

Northern Centre for Cancer Care

Radiotherapy to the Breast

Introduction

We have given you this leaflet as your clinical oncologist has recommended radiotherapy for breast cancer.

The timings and effects of treatment may vary from one person to another. This leaflet will highlight the key points of the discussion you will have with your oncologist, breast specialist radiographer and treatment team. At the end of this leaflet is an example of a radiotherapy consent form that you would talk through at your discussion.

We understand this may be an anxious time. You may feel that you have been given lots of information about what needs to be done in a short period of time. We hope you will find this leaflet helpful to answer some of your questions. If you have any further questions about your treatment, please speak to your oncologist, specialist radiographer or breast care nurse.

We have videos available for patients, and their families and carers, who will be coming for radiotherapy either at the Northern Centre for Cancer Care (NCCC) at Newcastle or Carlisle. These videos provide all the information you need to know before coming for your first appointment and will hopefully help to reduce anxiety as you will know how to get to the department, what to expect and who you will meet.



These videos and other useful information about radiotherapy are also available on our Northern Radiotherapy Network website:

<https://northernradiotherapynetwork.nhs.uk/videos>

Or by using the QR code.

What is radiotherapy?

Radiotherapy is treatment using high-energy x-rays aimed specifically at your breast or chest wall. The treatment is quick and painless and patients tend to tolerate it very well.

After breast conserving surgery (sometimes called a lumpectomy or wide local excision) there remains a small risk of cancer returning in the breast. This can happen even if the surgeon has completely removed the cancer that can be seen and the edges (or margins) around the cancer are clear.

Radiotherapy has clear benefits since it is a localised treatment which destroys any microscopic cells and reduces the risk of recurrence in your breast/chest wall. The x-rays cause damage to any cancer cells in the treatment area. Normal healthy cells are also affected but are able to recover and repair themselves.

No treatment is completely risk free. In recommending your treatment, your oncologist has weighed up the risks and benefits. These will be discussed with you further at your consent appointment.

Radiotherapy is planned to treat as little of the normal body tissue as possible. Treatments are given over a number of appointments. This is to allow normal cells to recover from the effects of radiation. The exact number of appointments will be decided by your oncologist and confirmed at your appointment to discuss radiotherapy.

Radiotherapy does not make you radioactive. You are safe to be around other people, including infants, babies and pregnant women.

Who will look after me when I come for radiotherapy?

Clinical oncologists	A consultant clinical oncologist is a doctor who specialises in treating cancer with radiotherapy, chemotherapy or hormone therapy. The oncologist will discuss what treatment you need and will oversee your treatment.
Consultant or clinical specialist therapeutic radiographers	Experienced Therapeutic Radiographer with additional training to review and consent patients referred for radiotherapy. They work alongside the clinical oncologists. You may be seen by a radiographer instead of an oncologist when you discuss your treatment.
Mould room technicians	You may need a special mould to help keep you in the correct position during treatment. If so, the technicians in the mould room will make this for you.
Therapeutic radiographers	Therapeutic radiographers are health professionals trained to plan and deliver your course of radiotherapy. At each of your treatment sessions the radiographers will make sure that you are in the right position for your radiotherapy. They will also give you information, advice and support and help you with your physical and emotional needs. These may be male or female.
Therapeutic review radiographers	The department has therapeutic radiographers who have undergone additional training so they can give advice about the side effects you may experience during and after your radiotherapy treatment.
Students and Apprentices	This is a teaching hospital so we may have students present at your appointments. All students are supervised by members of staff, but if you prefer not to have them present, please tell the staff. This will in no way affect your treatment, as your request will be respected and understood.

How do we plan your treatment?

One of your first appointments in the radiotherapy department will be for a CT (computerised tomography) scan to plan your treatment (planning appointment). The appointment for your planning scan will last approximately 30 minutes.

You will have a CT scan of the upper half of your body. You will need to remove your clothes on your top half, however you will be provided with a gown to wear. We will try and keep you covered as much as possible during the appointments.

If you have had surgery, it is important that your scars have healed and there is no swelling (inflammation, infection or seroma) of your breast. It is also important that you are able to raise your arms comfortably above your head for treatment.

We will ask you to lie on a piece of equipment called a breast board (picture 1). Your arms will be raised and supported by arm rests so they are away from the treatment area (picture 2). This breast board will help you keep still and ensure that you are in the same position each day for treatment.

Please tell the radiographers if you are uncomfortable or in pain and they will adjust your position appropriately.



Picture 1: Breast Board



Picture 2: Treatment position

The CT scan allows us to target your treatment effectively by seeing where your breast tissue lies in relation to other anatomy in your chest area. It takes images of your body, using x-rays, and processes them using a computer. These detailed pictures mean we can target your treatment accurately whilst minimising dose to areas that do not need treating. The scan usually takes less than 5 minutes.

For the scan you lie on a couch while it passes through a large, hollow ring (picture 2).

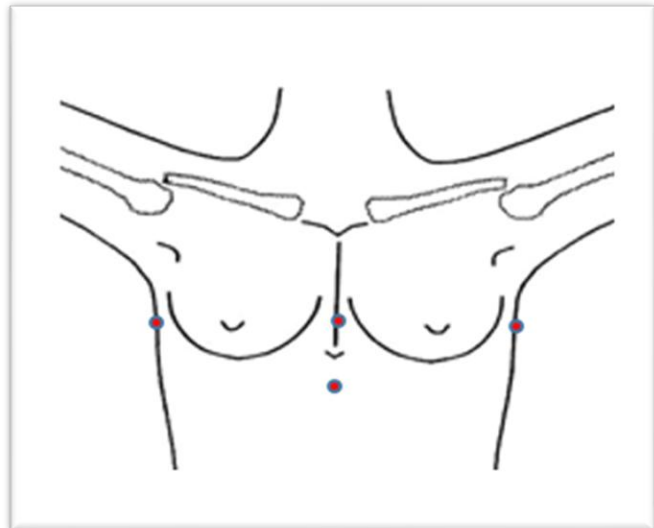
The CT scan is not the type of scan that causes difficulties for those who suffer from claustrophobia and you do not need any injections.

During the appointment the radiographers will draw with pen on your skin and place wire markers and ball bearings on and around the treatment area. This is to help us plan your treatment.

After the CT scan, the radiographers will also need to mark your skin with small tattoos. They are the size of a full stop (picture 4). These tattoos are used to place you in the correct position each time you have treatment. These dots are permanent. There will be 4 altogether. Picture 5 shows the approximate position on the small tattoos. If you are concerned about receiving tattoos, please mention it to a member of the radiotherapy team.



Picture 4: Treatment tattoo



Picture 5: Position of the treatment tattoo. (●)

All of the images and measurements taken at the radiotherapy planning appointment are used to make an individual treatment plan for you. The scan is purely for the technical radiotherapy planning and allows us to accurately target your treatment and is not designed to look for cancer elsewhere.

It is important to lie still and relaxed as possible during the appointment so accurate measurements can be taken. The radiographers are there to explain the procedure and to answer any questions you may have.

At this appointment you will receive the date and time for your first treatment appointment.

There will be a gap in between your planning CT scan and starting your first treatment (approximately 2 weeks) whilst we plan and check your treatment.

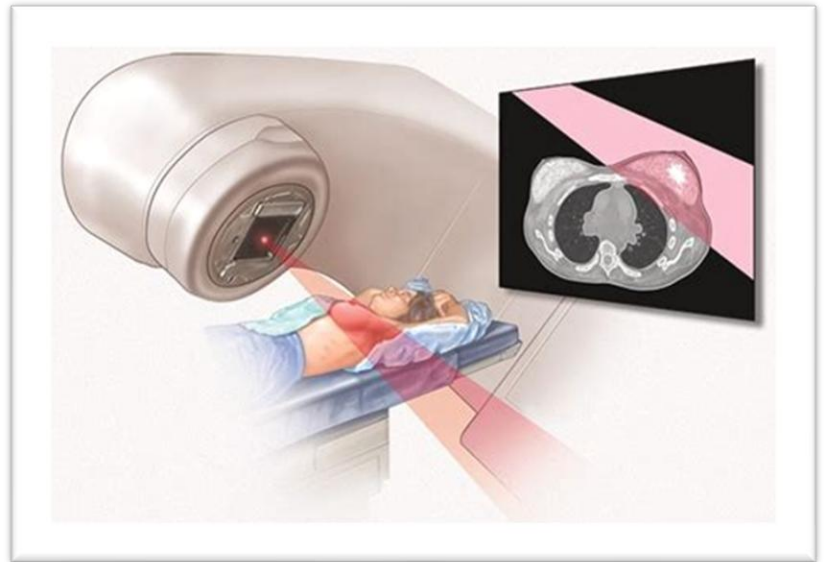
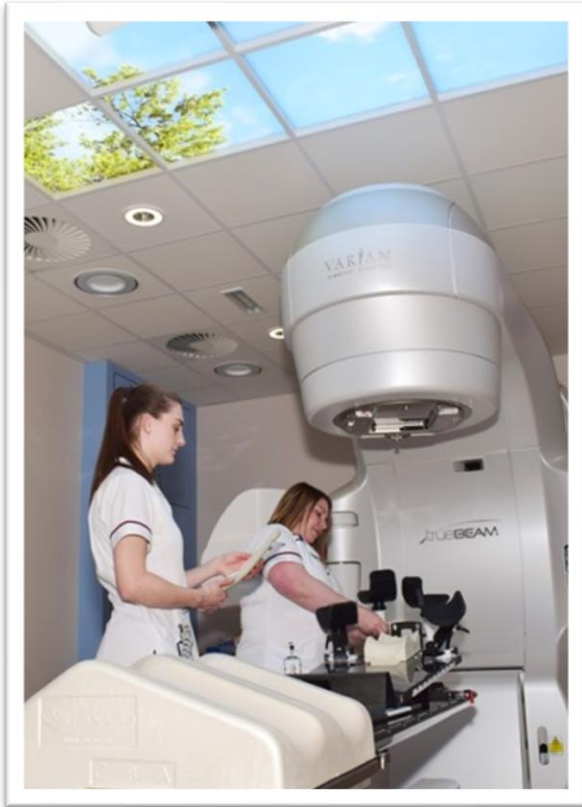
What happens during treatment?

The treatment is given daily (Monday to Friday). Your oncologist or specialist radiographer will tell you how many treatments you will be having. Each appointment lasts approximately 15 minutes. You can start your radiotherapy treatment on any day between Monday and Thursday. You will not be expected to have treatment on a Saturday or Sunday, unless the staff have spoken to you specifically about this.

You will have your treatment on a linear accelerator (Linac). On your first day of treatment the radiographers will explain the daily procedure, give you information on how to look after yourself and your skin in the treatment area. We will give you a full list of appointment times.

Each day we will ask you to get changed into your gown before your treatment. The staff will ask you to take any clothes/valuables you bring with you into the treatment room.

For each treatment session you will lie on the breast board in the treatment position. In order to get you into the correct position for treatment the radiographers will ask to lower your gown to get to your breast area and tattoos. We will keep you covered as much as possible throughout each appointment. We will always maintain your dignity throughout the treatment. If you would like to speak to anyone about this further, please speak to a radiographer when you attend any of your appointments in the department.



The radiographers will make sure that you are in the correct position by lining up the permanent tattoo dots with green laser lights in the room.

The radiographers will then perform verbal checks and move the treatment machine and couch into position for your personal treatment plan.

In order to give the best treatment you will be treated from different angles.

The machine will move around you and will not touch you. All you need to do is relax, remain still and breathe normally. The radiographers will watch you throughout the treatment on CCTV (Closed-circuit television). They can also speak to you over the intercom.

Each day before your treatment starts you will have x-ray pictures taken to make sure you are in the correct treatment position.

You cannot see or feel the treatment. The only way you will be aware of the treatment starting is from a buzzing noise when the machine switches on.

The radiographers will let you know when the treatment has finished.

Side effects during treatment

Radiotherapy treatment is painless; however it does have some side effects that you may notice. You may develop side effects over the course of your treatment. These usually disappear gradually over a few weeks or months after treatment finishes.

It is important to point out that side-effects can vary from person to person and will depend on the area that is being treated. The following side effects are a general guide.

Your oncologist or radiographer will discuss relevant side effects with you at your consent appointment so you know what to expect.

Let the radiographers know about any side effects you have during or after treatment. There are usually things that can be done to help.

Side effects can be classed as short term (acute) or long term (late effects).

Possible short term (acute) side effects

Acute side effects are temporary and can affect most patients. The side effects usually begin approximately 7 days after starting your treatment and continue for approximately 2-4 weeks after you have finished your treatment. They then usually settle within 6-8 weeks after you have finished treatment.

Common short term side effects

Skin reaction

This is a normal reaction to radiotherapy. Towards the end of treatment most patients experience some changes in the skin. A skin reaction will only occur in the area being treated. Ask your radiographers or oncologist where this is if you are not sure.

The skin may

- feel tight, sore or uncomfortable
- become pink or red
- become dry and flaky
- itch
- A rash may appear and feel itchy and this may feel worse when you get warm or hot.
- peel or blister
- scar and nipple areas can be more sensitive
- dark skin may get darker or have a blue or black tinge

The reaction may be worse in areas where skin folds or skin surfaces rub together e.g. under the arm and/or under the breast, therefore more care should be taken with these areas. Sometimes the skin may blister or peel. If this happens, tell your radiographers; they will be able to give you further advice and provide any gel or dressings that might be needed.

For most people, the skin reaction is mild and can be effectively eased with the use of our recommended creams, which will be provided by the staff in the department.

Your skin will be monitored by the radiographers during radiotherapy and you will be given advice on how to care for it. You will also have an appointment with a breast review radiographer approximately 3-4 weeks after starting your radiotherapy.

Skin reactions usually build up to a peak 2-4 weeks after **finishing** radiotherapy and sometimes persist for up to six weeks after treatment has finished. You will be given 'Finishing radiotherapy to your breast' leaflet which will give you additional information on how to look after your skin once you have finished your treatment.

Tiredness / Fatigue

Radiotherapy can sometimes make you feel tired especially towards the end of your course of radiotherapy and for a number of weeks following treatment. This is a common side effect.

You should rest as much as you need to, however it is known that light exercise e.g. walking, and drinking more fluids can help reduce fatigue. It may be some time before you feel able to do some of your usual activities.

Fatigue is something nearly everyone with cancer feels. It affects people differently and it is important to tell the health care team if you are feeling more tired than usual. There are some physical causes, such as anaemia that are readily treatable.

Please ask for a booklet on Fatigue at the Information Centre in NCCC (Northern Centre for Cancer Care) which may give you tips to help with this.

Hair loss in treatment area

Many women have a concern that radiotherapy will cause hair loss to their head. Please be assured that **you will not lose any hair on your head** from the radiotherapy, and it will not prevent regrowth of hair after chemotherapy.

Radiotherapy is a localised treatment and it only affects the area being treated. You may find that the hair under your arm on the affected side stops growing and falls out during treatment. After treatment you may experience less hair growth in that area.

Less common short term side effects

Pain or discomfort and swelling in the breast or chest wall area

Some people experience aches, twinges or sharp pains in the breast area and sometimes describe their breast and treatment area as feeling different. Although these are usually mild, they can continue for some time after the treatment is finished.

If you have had a mastectomy you may notice some slight swelling along the mastectomy scar or within the chest wall area.

If you have not had a mastectomy you may notice a change to size, shape or sensation of the breast. It may feel a little swollen and more tender. You may feel some tingling or “nerve sensations” or shooting pains within the breast tissue and some pain or tenderness around the rib area. If this happens it can be treated with mild painkillers e.g. paracetamol if needed.

You may also experience numbness to the upper part of the inner arm. This is normally an effect from your surgery. These symptoms usually improve over time but for some patients can persist long term.

Stiffness of the shoulder

Some patients find that they have stiffness in the shoulder or a reduction in the range of arm movements. This is more likely to occur following mastectomy than lumpectomy. It is important to do exercises to help maintain the movement in the shoulder. You may have been seen by a physiotherapist who has instructed you about exercises before you attend for your radiotherapy (usually just after surgery). It is important to continue with these exercises during and after radiotherapy as they will help with achieving the arm position required for you to receive treatment.

Although swimming offers excellent exercise for the arm and may help reduce stiffness of the shoulder, we suggest you wait until you finish your course of radiotherapy and any related side effects have settled down.

Rare short term side effects

Feeling sick (nausea)

Nausea is a very rare side effect of radiotherapy. However, you may feel nauseous if you're feeling particularly anxious or worried. If you are experiencing any symptoms please speak to a member of staff.

Sore throat

If we are treating the lymph node areas at the side of your neck you may find that this causes a sore throat, feeling of a lump in the throat or discomfort on swallowing. You can take pain relief or throat lozenges if needed.

Pneumonitis

When treating the breast/chest wall it is not possible to avoid the lung. A very small amount of lung is treated. It is rare for this to cause any problems for the majority of patients.

Pneumonitis is a temporary inflammation of the lung leading to coughing or breathlessness. It tends to happen 4 -12 weeks after treatment. In some patients it can occur anywhere up to 6 months after treatment. For most people the symptoms clear up on their own after 7-10 days after appearing. If symptoms persist please contact your GP. A common treatment is a course of steroids to help settle the inflammation.

Possible long-term or permanent effects of treatment

Long term side effects (late effects) can occur months to years after radiotherapy. Most patients who receive radiotherapy to the breast experience minimal or mild side effects which do not interfere with everyday activities and have no long term damaging effects.

These late effects of the hardest to predict and, unfortunately, when they do occur they are permanent. The oncologist or specialist radiographer will explain the potential late side effects of the radiotherapy to you as part of the consent process.

We plan the treatment to avoid the surrounding areas around the breast/chest wall area as much as possible to reduce these side effects.

Common long term side effects

Breast changes

Occasionally the texture, sensitivity and shape of the breast, and the pigmentation of the skin, may alter. This may be a permanent reaction to radiotherapy.

In some patients the breast can feel firmer or more tender than the other side. This usually settles over several months.

In some patients the breast can become smaller or slightly different in shape after treatment. This is caused by thickening of the underlying tissue. In a small number of patients there may be thickening of the skin which may cause it to feel 'leathery' due to a loss of elasticity and suppleness.

It is common to notice a slight change in the colour of your skin where the treatment has been given. This is usually very slight and does not cause any problems.

What if I have an implant or tissue expander in place?

If you have had a breast implant there may be some changes to the size and shape which could lead to a poor cosmetic outcome after treatment.

For patients with a tissue expander in place, radiation may affect the quality of the skin overlying the expander.

We cannot predict which patients will be affected

Less common long term side effects

Breast oedema

Breast oedema can occur where the breast retains fluid. It can become swollen, tender, pinker in colour and warmer to touch several months after treatment. If this happens, continue to use moisturising cream on your breast every day. It can be associated with pain, discomfort, shooting pains and twinges.

If your breast becomes swollen, please contact your breast care nurse. They may refer you to the lymphoedema service for advice and help.

Lymphoedema

If you receive radiotherapy to your lymph node areas as part of your treatment for breast cancer, or if you have had surgery to this area there is a risk of developing lymphoedema. This is a swelling of your arm on the side where the cancer has been treated. It is caused by damage to, or removal of, the lymph glands under your arm which are normally responsible for draining fluid. Some patients first notice lymphoedema when they receive an injury to the arm that results in swelling and delayed healing. Others may notice a more gradual swelling of the arm which may also extend to the wrist and hand.

Treating nodal areas can increase the risk of lymphoedema developing in later months or years. Approximately 20% of patients will develop some degree of swelling. Swelling can occur at any time. Taking special care of your hand and arm on the side where you have had treatment may help to reduce the risk of this developing.

This is discussed in the section “Care of the arm during and after your treatment” but your oncologist or breast care nurse can give you further information.

Shoulder Movement

When treating lymph node areas there is a small risk of shoulder stiffness. This is due to scarring of the tissue around the shoulder joint. There may be some restriction in the range of your shoulder movement on the side where you have been treated. Regular exercises will help.

Your breast care nurse can provide you with information on helpful exercises. These, and using your arm normally, will help you keep your shoulder more flexible.

Discomfort

Long term, persistent discomfort/ pain in your breast may occur. If you experience this, please speak to your oncologist, breast care nurse or GP.

Rare long term side effects

Telangiectasia

Small blood vessels in the skin can be damaged by radiotherapy. This can cause red ‘spidery’ marks (telangiectasia) on your skin in the treatment area to show. They can look unpleasant but do not cause any problems.

Lung Fibrosis

When treating the breast/chest wall it is not possible to avoid the lung. A very small amount of lung is treated. It is rare for this to cause any problems for the majority of patients. Radiotherapy can cause scarring (fibrosis) of a small area of lung tissue, which can cause shortness of breath or an irritating cough in a very small proportion of patients. This can develop usually after 1 year from treatment.

Every effort is made to limit the amount of lung included in the treatment area to minimise the risk.

Bones

Radiotherapy can cause tenderness in the rib area due to inflammation of the cartilage.

Rib fracture is rare; it can occur from radiotherapy weakening the underlying ribs on the treated side. This may increase the risk of fracture in later years.

Brachial Plexus Neuropathy

If you have had your lymph nodes included as part of the treatment, radiotherapy can cause damage to the nerves around the treatment area which can lead to pain, weakness, altered sensations (numbness and pins and needles) and restricted movement to the arm and hand on the treatment side. It can occur in approximately every 1 in 1000 patients who have treatment.

Thyroid

If you have had your lymph nodes (supraclavicular fossa or internal mammary nodes) included as part of the treatment, the radiotherapy can come near or very close to the thyroid. In rare cases, it may cause an underactive thyroid. Every effort is made to exclude the thyroid from treatment area to minimise risk. Historically there has been slightly higher incidence of underactive thyroid following treatment for radiotherapy although this may not apply in patients who have been treated with modern radiotherapy techniques.

Heart

Radiotherapy to the left breast or chest wall may affect a small amount of heart tissue and make you susceptible to heart disease. Every effort is made to exclude the heart from treatment area to minimise risk.

Second Malignancy (A different cancer in the treatment area)

Radiotherapy is associated with a very small risk of developing a secondary cancer many years later (10 or more years) in the area treated.

In non-smokers, the risk is usually less than 1%, which is much less than the risk of not treating the breast.

If you are a long term smoker, the risk is larger (around 2-5%), but you can greatly reduce this risk by stopping smoking.

These effects are explained as part of the consent process. However, due to improvements in the planning of your treatment and the way in which the radiotherapy is given, these long-term effects occur less often.

Only a small percentage of patients will develop even 1 of the side effects and it would be extremely rare for someone to develop several.

What I can do to help?

Skin care

We recommend that you take care of your skin during and up to six weeks after your radiotherapy as the skin reaction is likely to continue and build up to a “peak” approximately **2-4 weeks** after treatment has finished.

What can make my skin reaction worse?

- If you receive treatment to areas where your skin folds, such as the breast or armpit; these areas can be warm, moist and rub together, making the skin more sensitive.
- If you are prescribed chemotherapy and/or immunotherapy alongside radiotherapy (due to their combined effects).
- If you smoke (as this can affect the oxygen levels in your skin).
- If you have other conditions such as diabetes and heart disease (as these may affect the overall well-being of your skin).

How can I help?

Tell your radiographers about your usual daily skin care routine. They will let you know if any changes are advised.

Please keep notes of any differences to your skin so that you can share these with your radiographers. Please also tell them if your skin reaction is painful, so that they can recommend pain relief.

Talk to your radiographers about any worries you have. Reactions to your skin cannot be prevented, however, there are things you can do to help yourself feel more comfortable

Health and well-being

- It will help your overall health if you keep up an intake of at least 6–8 glasses of water a day and eat a nutritionally well-balanced diet that includes fruit, vegetables, whole grains and lean protein. You can ask your radiographers and clinical nurse specialist to provide examples and to explain the importance of staying hydrated and eating a healthy diet in more detail.
- If your skin is not blistered or peeling, you may go swimming. It is best to shower immediately afterwards to wash off the chlorine and then apply moisturiser. Please stop swimming if it irritates your skin.
- Avoid sun exposure and protect the treated area from direct sunlight. You can wear a brimmed hat and/or cover up with clothing. Continue to protect the treated area from the sun for at least one year after you have finished treatment. Because your skin will be more sensitive, use sunscreen with SPF 50 (sun protection factor 50).
- You may find it more comfortable to wear loose-fitting clothing made of natural fibres, such as cotton or silk. You may find a “cropped top” is more comfortable than your normal bra. If have had a mastectomy it is better to wear a temporary lightweight prosthesis.
- Keep the area cool. You may find that using a hair dryer or fan set on a “cold” setting applied over the treatment area may help.

Hygiene and moisturising

- When washing and bathing, make sure the water is not too hot; wash the skin gently with products you would normally use and gently pat dry.
- Do not soak the area in the bath or under a long hot shower. You may wash the treated area using a simple, unperfumed soap or shower gel applying gently with your hands rinsing the area well with warm water. Avoid using flannels or sponges. Pat the area dry with a soft towel or let the skin dry naturally. For those patients with large breasts it is important to pay extra attention to skin folds such as those under the arm and breast.
- **Do not use** talcum powder, bubble baths, bath salts, or body lotions in the treated area as they tend to be highly perfumed and can dry or irritate the skin. The radiographers may give you a moisturising cream to soothe your skin.
- Please continue to use the moisturiser you prefer and like to use. No specific moisturiser can be recommend for use during and after treatment as there is not sufficient evidence to support the use of one product over another.
- Use moisturiser frequently; gently smooth it onto your skin until it is absorbed. The aim is to help keep your skin supple.
- If you do not currently use a moisturiser, speak with your radiographers and clinical nurse specialist and they will be able to suggest a few options for you.
- You do not need to wipe your moisturiser off before receiving treatment, but please do not apply moisturiser immediately before your treatment.
- Please stop using moisturiser if it irritates your skin and talk to your radiographers and clinical nurse specialist.
- If your skin blisters or peels, stop using moisturiser in that particular area and ask your radiographers and clinical nurse specialist for more advice.
- Please continue to use the deodorant you normally use, unless it irritates your skin; stop if your skin blisters or peels.

‘DON’Ts’ for the treatment area

- Avoid rubbing the area.
- Avoid or reduce shaving, if possible, unless advised differently by your radiographers and clinical nurse specialist.
- Do not use wax, creams or lasers for hair removal on or close to the treated area during your treatment.
- Do not use sticky tape on the area (such as Elastoplast™ or Micropore™).
- Avoid using make up, hair dye, perfumes and aftershave on or close to the treated area

We cannot prevent radiation skin changes but the aim of good skin care is to minimise symptoms and promote comfort for as long as possible.

Care of the arm during and after treatment

This is only applicable to those patients who have had surgery to examine the lymph glands in the armpit and/or those patients who are receiving radiotherapy to the lymph node areas.

The aim of this care is to avoid breaks in the skin, or injury to the arm and hand whenever possible, as these may lead to infection. There are a number of ways we recommend you do this:

- Offer your other arm for all injections, taking of blood pressure or any infusions e.g. blood transfusions.
- Wear gloves to protect your hand when gardening or using harsh detergents.
- Wear gloves when using the oven to prevent burns to the hand or arm.
- Use a thimble when sewing.
- When your skin reaction has settled after treatment has finished, you may use an electric razor or depilatory cream for removing underarm hair.
- Avoid lifting or carrying heavy cases or shopping bags with the affected arm.

If you do develop cuts, scrapes or animal bites to the arm or hand wash the area well with warm water and apply an antiseptic cream. If the cut fails to heal, or you notice any swelling or redness developing in the arm please contact your breast care nurse or GP.

If you would like further information about lymphoedema or advice on treatment, please speak to your specialist team who will be happy to help you.

How else can I help myself during treatment?

You can help by doing these things:

- Don't try to lose weight during treatment as this may change the size or shape of your breast and so alter your treatment plan. We recommend a healthy balanced diet. It is safe to adopt a healthy eating and exercise plan after treatment is finished.
- Try not to smoke. It can make your skin reaction worse. Please ask for help with smoking cessation.
- Tell us if you are worried about your side effects, or if you feel unwell, or if you have any problems or questions.

Please tell your treatment radiographers if you have any problems between appointments.

Your progress

You will be seen or contacted by a breast review radiographer during or after you have finished your treatment. This will be an opportunity to discuss any concerns or problems you may have. They will also discuss with you about follow up arrangements and future appointments.

Your emotions

It is important to make time for yourself. Emotions associated with the reactions to a diagnosis of breast cancer may come to the surface at various stages during your treatment.

Don't worry if you feel low. If you need to talk to someone, please ask, we are here to help. We have a wide range of support services within the department, such as Macmillan nurses, dietician and social worker. A Clinical Psychology service is also available at NCCC.

The Maggie's Centre provides practical, emotional and social support for people with cancer, their family & friends. Help is offered freely to anyone who want to drop-in. Maggie's is situated opposite the entrance to NCCC.

Sex

Sexual activity is personal to each individual and may be an aspect of your life about which you have concerns relating to your disease or treatment. You may have questions you wish to ask. Please talk to your oncologist, breast care nurse or specialist radiographer if you would like to talk about these issues confidentially. There is more information available in the Information Centre at NCCC

Pregnancy

It is very important that you should not be or become pregnant at any time throughout the course of radiotherapy, or whilst taking hormone medication.

If you are unsure of this issue or if you think you may be pregnant at any time during your treatment, it is extremely important that you inform a member of staff immediately.

You will be asked (if appropriate) to confirm that you are not pregnant by one of the radiographers before your CT scan/planning appointment and before starting treatment.

Breastfeeding

Women and birthing parents often find that if they've had a wide local excision, also known as a lumpectomy, the affected breast may not produce much milk. This is particularly true if the lump was removed close to the nipple. It's likely that the milk ducts (narrow tubes that carry the milk within the breast to the nipple) and nerves may have been damaged by the surgery.

Radiotherapy is likely to further affect the breast's ability to make milk. Changes to the breast tissue can make breastfeeding painful, or make it harder for the baby to latch onto the breast. Still, many women are able to breastfeed.

Due to the effect of radiotherapy on the lobules (glands in the breast that produce milk when breast feeding), it can change the appearance of breast milk. After radiotherapy, breast milk may look thicker and darker.

Breastfeeding from one breast is a possibility though, and with support, women can establish a full milk supply from the breast that didn't have radiotherapy (non-treated breast).

Pacemaker

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 throughout your treatment.

After your radiotherapy has finished

The side effects of treatment may continue after radiotherapy has finished with the peak skin reaction occurring approximately **2-4 weeks** after. Continue with your skincare routine until any changes return to normal.

You will be followed up by either your surgeon or your oncologist. We will discuss this with you before you finish radiotherapy. You may have routine annual surveillance mammograms for the next 5 years or if you under 50 years old, until you are 50.

On your last treatment you will be given a leaflet “Finishing your radiotherapy to the breast” which provides information about what happens after completing a course of radiotherapy to the breast.

You will also get a discharge letter, with a copy for your GP, summarising any side affects you may have and any creams or medication you have been prescribed at NCCC.

If you are worried about your side effects **after** your treatment has finished, please contact:

- **Newcastle patients: 0191 2139579 / 0191 2448748**
- **Carlisle patients: 07500 101701 / 07920 870029**

Or your breast care nurse at your referring hospital.

Example radiotherapy consent form



Radiotherapy consent form for breast cancer

This form should only be used if the patient is over 16 years old and has capacity to give consent. If the patient does not legally have capacity please use an appropriate alternative consent form from your hospital.

Patient details

Patient name:	Date of birth:
<input type="text"/>	<input type="text"/>
Patient unique identifier:	Name of hospital:
<input type="text"/>	<input type="text"/>

Responsible consultant oncologist or consultant therapeutic radiographer:

Special requirements: eg, transport, interpreter, assistance

Details of radiotherapy

Radiotherapy type:	External beam radiotherapy
Site and side: (Tick as appropriate)	<input type="checkbox"/> Breast <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Partial breast <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Chest wall <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Lymph nodes in armpit (axilla) <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Lymph nodes in lower neck (supraclavicular fossa) <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Lymph nodes behind the breastbone (internal mammary chain) <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Tumour bed boost <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Other <input type="text"/> <input type="checkbox"/> R <input type="checkbox"/> L
Aim of treatment: (Tick as appropriate)	<input type="checkbox"/> Curative – to give you the best chance of being cured <input type="checkbox"/> Neo-adjuvant – treatment given before surgery to shrink the tumour <input type="checkbox"/> Adjuvant – treatment given after surgery to reduce the risk of cancer coming back <input type="checkbox"/> Disease control/palliative – to improve your symptoms and/or help you live longer but not to cure your cancer

You may have questions before starting, during or after your radiotherapy.

Contact details are provided here for any further queries, concerns or if you would like to discuss your treatment further.

Patient name:	Patient unique identifier:
<input type="text"/>	<input type="text"/>

Possible early/short-term side-effects

Start during radiotherapy or shortly after completing radiotherapy and usually resolve within two to six months of finishing radiotherapy. Frequencies are approximate.

Expected 50%–100%	<input type="checkbox"/> Tiredness <input type="checkbox"/> Temporary hair loss in treatment area
Common 10%–50%	<input type="checkbox"/> Skin soreness, itching, blistering and colour changes in treatment area – redness in white skin tones and subtle darkness, yellow/purple/grey appearance in brown and black skin tones
Less common Less than 10%	<input type="checkbox"/> Breast/chest wall/axilla discomfort <input type="checkbox"/> Breast swelling <input type="checkbox"/> Change in breast texture
Rare Less than 1%	<input type="checkbox"/> Sore throat <input type="checkbox"/> Skin blistering <input type="checkbox"/> Lung inflammation (pneumonitis) – which can lead to cough / breathlessness

Specific risks to you from your treatment

I confirm that I have had the above side-effects explained.

Patient initials

Patient name: _____ Patient unique Identifier: _____

Possible late or long-term side-effects

May happen many months or years after radiotherapy and may be permanent.
Frequencies are approximate.

Expected 50%–100%	<input type="checkbox"/> Breastfeeding – after breast radiotherapy (and or surgery), you may not produce milk in that breast but the other breast will not be affected
Common 10%–50%	<input type="checkbox"/> Skin colour change in the treatment area including: – Lighter or darker for any skin tone <input type="checkbox"/> Subtle changes to breast appearance including: – Change to breast size, shape and texture <input type="checkbox"/> Breast/chest wall/axilla discomfort including: – Aching and shooting pains <input type="checkbox"/> Worsened cosmetic outcome after reconstruction surgery – which may require the implant to be replaced
Less common Less than 10%	<input type="checkbox"/> Marked change to breast appearance including: – Change to breast size, shape and texture <input type="checkbox"/> Breast/chest wall swelling <input type="checkbox"/> Shoulder stiffness <input type="checkbox"/> Swelling (lymphoedema) of the arm – fluid collecting in the arm which may cause swelling, pain and/or movement difficulties
Rare Less than 1%	<input type="checkbox"/> Skin changes (telangiectasia) in the treatment area – small visible blood vessels which look like spidery marks <input type="checkbox"/> Rib fracture <input type="checkbox"/> Fibrosis (scarring) of the underlying lung – which can cause breathlessness, cough or changes on X-ray <input type="checkbox"/> Increased risk of heart disease in later life <input type="checkbox"/> Brachial plexopathy – nerve damage which may cause pain, numbness or tingling affecting the arm and shoulder <input type="checkbox"/> A different cancer in the treatment area
Specific risks to you from your treatment	
<input type="checkbox"/> I confirm that I have had the above side-effects explained.	
Patient initials _____	

TO BE RETAINED IN THE PATIENT'S RECORDS | Date of issue and version: November 2023 version 3. Review date: 2026
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Patient name: _____ Patient unique Identifier: _____

Statement of health professional

(to be filled in by health professional with appropriate knowledge of proposed procedure)

- I have discussed what the treatment is likely to involve, the intended aims and side-effects of this treatment.
- I have also discussed the benefits and risks of any available alternative treatments including no treatment.
- I have discussed any particular concerns of this patient.

Patient information leaflet provided: ☐ Yes / ☐ No – Details: _____

Copy of consent form accepted by patient: ☐ Yes / ☐ No

Signature: _____

Date: _____

Name: _____

Job title: _____

Statement of patient

- I have had the aims and possible side effects of treatment explained to me and the opportunity to discuss alternative treatment and I agree to the course of treatment described on this form.
- I understand that a guarantee cannot be given that a particular person will perform the radiotherapy. The person will, however, have appropriate expertise.
- I have been told about additional procedures which are necessary prior to treatment or may become necessary during my treatment. This may include permanent skin marks and photographs to help with treatment planning and identification.
- I agree that information collected during my treatment, including images and my health records may be used for education, audit and research. All information will be anonymised. I am aware I can withdraw consent at anytime.

Tick if relevant

- ☐ I confirm that there is no risk that I could be pregnant.
- ☐ I understand that I should not become pregnant during treatment.

Note: If there is any possibility of you being pregnant you must tell your hospital doctor/health professional before your treatment as this can cause significant harm to an unborn fetus. Testosterone and other hormone treatments are not contraception.

- ☐ I understand that if I were to continue to smoke it could have a significant impact on the side-effects I experience and the efficacy of my treatment.

- ☐ I understand that I should not conceive a child or donate sperm or eggs during the course of my treatment and I will discuss with my oncologist when it will be safe for me to conceive a child after radiotherapy.

- ☐ I do not have a pacemaker and/or implantable cardioverter defibrillator (ICD).

or

- ☐ I have a pacemaker and/or implantable cardioverter defibrillator (ICD) and I have had the risks associated with this explained to me.

Signature: _____

Patient name: _____

Date: _____

Statement of:

- ☐ **Interpreter**
- ☐ **Witness** (where appropriate)

- ☐ I have interpreted the information contained in this form to the patient to the best of my ability and in a way in which I believe they can understand.

or

- ☐ I confirm that the patient is unable to sign but has indicated their consent.

Signature: _____

Name: _____

Date: _____

Patient confirmation of consent

(to be signed prior to the start of radiotherapy)

I confirm that I have no further questions and wish to go ahead with treatment.

Patient initials _____

Date: _____

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How to contact us

If you have any queries **during** your radiotherapy, please speak to one of the therapy radiographers when you come in for treatment or you can contact.

Newcastle Northern Centre for Cancer Care	Carlisle Northern Centre for Cancer Care North Cumbria
Consultant Breast Radiographer 0191 2139579 9am to 5pm Monday - Thursday	Information Support Radiographer Tel: 01228 814823 Mob: 07500101701 Mob: 07920870029 9am to 5pm Monday - Friday

After you treatment has finished you can contact:

- Radiotherapy breast radiographer or Information Support radiographer
- Named breast care nurse
- GP

Helpful contacts

Northern Centre for Cancer Care Macmillan Information and Support Centre

Opening hours Monday to Friday from 9am to 4.30pm

Tel: 0191 2138611

Maggie's Newcastle

www.maggiescentres.org

Tel 0191 233 6600

This is located opposite the Northern Centre for Cancer Care at the Freeman Hospital. It is open Monday to Friday (9am-5pm). No referral required, just drop in.

Breast Cancer Care

Helpline: 0808 800 6000

Website: www.breastcancercare.org.uk

This helpline is free and confidential service staffed by experience nurses and specially trained workers with a personal or professional experience of breast cancer

PALS (Patient Advice and Liaison Service)

For help, advice and information about NHS services.

Freephone 0800 032 02 02

E-mail northoftynepals@nhct.nhs.uk

Text to 01670511098

If you would like further information about health conditions and treatment options, you may wish to have a look at the NHS website at www.nhs.uk

If you would like to find accessibility information for our hospitals, please visit www.disabledgo.com

Space for notes and questions: