



Royal Berkshire  
NHS Foundation Trust

# Radiotherapy to the pelvis for anal and rectal tumours

Information for patients on  
radiotherapy treatment

Berkshire Cancer Centre Radiotherapy Planning  
Opening times: 8.30am-4.30pm Monday to Friday  
Level 1 North Block, Royal Berkshire Hospital  
Tel: **0118 322 7872**  
Email: [radiotherapy.planning@nhs.net](mailto:radiotherapy.planning@nhs.net)

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## What happens next?

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In the clinic, you and your doctor have agreed that you are going to have radiotherapy treatment for your cancer. This booklet explains what you can expect during and after your treatment and gives some general advice and information. You will be given time to discuss any concerns with the radiographer (a person trained to give radiotherapy) at your planning appointment.

Please note that your appointments could be at either the Royal Berkshire Hospital or at the Bracknell HealthSpace, depending upon availability.

### Planning treatment

We will contact you by telephone to arrange an appointment for the CT scan that forms part of the planning of your radiotherapy treatment and which can take up to two hours. During this telephone call, please mention if:

- You have a pacemaker or other implanted cardiac device as radiotherapy can affect some types of cardiac device.
- You have not had a blood test taken in the last 12 weeks as we may require you to take one prior to the planning scan date.
- You have been admitted to hospital since your last blood test.
- You have any kidney problems.
- You have diabetes.
- You have any problems with travel or appointment times and we will do our best to help you.

If you have any questions regarding your CT scan appointment, then you can contact us on the number below:

Telephone: 0118 322 7872 Monday-Friday 8.30am-4.30pm

Email: [Radiotherapy.planning@nhs.net](mailto:Radiotherapy.planning@nhs.net)

Your treatment will be scheduled to start approximately 2-3 weeks after the planning CT.

## What are the benefits of radiotherapy for rectal and anal cancer?

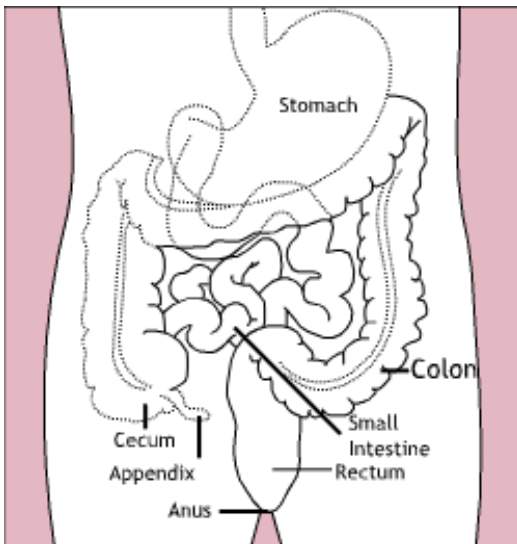
In rectal and anal cancer, radiotherapy is given to the tumour in the rectum and or/anal canal and surrounding tissues. Radiotherapy works by using high energy x-rays to kill cancer cells. Our bodies are made up of different cells and all cells have the ability to divide and grow. If radiation hits a cell that is dividing, it will be damaged. Unlike normal cells, cancer cells are much less able to repair the damage, which means that more of them will be destroyed.

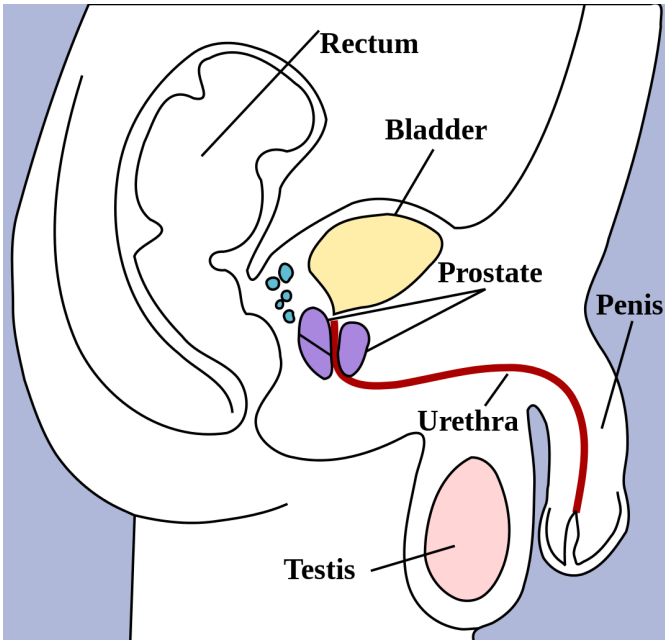
**When recommending radiotherapy, your doctor will have taken into account the risks and benefits of the treatment. Although there are risks and side effects, it is felt that the advantages for you outweigh the disadvantages.**

The number of treatments you are given will depend upon the nature of your cancer; and the doctor will have explained this to you.

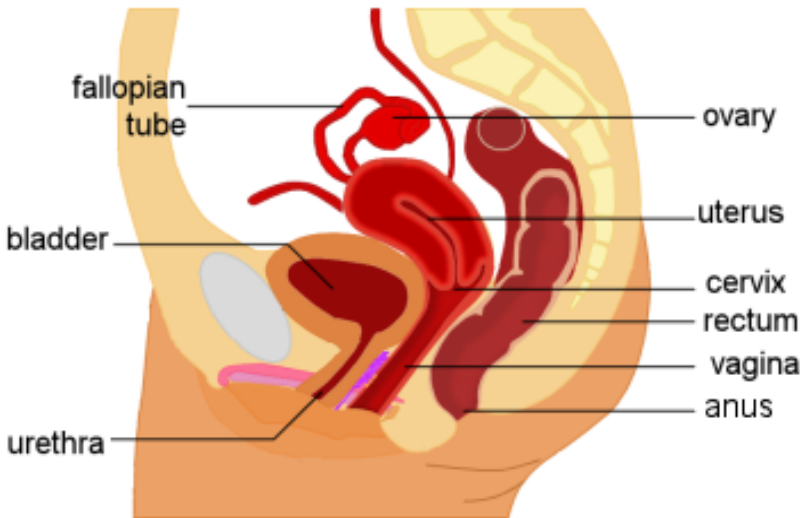
## The areas being treated

These diagrams may be useful to help you understand where your cancer is and the area to be treated with radiotherapy. Your doctor may draw on them to help explain your treatment.

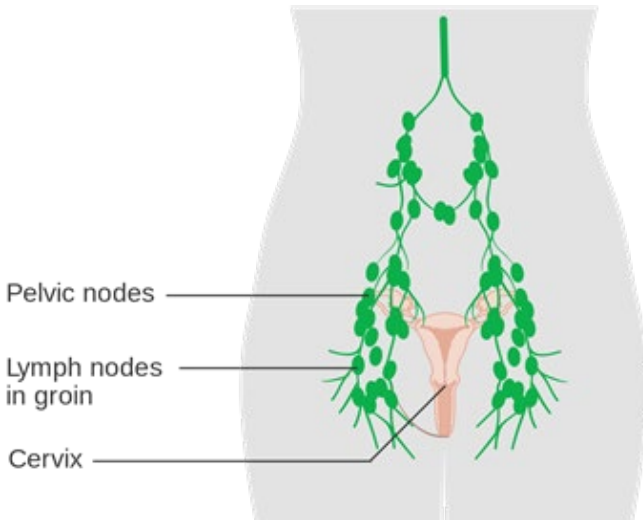




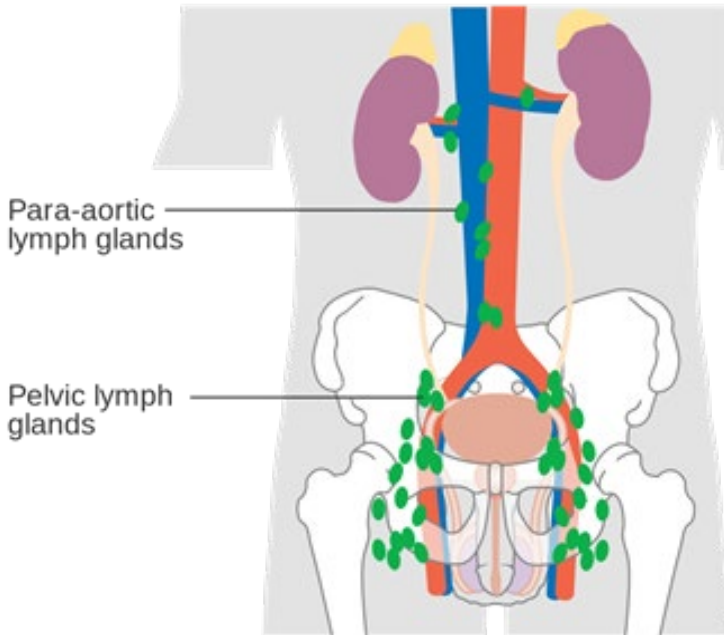
Male pelvis – side view.



Female pelvis – side view.



Female pelvis showing lymph nodes.



Male pelvis showing lymph nodes.

## **Chemotherapy**

Your doctor may recommend some chemotherapy as well as radiotherapy. Chemotherapy is the use of drugs to treat cancer, and to enhance the effects of radiotherapy. If your doctor feels you might benefit from this treatment, he or she will discuss this with you. The staff will give you a leaflet with specific information about the type of chemotherapy that you are going to have.

## **Contraception – avoiding pregnancy**

Patients with childbearing capacity **must not be pregnant or become pregnant at any time during the planning and course of radiotherapy**, as radiation can be harmful to the unborn child. It is important to let the radiographers know if you have missed a period or suspect you may be pregnant, before you are exposed to any radiation. Patients with childbearing capacity will be asked to confirm their pregnancy status prior to planning the radiotherapy and again on the first day of radiotherapy treatment. This applies to all patients between the ages of 10-56 years and is a legal requirement. Radiation can also damage the production of sperm in patients undergoing pelvic radiotherapy and so patients must use contraception during treatment and for at least one year afterwards if there is a chance of your partner becoming pregnant.

## **Patient identification**

The hospital has a policy to ensure the correct patient is identified for their scan or treatment each time they attend an appointment. This will be done by our staff asking you to confirm your full name, your date of birth and the first line of your address. You may be asked this by different staff members, so please bear with us, but we take great care to ensure the correct patient identification checks are undertaken.

## **Preparation for planning and radiotherapy**

Where possible, we need to ensure that both your bowel and bladder are in the same position at the planning CT scan and each radiotherapy treatment. It is beneficial that you have a regular bowel movement before the planning CT scan and each day before your radiotherapy treatment. This will help reduce the build-up of gas inside your bowel, which can cause different amounts of rectal filling. We ask that you attend for the planning CT scan appointment having emptied your bowels if possible, although we caution against straining in order to achieve this. We also need you to be able to hold a comfortably full bladder for the CT scan and each of the treatment sessions.

Please contact us if you think you will struggle with holding your bladder or if you struggle to empty your bowels daily. You will be asked to empty your bladder upon arrival for your scan and then asked to drink a specific amount of water prior to your scan. We will then perform your scan approximately 30 minutes after you have finished drinking the water. This is to allow your bladder to fill and is an important process in planning your course of treatment and for your subsequent daily treatments. It is important that you are well hydrated in the days leading up to the CT scan and throughout the course of treatment. We advise patients to aim for 4-5 pints (2 litres) of fluid across the day, most of which should be water. We recommend that you do not drink more than a couple of cups of tea and coffee a day, and decaffeinated tea and coffee is preferable.

## **CT scan – your planning appointment**

Please allow up to two hours for the CT scan appointment.

When you arrive for your planning appointment, please report into the receptionist at the desk in the radiotherapy waiting room. They will tell you where to wait until a member of the radiotherapy team comes to call you in for your scan.

Before the scan starts, one of the radiographers (x-ray specialist) will explain what is going to happen and answer any of your questions.

They will explain to you that you will need to have a comfortably full bladder for this scan. Radiographers from the Radiotherapy Department will then carry out your CT scan. During your CT scan, you will lie on the CT couch with your clothes removed from the waist down. A small wire marker will be positioned on the entrance to your back passage. You may feel a bit exposed, but we will provide you with medical underwear that is compatible with radiotherapy treatment or if you prefer we can cover you with tissue paper to maintain your dignity and it will only be your scanning team in the room with you. We will use knee rests and ankle stocks to support you in an exact but comfortable position. This will be replicated for your treatment every day.

The Berkshire Cancer Centre is a training centre, so you may meet radiotherapy students who may be involved with the planning and delivery of your treatment under close supervision.

## **Contrast ('dye') injection**

The doctor may have requested that you have an injection of contrast for the scan; not everyone will have this but for some patients it is helpful. You may have had an injection of contrast for scans before. It involves having a cannula, which is a bendy tube, inserted into your arm or hand using a needle. The needle is used only to position the cannula and is removed once the cannula is in place. The cannula left in your vein is used to inject the contrast through. The radiographers will let you know when the injection is about to start. The contrast injection may create a very warm feeling for about 20 seconds. This is often concentrated around the pelvis and groin area spreading down the thighs. It may also give you a metallic taste in your mouth. These are all common and disappear quickly. The cannula will be removed about 20 minutes after your CT scan is finished.

**If you have had an allergic reaction to contrast dye before, you must tell the radiographers before your scan.**



## **Marking out the treatment area**

The planning radiographers will draw some temporary pen marks on your skin around your pelvis to define the area your oncologist is going to treat. The radiographers will then place some markers on your skin, which will show up on the scan to aid us in planning your treatment. Measurements are taken to record the position of these marks, which will be used each time you come for your treatment. Your pelvis will then be scanned, during which time you will not feel anything. The couch will move through the scanner. The scan will take approximately five minutes. It will not hurt but it is very important that you stay very still during the scan, while breathing in a relaxed manner. The radiographers are watching you throughout the whole procedure. Please note it is no longer required for our patients to have permanent marks (tattoos) for treatment.

At your CT scan, we will give you the date and time for your first treatment. This will be approximately 2-3 weeks after your CT scan, and you will be shown where to report in next time. During this time, we use your CT scan images to produce a computerised plan of your treatment, ensuring an even dose of radiation to the rectum or anal canal, while minimising the dose to surrounding tissues and organs – e.g. bladder. There will not be any 'results' from the CT scan, it is used to help us plan your radiotherapy.

## **Your first radiotherapy treatment**

When you arrive for your treatment, please report into the receptionist at the desk in the radiotherapy waiting room. Please ensure you provide a car registration number if you require free parking at the time of your first treatment appointment. While this entitles you to free parking, it does not guarantee a parking space. Parking availability can be very limited so please leave plenty of time for parking.

On your first treatment you will have a chat with a radiographer who will be treating you. They will:

- Check your details.
- Give you a list of the first week's appointment times.
- Discuss the amount of water you need to drink before treatment every day.
- Discuss the treatment procedure.
- Outline the potential side effects.
- Tell you which day your doctor or review radiographer will see you during the treatment.
- Answer any questions you might have.
- Provide you with medical underwear if required.
- They will then ask you to empty your bladder and to drink the required amount of water.

## **What happens during treatment?**

Each time you attend for treatment we need to ensure we are treating the correct person. As you enter one of the treatment areas we will ask you to identify yourself by telling radiographers your name, date of birth and first line of your address. The staff will check this information against your radiotherapy prescription.

Each day the radiographers will put you in the same position as your planning scan by using our specialist equipment called SGRT (camera system). This camera system is attached to our treatment machines and uses infra-red lights to help us get you into the correct position and will also detect movement during the radiotherapy. We will need to remove your clothing from the waist down in order to use the camera system. You may feel a bit exposed, but you will have on medical underwear or be covered with tissue paper to maintain your dignity, and it will only be your treatment team that is present with you. You will not feel anything from the infra-red light and it will not affect or hurt your eyes so you can keep them open if you wish. Please do let us know if you are light sensitive.

All the measurements for your treatment will then be set and checked. The machine will then move to the first treatment position. The radiographers then leave the room to deliver your treatment. This is so they aren't exposed to too many high-energy rays, as they will treat many patients during one day. During the radiotherapy treatment it is **very important** that you remain still, breathing normally, as you did in your CT scan.

During your treatment course, we will take x-ray images to confirm your treatment position. These are then repeated on subsequent treatment days as required. These x-ray images are used for position checking only. They do not show us how the treatment is working.

An additional check will also be carried out using a dose measurement device that is taped to your skin during one of your treatment sessions. This is done to confirm the dose given matches your treatment plan. This is a routine check and may be repeated on another of your treatment sessions.

The radiographers check all the details of your treatment plan before going out of the treatment room as they operate the machine from outside of the treatment room. Although you are alone in the room, you will be monitored on a TV camera during your treatment. If you need a radiographer during the treatment, raise your hand clearly and a radiographer will stop the treatment and come into the room. You will not see or feel anything during the treatment but you will hear a buzzing noise as the treatment is delivered.

The total time of your first treatment will be around 20-30 minutes. Subsequent treatments should take between 10 and 15 minutes. Once treatment has started, we aim to continue it without any breaks or days off, apart from the weekends. However, we know that circumstances do sometimes arise where either you cannot come for treatment or for technical reasons, e.g. a machine breakdown, when we might not be able to deliver to the original schedule. If any treatments are missed, the radiographers will discuss with you how we will compensate for this.

This will not change the effectiveness of treatment and, in the event of repeated delays, you will be given more information.

If there are any short notice changes of appointments times, we ask for your understanding and patience while the staff works hard to rearrange your appointment.

Radiotherapy does not make you radioactive and it is perfectly safe for you to be with other people, including children, after treatment.

## **After treatment**

### **Possible side effects**

Side effects and their intensity will vary from patient to patient – everyone is different and reacts differently to the treatment. It is important you keep the radiographers informed of any side effects experienced. Most side effects will gradually start from approximately 2 weeks into your course of treatment and may continue for 4-6 weeks after your treatment is completed.

**Skin reaction:** You may see a skin reaction on the area we are treating. This begins as a mild reaction similar to sunburn and may become dry and itchy. In some cases, the reaction may become more severe, similar to bright red sunburn. Towards the end of treatment, the skin around the anus, the vagina in women or scrotum in men may break down and weep.

To minimise skin soreness, we advise that you:

- Gently dry the treatment area by patting not rubbing the skin, or ideally, where possible, allow the skin to dry naturally after bathing or showering,
- Avoid applying hot or cold heat sources to the treatment area.
- Apply a moisturising cream (no Sodium Lauryl Sulphate) twice a day to moisturise the treatment area, although you should avoid applying the cream one hour before your treatment.
- Avoid exposing the treatment area to the sun.

- Try to keep loose, cotton clothing against your skin.
- Get as much air to the area as possible.
- Swimming is ok while on treatment; although we ask that you seek advice if you notice a skin reaction developing.

If you experience any itching or soreness in the treatment area, please let the radiographer know and they will advise you further. Towards the end of the treatment, the skin between your legs and around your bottom may become darker in colour.

Due to possible soreness and discomfort, we advise that you avoid penetrative sexual intercourse until any bowel problems or sensitivity in this area have passed.

You may lose some of the hair in the area being treated. This usually grows back, but sometimes hair loss can be permanent.

If you experience any pain or discomfort, you can take painkillers, such as paracetamol, following the dosage instructions on the packaging. If the pain continues even though you are taking regular painkillers, please discuss this with the radiographers, your oncologist or the clinical nurse specialists.

**Tiredness:** Radiotherapy can make you feel tired, as can the anxiety and travelling for the treatment. The tiredness may start while you are having treatment and continue for a number of weeks after the treatment has finished.

If necessary, you should allow extra time for a rest, for example an afternoon nap. If possible, spread your chores out over the week.

There is no reason why you shouldn't continue with your usual daily activities if you feel able, and many people report a benefit of maintaining gentle exercise, such as walking each day throughout their course of radiotherapy.

Keeping hydrated by drinking 6-8 cups of water per day, limiting caffeine such as tea and coffee (or replace with decaffeinated versions) can also help to keep you more active.

**Urinary symptoms:** During your treatment, the sensitive lining of your bladder may become irritated by the treatment which may cause a burning feeling when you pass urine. You may need to pass urine more frequently and with a greater sense of urgency, but this usually gets better when your treatment is finished. The burning and frequency can be helped by drinking plenty and avoiding too much tea, coffee and alcohol.

Some patients find that drinking cranberry juice and lemon barley water helps to settle this irritation. If you are taking the drug Warfarin, avoid cranberry juice as it can have an effect on the drug. If the pain increases or you are unable to pass urine you must tell the radiographers as soon as possible. Outside work hours please contact your GP.

**Changes in bowel habit:** Side effects will vary in different people. Some patients will start to have loose and watery stools (diarrhoea); they will pass more wind and have to open their bowels more urgently and frequently. This may mean that you have to rush to the toilet. It is not uncommon to pass a small amount of mucus or stool when passing wind. Some patients will have the opposite and find it difficult to go to have their bowels open (constipation). You may feel pain around your back passage or stomach, or feel that you have not emptied your bowels properly, resulting in straining. You may also pass some mucus or blood from the back passage. These symptoms may be caused by the radiotherapy affecting healthy cells, making them irritated, sore and inflamed. Please tell the review radiographers or contact your nurse specialist if you have these changes. They may recommend medicine and creams to help your symptoms.

If you feel bloated or have excessive wind, you may find it helpful to eat for 3 small easily digested meals each day with 2 or 3 snacks in between, as this will help in keeping your bowels regular.

Keep hydrated by drinking 4-5 pints (2 litres) of fluids per day. Limit caffeine – such as tea and coffee (or drink decaffeinated versions).

Symptoms usually happen in the second or third week into treatment and will settle down a couple of weeks after the treatment has finished. Some patients find that the symptoms may continue and become permanent (see late side effects).

**Problems with your sex life:** You may find that you have a loss of libido, and have little or no desire for sexual intercourse.

Men may find that they have difficulty getting and/or maintaining an erection. They may find ejaculation uncomfortable because the tube that they pass urine and semen through may become inflamed. The inflammation should improve after treatment is finished.

Women may find the vagina is drier and narrower, which can sometimes make penetrative sex feel uncomfortable. If appropriate, they can be given a set of vaginal dilators to use after treatment to reduce vaginal narrowing and shortening. This can be discussed during one of your reviews with a review radiographer.

If you receive anal penetration, we suggest that you wait until any bowel problems or sensitivity in this area has passed.

You are advised to use contraception during treatment and for at least one year afterwards, if there is a chance of your partner becoming pregnant.

We run a Sexual Care Clinic that you can book into if you would like to discuss the impact of treatment on your feelings towards sex and intimate relationships. Telephone 0118 322 8869 to leave a voice mail message or alternatively email:

[sexualcareafterrt@royalberkshire.nhs.uk](mailto:sexualcareafterrt@royalberkshire.nhs.uk).

**The side effects from this treatment can feel embarrassing but please let your specialist or radiographers know, as often, simple treatments are available to help.**

**Fertility:** This treatment causes infertility, which is permanent and very likely to bring forward the menopause during the three to four months after treatment in those patients who are still having regular periods.

Your doctor may advise you to start hormone replacement therapy (HRT) if your symptoms are troublesome.

If fertility is an issue for you and your partner, please let the doctor who is planning your treatment know so that this can be discussed further with you. If appropriate, they can arrange for you to see a fertility specialist urgently.

## **Late side effects**

Radiotherapy can cause problems that become evident months or even years after treatment is complete; these are called 'late effects' and are difficult to predict. You should always report problems to your GP or hospital team for assessment and advice.

You may wish to read the Macmillan booklet 'Managing the late effects of pelvic radiotherapy', which is available from the Macmillan Information Centre in the Berkshire Cancer Centre or from your specialist nurse.

**Bowel late effects:** You might continue to feel an urge to empty your bowels more often or with more urgency. You may also feel the need to strain to pass a bowel movement and you may continue to pass a slimy mucus discharge or bleed from the back passage. These are often slight and although they may gradually improve over time, there is a chance that you might need to wear pads. Sometimes, scar tissue forms as the area is healing. If scar tissue affects the bowels, it can add to the problems of diarrhoea. Very rarely, this can lead to a narrowing or even a blockage in the bowel. An operation may be needed to remove this narrowed area, but this is a very rare problem.

**Bladder late effects:** Occasionally, patients find they continue to need to pass urine more often due to the bladder wall becoming less stretchy. You may also find you get a small amount of blood in the urine due to fragile blood vessels in the bladder wall. Rarely, some patients may leak urine (bladder incontinence).



**Lymphoedema:** This is swelling that develops because of a build-up of fluid in the body's tissues. Pelvic radiotherapy sometimes causes lymphoedema in the legs, pelvic area or genitals. This happens when the lymphatic system, which normally drains the fluid away, is not working properly. It is more likely to occur if you have had your pelvic lymph nodes treated. Lymphoedema can be managed and it is usually possible to reduce the swelling if it is diagnosed and treated early.

**Vaginal late effects:** Radiotherapy treatment can affect the vagina, causing changes. These include: vaginal scarring (fibrosis), shortening and tightening of the vaginal space (stenosis) and the walls of the vagina may stick together (adhesions). To prevent these occurring, you will be advised on the use of vaginal dilators by the radiographers. We will give you an information sheet about this.

**Penile late effects:**

- **Erectile dysfunction (problems getting an erection):**  
Radiotherapy can sometimes affect your ability to get and keep an erection. This is because it can injure the healthy cells in the pelvic blood vessels and nerves that control erections.
- **Dry ejaculation.**

If these are a concern to you, please talk to your doctor, nurse specialist or your GP, who will be able to support and advise you. Alternatively you can contact the Radiotherapy Sexual Care Team on 0118 3228869 to discuss further.

If you experience any of the above problems, contact your GP or hospital specialist for advice. Additionally, please ask your team of radiographers or your specialist nurse if you have any questions or concerns.

## **Contact details**

Colorectal Nurse Specialists: 0118 322 7182

Review Radiographers: 0118 3228869

Radiotherapy Sexual Care Clinic: 0118 3228869

Radiotherapy Planning Department: 0118 322 7872

Email: [radiotherapy.planning@nhs.net](mailto:radiotherapy.planning@nhs.net)

Macmillan Cancer Information Centre: 0118 322 8700

## **Further information**

- Macmillan Cancer Support 0808 808 2020 [www.macmillan.org.uk](http://www.macmillan.org.uk)
- Royal Berkshire NHS Foundation Trust Patient Advice and Liaison Service (PALS): 0118 322 8338 or email [PALS@royalberkshire.nhs.uk](mailto:PALS@royalberkshire.nhs.uk)

# Notes

To find out more about our Trust visit [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

**Please ask if you need this information in another language or format.**

RBFT BCC Radiotherapy Planning Department.

Reviewed: October 2024 by Lisa Revans, Updesh Kaur and Caoimhe McGowan.

Next review due: October 2026