

Contacts

If you are unable to keep any appointments, or have any questions concerning your appointment, please telephone the Wellington Blood & Cancer Centre as soon as possible.

Radiation Treatment Department
Level 2
Wellington Blood & Cancer Centre
Wellington Regional Hospital
Private Bag 7902
Riddiford Street
Newtown

Telephone: 04 806 2000

Monday - Friday: 8am – 4:30pm

Brachytherapy Suite: 04 806 2024

5 North Ward oncology nurses are available for **urgent after hours advice** related to your treatment. This is after 4:30pm and on weekends. **Please call: 04 806 0418**

Information for Patients Receiving Prostate Brachytherapy

Radiation Treatment Department

Wellington Blood and Cancer Centre

Introduction

Your doctor has recommended a course of brachytherapy as part of your treatment. This booklet will give you information about:

- What is brachytherapy?
- Who will I meet?
- What will my treatment involve?
- Possible side effects
- What will happen after treatment?

Treatment is given at the Radiation Treatment Department at the Wellington Blood and Cancer Centre on level 2 of Wellington Hospital. Please report to reception on arrival and check in. If you are arriving for your appointment early and the doors are locked, please ring the doorbell on the wall to the right of the doors. A member of the team will meet you and bring you through to the brachytherapy area.

Support Services

Please ask a member of your treatment team if you would like more information or to access any of these services.

- Cancer Society
- Counselling (general/relationship/sexual issues)
- Social work
- Support groups
- Massage
- Fit for life
- Chaplains
- Pacific health

Smoking

We strongly advise you to stop smoking. You may find this very difficult. Please speak to your treatment team about support available to help with this.

Contraception during and after Radiation Treatment

If you are having sex during and after your treatment it is important to use contraception. Your doctor will advise you not to father a child during treatment and for up to six months after it is finished. You can ask your doctors for information about this.

What Will Happen After Treatment?

Reactions usually peak about 1-2 weeks after treatment. Most people find these start to resolve 3-6 weeks after treatment. A follow-up appointment with the doctor will be given to you.

What is Brachytherapy?

The majority of radiation treatments for prostate cancer are given by external beam radiotherapy in which treatment is given from outside the body. However, for certain groups of patients, part of their treatment may be given with brachytherapy which involves the placement of a radioactive 'source' or sources directly within the prostate ('Brachy' means 'near' in Greek).

The main advantage of brachytherapy is that by placing the radioactivity directly within the prostate, it is possible to reduce the overall amount of normal tissue exposed to the effects of radiation which reduces side effects. In addition, brachytherapy allows higher doses of radiation to be delivered to the prostate this may improve tumour control rates.

In high dose rate (HDR) brachytherapy a single radioactive source, made of a material called Iridium, is placed temporarily within the prostate to deliver the radiation. This is the kind of brachytherapy used in the Wellington Blood and Cancer Centre.

Having HDR brachytherapy treatment is a medical procedure that may take up to 4 hours. During the procedure hollow needles, called catheters (tubes) through which the treatment is given, are implanted into the prostate. The treatment is given and the catheters are removed before you wake up.

HDR brachytherapy is often used in conjunction with other treatments such as hormone (androgen deprivation) therapy and external beam radiation therapy. It is less commonly given alone. Your radiation oncologist will discuss with you what your particular treatment plan will involve.

External Beam Radiation Therapy used with HDR Brachytherapy

The majority of men undergo a course of external beam radiation therapy after undergoing their brachytherapy procedure. External beam radiation therapy is given on a daily basis as an outpatient for 4-5 weeks (Monday – Friday). Approximately one week after the brachytherapy treatment you will have a CT scan to plan the EBRT treatment. EBRT treatment will then usually commence 1-2 weeks following this CT scan.

Hormone Therapy used with HDR Brachytherapy

Some men have hormone treatment prior to undergoing their HDR brachytherapy procedure. This is usually given as an injection. HDR Brachytherapy will usually be performed 5-6 months following the first hormone treatment injection.

Side effects related to the implant

Local discomfort after the treatment is common but usually mild and easily managed with pain relief. There may be other side effects that persist for days or even a few weeks following removal of the implant. You may notice some soreness when you pass urine after the catheter is removed and passing motions may be uncomfortable for the first few days. Some men notice that their urinary stream is slow and there may also be some swelling and bruising in the scrotum and perineum.

As mentioned, blood in the urine is quite common and may persist for several days, but usually clears rapidly. Occasionally the bleeding may recur after about 10 days or so, as the healing scabs fall off.

Sometimes men notice that the tip of the penis feels numb, which is due to bruising of the nerves; this gradually improves with time. All of these side effects relate to the physical aspects of the implant. Pain relief such as Paracetamol can be used to relieve any lingering discomfort.

The main long term toxicity following brachytherapy is a small risk of developing a narrowing in the urethra, which is the tube that passes urine from the bladder to the penis. If this does occur it can usually be managed by stretching of the urethra. There is a very small risk (less than 1% of cases) of developing urinary incontinence. The risk is generally highest in patients who have previously undergone surgery to widen the urethra (TURP) for urinary flow difficulties. Impotence is a recognised long term complication of brachytherapy and EBRT and may be seen in 10-50% of cases depending on pre-treatment erectile function.

Care after treatment

Most men do not experience pain from the treatment catheters, although there may be some local discomfort and you will be supplied with pain relief as required.

Once the treatment is completed and the anaesthetic has worn off, a nurse will remove your urinary catheter and you may get up slowly. Most men can leave the hospital later the same day once you have been reviewed by the doctor supervising your treatment.

It is not uncommon for men to lose a little blood in the urinary catheter following the implant but if there is a significant amount of blood still in the urine, you may need to spend the night in hospital until this settles. Bring an overnight bag with you on the day of the procedure in case.

It is important that you have organised a responsible adult to pick you up, or travel with you on public transport or in a taxi. You also need an adult to stay with you overnight. You should not make any important decisions, drive a car or operate dangerous equipment for 24 hours after your anaesthetic. It is also advisable to take at least two days off work following the brachytherapy procedure to help with your recovery.

If you are unable to pass urine following your brachytherapy treatment, you should seek urgent medical attention through your emergency service provider as this requires immediate treatment.

Who will I meet?

Radiation Oncologist: A Radiation Oncologist is a doctor who has specialised in looking after patients with cancer, in particular, involving the use of radiation therapy. Your Radiation Oncologist decides whether brachytherapy is required, how it should be delivered as well as the number of treatments needed.

Radiation Oncology Registrar: A Radiation Oncology Registrar is a doctor who is currently training to become a specialist. The Registrar works closely with your Radiation Oncologist.

Radiation Therapist: Radiation therapists are involved at each stage of your treatment. They organise your appointments and will meet you before your planning session to explain the process. The radiation therapists also plan and deliver your radiation treatment.

Medical Physicist: Medical Physicists are involved in maintaining the brachytherapy machines and work with the doctors and radiation therapists to achieve the best treatment plan for you.

Anaesthetist: Anaesthetists are specialist doctors who are responsible for providing general anaesthesia for operations and procedures. You will see an anaesthetist during your anaesthetic pre-assessment. You will also be reviewed by the anaesthetist the morning of your brachytherapy procedure.

Nurse: Radiation nurses will see you during your pre-assessment and pre-treatment appointments. They will also be involved in your care the day of your brachytherapy procedure.

Brachytherapy pre-assessments

To check whether you are a suitable candidate for brachytherapy and the associated anaesthetic you need to undergo a series of appointments and tests. A Radiation Therapist will contact you with these appointments. They are performed a number of weeks or months prior to your brachytherapy.

The assessments include:

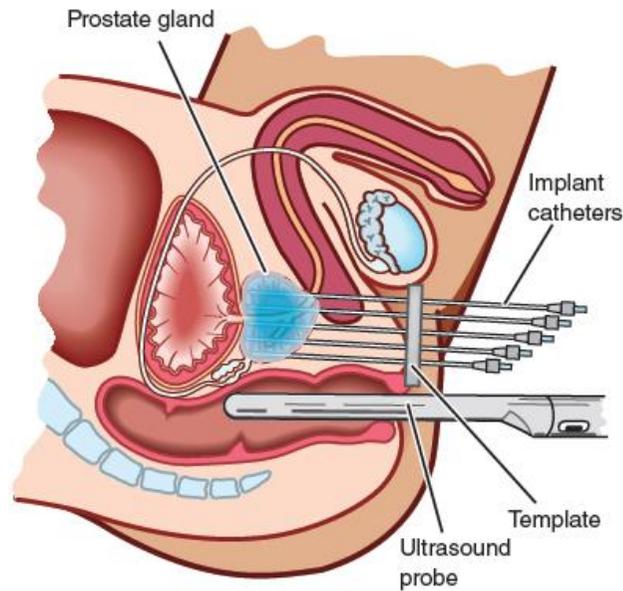
- A consultation with the Radiation Oncologist who performs brachytherapy
- A CT scan in the Radiation Treatment department called a 'pubic arch study'. This CT scan is used to assess the size and position of your prostate in relation to the bones in your pelvis to ensure that brachytherapy is technically feasible
- A urine flow study performed in the Urology department
- A blood test
- The completion of a number of health and prostate related questionnaires to assess suitability for anaesthetic and establish a baseline of urinary, bowel and sexual function.
- A pre-anaesthetic assessment with an anaesthetist. This may be on a different day to the other assessments.

Whilst you are under anaesthetic, a urinary catheter is inserted to drain urine from the bladder. Next an ultrasound probe is placed into your rectum to obtain images of the prostate. This allows the doctor to accurately place the treatment catheters into the prostate, via the perineum which is the skin behind the scrotum.

The ultrasound images are used to check the position of the catheters and also identify the capsule of the prostate and surrounding normal tissues. This information is then used to create an individualised treatment 'plan' which will allow us to deliver the radiation so that we adequately treat your prostate while also minimising irradiation of nearby normal tissues.

Treatment is delivered whilst you are still under anaesthetic. Once treatment is complete, the treatment catheters are removed before you are woken up from the anaesthetic. Three small gold marker seeds may also be placed in the prostate during the procedure to help with planning your subsequent external beam radiation treatment. These marker seeds are only placed if you are having external beam radiation treatment at the Wellington Blood & Cancer Centre.

Implant, planning and delivery of radiation treatment



Prostate Cancer Foundation of Australia

The entire procedure is performed under a general anaesthetic. With a general anaesthetic you are given an injection which makes you unconscious for the whole procedure. In order to get the radioactive source into the prostate, we first need to 'implant' the prostate with a number (around 6-18) of small hollow plastic tubes, called catheters. These are the tubes that the radioactive source will move through during the treatment.

Bowel Preparation and Pre-anaesthetic Information

You will be given more detailed instructions regarding the preparation required for the brachytherapy procedure once your treatment has been booked. One of our nurses will discuss this with you one week prior to your brachytherapy treatment either by phone or at a booked appointment within the radiation therapy department.

The preparation for brachytherapy includes use of an enema to help empty your bowels. The aim of bowel preparation is to ensure that the rectum is clear of motions which can make it more difficult to plan the treatment.

As you will be having an anaesthetic you will be required to stop all food from 2am on the morning of your treatment. You may continue to drink water until 6am to prevent dehydration and so that you can take your normal prescribed medications in the morning before coming to the Radiation Therapy Department. You will need to use a second enema the morning of the procedure. After the implant has been performed you will be allowed to eat and drink.

Medications

In order to reduce the risk of abnormal bleeding associated with the implant you will need to stop all blood thinning medications prior to the treatment. Your doctor will ascertain how to do this safely but in general all patients taking aspirin or other anti-platelet drugs should stop this a week prior to admission. Special arrangements will be made for patients who are taking warfarin.