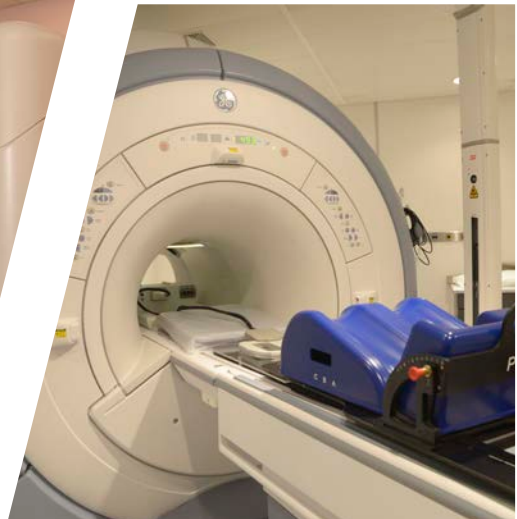


Information for patients

Receiving radiotherapy or chemoradiation for rectal cancer



This leaflet is for patients receiving radiotherapy or chemoradiation treatment for a cancer arising within the back passage or rectum. It describes:

- What is Radiotherapy?
- How your treatment is planned and delivered.
- The effects that you may experience during and after treatment, and how best to cope with them.
- Who to contact if you have any questions or worries.

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.

Radiotherapy is given in several small doses over a specified period of days or weeks.

Therapy radiographers operate the radiotherapy planning and treatment machines. We have both male and female staff. They will be able to answer any questions or concerns that you may have.

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

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

Preparation for planning and treatment appointments

Hydration before your radiotherapy

It is important that you are well hydrated (drinking plenty of fluids) even before you start your treatment. **We ask that you aim to drink 1.5-2 litres (6-10 average mug sizes) of fluid a day.** Try to drink water or decaffeinated drinks. It is best to avoid caffeinated, fizzy and alcoholic drinks.

Please follow these instructions for at least one week before your planning scan and throughout treatment to ensure you are well hydrated.

You will receive a phone call from one of our radiographers before you attend for your first appointment. They will explain about hydration and go over any instructions you will need to follow for your radiotherapy and planning.

Bladder preparation for planning scan and treatment

Before your planning scan and each treatment, your radiographers will ask you to fill your bladder. When you arrive in the department, they will ask you to empty your bladder and then drink **500ml of water**. This helps to ensure you have a comfortably full bladder. It is important that you drink the water within 5 minutes. You will then **wait around 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 fizzy juices. Try decaffeinated options.
- Limit your alcohol intake.
- You will need to be in the department at least 30 minutes before your treatment appointment time.
- If you are coming to the department with hospital transport, please arrange to be brought in 30 minutes 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 we ask you to.
- Once you drink the water you should not empty your bladder until after you have had your scan or treatment.

Your CT scan appointment

The first step in your treatment planning is a visit to the CT scanner. This is a scan taken with you lying on a special couch in the position necessary for your treatment. The X-ray pictures from this CT scan will help us plan your radiotherapy. There are no results from this scan.



CT Simulator

Your radiographer will show you into a changing room where they will ask you to undress from the waist down. You can keep your underwear on. Your radiographers will give you a gown to wear and will ensure your dignity is maintained by covering you whenever possible.

They will then show you into the scanning room and ask you to lie on the CT couch on your back. They will put some pen marks on your skin and then place some stickers over the top.

Your radiographers will move you in through the scanner. When you are ready, they will leave the room to begin the scan. They are watching you at all times through a window. It is important that you stay as still as you can during the scan. It will only take a few minutes.

Once the scan is finished, your radiographers will remove the stickers and replace the pen marks with little permanent marks (tattoos) which look like tiny freckles. These marks will be used to position you each day you come for treatment.

MRI Scan

Your doctor **may** also request a MRI scan to help with planning your treatment. They will discuss this with you. You will visit the MRI scanner at the Beatson. This will be a day or so after your CT scan. You will lie in the same position as you were for the CT scan and follow the same bladder preparation.



MRI Scanner

When you are lying flat on the couch, a frame will be placed over your pelvis. It rests gently on your skin and will stay in place during the scan. This helps to give a better scan picture.

Your radiographers will be in another room during the scan but they will be able to see you through a window.

The scan takes about 30 minutes. You won't feel anything. Some patients find the scanner noisy. Your radiographers may play some music for you.

It is very important that you stay relaxed and still during the scan as any movement can reduce the quality of the scan pictures.

Contrast Injection

You may need to have an injection of contrast (dye) during your scan(s). This will help us to see the area we want to treat more clearly.

Your doctor or radiographer will put a small needle (cannula) into a vein, usually on the back of your hand or arm. The needle will be removed and will leave a small tube of plastic in your vein. It will be taped in place and will stay in during the scan. We will then inject the dye through this plastic. It may feel a little cold but you should not feel any discomfort.

Some people can have an allergic reaction to the dye. 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.

The dye is only needed for the planning scan(s), you will not need it for your daily treatment.

Radiotherapy treatment

Radiotherapy can be given in a number of ways to treat cancers of the rectum. This can range from a single week of treatment before your operation, through to 5 or 6 weeks of treatment either before or after surgery. 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.

Each day you come for treatment your radiographers will position you just as you were in the CT scanner. The lights in the room will dim and they will move the bed up under the machine. The machine will move round about you but it won't touch you.

When your radiographers have checked your individual plan, they will leave the room to start your treatment. They are monitoring you closely all the time on CCTV.

Your radiographers may take some X-ray pictures or a scan before beginning your treatment. This allows them to check your position. This can take a few minutes but please keep still. It is important to ensure your treatment is accurate.

There is nothing to feel during treatment or immediately afterwards. Your treatment usually takes 10-20 minutes. It is important you stay as still as you can during treatment and breathe normally. Please speak to your radiographers if you have any questions or problems.



Linear Accelerator

Chemotherapy and Radiotherapy

It is common for people having longer courses of radiotherapy to have chemotherapy also. The chemotherapy makes the cancer cells more sensitive to the radiotherapy. Chemotherapy drugs used to treat rectal cancer can be given in different ways. Sometimes they may be given as part of a clinical study (trial). Your doctor or specialist nurse will talk to you about the drugs and trials and will answer any questions you might have.

Chemotherapy is a drug treatment and can be given through a tube in a vein (intravenously) or as a tablet that is swallowed (orally). We will give you more specific information about your chemotherapy once you and your doctor have decided on which treatment you will have.

You will have a pre-assessment appointment with your clinical nurse specialist before your treatment starts. They will talk you through your planned treatment and potential side effects. If you have been prescribed chemotherapy in tablet form, they will give you them at this appointment. If you have any questions or concerns, they will be happy to answer them.

Early effects of radiotherapy treatment

We treat each person 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.

People having a single week of treatment may notice very few side effects. Most people having longer courses of treatment find the side effects of the treatment become more noticeable as the treatment progresses. They may last for a few weeks after treatment is completed.

Some of the effects you **may** experience are:

- **Tiredness:** You will begin to feel quite tired during your treatment. It tends to start 2-3 weeks into your course of treatment and will last for a number of weeks after.
- **Bowel:** It is likely that your bowel habit may change after 3-4 weeks of treatment. This may include constipation or diarrhoea which can be accompanied by colicky or wind pains. Your nurse specialist or doctor can prescribe medication to help this, so let us know if you have problems. You should also drink plenty of fluids to replace water lost because of diarrhoea. Some people notice a discharge of mucus from the back passage and there might be a little blood. If you have had a colostomy you may find that as your bowel moves more often you need to change the bag more frequently.

- **Rectum (back passage):** You may develop the urge to constantly go to the toilet. You may have this sensation at the start of your treatment as a consequence of the tumour. However as the treatment progresses the back passage becomes inflamed by the treatment and you may feel the urge to go to the toilet many times during the day and perhaps at night. You may feel like this even if you have a colostomy. If this troubles you let us know as we can prescribe something to help.
- **Nausea:** This is not usually a problem for most people, although it can sometimes happen. Please let us know if it is troublesome, particularly if you are actually being sick or have tummy pains. Again we can prescribe medication to help.
- **Passing water:** Your bladder can also become irritated and you may feel that you need to pass water more often and more urgently than usual. You may also experience a burning sensation, a bit like cystitis, when passing urine. Drinking plenty of water will help, but let us know so that we can check there is no infection present.
- **Vagina:** The tissues of the vagina (front passage) will be irritated by the treatment. You may develop a mild clear discharge. If you have a heavy, creamy or discoloured discharge (yellow, green or brown) you should let your specialist nurse or radiographer know. The vagina can also become a little inflamed during treatment which may make it sore.
- **Hair:** The chemotherapy used in rectal cancer treatment does not generally cause visible loss of hair. However, the radiotherapy will cause hair loss in the treated area. This is usually temporary.

Chemotherapy given with Radiotherapy

As we explained earlier in this leaflet, chemotherapy can be given with radiotherapy for rectal cancer. When you have both treatments together the side effects may be slightly worse. You may have side-effects other than those listed above; in particular your mouth may become irritated by the chemotherapy treatment and the skin on the palms of your hands and soles of your feet may become red and irritable. Chemotherapy may slightly increase the chances of nausea, diarrhoea and tiredness with your treatment.

Late effects of treatment

We believe the benefits of your treatment outweigh any longer-term risks involved. It is important to remember that radiotherapy is often given either to allow your surgeon to remove an otherwise inoperable cancer or when your doctor has concerns of a risk of your cancer coming back.

However you need to be aware that other possible longer-term side effects may occasionally occur. It is important to emphasise the likelihood of these effects is small and varies from one person to the next.

If you are having an operation after your radiotherapy, it is possible the surgery will also contribute to some of the points mentioned here. Your doctor will explain specific individual issues to you personally; therefore the following is a general guide.

- If you have an operation after your radiotherapy, the treatment may slow down the healing of any surgical wound in the treatment area. However it should heal fully with time.
- Treatment, whether it is radiotherapy, surgery or a combination of both, can affect your bowel habit. In most cases, it does not cause too much upset. You may find your bowels are looser, or you may have to go more often.

Sometimes medication may be needed to regulate your bowel on a longer-term basis.

- About a year after the treatment is complete, small blood vessels can occasionally form within the bladder or the rectum. These vessels are more delicate than normal and may occasionally break down producing blood in the urine or the bowel motion. It may seem frightening at first but is not usually serious. You should let your GP or specialist know as they may wish to arrange further tests.

Serious problems are very rare. Scar tissue may develop in several areas. Occasionally it can affect the wall of the bladder and very rarely this can cause shrinkage of the bladder. This can cause irritation on passing water and occasionally make it difficult for patients to “hold on” requiring them to get to a toilet urgently.

If such scar tissue affects the bowel it can add to the problems of diarrhoea mentioned above. Very occasionally this may lead to narrowing or even a blockage in the bowel and an operation may be required to remove this narrowed area. Fortunately this is a very rare problem but please do speak to your doctor if you are worried.

A very rare but potential effect is that radiation can cause cancer. Although this is a serious possible consequence of your radiotherapy, it is important to bear in mind that it is extremely rare. If it does happen it is likely to be many years after treatment has ended.

Relationships

Following your treatment there is a possibility of loss of sexual function. This may occur as a result of radiotherapy or surgery or a combined effect of both.

Treatment can damage the nerves that control getting an erection and you may therefore find it difficult to get and keep an erection. Whether due to the radiotherapy or the

surgery, help and advice is available so please let your doctor or specialist nurse know if this becomes an issue. It is likely you will become infertile as a result of the radiotherapy and if this is a concern we can arrange discussions with specialists to store sperm before treatment starts.

Radiotherapy affects the ovaries, therefore if you were still having periods before radiotherapy, you will go through the menopause (the "change"). As a result of this you will become infertile. Following treatment, you may initially notice some vaginal dryness. If this continues to be a long-term problem you should discuss this with your doctor, as help and advice is available. Longer term, it is possible scarring in the tissues of the vagina may contribute to some discomfort during intercourse. If your doctor thinks you may be at risk of this you may be given advice about vaginal dilators which can be used to help keep the vagina supple. Your doctor or specialist nurse can advise you about this. We also have professionals who can advise about using dilators on an individual basis. Please ask if you have any questions or concerns.

With all of these effects above, it cannot be stressed strongly enough that they are potential effects. This does not mean that you will experience all or indeed any of them. Also, you must remember there are great benefits to having treatment which make the small risk of complication acceptable in your doctor recommending this treatment.

It's also important to remember that your emotions and worries can also play a part in difficulties in your intimate relationships, particularly at this time. There are staff available in the department who can help you talk through any issues, so please let us know if you would like to see someone.

General advice during treatment

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

- Try to get enough rest and sleep, especially when the treatment begins to make you feel tired. It is also important that you try to continue with some of your normal daily activities. A sensible balance between rest and activity may be most beneficial. Research has shown that gentle exercise is also beneficial for people who have had a cancer diagnosis both in the short and longer term. There are programmes available that can help with this. Please let us know if you are interested in finding out more.
- The radiation from radiotherapy does not stay in your body so it is safe to be near other people, including children and pregnant people.
- Try to drink plenty of fluids throughout your treatment to avoid becoming dehydrated.
- The colo-rectal nurse specialists will see you once a week at the review clinic while you are having treatment. They will help you with any problems you may experience during treatment.

Your skin and skin care during treatment

- Your skin in the treated area will be more sensitive and may become pink or red. This is most likely to happen in the folds of skin between the buttocks and in the groin. This tends to be a couple of weeks into treatment. Some people develop an irritation of the skin or itch around the back passage (anus) or front passage (vulva), especially towards the end of treatment. We can prescribe creams that will help soothe the skin but do not be tempted to use anything other than those prescribed or recommended by the Beatson. However soothing they may seem, they may interact with your treatment and

cause your skin to become worse. Please tell staff as soon as you start to experience any of these symptoms.

Please note during treatment:

- You may bath or shower during treatment using lukewarm water. You may continue to use your own soap during treatment unless it begins to cause you any discomfort. Pat your skin dry with a soft towel.
- Only use creams or lotions on the treated area if they have been recommended or given to you by the staff at The Beatson.
- You will find that you may be more comfortable if you wear loose fitting clothes and underwear, preferably with cotton next to your skin during treatment and for 2-3 weeks after radiotherapy.
- If you have piles (haemorrhoids) or have had these treated in the past, they may get a little worse during treatment. Let us know and we can prescribe something to help.
- Please be aware that after your treatment has finished your skin will not heal immediately. It may become worse over the following 2 weeks however it should settle 3-4 weeks after treatment has finished. You may begin washing normally once your skin no longer looks red or feels itchy.
- **Diet:** Keep to a normal diet at the start of treatment, although it is best to avoid foods that you know make your bowels move unduly, for example prunes, rhubarb, hot spicy foods etc. It's also best to cut down on large amounts of fruit juice, fruit and vegetables if you start to have diarrhoea.
- **Sexual intercourse:** If you are sexually active, the side effects of radiotherapy can cause temporary discomfort in the pelvic area. You may prefer to wait until any inflammation or discomfort has settled. This is usually 3-4

weeks after treatment ends. If appropriate you will need to take adequate contraceptive precautions.

Vaginal intercourse may be uncomfortable as you may be a little drier than before. You may find it useful to use a lubricant. There are several brands available in the chemist such as KY jelly or Replens, and it is a matter of finding the one that suits you best. Help and advice is available, please speak to your nurse specialist, doctor or radiographer.

After treatment ends

Your oncologist will arrange to see you 4-6 weeks after your treatment has finished.

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 and information is available from:

- Colorectal Nurse Specialist
☎ 0141 301 7693 / 0140 301 7691
- Information and Support Radiographer ☎ 0141 301 7427

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. ☎ 0141 301 7390

The Beatson Cancer Centre has a **Radiotherapy Advice Line** available for patients who have completed treatment. This is an answer phone service for non urgent calls available Monday – Friday. Please leave your name, contact number and a short message and we will call you back as soon as possible.

☎ 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 increased 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 ☎ 0141 301 7990

National 8pm-8am ☎ 0800 917 7711

Counselling and Clinical Psychology

This leaflet deals with the physical aspects of your treatment, but your emotional wellbeing is just as important to us. Being diagnosed with cancer can be a deeply distressing time for you and those closest to you. Within the department we have a 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:

Macmillan Cancer Support	☎ 0808 808 0000
Providing practical, medical, emotional and financial advice for those affected by cancer.	
🌐 www.macmillan.org.uk	

Maggie’s Gartnavel	☎ 0141 357 2269
Maggies Lanarkshire, Monklands Hospital	☎ 01236 771 199
Maggie’s Forth Valley	☎ 01324 868 069
Maggie’s Centre provides a comprehensive cancer support programme for people and their families affected by cancer.	
🌐 www.maggies.org	

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.

Bowel Cancer UK in Scotland

Provide information and support for everyone affected by bowel cancer. Free leaflets and booklets available for download and to order.

🌐 www.bowelcanceruk.org.uk

The Colostomy Association

☎ 0800 328 4257

The UK support group for people with a colostomy.

🌐 www.colostomyuk.org

If you are interested in finding out about becoming more active, please visit:

🌐 www.nhsggc.org.uk/getactive

Beatson Cancer Centre

If you want to find out more about our Centre please visit

🌐 www.beatson.scot.nhs.uk

NHS 24

☎ 111

Leaflet written by L.Webster & Dr A. McDonald
Reviewed H. Reid & K. Smith June 2023
Approved H. Reid June 2023
Review date: June 2025