



The Clatterbridge
Cancer Centre
NHS Foundation Trust



Radiotherapy for rectal cancer

Radiotherapy

A guide for patients and carers

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This information is for patients who are going to receive External Beam radiotherapy (radiation delivered from outside the body) for the treatment of rectal cancer.

You may find it helpful to read our booklet called 'Radiotherapy'. If you have not been offered a copy, please ask a member of staff.

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.



Photograph of a treatment machine showing pillow, knee and ankle supports.

External Beam Radiotherapy can be used

- In combination with surgery

a) Before surgery (pre-operative)

Radiotherapy is given to shrink the tumour to make it easier to remove or to lower the risk of the cancer returning (recurrence). You will be offered a short course (5 treatments) or long course (25-30 treatments) of radiotherapy. A long course of radiotherapy often includes the use of chemotherapy (drug treatment) and is known as



chemo-radiotherapy. Chemotherapy can be given as tablets or through a PICC line (a long, thin tube that is put into a vein in your arm then threaded through the vein into a large vein in the central chest). The PICC line is inserted 1 week before the treatment starts at a clinic in CCC and stays in for the duration of your treatment.

If chemotherapy is appropriate for you, your doctor will discuss the risks and benefits with you. Chemotherapy can cause different side effects to radiotherapy. You will be given more information when you attend for your chemotherapy appointment.

b) After surgery (post-operative)

- When the cancer was difficult to remove or the examination of the tissues removed shows signs of cancer cells close to the edge of the specimen.
- When you have cancer involving other structures in the pelvis
- As an alternative to surgery
- To help control your symptoms in advanced cancer (palliative radiotherapy)

Your doctor will explain, in detail, why you need radiotherapy. If you are unsure why you are having radiotherapy, please do not hesitate to ask.

'Boost' radiotherapy dose

For some people, it is useful to give an additional radiation dose to a small area within the area to be treated. This is known as a 'boost' or 'phase 2' treatment. If this is suitable for you, your doctor will discuss it with you before you start and during your course of treatment. These include:

- Creating a new external beam radiotherapy treatment prescription by re-using the information gained at planning. Usually a boost dose is given over 3 or 5 treatment days and you stay on the same treatment machine
- Undergoing a procedure called Brachytherapy, which is a treatment that delivers radiation using a special applicator (tube). You will need to go into the theatre at Clatterbridge Cancer Centre - Liverpool for this procedure
- Undergoing a procedure called Contact therapy (Papillon). Papillon therapy is a treatment procedure that delivers radiation using a special applicator (tube) but is suitable for only a few people

Preparation for planning and treatment

Pre-treatment CT scan – (planning)

Before you start your radiotherapy, you will have a CT scan of the pelvis which is used to design the radiotherapy. This process is called 'planning'. In order to help you to lie still and



be as comfortable as possible, if you have a colostomy, please empty your colostomy bag as required, once you arrive at the department.

Before the scan, we will ask you to drink some fluid containing contrast agent (dye); its use being two-fold:

- a)** For treatment, the effect of the fluid filling the bladder is to push healthy bowel away from the area to be treated, so helping to reduce side effects to the normal bowel. Consequently, we need to do the planning CT scan with fluid in the bladder
- b)** The dye helps to identify the bowel more easily when we later look at the scan to outline the area to be treated

Sometimes, we will also use IV contrast (dye injected into a vein) which helps to identify the blood vessels.

The use of contrast agents is not repeated for treatment.

Most people lie on their back for the scan but occasionally we do the scan lying face down on a specially shaped firm board, which can help to move the healthy bowel away from the area to be treated. Should your oncologist request the use of the board, we will talk to you about its use in detail.

At the end of the scan we will ask your permission to make a few permanent marks (tattoos) on your pelvis. The position of the tattoos is marked on the scan images as part of the design of the treatment, and is used as reference marks.

The planning scan takes only a few minutes but you should expect to be in the hospital for a couple of hours. Most people will start the radiotherapy approximately 2 weeks later. See our booklet called 'Radiotherapy' for more information about planning (and treatment).

Individuals who have a contraceptive coil

Individuals who have a contraceptive coil in place should arrange for its removal prior to starting radiotherapy and preferably before attending for planning.

Treatment procedure

For each of your treatments, we will require you to follow a drinking protocol to replicate your bladder size during your planning scan. The Therapeutic Radiographers will talk to you about this in detail when you attend. Don't worry if the fullness of your bladder feels different from day to day, but avoid being treated with a very full or empty bladder. You should eat and drink normally before you attend. The treatment procedure takes about 10 minutes with the treatment machine being 'on' for only a few minutes. You will lie in the same position as the scan and not feel anything as the treatment is given. The Therapeutic Radiographers will talk to you about what to expect when you attend.



Colorectal Clinical Nurse Specialist (CNS) Service

The Colorectal Clinical Nurse is based at Clatterbridge Cancer Centre - Wirral to ensure that all patients (and/or carers) who have a diagnosis of colorectal cancer have access to written and verbal information on all issues surrounding the management of colorectal cancer; advice on treatment options; psychological support and symptom management. Appointments into this service may be automatically booked as part of your care. If you do not receive an appointment to see our Clinical Nurse Specialist, please discuss this with your Therapeutic Radiographers.

Eating and drinking

While you are receiving radiotherapy, it is important to drink and eat a healthy diet to help you cope with and recover from your treatment. However, continue to follow any advice you have already been given about your diet to help you manage your bowels, particularly if you have a stoma bag.

Should you have any problems with recent weight loss or any side effects which affect your eating and drinking, a referral to our dieticians can be arranged. We have a leaflet called 'Eating well & coping with side effects' which may be useful to you. You can request a copy or view it on our website.

Dietetic service at The Clatterbridge Cancer Centre

Dieticians are available at Clatterbridge Cancer Centres to discuss your diet and give advice on suitable foods, how to improve your nutritional intake and the possible use of nutritional supplements.

Sexual activity, contraception and fertility

If you are sexually active, you can continue to be so while you are having radiotherapy. However, the side effects of radiotherapy can cause temporary discomfort in the pelvic area. You may find that you have no desire for sex or intercourse is uncomfortable, in which case the use of a water-based lubricant jelly may be helpful.

The use of a vaginal dilator is recommended - see later: Possible long-term or permanent side effects of radiotherapy.

If you are sexually active and conception is a possibility, it is important to use contraception while you are having radiotherapy and for at least 1 year after the completion of radiotherapy.

Individuals should avoid getting pregnant while receiving radiotherapy, as radiation is harmful to the unborn child. (See later - Long-term or permanent effects). Radiotherapy to the pelvic area is known to affect the reproductive organs and your ability to produce sperm/ovum. The effect is different for each individual. After treatment, it is likely that you will become infertile, which may or may not be important to you. If you have concerns, you will be referred to a local specialist centre for further advice. It is important to be referred before starting your radiotherapy.



General information about the side effects of radiotherapy treatment

The development of side effects depend on the number of treatments you have. Treatment courses vary in length from 1-6 weeks. Every patient is different and you may not have the same side effects as someone else. Most side effects are temporary but some may last for weeks or months after your treatment has finished (please refer to section on side effects). Your doctor will talk to you about any side effects that may affect you.

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 will also see you regularly. 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 are feeling so that you can be given additional information, support and medicines if required.

If you are attending as an outpatient, it may be necessary to come into our hospital to help you cope with the side effects, though this is rare.

Side effects during and immediately after completion of radiotherapy

The usual pattern for the development of the temporary (short term or acute) side effects are as follows:

Most side effects start about 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 quickly over the following 2-3 weeks.

Your bowels

The treatment may irritate your bowel causing side effects that include:

- Getting cramp-type pain in your pelvis/lower abdomen (tummy). We will give you medication to soothe the bowel and also painkillers, if required
- More frequent bowel movements passing watery diarrhoea
- Feeling the urge to open your bowel, but without passing anything, even if you have a stoma
- Discomfort when you open your bowels
- Passing blood and/or mucous



You can help yourself by:

- Avoid eating foods that you know upset your bowel
- Continue to use any medication and/or advice you have already been given to help you manage your bowels, particularly if you have a stoma bag
- Avoid drinking large quantities of fizzy drinks or foods that make you pass wind, but continue to drink clear fluids
- Telling us if your bowel habits are changing as we may need to adjust / alter medications and consider adjustments to your diet, if appropriate to do so

Your bladder

The treatment may irritate your bladder and you may feel an urgent need to pass urine (urgency) and to pass urine more often (frequency). You may also feel a stinging/burning sensation when you empty your bladder. You can help yourself by:

- Letting us know if the burning sensation lasts for a few days. The discomfort may be due to infection. If so, we will give you antibiotics and continue with your radiotherapy
- Trying to drink more fluid until the symptoms have settled. Avoid taking large quantities of tea, coffee, alcohol and cola type drinks. Water is best. Aim to have at least 10 cups of fluid a day
- Allowing water to come to room temperature before drinking. Cold water is often unpleasant to drink

- Cutting down on the amount you drink in the evening if you find the need to use the toilet during the night

Your skin

Your skin in the treatment area may become dry, red and itchy or tender. The areas of skin particularly at risk include:

- The area between the buttocks
- The perineum (the space at the top of the legs that contains the outlet for the bladder, bowels and vagina) if included in the treatment field
- The groin

As your bowel movements become more frequent, the skin around the back passage (anus) may also become sore as a result of cleansing. Likewise, if you have a stoma, the need to change your stoma bag more frequently may cause the skin around the stoma to become sore. If the skin soreness is troublesome, the use of painkillers may be beneficial. If any area of your skin becomes uncomfortable, ask us for advice. A few people may need to use dressings for a short time.

Read our skin care leaflet on how to manage skin reactions.

Hair loss

You may lose hair in the area being treated only, not the rest of your body. It usually re-grows.



Feeling sickly

Giving radiotherapy to the bowel can sometimes make you feel sickly (nausea). This feeling may cause you to lose your appetite and so it is important to report it to your Therapeutic Radiographer, nurse or doctor. We can give you medication and advice to help you cope.

Tiredness (fatigue)

It is quite common to feel more tired 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.

Bowel obstruction

A rare complication is bowel obstruction. Bowel obstruction is defined as "the partial or complete narrowing of the bowel". Radiotherapy can cause an obstruction as a result of inflammation (soreness) of the bowel as can the presence of the tumour. The risk of developing an obstruction is present while you are receiving radiotherapy and for a few weeks after completion of treatment until the side effects affecting the bowel have settled.

The signs of bowel obstruction are as follows and occur at the same time: nausea and vomiting, (feeling and being sick), constipation (lack or reduced number of bowel movements),

bloating and severe pain in the abdomen (belly). In the event that you develop these symptoms, you should attend your local accident and emergency department urgently. If possible, take your radiotherapy appointments list with you to provide the staff with our contact numbers.

Delayed healing

Radiotherapy can slow down the healing process. Other factors can affect this process too, e.g. having diabetes. The effect of delayed healing is an important consideration in people treated for colorectal cancer if:

- The treated area includes the perineum (the space at the top of the legs that contains the outlet for the bladder, bowels and vagina). This area is likely to become temporarily very sore and take a number of weeks to heal completely
- You receive radiotherapy as a pre-operative procedure, in which case there is a small risk that you will take longer to recover from your operation



Possible long-term or permanent side effects of radiotherapy

Radiotherapy can cause long-term changes to the normal tissues in your pelvis. These effects may appear months or years after treatment and are related to the dose of treatment. Many people do not develop long-term side effects.

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 arrange for an appointment with your oncology doctor. Long-term side effects may:

- Result in your bladder and bowel habits not returning to normal. The most frequently occurring problem is the need to empty your bladder or bowels more often. Adjusting your diet and medication can often reduce these effects. In a small number of cases, surgery may be required. Rarely, the long-term effect can result in the permanent need to use pads to manage incontinence (inability to control the bowels)
- Cause a permanent loss of fertility
- Cause an early menopause in individuals who are still having regular menstrual periods. Your doctor may advise that you start hormone replacement therapy if your symptoms are troublesome
- Cause tissue scarring

It is possible that scar tissue will slowly develop over time in the tissues of the vagina, which can cause the vagina to narrow and/or shorten (this can start to develop up to 5 years after completing treatment). This may cause discomfort or pain during sex or an internal examination. The regular use of a vaginal dilator (dilators are tubes that are inserted into the vagina for a few minutes on a regular basis) will help to prevent vaginal narrowing and their use is recommended even if you are sexually active. The use of dilators will be discussed with you and you will be offered a pack together with additional written information.

Another common side effect for men is difficulty in getting an erection. Other problems can also arise which affect your sexual health, e.g. premature ejaculation. If these symptoms concern or affect you, please discuss your sexual health with your oncology doctor, colorectal nurse or GP. It may be possible to remedy some of these problems, e.g. use of medication such as Viagra. You may need referral to a special clinic (Andrology) and your doctor can arrange this for you at your request.

The small blood vessels near the surface of the bowel can become fragile, causing slight shows of blood with a bowel motion. If the bleeding persists or worsens, see your GP as this needs to be investigated further.



Development of a fistula

A fistula can develop as a complication of treatment. It is very rare, but can impact greatly upon the quality of your life. The definition of fistula is “an abnormal communication between two body cavities or surfaces”. Within the pelvis, a fistula may connect together the following organs: bowel, bladder, the vagina or connect the bowel to the pelvic cavity. Surgery is usually required to help correct the effect of a fistula.

Follow-up and recovery

Macmillan Cancer Support has free information on coping and living with cancer and treatment related effects that may be useful to you. These can be ordered over the telephone, visiting a Cancer Information and Support Centre (sited in the main entrances of all Clatterbridge Cancer Centres) or by visiting their website.

A doctor from the oncology team will see the majority of people within 4-6 weeks after completion of your radiotherapy. This appointment is usually at your local hospital.

As you complete your radiotherapy, your care needs will be assessed. If you have any new nursing needs as a result of radiotherapy, we can make arrangements for a district nurse to visit you.

In the first few weeks after finishing treatment, your condition is likely to worsen - this is usual. If you are finding it hard to cope

and you need help, contact your GP, District Nurse or staff at The Clatterbridge Cancer Centre.

If you have been affected by tiredness and fatigue, it may persist. Planning ahead, doing only the things that are necessary and having plenty of rest breaks in your routine can help you to cope. Ensure you eat as well as you can. Slowly, it should improve but it can take a number of weeks to recover. It may take many months before you feel that you have recovered fully and are able to do all the things you did before your diagnosis and treatment.

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 colorectal cancer by attending a local support group. Contact your colorectal nurse or the Cancer Information & Support Centre for more details.

The diagnosis of cancer together with the impact of treatment can have a major impact on how you feel, which can affect how you behave. Symptoms may affect other areas of your life, e.g. sexual intimacy. If you are able, talk about how you feel with healthcare staff. 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. Consider discussing these issues with your GP or your oncologist at your follow-up appointments.



Referrals to specialist staff, e.g. a psychologist or occupational therapist can be beneficial.

Pre-operative radiotherapy

The specialist nurse and doctor at the hospital will liaise with the surgical team. Ask to see our Colorectal CNS if you have any queries.

Short course - Surgery is usually performed the week following completion of your radiotherapy.

Long course - It is usual to see your oncology doctors approximately 4-6 weeks after completion of your radiotherapy. The purpose of this appointment is to check that you are coping and recovering from side effects. You will be given another appointment to see the Surgical Pre-operative Assessment team. You will have various tests, including an MRI scan, to assess the effect of radiotherapy. Your case will be discussed at a multi-disciplinary team meeting and you may be offered surgery.

Useful information and websites

The Clatterbridge Cancer Centre Hotline

0800 169 5555

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

CCC leaflets

- You and your PICC line
- The Use of vaginal dilators when receiving radiotherapy to the pelvis
- Contact X-Ray Brachytherapy for Rectal Cancer (Papillon)
- Skin care guidance



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 £6 (including delivery).

Tel: 0330 995 0400

Email enquiries@disabilityrightsuk.org

Macmillan Cancer Support

www.macmillan.org.uk

Tel: 0800 808 0000

Cancer Information and Support Centre: Clatterbridge Cancer Centre - Liverpool

Tel: 0151 318 8805

Isle of Man Macmillan information Centre, Nobles Hospital Main Entrance

Tel: 01624 650735

www.bowelcanceruk.org.uk

Tel: 020 7940 1760

www.colostomyuk.org

Tel: 0800 328 4257

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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