



# Radiotherapy to the breast or chest wall



# Radiotherapy to the breast or chest wall

You and your clinical oncologist have decided that a course of radiotherapy would be the appropriate treatment for your cancer.

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

Your doctor will discuss the risks and benefits of having a course of radiotherapy and you will need to sign a consent form agreeing to have treatment. You will also be asked to confirm this consent verbally on the day of your planning scan.

The risks of receiving radiotherapy to the breast or chest wall are outlined in this leaflet.

You may decide that you do not want to have radiotherapy – this is an option for you to consider. In this instance, you might want to talk again with your doctor and let them know what you have decided.

You can request a second opinion on your diagnosis or treatment at any time during your consultation or treatment process. Please speak to your clinical oncologist or GP for information on how to do this.

Your breast care nurse is:.....

Contact number:.....

| <b>Contents</b>  | <b>Page</b> |
|--|-------------|
| Patient pathway  | 4           |
| What is radiotherapy?  | 5           |
| What do I need to think about before radiotherapy starts?          | 5           |
| What are the side effects of radiotherapy?                         | 6           |
| Who will look after me during my treatment?                        | 10          |
| Radiotherapy planning  | 11          |
| CT scan  | 11          |
| What is a radiotherapy plan?                                       | 14          |
| First day of radiotherapy treatment                                | 14          |
| Managing the side effects of radiotherapy to the breast/chest wall | 17          |
| Where can I get further supplies of my medicines?                  | 19          |
| What happens when treatment ends?                                  | 19          |
| Will I be followed up after my treatment has ended?                | 20          |
| Commonly asked questions   | 20          |
| Additional information   | 21          |
| Contact us   | 22          |
| Further support and information                                    | 23          |

## Patient pathway

Once you have consented (agreed) to radiotherapy, you will be referred for a CT planning scan and radiotherapy.



Radiotherapy appointments are booked by the radiotherapy bookings team, available on 020 7188 3160.



You will attend the Cancer Centre at Guy's or Guy's Cancer at Queen Mary's Hospital for a planning CT scan. This appointment takes about 30 minutes.



Approximately two weeks later, you will attend the radiotherapy department for your first radiotherapy treatment. Treatment is usually given daily. A course of treatment is between one and six weeks. Radiotherapy treatment appointments take approximately 30 minutes.



Your treatment is complete.



You will be seen for follow-up four to six weeks later at your original hospital.

## What is radiotherapy?

Radiotherapy uses radiation (high energy x-rays) to treat cancer. The radiation only damages the cells within the treatment area, killing the cancer cells but allowing normal healthy cells to recover. Any side effects of radiotherapy are usually isolated to the area being treated.

Treatment is given over a prescribed number of days/weeks so that only small doses (fractions) of radiation are given. Your clinical oncologist will prescribe the amount of radiation needed and will tell you how many treatments you will have and over how many weeks. Treatment is given on weekdays (Monday to Friday) with a break at the weekend.

**It is important that you attend all of your treatment appointments.**

## What do I need to think about before radiotherapy starts?

**Pacemakers** – If you have a pacemaker, please tell your doctor as soon as possible. You will need to have a pacemaker check before your radiotherapy treatment.

**Pregnancy** – All female patients under the age of 60 will be asked to confirm their pregnancy status before the first planning session starts. **It is very important that you are not and do not become pregnant while undergoing radiotherapy planning and treatment.**

If you think you may be pregnant at any time during your course of treatment, please tell your clinical oncologist or radiographer immediately. If necessary, please speak to your GP about contraception methods suitable for use during radiotherapy.

## What are the side effects of radiotherapy?

**Receiving radiotherapy does have side effects.** The most common side effects are listed below and are grouped into short term and long term effects. Your clinical oncologist will have discussed these effects with you as part of your consent to treatment. You can ask someone in your treatment team at any point if you would like clarification of these side effects.

Whilst we cannot prevent against side effects, we can help you to manage them. Side effects that occur during your radiotherapy are called early (or acute) side effects. They usually begin to occur one to two weeks after your treatment starts. As your treatment progresses, these become more severe and are usually at their worst one to two weeks after your radiotherapy treatment finishes. Then, they gradually start to improve and by three months after the completion of your treatment, most will have resolved or at least improved considerably. Early side effects affect all patients, but the severity varies.

There are also side effects that occur months to years after the treatment has finished – these are called long term side effects and are consequences of the radiation treatment.

You may or may not experience long term side effects – not everybody does. They may start during treatment and then gradually become worse, or they may develop slowly over a long period of time. Some may improve slowly but others may be permanent.

We use the most modern radiotherapy techniques available to reduce the side effects to a minimum.

However, some of the side effects described below are unavoidable.

We will support you and help you to manage these side effects, with advice and medications where necessary. Additionally, you will be reviewed by the Treatment Support Radiographers, who will assess your reactions to treatment.

### **Possible early side effects:**

- **Skin reaction:** Skin in the treatment area may develop a reaction to the radiation. The skin may become dry, red and itchy. This may cause the skin to begin to blister and the area to become moist. If this does occur, the skin will fully heal after treatment has finished. The skin in the treatment area may darken in colour and occasionally may remain like this for some time.
- **Tiredness:** A sense of fatigue and a lack of energy may occur during radiotherapy, but will slowly settle once treatment is completed.

## Uncommon late side effects:

- **Breast oedema:** The breast may swell slightly during treatment. This may remain after treatment.
- **Fibrosis/shrinkage:** After treatment the breast may become firmer and reduce in size over a period of months, a side effect which may be permanent.
- **Chest wall/breast tenderness:** The area that has been treated may feel tender for several months after treatment.
- **Arm swelling (lymphoedema):** This may occur due to scar tissue, which may form after surgery or radiotherapy to the armpit. Specialist nurses are available to offer advice and treatment should this occur, though rarely the changes may be permanent.
- **Impact on reconstruction:** Treatment may cause scar tissue, affecting the cosmetic result of the reconstruction, particularly if you have had an implant-based reconstruction. Your doctor will discuss this with you.

## Very rare late side effects:

**Every effort is made to minimise these effects and enhance the benefit from the treatment. All of the effects are very rare – your doctor will discuss them with you in detail.**



- **Stiff shoulder:** The shoulder joint may become stiff after surgery or radiotherapy, but mobility can be improved with physiotherapy.
- **Rib pain:** Radiotherapy can make rib bones brittle after treatment and very rarely, this may result in rib fracture. This can be painful but usually heals without treatment.
- **Lung reaction:** A small area of the lung within the treatment area may become scarred and this may cause breathlessness. This is very rare, and occurs in less than one in 100 patients.
- **Cardiac effects:** Treatment to the left breast may involve treating a small area of the heart. In the past this was associated with a small increase in the risk of heart disease (less than 1 in 100 patients). Modern radiotherapy planning may enable us to shield the heart to reduce further risk.
- **Telangiectasia:** Tiny dilated capillaries (blood vessels) may become visible under the skin in the area that was treated. If this does occur, it usually takes many years to develop.
- **Nerve complications:** Very rarely, pins and needles, numbness, pain and weakness can occur in the arm and hand due to late effects of the radiotherapy on the nerves beneath the collar bone.
- **Late malignancy:** There is an extremely small chance of developing another cancer within the treatment area 10 years or more after treatment.

## Who will look after me during my treatment?

A number of healthcare professionals will be involved in your treatment and care. Below is a list of all of the doctors, nurses, specialists and departments who will look after you while you are having radiotherapy.

**Clinical oncologists** are doctors who are trained in the use of radiotherapy and chemotherapy. The consultant clinical oncologist will be in charge of your care. Clinical oncologists are supported by a team of specialist registrars, therapy radiographers, nurses and administrative staff.

**Therapy radiographers** are specifically trained to plan and deliver the radiotherapy. They provide support and advice on radiotherapy side effects and their management. The radiographers will have day-to-day responsibility for you while you are receiving radiotherapy.

Your **treatment support radiographer** will provide support and advice on all aspects of your treatment.

**Oncology nurses** provide support and advice on the side effects of radiotherapy and chemotherapy and their management. Chemotherapy nurses will be involved in delivering chemotherapy treatment if necessary.

The **acute oncology assessment unit** will provide emergency medical care for any side effects of treatment or problems relating to the cancer itself.

Please call **020 7188 3754** at any time. From 6.15pm-8.30am and at weekends, calls will be directed to the on-call doctor.

## Radiotherapy planning

Following your initial outpatient appointment with the doctor, you will be sent a letter asking you to attend the radiotherapy department at the Cancer Centre at Guy's or Guy's Cancer at Queen Mary's Hospital. This appointment is for you to have a **CT scan**.

Please bring your appointment letter with you.

A member of the pre-treatment radiotherapy team will explain what is going to happen. During this discussion you will be asked to confirm your name, address and date of birth. **You will be asked for this information before every procedure/treatment undertaken in the department.**

We will ask you to **re-confirm consent** to make sure you are certain that you would like to go ahead with the proposed treatment.

## Computerised tomography (CT) scan

A CT (computerised tomography) scanner is a special x-ray machine that produces a series of detailed pictures showing the structures of the chest.

This scan is for planning your treatment only. The images are sent to a planning computer and used to

reconstruct a three dimensional image of your breast/chest wall. The clinical oncologist will then use this image to accurately plan your radiotherapy.

You may eat and drink normally on the day of your scan and throughout your treatment appointments, and there is no harm in you being around other people.

### **During the CT scan**

In preparation for the scan, you will need to remove all your clothing above the waist. We will provide a gown, but you will need to remove this for the scan and all treatments.



CT scanner  
Image supplied courtesy of  
Siemens.

You will need to lie face up on the CT table with your hands above your head. Your legs will be straight with your feet flat on a board. The radiographers will make you as comfortable as possible so that you are able to lie very still.

A radiographer will make some pen marks on your chest to mark the area that needs to be scanned. They will place thin pieces of wire on your surgery scars and secure these with tape. This is done so that the mark shows up on your scan. The pen marks, wire and tape will be removed after the scan is completed.

The CT table will be raised to go through the scanner and the radiographers will then leave the room. They will be watching you at all times through a mirror. The radiographers will start the scan from outside the room. You will feel the bed slowly move in and out of the scanner and hear the machine buzzing. The scan should only take a few minutes.

### **After the CT scan**

Once the scan is completed, the radiographers will come back into the room. The radiographers will take some measurements and make some very small permanent ink marks (tattoos) on your chest and on your side. These marks help to position you correctly for your future treatments.

The radiographers will help you down from the scanning table and you may then get dressed and leave the department.

Before you leave, you will be given a provisional list of all your radiotherapy treatment appointments – **please bring this list with you to your first treatment appointment.**

You will be given a confirmed list of appointments on the first day of your radiotherapy treatment, approximately two weeks after your CT scan.

## **What is a radiotherapy plan?**

Your radiotherapy plan is the personalised design of your radiotherapy treatment. It is tailor-made for you and is based on the CT scan that you had. A team of doctors, radiographers and physicists will work together to decide where the treatment needs to be directed, avoiding as much healthy tissue as possible.

## **What will happen on my first day of treatment?**

When you arrive for your appointment, please book in at reception. You will then be directed to the treatment waiting area.

One of the treatment radiographers will discuss your treatment with you and you will be given the opportunity to ask any questions you may have.

Please bring a dressing gown to wear at your treatment appointments. You will be asked to change in a cubicle, and then taken into the treatment room where the staff will introduce themselves.

You will be asked to lie on the treatment table, which will be set up with the same equipment as when you had your CT scan. You should relax, stay still and breathe normally.

Radiotherapy treatment is given by a machine called a linear accelerator, often referred to as a linac.



Linear accelerator (linac)

Image supplied courtesy of Varian.

The lights will be dimmed so that the radiographers can see the room lasers that will help them to position you correctly. You will hear the machine move around you. It will come close to you but will not touch you. You will hear radiographers taking various measurements and you will feel the bed moving. Once you are in the right position, the radiographers will leave the room.

Once the radiographers have left the room, you will hear a buzzing sound. This is the door safety interlock. You will be alone in the room during your treatment but the radiographers will be watching you all the time on closed circuit television (CCTV).

If you need assistance at any point, just wave a hand and the radiographers can immediately return to the room.

Digital x-ray images are taken regularly during your treatment to ensure that the treatment is being delivered accurately. There will be a short delay whilst these images are assessed and you may feel the bed move as the radiographers adjust its position from outside of the room. Treatment will then be delivered and the machine will move around you to treat you from different angles. This whole process will take approximately 20 minutes.

Afterwards, the radiographers will return to the room, and help you down from the treatment table. The treatment table will be quite high up, so it is very important that you do not move or attempt to get off the table without assistance. The radiographers will tell you when it is safe to sit up and get off the table.

### **Treatment review**

You will be seen by a member of the treatment support team – these radiographers will support you during your treatment and help you to manage your side effects. You will have separate appointments for this on your appointment list.



# Managing the side effects of radiotherapy to the breast/chest wall

## Itchy inflamed skin

Radiotherapy commonly causes inflammation, redness and itching one to two weeks after treatment begins. This can sometimes affect the entire treatment area. To reduce the likelihood of this reaction we suggest the following:

- **Washing:** It is important to keep the treatment area clean. Shower/bath using lukewarm water and use your usual soap or shower gel. Aqueous cream may be used as a soap substitute but not as a leave on moisturiser. Use a soft towel to gently pat the skin dry – do not rub.
- **Moisturising:** Moisturising in the treatment area will help your skin to cope better. You may continue to use your usual moisturiser or if you need to buy one, we recommend one without the additive, sodium lauryl sulphate (SLS). During treatment, apply the moisturiser sparingly twice a day or more often if your skin is very itchy.
- **Deodorant:** You may continue to use your normal deodorant unless your skin becomes sore or irritated.
- **Hydrocortisone cream 1%:** This is a steroid that works by reducing inflammation. It can be

prescribed by your doctor if the itchiness becomes problematic.

**Do not use the moisturiser or hydrocortisone cream on broken skin. Check your skin daily before applying creams. Dressings will be given for broken skin.**

- **Shaving:** Do not wet shave under the arm on the treatment side. If really necessary, a dry electric razor can be used. Do not use any hair removal creams or wax in the treatment area or near to it.
- **Clothing:** Wear loose comfortable clothing, Bras should be cotton, without wires or bones, not too tight or lacy. Nursing bras or camisoles may be more comfortable.
- **Swimming:** Reduce the number of times you swim in chlorinated water as this can have a drying effect on the skin. After swimming, shower to remove excess chlorine and discontinue swimming if the skin becomes sore.
- **Sun:** The skin in the treatment area will be more sensitive during radiotherapy and should not be exposed to the sun. You should protect the skin in this area for at least one year using a high factor sun block.
- **Comfort:** Do not use a hot water bottle on your chest during your course of treatment as it will aggravate your skin.

### **Occasional pains in breast**

You may experience some discomfort in the breast, such as sharp pains, heaviness and swelling. These side effects will gradually settle after treatment has finished.

### **Tiredness**

You may feel tired during treatment. The best way to cope is to rest, eat regularly and do a small amount of light exercise (such as walking). Ask your friends and family to help you with daily activities.

## **How do I get further supplies of my medicines?**

After being prescribed medicines at the hospital, take the white copy of your prescription to your GP who can continue to prescribe these for you. Anyone with a cancer diagnosis is entitled to free prescriptions. If you do not already have a medical exemption card, you can get an application form from your GP, the oncology outpatient department, or from Dimbleby Cancer Care or the Dimbleby Macmillan Support Centre. Please ask us if you need any further information.

## **What happens when treatment ends?**

In the last week of treatment, you will see a treatment support radiographer to review your side effects and discuss how to manage them. The side effects are likely to worsen during the first two weeks after treatment and then they will start to improve.

On the last day of treatment, you will be given a Treatment Completion Form summarising your treatment. We will send one copy to your GP and give you one for your own records.

## **Will I be followed up after my treatment has ended?**

Your oncologist will want to see you two to six weeks after your treatment has ended. This appointment is to check that you are recovering well, and will take place in the clinic where you were originally seen.

You will be given the telephone number and information to on how to book your follow up appointment on the first day of your radiotherapy treatment.

In the long term, you will be followed up by your oncologist and referring surgeon. This is to assess both your recovery and your response to treatment. Further appointments with your oncologist will be at six months, one year and then yearly thereafter for the next five years. In addition, you will have follow up appointments with the referring surgical team.

## **Commonly asked questions**

### **Where can I get advice on financial support during treatment?**

Dimbleby Cancer Care offers a benefits advice service at Guy's and St. Thomas'. To book an appointment, please telephone **020 7188 5918**.

**When can I go on holiday?**

As long as your skin is protected from sun exposure, you can go on holiday as soon as you feel well enough. You may swim as soon as your skin reaction has healed.

**When can I go back to work?**

Some patients continue to work throughout their radiotherapy treatment, while others may feel they need a few weeks before returning, especially if they have had chemotherapy as well. If you have had a long break from work, it may be advisable to plan a phased return, where you work shorter hours initially.

**Additional information**

In order to improve treatments and services, audits are regularly carried out in the department. This can involve using patient notes. Any data collected will have all personal and identifiable details removed to ensure patient confidentiality. However, if this is unacceptable to you, and you would prefer that your notes are not seen, please let your consultants know and your wishes will be respected.

Clinical trials are undertaken within the department, which you may be eligible to take part in. If necessary and appropriate, your doctor will discuss this with you.

## Contact us

|   |                                       |
|---|---------------------------------------|
| Radiotherapy reception at the Cancer Centre at Guy's  | 020 7188 7188<br>(ext 57542 or 57569) |
| Main reception at Guy's Cancer at Queen Mary's Hospital   | 020 7188 0770                         |
| Radiotherapy bookings   | 020 7188 3160                         |
| Radiotherapy treatment support team<br>(8.30am to 5.30pm, Monday to Friday)   | 020 7188 4220                         |
| Acute oncology assessment unit  | 020 7188 3754                         |
| <p><b>Out of hours oncology doctor on call</b></p> <p>If you require assistance out of hours, please phone the hospital on <b>020 7188 7188</b> and ask them to contact the oncology doctor on call. Please have your hospital number ready. The switchboard operator will take your details and ask the emergency oncology doctor to phone you back.</p> <p><b>If you are concerned, please go to your local emergency department.</b></p> |                                       |

## Further information

### Macmillan Cancer Support

If you have any questions about cancer, need support, or just want to chat, call the free Macmillan Support Line.

**t:** 0808 808 0000 (9am to 8pm, Monday to Friday)

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

### Breast Cancer Care

For free confidential information and support, contact Breast Cancer Care

**t:** 0808 800 6000 **w:** [www.breastcancercare.org.uk](http://www.breastcancercare.org.uk)

Guy's and St Thomas' hospitals offer a range of cancer-related information leaflets for patients and carers, available at [www.guysandstthomas.nhs.uk/cancer-leaflets](http://www.guysandstthomas.nhs.uk/cancer-leaflets). For information leaflets on other conditions, procedures, treatments and services offered at our hospitals, please visit [www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets)

The logo for Dimbleby Cancer Care is a blue rounded rectangle with the text "Dimbleby Cancer Care" in white. The word "Dimbleby" is on the top line, "Cancer" is on the middle line, and "Care" is on the bottom line.

**Dimbleby  
Cancer  
Care**

**Dimbleby Cancer Care** has a drop-in information area staffed by specialist nurses and offers complementary therapies, psychological support and benefits advice for patients and carers. We're located in the Welcome Village of the Cancer Centre at Guy's.

**t:** 020 7188 5918

**e:** [DimblebyCancerCare@gstt.nhs.uk](mailto:DimblebyCancerCare@gstt.nhs.uk)

The **Dimbleby Macmillan Support Centre** at Guy's Cancer at Queen Mary's Hospital, Sidcup offers information, psychological support and complementary therapies.

**t:** 020 7188 0771

**e:** [DimblebyCancerCare@gstt.nhs.uk](mailto:DimblebyCancerCare@gstt.nhs.uk)

## Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

**t:** 020 7188 8748 9am to 5pm, Monday to Friday

## Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

**t:** 020 7188 8801 (PALS)      **e:** [pals@gstt.nhs.uk](mailto:pals@gstt.nhs.uk)

**t:** 020 7188 3514 (complaints)      **e:** [complaints2@gstt.nhs.uk](mailto:complaints2@gstt.nhs.uk)

## Language and Accessible Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch:

**t:** 020 7188 8815      **e:** [languagesupport@gstt.nhs.uk](mailto:languagesupport@gstt.nhs.uk)

## NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health. **w:** [www.nhs.uk](http://www.nhs.uk)

Leaflet number: 2423/VER8

Date published: May 2017

Review date: May 2020

© 2017 Guy's and St Thomas' NHS Foundation Trust

A list of sources is available on request

