THE beatson
WEST OF SCOTLAND CANCER CENTRE

NHS
Greater Glasgow and Clyde

Patient Information for

Radiotherapy to the Prostate

This leaflet is for patients receiving radiotherapy to the prostate. It describes your radiotherapy planning and treatment. It also explains the effects that you may experience during and after treatment, and how best to cope with them. We treat each patient as an individual and the effects of treatment may vary from one person to another. Your doctor, radiographer, and clinical nurse specialist will explain specific aspects of your treatment.

What is Radiotherapy?

Radiotherapy is the use of carefully measured doses of radiation to treat cancer. It damages the cells and stops them dividing and growing. Most patients having radiotherapy are treated using a high energy beam of x-rays delivered to a precise area, by a machine called a linear accelerator. The rays are used to treat the tumour and a small surrounding area.

Radiotherapy is often given in several small doses over a specified period of days or weeks, but may be given in a single treatment.

Therapy radiographers operate the radiotherapy planning and treatment machines and will be able to answer any questions or concerns that you may have.

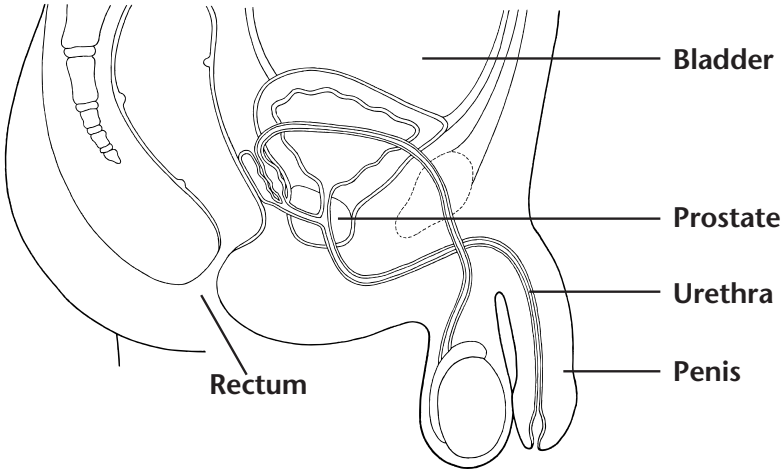
You will receive a list of appointments which will include planning, treatment and review dates and times.

If you are in doubt about anything or have any questions or problems, please let us know as soon as possible.

Fertility

If you are planning to have children please remember that radiotherapy to the prostate can cause infertility. You may be able to store sperm before your treatment starts. Please ask your doctor or nurse for more information if this concerns you.

Location of Prostate Gland



Preparation for Treatment

Before your course of radiotherapy can begin we need to plan your treatment carefully to allow us to produce an individual plan for you. You will be asked to attend the outpatient department prior to starting your radiotherapy to have 3 markers placed into your prostate gland.

Insertion of 3 markers into your prostate gland.

Accuracy is always important in radiotherapy as it ensures the tumour is treated with the correct dose. It also ensures that the surrounding tissues receive as little radiotherapy as possible. Research has shown that these markers can improve accuracy and reduce the size of the area treated.

Your prostate can move a little from day to day. We will check the position of the prostate daily using the markers, and can make adjustments to your treatment as necessary.

What are prostate markers?

Each marker is a small cylinder and measures about 1mm in diameter and 3-4 mm in length. Usually 3 are inserted. The markers are not radioactive and remain in the prostate permanently.

How are the markers inserted?

The procedure is very similar to the prostate biopsy you had when your diagnosis was made. We will send you an appointment to attend the Beatson Cancer Centre, Out-Patient department. There is no need to fast.

If you are taking blood thinning medication, your doctor will confirm if or when it is safe for you to stop taking your medication. This is a guide to some of the more common ones:

Ticagrelor- stop 7 days before seed insertion.

Warfarin- stop 5 days before seed insertion.

Rivaroxaban, Apixaban or Edoxaban- stop 72 hours before seed insertion.

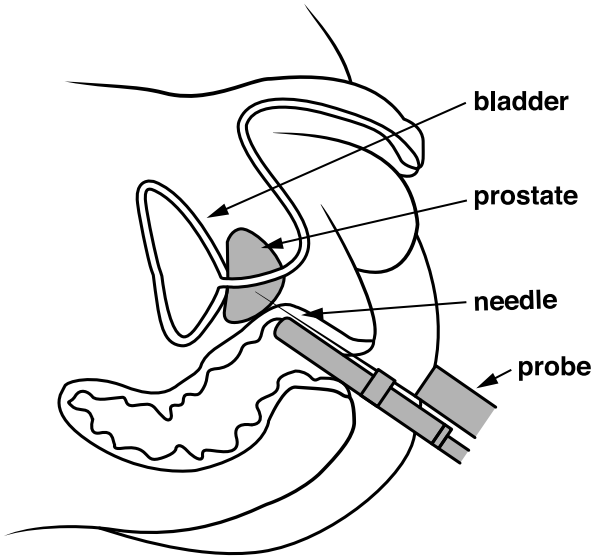
Aspirin or Clopidogrel - no need to stop.

Your doctor may feel it is not recommended for you to stop taking your blood thinning medication. They will discuss this with you. However, in such cases, it is still possible to proceed safely with radiotherapy without the insertion of markers.

- Your doctor or nurse specialist will discuss the procedure and you will be able to ask any questions before you sign a consent form.
- A sample of your urine will be checked for signs of infection. If you have a urine infection, we will delay the procedure.
- We will also check for sugar in your urine. If you have diabetes and your glucose is above 12mmol/l we will delay this procedure due to an increased risk of infection.
- We will ask you to take a single dose of antibiotic tablets 1 hour before the procedure.
- You may need a small enema before the procedure to empty your rectum (back passage). You can administer this yourself.
- We will ask you to lie on your left hand side with your knees drawn up.

- An ultrasound probe will be inserted gently into your rectum to locate the prostate. We will ensure your dignity is maintained by covering you whenever possible.
- A needle, with a marker loaded in it, is introduced through the ultrasound probe.
- The marker is then implanted into your prostate. One needle is used for each marker.

The procedure may last 10-15 minutes, however you could be in the department for up to 2 hours. This includes pre-procedure checks and antibiotic administration.



What should I expect after the procedure?

The procedure is likely to be less traumatic than a prostate biopsy. You may experience some discomfort. This usually settles quickly but simple painkillers such as paracetamol can help.

- You may notice a small amount of bleeding from the rectum, in your urine or in your semen for up to 7 days after the procedure. This usually settles without any further treatment being required. If bleeding persists seek advice from your GP or cancer specialist.

- There is a potential risk of infection in the prostate and urinary tract. Therefore, if you develop flu like symptoms (fever, shivers, general aching) you should seek medical assistance immediately.

We would encourage you to drink at least 2 litres of fluid during the 24hrs after the insertion of markers.

Please ask your doctor or nurse specialist for advice if you have any questions or concerns.

Preparing for your radiotherapy appointments

The position of your prostate can vary daily depending on the fullness of your bladder and rectum. To help minimise this, you will be given instructions to follow before your scan and treatment. This can help to:

- Limit the amount of bladder and bowel in the treatment area. This may help reduce any side-effects you may experience.
- Ensure treatment accuracy each day.

If you have any questions or problems, please speak to your radiographer.

Bowel preparation for radiotherapy planning and treatment

We will give you a supply of small enemas to use. These will be given to you when you attend to have your markers inserted.

- **CT planning Scan:** You will need to use 2 enemas before your CT scan. You should use the enemas at home. Please use 1 the evening before your planning scan, and 1 on the day of your scan, 1 to 2 hours before your appointment time.
- **Treatment:** Please use 1 enema each day for your first 7 treatments. You should use the enema at home, 1 to 2 hours before your appointment time.

To use the enema:

- Pull or twist the cap off the tube.
- If you want to lubricate it before inserting, squeeze a drop of liquid out onto the nozzle.

- Insert the full length of the nozzle into your back passage.
- Gently squeeze the tube until it is empty.
- Keep squeezing the tube as you remove the nozzle from your back passage.
- Wait for the enema to work- approximately 10-15 minutes.
- If you have no bowel movement within 15 minutes it means your rectum is already empty. Do not strain.

Bladder preparation for radiotherapy planning and treatment

When you arrive in the department, your radiographers will ask you to empty your bladder and then drink **500ml of water**. This helps to ensure you have a comfortably full bladder. It important that you drink the water quickly. You will then **wait 30 minutes** before having your scan or treatment.

As it is important that these instructions are followed, please remember the following:

- **You will need to be well hydrated before coming to these appointments. Try to drink at least 2 litres of fluid every day.**
- **Avoid caffeinated drinks- tea, coffee, energy drinks and some fizzy juices. Try decaffeinated options.**
- **Limit your alcohol intake.**
- **You will need to be in the department at least half an hour before your treatment appointment time.**
- **If you are coming to the department with hospital transport, please arrange to be brought in half an hour before your appointment.**
- **When you arrive in the department, your radiographers will tell you when to start drinking. Please do not drink your water until you are asked to.**
- **Once you drink the water you should not empty your bladder until after you have had your scan or treatment.**

The CT Simulator planning appointment

Approximately 2 weeks after the insertion of the markers you will visit the CT simulator to have your treatment planned. This involves a special x-ray scan taken when you are lying flat on your back with a shaped rest under your legs and feet. This helps to keep you in the correct position. This will allow us to plan your treatment accurately.

CT Simulator

When you are in the planning or treatment room, your radiographers will ask you to remove your trousers. This makes it easier to lie in the correct position and is more comfortable. Once you are lying on the CT couch, we will also ask you to slip your underwear down to uncover the area that is being treated. Your radiographers will ensure your dignity is maintained by covering you whenever possible.

You may need to have an injection of contrast (dye) that will help us to see the area we want to treat more clearly. Your doctor or radiographer will put a small hollow tube (cannula) into a vein. It is inserted using a fine needle which is removed once the cannula is in place. We will tape the cannula in place to keep it in position during the scan. We will inject the contrast (dye) through this. It may feel a little cold but you should not feel any discomfort. You may need this dye for the CT planning process, but not for treatment appointments.

Some people can have an allergic reaction to the contrast. This is rare but we will ask some questions before beginning to ensure it is unlikely to happen to you. Your radiographers will keep a close check on you during the injection and scan, so if you feel anything unusual please tell us.

It is important that you stay as still as you can during the scan. The scan takes 10-15 minutes.

Following your CT scan we will put 3 tiny permanent marks called tattoos on the skin on your pelvis. They are barely visible but help the staff to position you correctly each time you are treated.

If your doctor has recommended a short course of radiotherapy, the preparation is simpler and usually involves a shorter visit to the CT Simulator before treatment starts. Your radiographers will explain if this applies to you and tell you how many treatments you will have.

Treatment

Your radiographers will explain the procedure and processes before treatment starts and check you know what to expect and how many treatments you will have. This can vary, but in general your treatment will last between 4 to 8 weeks. Your doctor will discuss this with you. Your radiotherapy will be given in small daily doses, Monday to Friday, but not at the weekend.

You will have your treatment on a machine called a linear accelerator as shown below.

Linear Accelerator

When you start treatment your radiographers will position you just as you were in the CT simulator. The lights in the room will dim for a few minutes while they position you. Your radiographers have to leave the room while the machine is on but they will monitor you on closed circuit TV. The treatment machine moves round about you but doesn't touch you. Each treatment lasts no more than 10 minutes, is painless and you will feel no different immediately afterwards.

Please check with your radiographers if you have any questions or problems.

General advice during treatment

There is no reason to change your lifestyle during treatment but it may help to:

- Try to get plenty of rest, especially if you feel tired, although it is important that you try to continue your normal daily activities and interests. We would, however, advise that you avoid cycling during your treatment.
- A sensible balance between rest and activity is best. Some people are happy to continue to work during their treatment.
- The radiation from radiotherapy does not stay in your body so it is safe to be near other people, including children and pregnant woman.
- It is important to drink plenty of fluids throughout your treatment to keep hydrated. You should try to drink 2 litres of fluid every day.

Early effects of radiotherapy treatment

During radiotherapy, the area being treated will gradually respond in a way similar to an 'inflammation'. This area will include the prostate, part of the bladder, part of the back passage (rectum/anus) and possibly the skin. The effects usually start a few weeks after the start of treatment and settle about 3-4 weeks after treatment ends.

Some of the effects you may experience are:

- **Tiredness:** You may begin to feel quite tired during treatment. This tends to start 2-3 weeks into your course of treatment and will last a number of weeks afterwards.

- **Bladder:** After about two weeks of treatment, the inside of the bladder may become inflamed (like cystitis). You may need to pass urine more often than usual, and have a burning sensation when passing urine. Let us know if this is a problem. Drinking plenty of water and reducing your intake of caffeine and alcohol can help.
- **Prostate:** During treatment your prostate may be inflamed and swollen. This can cause pressure on the urethra, the tube through which urine passes. You may find your urine flow becomes slower, is slow to start or you may notice a slight dribble at the end of urination. You may feel your bladder doesn't completely empty, or you have a desire to go again soon after urinating.
- **Rectum (back passage)**: The wall of your back passage may become inflamed and you may feel the urge to go to the toilet more often during the day and perhaps at night. If you have piles (haemorrhoids) or have had these treated in the past, they may get a little worse during treatment.
- **Bowel:** You may notice a change in your bowel movements. You may need to move your bowels more frequently and the stools you pass may be softer. You may also pass more wind than usual which may be accompanied by colicky pains. A few men may develop diarrhoea which may be accompanied by an urge or feeling of incomplete emptying. You may pass a clear jellylike mucus from your back passage, and there might be a little blood. Avoiding very spicy foods can help.
- **Sexual Activity** - Your treatment will cause a general inflammation in the prostate gland. This can cause discomfort or pain during sexual intercourse which may be best avoided until the effects of radiotherapy settle after the end of treatment. After treatment a small number of men find ejaculation is uncomfortable.
- **Skin** - The skin in the treated area may become more sensitive. This can be treated with creams. It is very important that you use only those recommended or given to you by Beatson staff. Please tell us if you have these problems.
- **Hair** - You may lose some body hair in the treated area. This is usually temporary, although in some patients it may not regrow.

During your treatment a radiographer, nurse or doctor will be available each week to review you if you have any problems. They will assess and treat any side effects, give advice and answer any questions you may have.

Diet

During your treatment, it is important to eat well and choose from a wide variety of foods to help you feel stronger. Keep to a normal diet at the start of your treatment, although it is best to avoid foods that you are sure make your bowels move unduly, for example prunes, rhubarb, hot spicy foods etc.

Skin Care during Treatment

Radiotherapy only affects the skin in the area being treated.

- You may bath or shower during treatment, provided the water is not too hot. Pat the skin in the treated area dry with a soft towel.
- You may find that you are more comfortable if you wear loose fitting clothes, particularly with cotton next to your skin.

After Treatment Ends

Most symptoms that you develop during treatment will wear off a few weeks after the radiotherapy is completed. Tiredness can last a little longer than other symptoms.

An out patient appointment will be arranged 8 -12 weeks after treatment ends, either at the Beatson or at your local hospital. You will be seen regularly thereafter. It would be helpful to ask your GP practice to check your PSA blood test the week before the date of the appointment.

Late effects of treatment

We believe that the benefits of your radiotherapy treatment outweigh any longer term risks involved. You should be aware of some potential long-term effects that may affect a small number of people.

It is important to point out again that effects can vary from person to person and your doctor will explain specific individual issues to you personally.

- Occasionally the diarrhoea or the slight discharge of mucus that can occur during treatment does not settle and long term medication may be needed to control it. Some people may notice an urge to move their bowels more often, particularly in the morning.
- About a year after treatment is finished, small blood vessels can form in the lining of the bowel and bladder. These vessels are more delicate than normal and may break down causing bleeding from the back passage or in the urine. If this happens, it may seem very frightening at first but is not usually serious. You should let your GP or specialist know as they may wish to arrange some tests to check the cause of the bleeding.
- A very small number of patients may develop some uncontrolled leakage of urine (urinary incontinence) after treatment.
- After radiotherapy to the prostate there is a small risk of a narrowing of the urethra (tube that takes urine from the bladder). If this develops, the flow of urine will be reduced and there may be dribbling or spraying. A small operation may be needed to correct it.
- Following treatment, there is a risk of losing sexual function. In particular you might find it difficult to get and keep an erection due to damage to some of the pelvic nerves. Patients who can get and maintain an erection may find that they produce little or no semen on ejaculation. If you develop problems, you can be referred to a specialist who may be able to offer help and advice, so please let your doctor know if this becomes a problem. Your own GP is also a useful source of support and help.
- There is a very small chance radiotherapy could increase your risk of bladder or bowel cancer. Although this is a serious possible consequence of your radiotherapy, it is important to bear in mind that this is very rare. If it does happen it is likely to arise years after treatment.

Remember, any of these risks should be balanced against the problems of not having radiotherapy.

Where Can I Get Help?

Information and Support

All our staff are here to make sure your treatment goes as smoothly as possible and will try to help with any questions or problems you may have. Further specialist help is available from:

- Uro-Oncology Nurse Specialist **Tel: 0141 301 7614**
- Information and Support Radiographer **Tel: 0141 301 7427**
- Macmillan Information Radiographer & Counsellor **Tel: 0141 301 7423**

The Beatson Cancer Centre has a **Radiotherapy Advice Line** available for patients who have completed treatment. This is an answer phone service, which is available Monday - Friday. Please leave your name, contact telephone number and a brief description of your concern. We will return your call as soon as possible. It can help us if you also leave your hospital number or date of birth.
Tel: 0141 301 7432

The Cancer Centre also has a **Cancer Treatment Helpline** for urgent calls. This is for patients on or within 6 weeks of treatment who have **urgent or severe symptoms** such as -

- Shivering or flu-like symptoms.
- Temperature greater than 37.5°C.
- Gum/nose bleeds or unusual bruising.
- Worsening or sudden breathlessness.
- Leg weakness/difficulty walking.
- Severe nausea/vomiting/diarrhoea/constipation.
- Sudden increases or uncontrolled pain.
- Other concerning symptoms associated with your cancer treatment.

The line is available 24 hours for emergencies, although it would be helpful if you called early in the day if this is at all possible.

For Urgent Calls:

Beatson 8am-8pm Tel: 0141 301 7990
National Helpline 8pm-8am Tel: 0800 917 7711

The Macmillan Information & Support Centre is on Level 1 at the main entrance of the Beatson. They offer emotional support, information and signposting to services within and near to the Beatson and in your own local area.
Open Monday to Friday 8.15am to 4.15pm. **Tel: 0141 301 7390**

Counselling and Clinical Psychology

This leaflet deals mainly with the physical aspects of your treatment, but your emotional well being is just as important to us. Being diagnosed with cancer can be a deeply distressing for you and those closest to you. Within the department we have a counselling and clinical psychology service that can help with worries and difficulties you might be having. If you think this may be helpful to you, please ask staff to put you in touch.

There are also voluntary organisations providing information and support. These include;

- **Prostate Cancer UK:** Helpline: 0800 074 8383. There are support groups throughout the country. Please check the website to find your local group.
  www.prostatecanceruk.org or call 0141 314 0050
- Macmillan Cancer Support. 0808 808 0000
  www.macmillan.org.uk Provides practical, medical, emotional and financial advice for those affected by cancer.
- **Maggie's Glasgow (Gartnavel):** 0141 357 2269
- **Maggie's Lanarkshire (Monklands Hospital):** 01236 771199
- **Maggie's Forth Valley:** 01324 868069
  Maggie's Centre provides a comprehensive cancer support programme for people and their families affected by cancer.

- **Cancer Support Scotland, The Calman Centre, Gartnavel Complex. Freephone 0800 652 4531**

  Provides emotional and practical support on a one-to-one basis and through community based groups. Complementary therapies available.

  www.cancersupportscotland.org

- **Macmillan Benefits Team** (within the Beatson) 0141 301 7374

  Provides free and confidential advice for people affected by cancer and their carers.

- **Beatson Cancer Centre** – if you want to find out more about our Centre please visit www.beatson.scot.nhs.uk

- **NHS 24** 111

- If you are interested in finding out about becoming more active, please visit: www.nhsggc.org.uk/getactive

Reviewed by H. Reid / K. Nash / G. Buchanan/ F. Birrell / M. Thomson September 2020

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