A decorative graphic on the left side of the page, consisting of three concentric, dark teal arcs that curve from the top left towards the bottom right, resembling a stylized 'C' or a partial circle.

Radiotherapy

A guide for patients and carers

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This information is for patients who are going to receive EBRT (radiation given from a machine outside the body) for the treatment of prostate cancer.

This leaflet will explain:

- When radiotherapy is given
- Preparation for planning and treatment
- General information about the side effects of treatment
- Any side effects that may affect you
- Who to contact when you need advice

You may find it useful to read our booklet called 'Radiotherapy' which explains how radiotherapy works and what to expect when you attend.

If you have any general enquiries prior to attending, please contact the Information and support radiographer at The Clatterbridge Cancer Centre, Monday to Friday during office hours (9am - 3pm) on 0151 556 5314.

The Clatterbridge Cancer Centre Hotline 0800 169 5555

If you are unwell during or up to 6 weeks following your cancer treatment, please call The Clatterbridge Cancer Centre Hotline. Your call will be answered by a dedicated nurse advisor. This line is available 24 hours a day, 7 days a week.

When EBRT radiotherapy is given

- To treat cancer that has not spread outside the prostate gland (localised) as an alternative to surgery
- After surgery if the PSA levels start to rise targeting the prostate bed (the area where the prostate was)
- When the disease is, or likely to be, in other tissues in the pelvis, i.e. just outside the gland (locally advanced) or the pelvic lymph glands. (We often use the term “whole pelvis” when we treat the prostate and lymph glands)



Photograph of a treatment machine

Your doctor will explain why radiotherapy is recommended for you.



Preparation for planning and treatment

Before starting radiotherapy, you will have a CT scan which is used to design your radiotherapy (called planning). We recommend starting 10 days before your planning appointment and during the course of treatment, if possible, you should aim to drink **1.5 litres (3 pints)** of fluid each day. If your fluid intake is normally more than this, continue as usual.

If you have an artificial hip(s) please alert the Therapeutic Radiographer when you attend.

Some preparation before the scan is required; this usually takes about 35 minutes, followed by the CT scan, which takes about 10 minutes.

The preparation involves the use of a small enema to empty the rectum; this helps make the rectum smaller and moves it away from the area to be treated (target area).

We also ask you to drink some water, which, once it has reached the bladder, will help to move the bowel away from the target area.

When you arrive, the staff will go through everything with you. If you are worried about the preparation process, please raise any concerns with the planning staff.

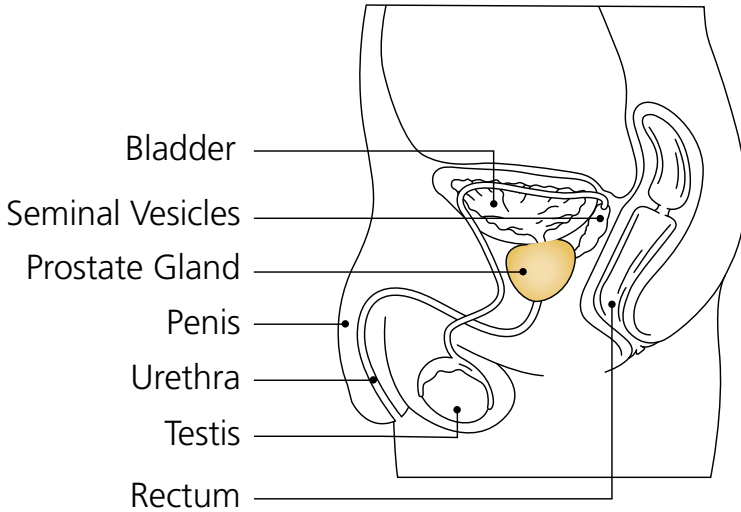


Diagram to show the position of the prostate



An example of a small enema

Why is the preparation important?

- **To ensure we hit the target area with each treatment**

To achieve this, we need to replicate the position of the target area at every treatment so the x-ray beams hit the area. (The target area is later defined on the scan images. It includes the prostate area (and any structures identified as being involved by previous investigations)



plus a small band of tissue next to the target used as a safety margin. The target area receives the highest dose of radiation and is individually designed according to your internal anatomy.

Note: The preparation procedure is an important first stage in ensuring the accuracy of treatment. In addition, 'high-tech' procedures, using images generated from the planning scan and treatment unit, are also in place.

- **To help reduce short and long term side effects**

When the preparation process is achieved, the structures around the target area (rectum, bladder, and small bowel) are moved away, helping to reduce the radiation dose to these areas.

You will need to repeat the preparation before every treatment, so you will be asked to arrive ahead of your appointment time. You may not be keen to use the mini enema each day, but research at the centre has shown that the use of an enema is beneficial and that patients tolerate this procedure well.

When you start your treatment, it is important that you understand and follow the instructions we have given you. Do not hesitate to talk to your treatment staff about the preparation instructions/routine which is required immediately before your treatment, not for the whole of the day.

If you are taking diuretics (water tablets)

Diuretics are used to treat a number of conditions and work by removing excess fluid from the body through increasing the production and flow of urine (wee). They are usually taken in the morning. Consequently, some men who have a morning appointment may be concerned about the effect of the diuretic while travelling to the hospital. If so, it is OK to take the diuretic as soon as you can after your appointment. If you attend in the afternoon, take your diuretic as usual.

Do not reduce your intake of fluid immediately before attending as this affects the filling of your bladder. It is important for your general health to drink and eat normally.

General information about the side effects of radiotherapy treatment

Every patient is different and you may not have the same side effects as someone else. Your doctor will talk to you about the side effects that are likely to affect you. Most are temporary but some may last for weeks or months after your treatment has finished (see later). Long term or permanent effects can occur but are fairly rare. Often, these effects can be easily managed and may not have a marked effect on your life.



During your treatment, a Therapeutic Radiographer or nurse will be able to answer any questions and deal with most of your problems. However, your doctor can also see you, if necessary. As you go through your treatment, how you feel and your ability to cope may change. It is important to let staff know how you feel so that we can give additional information, support and medicines etc.

Side effects during and immediately after treatment

Many patients have few or no side effects during their treatment and are able to carry on their normal activities. During your treatment, you can raise any concerns with your treatment staff. Clinic appointments with the On-treatment Review Advanced Practitioner will also be booked to discuss how you are managing and any side effects etc. It is important to let us know when your side effects start; we will give you medicines and advice to help you cope.

The usual pattern for the development of the short-term (acute) side effects is to gradually start about 5-10 days after the first treatment. They usually persist and worsen, the effects being most troublesome about 10 days after the last radiotherapy treatment. After this, the healing process begins. The side effects usually settle over the following 2-3 weeks but sometimes effects may persist for weeks or months.

Your bladder

The bladder and prostate are next to each other so it is impossible to avoid giving the bladder some radiation dose, which results in some inflammation (soreness). Consequently, you may feel the need to pass urine (wee) more often, get a burning sensation, a slowing of the stream of urine and an urgent need to pass urine.

You can help yourself by:

- Drinking more fluid; about 3 pints of fluid each day until the symptoms settle. Avoid large quantities of caffeine (tea, coffee, energy and cola-type drinks)
- If you wish, you may take alcohol in moderation, but stop if it causes irritation in your bladder
- Letting us know if you develop a burning sensation when you pass urine; if it is severe you may have an infection. If so, we will give you antibiotics and your treatment will carry on

Unable to empty your bladder during, or shortly after the course of radiotherapy?

This happens rarely. The urethra (see diagram on page four) passes through the prostate. Inflammation can cause it to be squeezed, making it difficult or impossible to pass urine. If you can't pass urine at all, get help quickly otherwise this can make you very unwell. You may need a catheter for a short time. Please contact The Clatterbridge Cancer Centre Hotline 0800 169 5555.



Your bowels

The treatment is likely to irritate your bowels. This symptom is more likely if you are having the whole pelvis treated.

You may have to open your bowels more often or occasionally they become stubborn. If your bowel habits change, advice on changing your diet may be appropriate as many people find this helpful. Meanwhile, carry on with your normal diet. A dietitian is available for you to talk to about your diet and we will arrange an appointment, if required.

You may also feel the urge to open your bowels, passing only small amounts or just mucus and wind. You may have discomfort and you may pass some blood.

You can help yourself by:

- Letting staff know about any symptoms so that they can give you advice and/or medicines
- Eating a good balanced diet
- Washing the area around your anus (opening of the bowel on the skin) gently and applying cream to soothe and moisturise, if necessary

Tiredness (Fatigue)

It is quite common to feel more tired and have less energy than usual during your course of radiotherapy and for several weeks after your treatment has finished. It may be useful to try to keep your normal routine but to reduce the amount of time that you

spend on each task. It is important to rest when you feel the need to do so. If you have family and friends nearby, consider asking for, or accepting, offers of help. If you live alone, do only the tasks that are essential until you feel stronger.

Your pelvic skin and hair

Your skin may become slightly red, dry and itchy. If your skin becomes uncomfortable, ask the radiographer or nurse for advice.

You can help yourself by:

- Wearing loose fitting clothes made from natural fibres, such as cotton, to allow the air to circulate around the pelvic area
- **Washing the area very gently in lukewarm water with a mild, unperfumed soap, e.g. baby soap. A shower is ideal, patting the area dry with a soft towel. Do not rub**
- Only applying creams recommended by your Therapeutic Radiographer, nurse or doctor

Temporary thinning or loss of pelvic hair can happen. The loss of pubic hair is most likely to be noticed.

Fertility & Contraception

Radiotherapy to the pelvic area is known to affect the reproductive organs. Retaining your fertility after completion of radiotherapy may or may not be important to you. If required, you will be referred to a local specialist centre for further advice and information. It is important to be referred before starting your radiotherapy.



It is not safe to presume that radiotherapy will make you infertile.

If you are sexually active and conception is a possibility, it is important to use contraception during, and after, your course of radiotherapy. If relevant, talk to your oncologist about when it is safe to stop the use of contraception.

You can continue with sexual activity while you are having radiotherapy. However, the side effects of radiotherapy can cause temporary discomfort in the pelvic area. You may find that intercourse is uncomfortable or you have no desire for sex. If so, try to talk to your partner and explain how you feel.

Inflammation may cause pain or discomfort when you ejaculate. Once treatment has finished, the inflammation and pain will settle.

Possible long term or permanent side effects of radiotherapy

Radiotherapy can cause long-term changes to the normal tissues in your pelvis. However, many people do not develop long-term side effects. They may appear months or years after treatment and may not have a marked effect on your life. If you develop any health problems that you suspect may be related to your radiotherapy, you should discuss this possibility with your GP. If necessary, your GP can refer you to specialist services, further investigations and/or appointment with your oncology doctor.

The following may occur:

- The use of surgery or hormone therapy is frequently used in the treatment of prostate cancer. With these treatments, impotence (inability to achieve an erection) and loss of libido (sex drive) may occur. The addition of radiotherapy can increase this risk and it usually develops slowly over time
- Following hormonal treatment (if given with your radiotherapy) changes to the sexual organs can occur, i.e. some loss of length and girth in penis size and the size and volume of the testis can be smaller
- Reduced volume or lack of ejaculate fluid can develop though you should still have the sensation of ejaculation and orgasm
- There is a small long-term risk of damage to your bowels. This risk is increased if you have the whole pelvis treated. You may have looser more frequent bowel movements, pass some mucus or small amounts of blood. These side effects can often be helped by adjusting your diet and the use of medicines. You should talk to your GP (or Oncology staff at follow-up appointments) about any persistent changes in bowel habits as further assessment/investigations may be indicated. Very rarely, these effects may need surgery
- There is a small long-term risk of scarring to your bladder, which may mean that you need to empty your bladder more often and there may be a small amount of blood in your urine. If you develop bleeding, see your GP



- Rarely, a narrowing (stricture) of the tube between the bladder and penis (urethra) can develop, causing urinary frequency (wanting to urinate more often) and a slow stream. This can be treated with a simple procedure
- Treatment with radiotherapy carries a small increased risk of developing a new pelvic cancer. This risk is balanced against your current health needs

Follow-up and recovery

As you complete your radiotherapy, your care needs will be assessed. If you develop any new nursing needs as a result of your radiotherapy, we will request a District Nurse to visit you.

In the first few weeks after finishing treatment, your condition is likely to worsen due to the side effects persisting. A doctor from the Oncology team will see the majority of patients within a couple of months after completion of their radiotherapy. This appointment is usually at your local hospital. Meanwhile, if you have any concerns you should contact our hotline. This service is available for 6 weeks after finishing your treatment. After this time, you should contact your GP.

The diagnosis of cancer, together with the impact of treatment and any side effects, can have a major impact on how you feel, which then affects how you behave. Sometimes, your relationship(s), including sexual intimacy, are affected. If you are able, talking to staff about how you feel can be a great help.

Sometimes, more help is required to help you cope and overcome any negative feelings. Often, these feelings become more apparent once you have completed all your treatments and you are beginning to recover. You should discuss these issues with your GP or your Oncologist at your follow up appointments. Referrals to specialist staff, e.g. a Psychologist or Sexual health alone, or with your partner, can be beneficial.

If you are feeling low or experience mood swings, it may be useful to talk about how you feel and your recent experiences. Some find it useful to have the support of others who have experience of cancer by attending a local support group. Contact the Cancer Information & Support Centre for more details.

Maggie's is a charity providing free cancer support and information to anybody who been affected by cancer. Our Cancer Nurse Specialists, Psychologists and benefits advisors are here to support you during treatment or after your treatment has finished.

The Maggie's Centres allow you to share experiences with others in a similar situation around our kitchen table. We provide courses on survivorship, bereavement, stress management, mindfulness, tai chi, yoga, relaxation or cancer support groups. You do not need an appointment or a referral to access any support from Maggie's, you can just drop in. Our telephone number is **0151 334 4301**.

Alternatively, if you are familiar with using the internet, the major cancer charity websites have online communities.



If you are gay or bisexual, you may wish to contact the 'Out with Prostate Cancer' support group.

If you find that you have long or frequent periods of low mood, you should seek help from your GP. There are many ways to be helped, including, but not always, a short course of anti-depressant tablets.

The Prostate Cancer UK and Macmillan Cancer Care have lots of free information on coping and living with cancer that are available free of charge. These can be ordered by telephone or by visiting a Macmillan Information Centre (sited in the main entrances at Clatterbridge Cancer Centre - Wirral and Clatterbridge Cancer Centre - Aintree).

Diet and prostate cancer

Research is emerging which **suggests** that a balanced healthy diet may slow down the growth of prostate cancer in individuals who already have the disease or reduce the chance of prostate cancer returning after treatment. Please contact "Prostate Cancer UK" for more information (see contact details).

Useful information and websites

Clatterbridge Cancer Centre - Liverpool

65 Pembroke Place, Liverpool, L7 8YA

Tel: 0151 556 5000

www.clatterbridgecc.nhs.uk

Clatterbridge Cancer Centre - Wirral

Clatterbridge Road, Bebington, Wirral, CH63 4JY

Tel: 0151 556 5000

www.clatterbridgecc.nhs.uk

Clatterbridge Cancer Centre - Aintree

Lower Lane, Fazakerley, Liverpool, L9 7AL

Tel: 0151 556 5959

www.clatterbridgecc.nhs.uk

Prostate Cancer UK

www.prostatecanceruk.org

tel: 020 8222 7622

Out with Prostate Cancer

Support group for gay and bisexual men and trans-women with prostate cancer

www.outwithprostatecancer.org.uk



Macmillan Cancer Support

89 Albert Embankment, London, SE1 7UQ

www.macmillan.org.uk

Tel: 0808 808 0000

Cancer Information and Support Centre:

Clatterbridge Cancer Centre – Liverpool, Tel: 0151 318 8805

Disability Rights UK (RADAR key scheme; access to locked public toilets). Disability Rights UK produce a key which gives access to over 9000 locked public toilets found in UK shopping centres, bus and train stations, department stores etc. Cost (July 2021) is £3.50 plus postage.

Postal address: Plexal, 14 East Bay Lane, Here East, Queen Elizabeth Olympic Park, Stratford, London, E20 3BS or email: enquiries@disabilityrightsuk.org

Maggie's Centre - Wirral

Tel: 0151 334 4301

Society of Radiographers

www.sor.org

How we produce our information

All of our leaflets are produced by staff at The Clatterbridge Cancer Centre and this information is not sponsored or influenced in any way. Every effort is made to ensure that the information included in this leaflet is accurate and complete and we hope that it will add to any professional advice you have had. All our leaflets are evidence based where appropriate and they are regularly reviewed and updated. If you are concerned about your health in any way, you should consult your healthcare team.

We rely on a number of sources to gather evidence for our information. All of our information is in line with accepted national or international guidelines where possible. Where no guidelines exist, we rely on other reliable sources such as systematic reviews, published clinical trials data or a consensus review of experts. We also use medical textbooks, journals and government publications.

References for this leaflet can be obtained by telephoning 0151 556 5570.

If you need this leaflet in large print, Braille, audio or different language, please call 0151 556 5570.

If you have a comment, concern, compliment or complaint, please call 0151 556 5203.

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Web: www.clatterbridgecc.nhs.uk

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