

Radiotherapy treatment before surgery for cancer of the rectum

Your treatment decision

The choice of treatment for cancer of the rectum is based on evidence, research and experience and includes individual factors such as the size and position of the tumour, as well as your general personal fitness. Your case, including any scans you have had, has already been discussed in a meeting with the specialist doctors and surgeons responsible for your care. Your doctors have recommended that you have treatment using radiotherapy and you may have surgery later on. Although some patients will be advised to have this treatment after they have had surgery.

You will receive either short course radiotherapy (one to two weeks) or long course radiotherapy (five to six weeks). Long course radiotherapy is usually given with concurrent chemotherapy. Details of these radiotherapy regimens are given below.

This factsheet provides information about your radiotherapy treatment, what the treatment involves and the possible side effects. We will ask you to sign a consent form that confirms that you wish to receive this treatment. You can change your mind at any time, however it is strongly recommended that you complete a course of treatment once you have started, as you would risk the radiotherapy failing unless the full course is completed.

What is radiotherapy?

Radiotherapy is a type of radiation treatment using x-rays. The treatment is given using a machine called a linear accelerator and treatment delivery is completely painless. It takes approximately 10 minutes to deliver the treatment and we will inform you if your treatment is delayed by more than 30 minutes.

How does radiotherapy work?

Radiation damages cells that grow and divide rapidly. Only the cells in the area of the body receiving treatment are affected and modern treatment methods mean that we can avoid treating normal cells as much as possible. The healthy, normal cells can repair themselves while the abnormal, cancer cells cannot recover.

Why is radiotherapy given before surgery?

Radiotherapy is given before surgery for cancer of the rectum to:

- ensure the best chance of complete removal of the tumour (cancer) at surgery
- decrease the chance of the cancer growing back within the pelvis after surgery.



Short course radiotherapy

Short course radiotherapy involves daily radiotherapy treatment for five days and takes place over one week (Monday to Friday). It is given to destroy cancer cells before surgery. Surgery usually takes place 6–8 weeks after radiotherapy to allow enough time for the tumour to shrink. Again, the timing of surgery will depend on the size and position of the tumour. Chemotherapy is not given during short course radiotherapy.

Long course radiotherapy

Long course radiotherapy involves daily radiotherapy treatment, Monday to Friday (excluding weekends) for 5–6 weeks. In total, you will receive 25–30 treatments. You may have chemotherapy tablets in conjunction with radiotherapy, which enhances the effect of radiotherapy.

The aim of giving 'chemoradiotherapy' is to shrink the tumour before surgery. Surgery is usually planned to take place 6–8 weeks after radiotherapy is completed, and scans (CT and MRI) will be carried out before surgery to assess how well the tumour has responded to the treatment. These scans will be discussed again in a meeting before surgery. In some patients, chemotherapy may also be recommended after surgery to decrease the chance of the cancer returning.

Planning your radiotherapy treatment (pre-treatment)

Before starting the radiotherapy, we will need to take a CT planning scan while you lie in the treatment position so we can design the radiotherapy according to your individual needs. Please see The Royal Marsden factsheet Having radiotherapy CT planning for further information and to check what time you need to arrive before your scheduled appointment – this is so we can explain the scan and make any other preparations needed. The treatment will be planned specifically for you, to make sure that the cancer is accurately targeted with the least amount of normal tissues included. This planning can sometimes take up to four weeks to complete, and involves physicists, radiographers and doctors. Your treatment start date will be the earliest time that we can safely get the treatment ready.

You will need a moderately full bladder for your scan and each day for treatment, therefore we will ask you not to empty your bladder for at least an hour before your scan and each day for treatment. When your bladder is moderately full, it will push part of your small bowel out of the treatment area. This may help to reduce some of the side effects from the radiotherapy. Please see The Royal Marsden factsheet Preparing your bladder for radiotherapy to your pelvis (or anus/rectum) for further details.

The CT planning session will usually take about 30 minutes. After your planning session, we will confirm a date and time to start the radiotherapy treatment.

Radiotherapy treatment

You will need to report to the receptionist at the Radiotherapy Department every day when you arrive. The receptionist will let the radiographers working on your machine know that you have arrived. On your first visit the radiographers will set aside some time to talk you through the treatment and answer any extra questions you may have so please arrive twenty minutes before



your treatment time on that day. Please remember that you will also need to fill your bladder before treatment.

You will be given radiotherapy treatment every day, Monday to Friday. The long course of treatment usually lasts about 5–6 weeks. We aim to treat every patient within 30 minutes of their appointment time and we will inform you if your treatment is delayed by more than 30 minutes. Treatment is not usually given on bank holidays, although sometimes special arrangements are made.

At each visit the radiographers will take you into the treatment room and position you on the treatment couch as you were for the planning scan. The radiographers will explain what they need to do and may ask you to make small movements so that the marks that were put on your skin during the planning stage line up with laser lights in the treatment room. When they are happy with the position, the staff will leave the room to deliver the treatment. Each day prior to treatment the radiographers will acquire a 'mini' CT scan to check coverage of the tumour, and check how full your bladder is. They will be able to see you on a closed-circuit television screen and they can talk to you through an intercom system. Please note that this is a live feed and is not recorded. If you have any problems, they will advise you to call out or raise your hand for attention and they will come in to help you. Some treatment machines have background music playing to help you feel more comfortable.

The radiotherapy machine will rotate around you during the 'mini' CT and the treatment but it will not touch you. Although you can hear a buzzing noise when the treatment is being delivered, you will not be able to feel anything happening.

Care during your course of treatment

The radiographers who you see each day can give you advice if you have any problems. They can also contact someone from the radiotherapy team to come and see you for specialist advice. Other members of the team include the clinical nurse specialists for gastro-intestinal (GI) tumours, dietitians and the radiotherapy nurses. Every week you will be asked to have a blood test and you will be seen in the clinic at week three and five to make sure that you are managing your treatment well without too many side effects. Women receiving radiotherapy to their pelvis will be given feminine care advice. Please see the Royal Marsden factsheet *Feminine care for women having pelvic radiotherapy* for further information.

If your blood count shows you have too few red blood cells (anaemia) then you may need a blood transfusion. This will usually take place during the day and you will not need to stay overnight.

Side effects of radiotherapy

Early side effects can occur during or immediately after the treatment, whereas late side effects can appear several months and years after the treatment.

Early side effects

- Tiredness (fatigue) – this is common and can often be made worse by having to travel to hospital each day. The tiredness will slowly improve after your treatment has finished.



- Diarrhoea – both the chemotherapy and the radiotherapy can affect your bowel habits, and you may experience diarrhoea. We can prescribe medication to help control any diarrhoea. (If you develop problems at the weekend you can take loperamide [Imodium] which can be bought from chemists).
- Mucus or blood from the back passage – during and after radiotherapy, you may pass mucus and/or blood with the bowel motion or at other times. We will advise on this during your clinic visit.
- Skin reaction – the skin in the treatment area may become pink or darker, depending on your skin tone. You may develop a patch of dry and itchy skin. You can use a simple unperfumed moisturising cream to relieve this. Sometimes there is superficial blistering of the skin. One of the radiotherapy nurses will see you for advice on how to manage this type of skin reaction.
- Urinary frequency/cystitis - you may notice discomfort as you pass urine or that you need to go more often. Drinking more can help to settle this. If it is more uncomfortable we can take a sample of your urine to test for a bladder infection and you may need medication.
- Nausea – you may feel more nauseous if you are having chemotherapy as well. Sometimes anti diarrhoea tablets can cause nausea too.

All these symptoms will settle within a few weeks of completing the treatment.

Late side effects

- Infertility in both men and women - sperm banking and egg collection can be offered before treatment.
- Menopause (in women) – your ovaries will stop producing hormones and you will experience menopause symptoms (you can be offered HRT if necessary).
- Sexual difficulties – men may become impotent and women may experience vaginal dryness and tightening.
- If you develop any sexual problems, we can provide advice when you attend the follow up clinics.
- Skin changes - the skin that is irradiated may become darker with time. In addition, small dilated veins appearing as red spots (telangiectasia) may develop. These are not harmful.
- Urinary frequency – this can occur in the long term due to a smaller, shrunken bladder, but is not common
- Alteration in bowel function – this is possible in the long term and varies from opening your bowels more frequently to problems such as severe diarrhoea or rectal bleeding. Severe rectal side effects in the long term occur in less than 5% of patients (five in 100 people) treated. If they do occur, investigations will be carried out to establish the cause and appropriate treatment will be advised. Up to half of all patients treated for cancer of the rectum may notice a change in bowel pattern compared with before treatment.

Remember these are possible side effects and you may not experience any of them.



This factsheet should be read together with The Royal Marsden booklet *Radiotherapy; your questions answered*. The booklet offers general information about radiotherapy and details about some of these side effects and how to manage them.

Follow up after your treatment

Four to six weeks after radiotherapy, you will have the scans (MRI and CT) repeated so that we can discuss the tumour shrinkage with your surgeon at one of our meetings. We will see you back in clinic to see how the side effects have settled and assess how much your tumour has shrunk when we examine you. We will also discuss the outcome of the meeting with you.

Please make sure you ask any questions that you have and that you feel comfortable with what you have been told. If you want any explanation repeated, the radiotherapy team is happy to do this; there is a great deal of information to take in during one session.

Contact details

If you have any questions or concerns about this treatment you can contact:

Dr Diana Tait's secretary and Dr Irene Chong's secretary: 020 8661 3370

Dr Katherine Aitken's secretary: 0208 661 3374

They will arrange for one of the team to speak with you.

Alternatively, please call:

The Royal Marsden Macmillan Hotline: 020 8915 6899

(available 24 hours a day, 7 days a week)

