



**University Hospitals Birmingham**  
NHS Foundation Trust



# **A patient guide to breast radiotherapy**

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This leaflet is for people who have been recommended to receive radiotherapy to the breast/chest wall. It will highlight the important details that you will have already discussed with your doctor. This leaflet is intended to be a guide as details and side effects of treatment will vary from patient to patient.

## **What is radiotherapy?**

Radiotherapy uses high energy X-rays in the treatment of cancer. Radiotherapy is similar to having a scan, it is painless, and you will not see or feel anything. You do have to lie still for about 15 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–Friday. The number of treatment sessions you will be having 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. The side effects will be discussed at a later point in this leaflet.

The treatment will not make you radioactive so it is safe to be around children and other people after your treatment.

We are a teaching hospital and have student radiographers in the department every day who are supervised by trained staff.

Your radiotherapy is 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. This is to ensure that smaller cancer cells have not been missed.

## What are the benefits of radiotherapy?

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

## 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 your options with you.

## What will happen if I do not have treatment?

There is a risk that your cancer may come back in the breast or on the chest wall (if you have had a mastectomy). The radiotherapy reduces this risk of this happening and you should discuss this with your doctor.

## Pacemakers

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 through your treatment.

## Pregnancy

It is extremely important that you are not pregnant or become pregnant during your course of radiotherapy. Even a small amount of radiation may harm an unborn foetus (baby) so 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 on the CT scanner or treatment machine.

## 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 (CT scan). You will be sent an appointment to attend the CT scanner in Radiotherapy, The Cancer Centre, Queen Elizabeth Hospital Birmingham.

This CT scan of your chest enables your radiotherapy treatment to be planned and the scan needs to be carried out regardless of any other scans you may have had recently.

The appointment will last approximately 30 minutes.

When you arrive for your appointment you will be given a gown and asked to change into it, removing all of your top clothes to the waist. Ladies may find it easier to wear a skirt or trousers rather than a dress to the appointment.

The usual position for planning and treatment is lying down flat with your arms up by your head resting on some arm supports.

Please let the radiographers know if you cannot manage this position.

The chest area will then be exposed.

The radiographers will place some markers on the skin for the duration of the CT scan.

Any pen marks put on the skin by the radiographers during the CT scan can be washed off when you get home.

Once your CT scan is complete 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 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 radiotherapy department is open from 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 CT.

## What happens when I come for my first treatment?

Your treatment will be carried out on a machine called a linear accelerator.

On your first day of treatment you can go directly to your allocated treatment room. If you are unsure where this is, please ask at the reception desk in the Radiotherapy department or any member of staff. Place your appointment card in the box outside the room so that the radiographers know that you have arrived.



Linear accelerator

You will be required to remove your top clothes (down to your waist) and change into a gown the same as you did at the CT appointment. The gowns and changing rooms are located in the waiting room.

If you prefer not to change into a gown, please inform a member of staff.

When the radiographers are ready to start your treatment 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 go into 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 open your gown and expose your chest, as it is important that the radiographers can see the whole of your chest and the skin surface as this is used to ensure you are in the correct position for treatment and that there is no clothing in the treatment area.

The radiographers will then move you closer to the machine with the room lights dimmed so they can use a special set of lasers and lights that shine across your chest to ensure you are in the correct position for treatment. They may then make some pen marks on your skin. The marks do not indicate where you are having treatment but are used to check your position during treatment and monitor if you have moved.

When you are in the correct position, the treatment machine will move around but it does not touch you at any point. 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 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.

For some treatments the radiographers may move the machine around you to perform a quick scan of your chest before starting treatment. This allows them to look at more pictures to ensure you are in the correct position. These pictures cannot be used to assess your response to radiotherapy. If this scan is part of your procedure, it will be explained to you at your first treatment.

When the machine switches on you may hear some noises such as buzzing and bleeping. This is normal and they are the noises that the machine makes whilst delivering the treatment. When the treatment has finished, please remain in position until the radiographers enter the room and tell you that everything is finished. This is for your safety.

Your first treatment appointment normally takes around 20 minutes.

## **What happens at my other treatment appointments?**

The process is very similar for each treatment appointment. Please put your appointment card in the box outside the room for each appointment then collect a gown to change into as you did on your first appointment. Once changed please have a seat in the waiting room.

Appointments may take around 15 minutes. These appointments are normally quicker because on the first day additional checks and measurements are performed.

## **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 well-being 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 it is important to make sure that you keep hydrated and drink plenty of fluids, especially if you are also receiving chemotherapy.

It is important to keep your skin clean and maintain good levels of hygiene as this can help reduce skin soreness.

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.

## **Will I see a doctor during my treatment course?**

During the course of your treatment you will be monitored by your treatment radiographers and you will be seen by a Review radiographer, your doctor, or one of their team in the radiotherapy clinic. The radiographers will let you know when this is. Please be aware that your treatment appointment time will be made to coincide with the clinic so that you do not have to make two visits in one day.

Please make sure you tell your doctor or their team of any side effects or problems that you are having. If you need any repeat medication that you have been given from your consultant you should mention this during your clinic appointment. Please bring a list of your current medications to this clinic consultation.

## **Are there any side effects?**

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 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 any member of the treatment team.



# What are the possible early (acute) side effects?

The side effects listed in the table below are usually mild and normally start to occur approximately two weeks into your radiotherapy treatment. Side effects are usually at their most severe up to 10–14 days after the 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.

Below is a table to summarise the acute side effects commonly experienced by patients undergoing radiotherapy. Please read on for more detail.

Acute side effects	
Sore skin	Your skin may become pink, itchy and sore during treatment. Sometimes the skin will break down, especially if there any skin folds within the area that is being treated. The radiographers will provide you with advice about how to reduce any possible skin reactions and what to do if you find that your skin is sore.
Tiredness	Radiotherapy can make you feel tired. This is partly due to the travelling involved in attending the hospital every day, but the treatment also contributes to this. This may continue for a few weeks after you have finished your radiotherapy.

# 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 are much more unlikely.

**Tiredness/fatigue:** Even if you have not noticed much tiredness or fatigue during your radiotherapy treatment, it is still possible to feel these effects after treatment has finished. There may be a period of time when you feel particularly sleepy or where you feel you do not have the energy to do anything physically or mentally. This can last for six weeks or longer. This duration of tiredness/fatigue can cause people to worry but this is quite a normal reaction to treatment. It will settle down.

**Skin:** After radiotherapy, small blood vessels in the skin of the treated breast can become damaged (telangiectasia). These can affect how the breast looks as small red lines can appear. Your skin tone may also change to appear slightly darker and it is also not unusual for the breast to feel firmer.

**Breathlessness:** Rarely, radiotherapy affects the lung and once treatment is complete, some women develop breathlessness or a cough. This usually improves within 2–4 weeks, however a short course of steroids may be needed. Long-term damage to the lungs is rare.

**Heart:** Radiotherapy very rarely causes heart problems. Only women who have cancer in their left breast are at risk and with advances in treatment planning techniques, the heart is avoided as much as possible.

**Ribs:** Radiotherapy can also weaken the ribs in the treated area. This can make them more likely to fracture (break) in the future but again is very rare.

**Lymphoedema:** Women who have had surgery and radiotherapy that covers under the arm or base of the neck are more at risk of developing a swelling in the arm called lymphoedema. If this occurs you will be referred to a specialist lymphoedema nurse who will advise you accordingly.

**Brachial plexopathy:** Radiotherapy to the area under the arm may cause some numbness and tingling in the hand, weakness in the hand, or pain around the shoulder, arm or hand. These symptoms will usually

be mild but very occasionally may be more severe and troublesome.

**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 because the risk of this happening is so small, the benefit of your radiotherapy treatment far outweighs this risk. Your doctor will discuss this with you.

In the years after radiotherapy, the breast tissue may shrink, causing the breast to become gradually smaller.

## Skin care during your radiotherapy

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
- The skin may feel dry, tight or sore
- A rash may appear and feel itchy
- Sometimes 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 about 10 days after starting treatment. It is usual for any skin reactions during treatment to last for a few weeks after treatment.

## What can affect my skin reaction?

- Having treatment to areas where there are skin folds (breast and armpits) can make your skin reaction worse because they can be warm, moist and 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 usual daily skin care routine. They will let you know if any changes are advised. Please talk to them about any worries you have.

## How can I help myself?

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

- The skin may become more sensitive during radiotherapy and it is important to keep the area clean when having treatment
- You may bath and shower as normal but use warm water rather than hot and avoid soaking the area for long periods
- You can continue to use your normal shower/bath products but if your skin becomes irritated, it is advisable to stop using that product and ask the radiographers for advice
- Be gentle washing the skin and do not use a washcloth or anything similar as this increases friction on the skin
- Pat the area dry with a soft towel or let the skin dry naturally
- It is not advisable to shave, wax or use hair removal creams under the arm whilst receiving treatment
- You may use your normal deodorant but if your skin becomes irritated, it is advisable to stop
- Wear loose fitting, natural fibre clothing e.g. a cotton vest/ t-shirt next to the skin
- You may swim during treatment but ensure you shower after to remove the chlorine from your skin. Moisturise after. Stop if the skin becomes irritated
- Keep the skin in the area being treated covered from the sun during treatment as the sun will intensify the reaction from your treatment

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 during the next 10–14 days before starting to improve. Most patients find their skin has healed by about four weeks after treatment finishes. If the skin has broken, healing may take longer than this.

Your skin will be more sensitive to the sun in the area treated so you will need to be careful in the sun for at least a year after treatment has finished. Use a sunscreen with a minimum UVB sun protection factor (SPF) of 50 and UVA protection or keep your skin covered.

## Moisturising

- Moisturising your skin can help keep the skin in good condition and help prevent it from becoming dry and itchy
- You may use your normal moisturiser. Use it frequently and gently smooth it into your skin and avoid rubbing the skin
- If you do not currently use a moisturiser, speak with the radiographers who give you your treatment and they will be able to suggest a few options for you
- If your skin breaks, blisters or peels, stop using moisturiser. Inform your treatment team and they will advise you further

## What do I need to do when I have finished my treatment?

Once you have completed your treatment your side effects may continue for a few weeks so please 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 treatment or call the review radiographers on **0121 371 3553** for advice.

You will be seen by your doctor when you have completed your treatment and this will be 6–12 weeks after your course of radiotherapy has finished. 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.

During your follow-up 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 optimally manage any late

side effects. If you have been discharged back to your GP, talk to your GP who can re-refer you if necessary.

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

All our staff are here to make sure your treatment 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.

For any non-urgent advice about side effects e.g. skin care, please call the review radiographers on **0121 371 3553**. Monday to Friday 09:00 to 17:00 hours.

During your treatment and for up to six weeks after if you need urgent advice due to side effects or are feeling unwell out- of- hours , please 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 and contact telephone number.

## Travelling to your treatment appointment

### By 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.

### By car

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 postcode for your satellite navigation device 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 please contact: Patient Transport Services on **0800 035 6511** (Monday–Friday 08:00–18:00).

To make a transport booking please call **0800 035 6511**.

### **Bromley Wing accommodation**

Patients who live some distance away can stay at the Bromley Wing in the Queen Elizabeth Hospital Birmingham. It is comfortable accommodation with meals 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**.

## **Helpful organisations**

Macmillan

**[www.macmillan.org.uk](http://www.macmillan.org.uk)**

Tel: **0808 808 0000**

Breast Cancer Care

**[www.breastcancercare.org.uk](http://www.breastcancercare.org.uk)**

Tel: **0808 800 6000**

## **Radiotherapy contact numbers**

### **Patrick Room – Cancer Centre, Queen Elizabeth Hospital**

Information and support for people with cancer and their families:

Telephone: **0121 371 3537/9**

## **Radiotherapy Review Radiographers**

For information and support for patients and their families

Tel: **0121 371 3553**

## **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

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## **Radiotherapy**

Queen Elizabeth Hospital Birmingham  
Mindelsohn Way, Edgbaston  
Birmingham, B15 2GW  
Telephone: 0121 371 2000

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