



A patient guide to radiotherapy treatment for anal cancer

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This leaflet is for patients who have been recommended to receive radiotherapy treatment for cancer of the anus. It will highlight important details that you will have already discussed with your doctor. This leaflet is intended to be a guide as details and side effects following radiotherapy varies from patient to patient.

What is radiotherapy?

Radiotherapy uses high energy X-rays. The aim of radiotherapy is to slow down or stop tumour growth. Radiotherapy is similar to having a scan, it is painless, and you will not see or feel anything. During the procedure you will have to lie still for a few minutes.

Radiotherapy treatment is sometimes called external beam radiotherapy and is carried out on a machine called a linear accelerator.

Treatment is normally given in short daily treatment sessions, Monday to Friday. The number of treatment sessions you will have will depend on your condition. Your doctor will discuss this with you in more detail.

Unfortunately some healthy cells within the treated area can also be affected, resulting in some side effects. These side effects will be discussed further on in this leaflet.

Radiotherapy treatment does not make you radioactive so it is safe to be around children and others after your treatment.

We are a teaching hospital and have student radiographers in the department everyday who are supervised by trained staff. Your radiotherapy will be delivered by radiographers, both male and female.

Why do I need radiotherapy?

Radiotherapy can be used as the main treatment for cancer or it can be used after surgery in order to treat smaller cancer cells that were too small to see, which may have been left behind after surgery.

What are the benefits of radiotherapy?

For most patients, the benefit of radiotherapy will be to control or potentially cure your cancer symptoms. Your doctor will discuss this with you in more detail at your first appointment.

Are there any alternative treatments to radiotherapy?

Cancer may also be treated with surgery and/or chemotherapy. It may be that you receive a combination of these treatments and your doctor will discuss these options with you.

Chemotherapy with radiotherapy (chemo–radiation)

Chemotherapy (a cancer treatment using medicine) is often used with radiotherapy for anal cancer and your doctor will inform you if they think chemotherapy is required.

Chemotherapy for anal cancer is often given in the first and fifth week of your radiotherapy treatment. During those weeks you will need to stay in hospital overnight.

On the morning of the first day of your treatment, you will be admitted into hospital to begin your chemotherapy. Your chemotherapy will be given through a drip and a porter will collect you to take you to the radiotherapy department for your treatment.

You will have regular blood tests during your radiotherapy. The

radiographers will organise these tests and you will be given the appropriate forms when required.

What will happen if I do not have treatment?

Without treatment, your cancer will continue to grow, which may mean your symptoms worsen. The cancer may then spread away from the original area and become incurable.

What if I have a pacemaker?

It is important that you inform your doctor or a radiographer if you have a pacemaker. Radiation may affect your pacemaker so checks will need to be organised throughout your treatment.

Pregnancy

It is extremely important that you are not pregnant or become pregnant during your course of radiotherapy, as even a small amount of radiation may damage an unborn foetus. It is very important to let the radiographers know at once if you think there is even a small possibility that you may be pregnant before being exposed to any radiation.

What happens before my radiotherapy begins?

Radiotherapy treatment has to be carefully planned and your first appointment will be for a computed tomography planning scan (a CT scan). You will be sent an appointment to attend the CT scanner in Radiotherapy, The Cancer Centre, Queen Elizabeth Hospital Birmingham.

The CT scan will be of your pelvis and this will enable your radiotherapy treatment to be planned. A CT scan needs to be carried out regardless of any other scans you may have had recently.

What happens at my CT appointment ?

The radiographers will talk to you before the CT procedure and explain what will happen during the CT planning scan. Please feel free to ask any questions you may have about your CT scan or treatment.

When you arrive for your CT appointment the radiographers will ask you to drink four cups, or 500ml, of water 30 minutes before they are planning to scan you to ensure you have a full bladder for your CT scan. There is a water machine available in the Radiotherapy Department but you are welcome to bring your own preferred drink with you if you wish.

Some patients will need to be given contrast (dye) as part of the CT scan. The contrast helps to highlight important areas that the doctors may want to treat or avoid.

If you require an injection of contrast, a small cannula (fine plastic tube) will be placed into a vein in your arm using a fine needle. This will be connected to a machine which will give the contrast agent when you are having your scan.

For the scan you will need to remove all clothing below the waist, except underwear. You will be covered with a paper sheet to maintain your dignity and modesty during the procedure. Ladies may find it easier to wear a skirt or trousers rather than a dress.

The radiographers will put some pen marks on your skin during the CT scan. These pen marks will help the radiographers plan your treatment. Once the scan is complete, the radiographers will ask permission to make three to four tiny permanent dots, called tattoos, which are the size of a small freckle. These do not indicate where you need treatment or the position of the tumour but are used to ensure you lie in the correct position each session. Any pen marks put on the skin by the radiographers during the CT scan can then be washed off when you get home.

The CT appointment will take approximately 60 minutes and

once completed you will be given an appointment for your first radiotherapy treatment. There will be a time delay between your CT planning scan and the start of your radiotherapy treatment because your treatment now needs to be planned, and this can be a complex process involving your doctor and a team of other professionals.

The routine hours of the Radiotherapy Department are 08:00 - 18:00.

If you have a need for a certain appointment on a specific day it is best to ask at the earliest available opportunity once you have started radiotherapy to avoid disappointment.

It may not always be possible to accommodate all patient requests as we are a very busy department, with approximately 250 – 300 patients on treatment each day. If you require hospital transport for your radiotherapy treatment, please discuss this with the radiographers at your CT scan.

Filling your bladder

Each time you attend for radiotherapy it is important to have a full bladder. This will ensure your bladder is pushed away from the area we are treating which will help reduce side effects you may experience and ensure treatment is accurate.

Each time you undergo treatment please empty your bladder and then drink four cups or 500ml of fluid, within 5 minutes, approximately 30 minutes before your appointment. There is a water machine available in the Radiotherapy Department, but you are welcome to bring your own drink if you prefer.

What happens when I arrive for my first radiotherapy appointment?

When you arrive for your treatment you should go directly to your allocated treatment room. If you cannot remember where this is, please ask at the reception desk in the Radiotherapy

Department, or a member of staff. Place your appointment card in the box outside your treatment room so that the radiographers know that you have arrived.

Please ensure that you arrive 30 minutes before your appointment to give yourself enough time to fill your bladder.

When the radiographers are ready to start they will come and talk to you and explain the procedure. Please feel free to ask any questions that you may have about your treatment side effects or appointment times.

When you enter the treatment room, you will be asked to lie down on the couch, in the same position you were in the CT scanner. You will be asked to remove your lower clothes as it is important that the radiographers can see your tattoos and that there is no clothing in the treatment area. You will be covered with a sheet of paper.

The radiographers will then move you closer to the machine and line up your tattoos to ensure you are in the correct position for treatment.

They will then make some pen marks on your skin. The marks are used to check your position during treatment and monitor whether you have moved.

The machine will move around you but does not touch you at any point during your treatment. The radiographers will inform you when they are leaving the room to commence treatment and you will hear an alarm sound, which is part of the safety procedure. The radiographers will operate the machine from the control area and they can hear and see you at all times. If you need assistance. This just call out or raise your hand. For your own safety, please do not try to get off the bed as it is raised up off the floor.

In some cases your radiographers may move the machine around you to perform a short scan of your pelvis. This allows them to view more images to ensure you are in the correct position. These images cannot be used to measure your response to radiotherapy. If this scan is part of your procedure it will be

explained to you at your first appointment.

When the machine switches on you may hear some buzzing or bleeping noises, this is normal. When the treatment has finished you should remain in the same position until the radiographer enters the room and allows you to move. This is for your safety.

Your first session of treatment normally takes 20 minutes.



Linear accelerator

What happens at my next radiotherapy appointments?

Your other treatment appointments normally take around 15 minutes. Please remember to arrive 30 minutes prior to each appointment to give yourself enough time to fill your bladder.

What if there is a delay?

If you are kept waiting and are unable to hold a full bladder please tell the radiographers. You may need to empty your bladder, drink and fill again with approximately half the amount of fluid (one to two cups). Please discuss this with the radiographers if you are unsure of what to do.

CCTV monitors

The treatment rooms are monitored during your preparation for treatment, positioning and treatment delivery by television cameras. This is part of ensuring the accuracy of your treatment and your safety and wellbeing in the rooms at all times. We assure you that the camera image feed is live and it is not possible to make a recording.

The images are viewable on screens situated in the machine control areas. The control areas are only accessible by authorised radiotherapy staff, some who may not be directly involved with your care at that time.

If you have any concerns about your privacy or dignity that you have not already discussed then please do not hesitate to highlight your concerns during the information discussion with the radiographers at your first treatment appointment.

Is there anything that i need to do whilst receiving my radiotherapy treatment course ?

- Whilst receiving radiotherapy treatment it is important to eat a healthy, well-balanced diet and make sure that you drink plenty of fluids, especially if you are also receiving chemotherapy.
- Try to avoid caffeine as this can irritate the bladder. This is found in tea, coffee and fizzy cola. Try decaffeinated versions.
- Avoid alcohol as this too can irritate the bladder.
- If you are diabetic please ensure you bring your insulin and some food each time you attend in case there are any delays.
- We also recommend you bring any medication you are required to take regularly, for example painkillers etc.

Will I see a doctor during my radiotherapy course?

During the course of your treatment you will be monitored by your radiographers and you will be seen by your doctor or one of their team. Please be aware that your radiotherapy appointment time will be scheduled to coincide with the clinic so that you do not have to make two visits in one day.

You should tell your doctor or their team if you are experiencing any side effects or problems. If you need any repeat medication that you have been given from your consultant you should mention this during your clinic appointment. A list of current medications may be useful to bring to this clinic consultation.

Are there any side effects to my radiotherapy?

When you were consented for your radiotherapy, your doctor will have explained the potential side effects.

The most common side effects often occur during the course of your radiotherapy treatment and may continue for a few weeks after treatment has finished. Side effects which occur six months or longer after treatment has finished are called late side effects.

If you have any questions about side effects, please ask a member of the treatment team.

What early (acute) side effects may I experience?

The side effects listed in the table below are mild and normally start to occur approximately two weeks into your radiotherapy treatment. Side effects are usually at their most severe at completion of radiotherapy, however they should gradually improve in the weeks after your radiotherapy has finished and should have settled by the time you attend your post radiotherapy follow-up appointment.

Please see the following table which summarises the acute side effects commonly experienced by patients undergoing radiotherapy.

Acute side effects	
Sore skin	Your skin will become sore and may start to weep during treatment. The radiographers will be watching for this, so do let them know if you are feeling sore.
Diarrhoea	Irritation of the back passage can lead to loose and more frequent bowel movements. You may also notice mucous in your stools. Speak to a member of staff as dietary changes and/or medication can help.
Bladder problems	Radiotherapy irritates the lining of the bladder which can upset your usual bladder habits. You may need to pass urine more frequently and with more urgency. You may also have a burning sensation (cystitis) when emptying your bladder. You may notice blood in the urine. Please inform a member of staff if this occurs.
Blood in stool	It is not uncommon to notice blood in your stools. Just let a member of staff know.
Haemorrhoids	If you have or have had haemorrhoids, the radiotherapy can make them worse or cause them to return. Just let a member of staff know.
Hair loss	Pubic hair in the area may stop growing. It should grow back but may be thinner.
Tiredness	Radiotherapy can make you tired due to travelling to hospital every day, as well as the treatment itself. This feeling can last for a few weeks after your radiotherapy has finished.

Side effects to the skin

Radiation will irritate the skin in the treated area and this is a common side effect when treating the anus. You will notice your skin becoming red and sore in between your bottom cheeks, groin area and genitals. The skin may also start to weep and may break down as the treatment progresses. The radiographers and your doctor will be looking and checking for this and will advise appropriate care and pain relief if required.

Please let them know if you are starting to feel sore.

Side effects to the bowels

Radiotherapy can disrupt your normal bowel movements. This is because we are treating your pelvis with radiation and your rectum (back passage) can become irritated. You may notice that your stools become loose during the treatment and you may experience diarrhoea and/or pass mucus (fluid produced from cells). This is a normal reaction to the treatment.

Therefore it is important that you drink plenty of fluids throughout the day to replace the fluids you lose if you suffer from diarrhoea. You should tell the radiographers if you are experiencing diarrhoea as they are able to recommend medication and offer advice on how to alter your diet to help reduce these problems.

In some cases, radiotherapy can cause the opposite effect and some patients experience constipation.

It is not uncommon to find a small amount of blood in your stool. This is normal but do let a member of your treatment team know.

Side effects to the bladder

Radiotherapy can irritate the lining of the bladder and may cause the following side effects:

- A need to pass water more often than normal (urinary frequency).
- A feeling that you cannot hold your water, making the need to empty your bladder feel desperate (urgency)
- A burning sensation when emptying the bladder, similar to cystitis (radiation cystitis)
- Blood and debris in the urine (haematuria)

You can help reduce these side effects by following these recommendations:

- In drinks such as tea, coffee and some fizzy drinks. Try decaffeinated versions instead.
- Avoid alcohol as this too can irritate the bladder
- Drink 2 litres of fluid a day to keep your urine diluted (clear urine rather than dark yellow). Don't be tempted to drink less to avoid going to the toilet, as this will make you dehydrated and your urine will be more concentrated (it will look very dark yellow in colour) which will irritate the bladder lining further

Haemorrhoids: If you have haemorrhoids, the treatment can irritate them further, or cause them to come back if you have had them before.

Hair loss: You may lose your pubic hair if it is in the area being treated. This should grow back after treatment but may grow back thinner.

Tiredness: Radiotherapy can make you feel tired. This can be partly because of the travelling involved in attending the hospital every day, as well as the treatment. This may continue

for a few weeks after you have finished your treatment.

Please let the radiographers know if you are experiencing any of the above side effects as they may be able to help.

What are the possible late side effects?

These may occur months or years after finishing your course of radiotherapy. With the improvements in radiotherapy planning and treatment techniques, these occur less frequently than in the past.

Tiredness and lethargy

Even if you have not experienced any tiredness during your course of radiotherapy, after it has finished there may be a period of time when you feel particularly sleepy or that you feel you do not have the energy to do anything. This can last for six weeks or longer. This is a normal reaction to the treatment and will settle.

Bowels

You may notice blood in your stools as the blood vessels in your back passage may become more fragile, causing blood to leak into your back passage and appear in your stools.

Sometimes people experience a permanent change in their bowel habits. Your motions may become more frequent or looser. You should let your doctor know if you are experiencing loose stools as medication can be prescribed to help regulate movements.

In rare cases small blockages can occur. These are caused by the tissue surrounding the bowel sticking together and sometimes surgery is required to correct this, however again, this is rare.

Bladder

Scarring from your radiotherapy treatment may result in the need to go to the toilet more regularly and the feeling being more urgent. You may also experience a small amount of urine leakage (incontinence), especially when laughing, coughing or sneezing.

Sexual function:

Females

- **Infertility and menopause:** Radiotherapy to the pelvis can lead to permanent infertility and is also likely to bring on an early menopause for ladies who are still having regular periods. It is important that you still continue to use contraception and do not start treatment if you are pregnant or become pregnant whilst on treatment. If you do wish to have children, you should discuss this with your consultant before beginning radiotherapy.
- **Vaginal stenosis:** There is a chance that your radiotherapy treatment may cause the vagina to become narrowed, making sexual intercourse and future examinations uncomfortable. There are different options available to help deal with this issue, from sexual intercourse to vaginal dilators. This can be discussed with your consultant or clinical nurse specialist.

Males

- **Infertility:** Radiotherapy to the pelvis can lead to permanent infertility. If this is a concern for you, please discuss the option of sperm banking with your consultant before you start treatment. If you are sexually active you may notice a reduction in semen production and sperm count.
- **Erectile issues:** Radiotherapy can result in difficulty in obtaining an erection due to damage to the nerves in this

area. Please discuss this with your consultant as there are medications that can help.

- **Contraception:** If you are sexually active it is recommended that you use contraception for six months after radiotherapy as sperm production will not stop straight away, however the sperm that is produced may be damaged. This could cause abnormalities if a child was to be conceived during this time.

Radiation-induced tumours: Radiotherapy can cause cancer and there is a very small risk of a secondary cancer developing in the area that has been treated. However, the risk of this happening is very small and the benefit of your radiotherapy treatment far outweighs this risk. Your consultant will discuss this further with you.

Caring for your skin during your radiotherapy treatment

During your radiotherapy and for a while afterwards, you may develop a skin reaction in the area being treated. You may notice:

- Your skin gradually becoming pinker or darker, depending on your skin colour
- Your skin may feel dry or tight, and sore
- A rash may also appear and feel itchy
- The skin may blister or peel. If this happens you will be given further help as you may need dressings

A skin reaction may appear at any time but usually begins around 10 days after starting treatment.

What can make my skin reaction worse?

- Having radiotherapy to areas, such as the groin or buttocks, where there are skin folds can make your skin reaction worse as the skin is warm, moist and may rub together causing friction
- Having chemotherapy alongside radiotherapy can make your skin reaction worse
- Smoking can make your skin reaction worse – if you need help to stop please ask for advice

Your treatment team will talk to you about your daily skin care routine. They will let you know if any changes are advised. Please talk to them about any worries you may have.

How can I help ease my skin reaction?

It may not be possible to stop a skin reaction but by following this advice you may feel more comfortable. This only applies to the skin in the area being treated.

- Wash the skin gently with soap and water; gently pat dry
- Avoid rubbing the treated area

Irritation can also be reduced if you use moisturiser sparingly. You should gently smooth the moisturiser on to your skin and apply in the direction of hair growth. You should stop using the cream if it irritates your skin, and inform your treatment team.

If you are choosing a new moisturiser, a sodium lauryl sulphate-free alternative is advised.

If your skin breaks/blisters you should stop using moisturiser. Your treatment team will advise you further.

Your treatment team will let you know if this advice changes during treatment.

After your treatment has finished, your skin will continue to be more sensitive. Your reaction may worsen for the next 7–10 days before starting to improve. Most patients find their skin

has healed four weeks after treatment finishes. If the skin has broken, healing may take longer than this.

Who do I contact if I have any questions or concerns?

All our staff at Queen Elizabeth Hospital Birmingham are here to make sure your radiotherapy goes as smoothly as possible and to support you through this difficult period. If you have any questions about your treatment or side effects, please do not hesitate to ask your doctor or any of the radiographers for advice.

During your treatment and for up to six weeks after your course has finished, if you need urgent advice due to side effects or are feeling unwell contact the oncology hotline on 07789 651543.

In the event that your call is not answered, please leave a message stating your name, hospital number, contact a telephone number and a short message.

What do I need to do when I have finished my radiotherapy?

Once you have completed your treatment, the acute side effects may continue for a few weeks even though you are no longer receiving treatment. Continue with the advice that was given to you during your radiotherapy until the side effects stop. If you are unsure of what to do, please ask a radiographer or your doctor before you finish your radiotherapy.

You will be seen by your doctor when you have completed your treatment and this will be 6–12 weeks after the course has ended. If you do not receive an appointment in the post within this time then please contact the secretary of your doctor who will be able to check this for you.

Your follow-up appointments will continue for months/years after your radiotherapy has ended. During these appointments

it is important that you mention any side effects or problems that have occurred since completing your treatment. This enables your medical team to help manage any late side effects.

Attending your appointments

Train

University Station is the closest train station to the hospital and is only a 5–10 minute walk away. There is also a shuttle bus running from the train station to the Cancer Centre, for those patients who have difficulty walking.

Driving

Car parking in Car Park D is free for patients attending for daily radiotherapy treatment. Car Park D is located directly opposite the doors to the Cancer Centre. The post code for your satellite navigation system is B15 2GW.

If you do drive, please bring in the ticket you have taken to access the car park and the radiographers will exchange this for a prepaid one so you may exit the car park without charge.

Hospital transport

Hospital transport is only provided if you have a medical need that stops you from using private or public transport.

If you need any help/advice or to book transport please contact: Patient Transport Services on 0800 035 6511

(Monday–Friday 08:00–18:00)

Bromley Wing

If you do not wish to travel you may arrange to stay in the Bromley Wing at the Queen Elizabeth Hospital. It is comfortable accommodation with meals provided from Monday–Friday for

people who are able to look after themselves.

Outside treatment times you are free to entertain yourself, have visitors or go out.

Accommodation here is free and can be arranged by contacting the Bromley Wing on 0121 371 4506.

You may also find this organisation helpful:

Macmillan: www.macmillan.org.uk

Telephone: 0808 8080000

Radiotherapy contact numbers

Patrick Room – Cancer Centre, Queen Elizabeth Hospital

Information and support to people with cancer and their families:

Telephone: 0121 371 3537/9

Oncology hotline

For urgent medical problems out-of-hours when attending for treatment and up to six week after radiotherapy or chemotherapy has finished.

Telephone: 07789 651543

Radiotherapy treatment rooms – direct telephone numbers

Room 1: 0121 371 5703

Room 2: 0121 371 5076

Room 4: 0121 371 5090 (tomotherapy)

Room 5: 0121 371 5085

Room 6: 0121 371 5098 (tomotherapy)

Room 7: 0121 371 5084

Room 10: 0121 371 5079

Room 11: 0121 371 5080

Radiotherapy
Queen Elizabeth Hospital Birmingham
Mindelsohn Way, Edgbaston, Birmingham B15 2GW
Telephone: 0121 627 2000
