very low.

Whilst there are no formal restrictions on your activities when you return home, we suggest you follow the guidelines listed below for a period of two months after your operation, for your own and your family's peace of mind.

- You may be given more specific advice if your spouse is already pregnant, or if you later advise us that she becomes pregnant. Women who are (or maybe) pregnant should not sit very close (less than 1 metre) to you, on the same sofa, for example.
Apart from this there is no need for you to treat them any differently from how you would have done before your implant. You may greet them as you normally would, and they may stay in the same room as you for as long as they wish.
- Do not nurse children on your lap, or sit very close (less than 1 metre) to them for long periods of time. As above, you may cuddle or hold them for a few minutes each day, and they may stay in the same room as you for as long as you wish.

- There is no need to place any restrictions on the time you spend, or activities you undertake, with other family members, friends and colleagues.
- Iodine seeds look like silver grains of rice. Occasionally a seed may be passed in your urine, so just flush it away down the toilet. If you find a seed in your bed don't pick it up with your fingers - use a spoon or tweezers and flush it down the toilet as before.

The radiation from this seed is very small and is not a risk to you or other people. You don't need to report this to the oncologist at the time, but please mention it at your next clinic visit.
- After the implant you may have sexual intercourse if you feel comfortable to do so. For the first two months there is a small risk that a seed may be passed into your semen so we advise that you use condoms. You may also notice that your semen is darker than usual or has specks of blood. Don't worry, as this will clear by itself.

Apart from these minor precautions you should be able to return to your normal level of activity following this treatment. You will be given appointments to return to the hospital for occasional follow-up visits to check on your progress.

It is very important that you understand all of these instructions. However, if anything is unclear please call us.

Additional help and support

You can also drop in or call the Lynda Jackson Macmillan Centre (LJMC) at Mount Vernon Hospital (see details on the back of this leaflet).

The Centre is staffed by a mixture of oncology trained professionals as well as volunteers and is an integral part of the main Cancer Centre.

Please do not hesitate about asking questions - they will be pleased to give you help and advice wherever possible.

