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 considered 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 ..........................................................
Contents
4 Patient pathway
5 What is radiotherapy?
5 Before radiotherapy starts?
6 What are the side effects of radiotherapy?
9 Who will look after you during your treatment?
10 Radiotherapy planning
11 CT scan
13 What is a radiotherapy plan?
13 What will happen on the first day of your treatment
15 Managing the side effects of radiotherapy to the breast/chest wall
17 Where can you get further supplies of your medicines?
17 What happens when treatment ends?
18 Will you have follow-up after your treatment?
18 Commonly asked questions
19 Additional and further information
20 Contact us
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, **t**: 020 7188 3160.

You will come to 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.

About two weeks later, you will come to the radiotherapy department for your first radiotherapy treatment. Treatment is usually given each day. Radiotherapy treatment appointments take about 30 minutes.

Your treatment is complete.

You will be seen for a follow-up appointment 2-6 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 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.

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 55 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 having 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.

While we cannot prevent against side effects, we can help you to manage them. Side effects that happen during your radiotherapy are called early (or acute) side effects. They usually begin 1-2 weeks after your treatment starts, and are usually at their worst 1-2 weeks after your radiotherapy treatment ends. Then, they gradually start to improve and by three months after 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 get 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 as much as possible. 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. Also, 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 happens, the skin will fully heal after treatment has finished. The skin in the treatment area may darken in colour and sometimes may remain like this for some time.

- **Tiredness.** A sense of fatigue and a lack of energy may happen during radiotherapy, but will slowly settle once treatment is completed.

- **Sore throat, pain or discomfort when swallowing.** You may find that your throat becomes sore, or you might have some pain or discomfort when swallowing. Please tell the radiographers if this happens as it can be managed with pain medication.

Possible late side effects

- **Breast oedema (swelling).** 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. This 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 might happen due to scar tissue, which may form after surgery or radiotherapy to the armpit. Specialist nurses can offer advice and treatment if this happens, but the changes are not usually 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.

**Uncommon late side effects**
Every effort is made to minimise these effects and enhance the benefit from the treatment. All of these 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 happens 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 lets 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 happens, 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. This is because of the radiotherapy on the nerves under the collar bone.
- **Late malignancy.** There is an extremely small chance of developing another cancer within the treatment area, 10+ years after treatment.

**Who will look after you during your treatment?**

A number of healthcare professionals will be involved in your treatment and care. Below is a list 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. They are supported by a team of specialist registrars, therapy radiographers, nurses and administrative staff.

**Therapy radiographers** are trained to plan and deliver the radiotherapy. They give 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 give 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, t: 020 7188 3754 at any time, seven days a week. From 6.15pm-8.30am and at weekends, calls will be directed to the on-call doctor.

Radiotherapy planning
After your first outpatient appointment with the doctor, you will be sent a letter asking you to come to 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 or treatment done 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.
CT (computerised tomography) scan
A CT 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 are used to make a 3D image of your breast/chest wall. The clinical oncologist will 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.
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 radiographers will take and record some measurements. These measurements help to position you correctly for your future treatments.

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 making noises. The scan should only take a few minutes.

You may need to wear a bra for treatment if your breasts are large or pendulous. This will be provided by the department.

**After the CT scan**
Once the scan is done, the radiographers will come back into the room.
If you are asked to wear a bra you may need to have some very small, permanent ink marks (tattoos) on your chest or abdomen and on your side.

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

Before you leave the department, 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, about 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 the first day of your 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 able to ask any questions you may have.
You will be asked to change into a gown in a cubicle, and then be 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.

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 and see some red lights coming on and off. 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 help 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 make sure that the treatment is being delivered accurately. There will be a short delay while 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 about 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 important that you do not move or try to get off the table without help. 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 and they can 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 1-2 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 reduces inflammation. It can be prescribed by your doctor if the itchiness becomes a problem. **Do not use the moisturiser or hydrocortisone cream on broken skin.** Check your skin each day 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 or near the treatment area.
- **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 stop 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 you get more 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?**
At the end of your 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 get worse during the two weeks after treatment, and then they will start to improve. You will also receive a call from them over the next few weeks to see how you are managing.

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 you be followed-up after your treatment has ended?**
Your oncologist will want to see you 2-6 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 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 your recovery, and response to treatment. Further appointments with your oncologist will be at six months, one year, and then once a year for the next five years. You will also have follow-up appointments with the referring surgical team.
Commonly asked questions
Where can you get advice on financial support during treatment?
Dimbleby Cancer Care, based in Welcome at Guy’s Cancer, offer a benefits advice service. For more information, please contact, t: 020 7188 5918.

When can you 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 you 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 at first.

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. 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. This will not affect your treatment in any way.

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.
Further sources of 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, Monday to Friday, 9am-8pm
**w:** 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

---

**Dimbleby Cancer Care** provides cancer support services for Guy’s and St Thomas’. We have a drop-in information area staffed by specialist nurses and offer complementary therapies, psychological support and benefits advice for patients and carers.

Dimbleby Cancer Care is located in the Welcome Village of the Cancer Centre at Guy’s, **t:** 020 7188 5918 **e:** DimblebyCancerCare@gstt.nhs.uk
Contact us
Radiotherapy reception at the Cancer Centre at Guy’s, t: 020 7188 7188, extension 57542 or 57569
Main reception at Guy’s Cancer at Queen Mary’s Hospital, t: 020 7188 0770
Radiotherapy bookings, t: 020 7188 3160
Radiotherapy treatment support team, t: 020 7188 4220, Monday to Friday, 8.30am-5.30pm
Acute oncology assessment unit, t: 020 7188 3754

Out-of-hours oncology doctor on call
If you need help out of hours, please phone the hospital, t: 020 7188 7188, and ask them to contact the oncology on-call doctor. Please have your hospital number ready. The switchboard operator will take your details and ask the emergency oncology doctor to phone you back.

If you are concerned, please go to your nearest Emergency Department (A&E).

Guy’s and St Thomas’ hospitals offer a range of cancer-related information leaflets for patients and carers, available at, w: www.guysandstthomas.nhs.uk/cancer-leaflets.
Pharmacy Medicines Helpline
If you have any questions 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
 t: 020 7188 3514 (complaints)  e: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

NHS 111
This service offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.
 t: 111  w: www.111.nhs.uk

NHS website
This website gives information and guidance on all aspects of health and healthcare, to help you take control of your health and wellbeing. w: www.nhs.uk

Leaflet number: 2423/VER11
Date published: October 2020
Review date: July 2023
© 2020 Guy’s and St Thomas’ NHS Foundation Trust
A list of sources is available on request