

Kent Oncology Centre

Breast Cancer Radiotherapy: Side Effects and Management

Information for patients

We hope this leaflet will help you understand the side effects that may occur when having external radiotherapy for breast cancer. It also explains the best management of these side effects. If you would like to speak to one of the radiotherapy team please feel free to contact them on the numbers given below:

Maidstone Hospital

Macmillan Specialist Radiographers ☎ 01622 225094

☎ 07703 972969

Appointment enquiries ☎ 01622 225080

Kent & Canterbury Hospital

Macmillan Specialist Radiographers ☎ 01227 864311

Appointment enquiries ☎ 01227 783010

You may find it helpful to view a short film showing breast radiotherapy: search www.youtube.com for 'Kent Oncology'.

The **Breast Cancer Kent Patient Information App** (available for download on the App Store or Google Play) is another helpful resource. Search "Patient Journey App" and then select "Breast Cancer Kent".

Radiotherapy for breast cancer

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

Which areas will be treated?

Your treatment plan may include radiotherapy to the **breast** or **chest wall** and for some people may also include lymph nodes in the **supraclavicular fossa** (above the breast, behind the collar bone), the **upper axilla** (armpit) and the **internal mammary chain** (behind the breast bone).

What is radiotherapy?

Radiotherapy uses radiation (high energy x-rays) to treat cancer. The radiation only affects cells within the treatment area, killing the cancer cells and temporarily damaging normal healthy cells, which recover.

Side effects of radiotherapy are isolated to the area being treated. Radiotherapy does not make you radioactive; it is safe to be around other people throughout your treatment, including children.

Treatment is given in small daily doses (fractions) over a number of days/weeks. Treatment is given on weekdays only (Monday to Friday) with a break at the weekend.

Most patients now have 5 daily treatments, though sometimes longer courses (up to 20 visits) may be required. Your oncologist will prescribe the amount of radiation needed and tell you how many treatments you will need. The treatment won't necessarily start on a Monday.

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

It is important that you attend all treatment appointments

You should not have radiotherapy if there is any chance you may be pregnant

Overview of the treatment pathway

Treatment consent

At your outpatient appointment, your doctor or specialist radiographer will discuss the risks and benefits of having a course of radiotherapy. If you wish to proceed, you will need to **sign a consent form** agreeing to have treatment. You may decide that you do not want to have radiotherapy; if so, you might want to talk again with your doctor or specialist radiographer.

Radiotherapy planning CT scan (30 minutes)

The first visit will be for a CT scan, usually within **2 weeks** of signing consent.

You will need to remove all of your clothing above the waist. We will provide you with a gown. You will need to lie face up on the CT table with your hands supported above your head. The radiographers will make you as comfortable as possible.

A radiographer will place some temporary pen marks on your chest and tape some markers to your skin. These will be removed when the scan is complete. The scan only takes a few minutes and the radiographers are watching you at all times from outside of the room. Once the scan is

complete the radiographers will make some very small **permanent ink marks** (tattoos) on your chest and on your side. These marks help to position you correctly for your treatments.

No contrast or dye injection is required for the scan.

The reconstructed images from the CT scan provide a **3-dimensional image** of your chest which is then used to accurately plan your radiotherapy.

If a breath hold technique has been mentioned to you, please see the sections below on 'Avoiding radiation to the heart' and 'How can I prepare for DIBH'.

Radiotherapy plan

Your radiotherapy plan is a **personalised design of your radiation treatment** based on the planning CT scan. A team of doctors, radiographers and physicists work together to decide where the treatment needs to be directed, avoiding as much healthy tissue as possible.

You will usually start radiotherapy within **2 weeks** of having the CT planning scan.

Radiotherapy visits (approximately 10-20 minutes per visit)

You will lie on the treatment table, which will be set up in the same way as when you had the CT scan. You should relax and stay still. The treatment is given by a machine called a **linear accelerator**, or '**linac**'.

The room lights will be dimmed so the radiographers can see the laser lights that help them to position you correctly. This may take some time, please try to relax. You will hear the machine move around you; it will come close but will not touch you. You will not be surrounded or feel enclosed by the machine.

Once you are in the right position, the radiographers will leave the room. You will be alone during your treatment but the radiographers will be watching you at all times 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-rays** are taken regularly to ensure that the treatment is being delivered accurately. When the team are happy with your position the treatment will be delivered, and the machine will move around you. **Beams of treatment** are delivered from different angles. Each beam lasts around 20-30 seconds.

You will not see or feel anything when the radiotherapy is in progress but you will hear the machine making a 'buzzing' noise. When the treatment has finished the radiographers will come back into the room. Please remain still, they will tell you when it is safe to sit up and get off the table.

You may be given treatment appointments at either Maidstone or Canterbury, depending on capacity, but due consideration will be given to your home address when allocating appointments.

Treatment review

You will be seen by your specialist Macmillan radiographer during treatment. They will support you through radiotherapy and help you manage any side effects. You will receive appointments for radiographer reviews.

You will usually have a follow up appointment with a Macmillan radiographer about 2 weeks after your radiotherapy and another with a member of your oncology team **6-8 weeks after completing radiotherapy**.

What are the side effects of radiotherapy for breast cancer?

You may experience some side effects, usually towards the end of the course of treatment and during the first few weeks after treatment has finished. Your doctor or specialist radiographer will discuss these when you consent to treatment.

Whilst we cannot prevent side effects, we can help you to manage them. Side effects may require you to make some adjustments to your normal life, but most are temporary and will gradually disappear after a few weeks.

Side effects that occur during your radiotherapy are called early (or acute) side effects. They usually begin to occur a week or two after your treatment starts. If you only require 5 treatments, side effects may not appear until after the treatment has finished. Side effects are usually at their worst **1-2 weeks** after your radiotherapy finishes. They then gradually improve. By **2 months** after completion of treatment most have resolved or at least improved considerably.

Early side effects affect all patients, but the severity can vary between individuals.

Late or long term side effects may occur months to years after the treatment has finished and are rare.

Possible early side effects

Expected side effects (more than 50 per 100 patients)

Tiredness (fatigue)

You may feel tired during or after your treatment. This can be worse if you have also had surgery or chemotherapy. The tiredness may affect what you feel able to do. The journey to hospital can be tiring. However, most people find they can manage their daily tasks as usual and some continue to work full time.

The sense of fatigue will slowly settle over a few weeks or months once treatment is completed.

Common side effects (10-50 per 100 patients)

Skin changes

You may notice some **redness** (like sunburn), increased **darkening** (pigmentation) and **tenderness** or **itching** of the skin in the treated area. In a few people the skin under the breast or in the lower neck might blister and the area can become moist and weepy. If this happens, the skin will usually be fully healed within 4 weeks. Increased pigmentation may take some time to resolve. The skin returns to a normal colour in most patients.

Your skin reaction can be dependent on:

- **Your type of skin** and the **size and shape of your breast**
 - If you received radiotherapy to areas where your **skin folds**, e.g. the curve under the breast and under the arm
 - If you have **diabetes or heart disease**
 - If you are a **smoker** (this can affect the oxygen levels in your skin).
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Less common side effects (fewer than 10 per 100 patients)

Swelling (oedema) of the breast

During and after treatment you may notice that your breast or chest area appears swollen and feels uncomfortable. This usually settles within a few weeks.

Pain in the breast area

Occasionally you may have aches, 'twinges' or sharp pains in the breast area, particularly in the area of the scar. Although these are usually mild, they can continue for some time after treatment is finished. In some cases they can last for months or even years, but they usually become milder and less frequent over time.

Rare side effects (fewer than 1 per 100 patients)

Dry cough and shortness of breath

Temporary inflammation of the lung behind the breast and ribs may cause a short term cough or mild breathlessness. This usually settles without the need for any treatment and does not cause long term lung damage.

Dry / sore throat

Radiotherapy to the lymph nodes in the supraclavicular fossa (lower neck) can cause a dry or sore throat for a short time. Very rarely you may experience some discomfort when swallowing. Please inform the radiographers if this happens as it can be managed with pain medication.

Possible late side effects

Common (10 to 50 per 100 patients)

Cosmetic changes in breast size, shape and colour

After treatment the breast may change in size or shape becoming firmer, smaller and look slightly different to before. The skin in the treatment area may be lighter or darker and the skin may feel thicker.

Adverse cosmetic impact on reconstruction

Radiotherapy may cause scar tissue and adversely affect the cosmetic result of a reconstruction, particularly if you have an implant in place. If required, surgery may be offered to improve the cosmetic appearance of the reconstruction.

Less common (fewer than 10 per 100 patients)

Chest wall or breast tenderness

The breast or chest wall may feel tender long term after treatment.

Shoulder stiffness

If your shoulder becomes stiff after radiotherapy you may be referred for physiotherapy.

Lymphoedema (swelling) of the arm

A build-up of lymph fluid in the arm can occur after surgery or radiotherapy to the lymph nodes in the armpit and behind the collar bone. The arm, on the side where radiotherapy or surgery was performed, may swell and feel uncomfortable and heavy. This is a long-term condition; if it occurs it can be controlled with appropriate treatment but will never completely go away. More information is available from your specialist radiographer or breast care nurse.

Skin changes

Tiny broken blood vessels (telangiectasia) may become visible under the skin; if they occur they can be permanent.

Hypothyroidism (under-active thyroid gland)

This may occur if your radiotherapy has included the lower neck area. It can be easily corrected with medication.

Rare side effects (fewer than 1 per 100 patients)

Fibrosis (scarring) of the underlying lung

Sometimes a small section of lung behind the breast can become scarred after radiotherapy. This is extremely uncommon and rarely causes any symptoms but it may be seen on x-rays or scans you might have after treatment.

Nerve complications

Very rarely, radiotherapy to the area behind the collar bone may cause damage to the nerves in the arm. This can result in tingling, numbness, pain, weakness and possibly some loss of movement.

A different cancer in the treatment area

In exceptional cases a new cancer, unrelated to your breast cancer, may develop in the treatment area many years after radiotherapy.

Avoiding radiation to the heart

In the past, heart problems sometimes arose many years after radiotherapy to the left breast or chest wall. Nowadays a technique called Deep Inspiration Breath Hold (DIBH) is used when needed to minimise the radiation dose to the heart.

Patients having radiotherapy to the internal mammary chain lymph nodes are always treated using DIBH. Other cases will be selected for DIBH if an excessive amount of heart would otherwise be in the treatment field. Not everyone needs this technique; your doctor or specialist radiographer will advise if DIBH is required.

If you require DIBH you will need to hold your breath for a short time when you have your CT scan and for each of your radiotherapy treatments, usually for around **20-30 seconds**. Holding your breath inflates the lungs and pushes the heart away from your chest wall and away from the area being treated. This helps minimise potential radiation dose to the heart and lungs.

How can I prepare for DIBH?

You do not need to do any specific preparation but you might find it helpful to practise holding your breath in the treatment position, lying on your back with your arms raised above your head for 20-30 seconds at a time to get used to the sensation.

The **'Respire' website** (www.respire.org.uk) contains a series of useful resources to explain the process and help you practice breath hold.

If you are unable to achieve breath hold your radiotherapy will be given while breathing normally. Your radiotherapy plan will be carefully designed to shield your heart from the radiation beam as much as possible.

The risk of a heart related event following radiotherapy is very small and the benefit of treatment usually outweighs any small risk.

Radiotherapy which includes the internal mammary chain (IMC) lymph nodes

If your radiotherapy needs to include internal mammary chain lymph nodes (which lie behind the breast bone) it will be impossible for your radiotherapy plan to avoid part of the opposite breast.

In the rare situation where a second breast cancer is found in this opposite breast some years later, it may be difficult or impossible to safely give radiotherapy to that area and a mastectomy would likely be recommended.

Pregnant?

Please tell the staff immediately if you might be pregnant; radiotherapy can harm the developing baby.

All female (at birth) patients up to the age of 60 will be asked to confirm their pregnancy status before the first planning session.

How should I look after my skin during radiotherapy?

Washing and bathing: make sure the water is not too hot; wash the treated skin gently and with products you would normally use. Gently pat the skin dry.

Deodorants/sprays: you may use the deodorant you would normally use unless it irritates your skin; stop if your skin blisters or peels in the area you apply it.

Wear loose fitting natural fibre clothing next to the skin, such as cotton or silk. If you usually wear a bra you may prefer not to.

Use a moisturiser frequently: gently smooth it onto your skin until it is absorbed. The aim is to keep your skin supple.

Use the moisturiser you prefer and like to use: no specific products are recommended for use during and after treatment; using something you are used to is best. If you do not currently use a moisturiser, speak with your radiographers and they can suggest a few options for you.

You do not need to wipe your moisturiser off before receiving treatment, but **please do not apply anything to the skin immediately before treatment.**

Please **stop using moisturiser if it irritates your skin.**

If your skin blisters or peels, stop using moisturiser in that particular area and ask your radiographers for advice.

You may go swimming if your skin is NOT blistered or peeling: it is best to shower immediately afterwards to wash off the chlorine and then apply moisturiser. Please stop if swimming irritates your skin.

Please avoid:

- **Rubbing the area.**
- **Using sticky dressings** (non-adhesive silicone dressings are advised).
- **Shaving and hair removal products** under the arm.
- **Perfumes and hair dye** on or close to the treated area.
- **Heating and cooling pads** on the treated area.
- **Exposing the treated area to direct sunlight:** cover up with clothing. Continue to protect the treated area from the sun for at least **1 year** after you have finished treatment. As your skin will be more sensitive, use sunscreen with SPF 50.

Your radiographers will advise how to manage your skin if it blisters and breaks down, using special dressings if appropriate. If you have already finished radiotherapy when this happens, please contact your specialist radiographer by telephone for advice.

Keep notes of any changes to your skin so that you can share these with your radiographers. Please tell them if your skin reaction is painful, so they can recommend pain relief. Talk to them about any worries you have.

After finishing treatment you may be aware of your skin reaction worsening for the next **10-14 days**. Continue with the suggested skin care advice. Most patients find that their skin has improved around **4 weeks** after treatment. If skin has blistered or peeled it may **take longer to heal**.

Stopping smoking, staying well hydrated, keeping active and following a balanced and nutritional diet will also help to keep your skin healthy.

Further information and advice can be obtained from:

**Kent Oncology Macmillan Cancer Information Centre,
Maidstone Hospital**

Offers support and information to anyone who has concerns about cancer (patients, relatives, friends or carers).

☎ 01622 227064

Macmillan Cancer Support

Provide practical, medical and financial information

☎ 0808 808 0000

Website: www.macmillan.org.uk

Cancer Research

General information about cancer, treatment and clinical trials.

☎ 0808 800 4040

Website: www.cancerresearchuk.org

Breast Cancer Now: The research & care charity

The UK's largest breast cancer charity: involved in research, awareness and support for anyone affected by breast cancer.

☎ 0808 800 4040. Website: www.breastcancer.org

Patient Advice and Liaison Service (PALS)

- Provide information on Trust services.
- Record and pass on your comments and compliments.
- Help resolve any concerns you have about the services provided at hospital.

East Kent Hospitals

☎ 01227 783145

Email: ekh-tr.pals@nhs.net

Maidstone & Tunbridge Wells Hospitals

☎ 01892 632953 / 01622 224960

Email: mtw-tr.palsoffice@nhs.net

Please use this space to write any notes or questions you may have.

Your Breast Care Nurse is:

Contact number:

Much of the information in this leaflet has been based on information provided by Breast Cancer Now charity.

MTW NHS Trust is committed to making its patient information accessible in a range of languages and formats. If you need this leaflet in another language or format please ask one of your clinical care team or the Patient Advice and Liaison Service (PALS). We will do our best to arrange this.

Maidstone and Tunbridge Wells NHS Trust welcomes all forms of feedback from our service users. If the standard of service you have received from the Trust does not meet your expectations, we want to hear from you. Please speak with the ward manager or the nurse in charge in the first instance, or you can contact the **Patient Advice and Liaison Service (PALS)** on:

Telephone: ☎ 01622 224960 or ☎ 01892 632953

Email: mtw-tr.palsoffice@nhs.net

Or visit their office at either Maidstone or Tunbridge Wells Hospital between 9.00am and 5.00pm, Monday to Friday.

You can be confident that your care will not be affected by highlighting any areas of concern or making a complaint. The Trust will retain a record of your contact, which is held separately to any medical records. If you are acting on behalf of a patient, we may need to obtain the patient's consent in order to protect patient confidentiality. More information on PALS or making a complaint can be found on the Trust's website: www.mtw.nhs.uk or pick up a leaflet from main reception.

Issue date: March 2021
Database reference: RWF-OPLF-PCS46

Review date: March 2025
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