



**Information for patients receiving
external beam radiation therapy
to the breast**

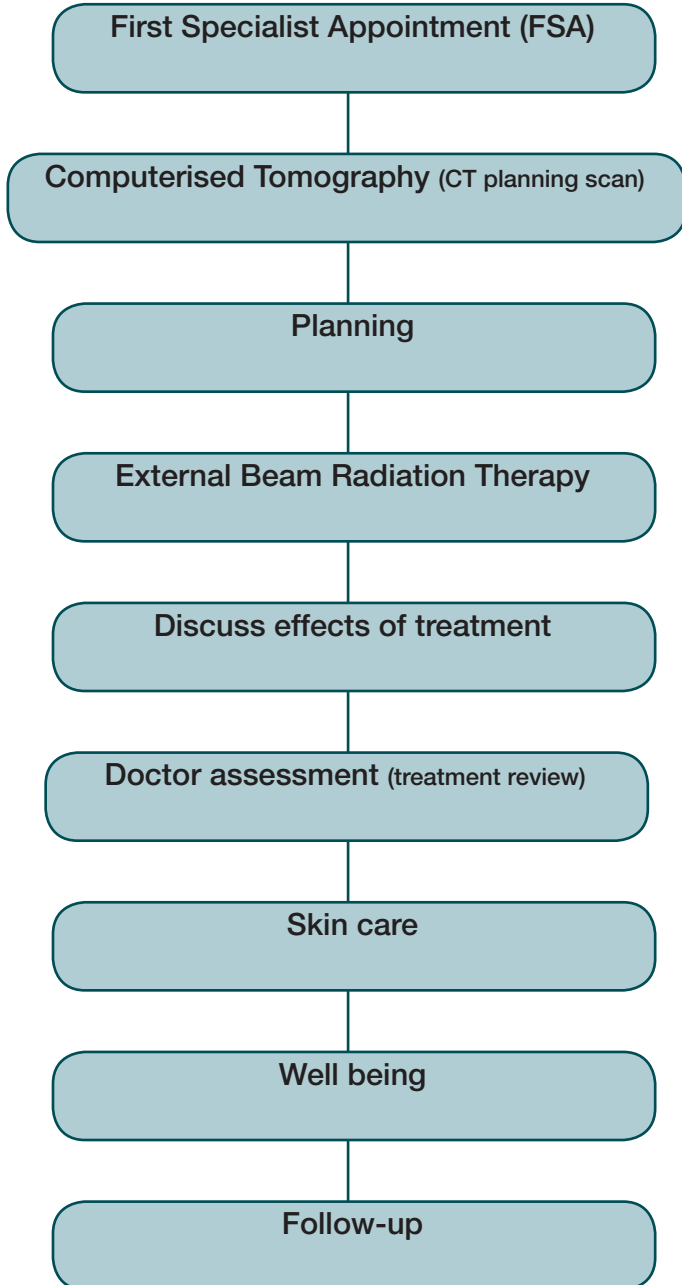


Waikato Regional Cancer Centre



Welcome to Waikato Regional Cancer Centre. The aim of this booklet is to provide information on the radiation therapy treatment procedure and to explain the journey from your first meeting with the radiation oncologist to the completion of your treatment.

Radiation Therapy



What is Radiation Therapy?

Radiation therapy is the use of high energy x-rays or electrons to damage the DNA (genetic code) in the cancer cells. Radiation therapy is planned to treat as little of the normal cells in the body as possible. Special care is taken to limit this by the use of advanced planning techniques and treatment delivery methods.

Radiation therapy is delivered in small treatments called fractions. This allows the normal cells to recover between each daily treatment. Treatment fractions vary for an individual. This can depend on the type of cancer, staging and intent of the treatment. Fractions can be delivered 5 days a week and for up to 7 weeks.

First Specialist Appointment (FSA)

Your consultant (radiation oncologist or registrar) will explain the radiation therapy procedure to you. Your diagnosis, treatment options and potential side effects of treatment will be discussed. If you consent to having radiation therapy treatment, a signature will be obtained at this stage. For the potential side effects please refer to section 'Effects of Treatment' on page 6 in this brochure.

Computerised Tomography (CT planning scan)



A CT planning scan is performed in order to deliver the treatment accurately and at the correct dose. We need to be able to locate the position of the tumour/site in relation to the surrounding normal tissue in the body. You will be set up in a comfortable position that will be reproduced when you come for your treatment.

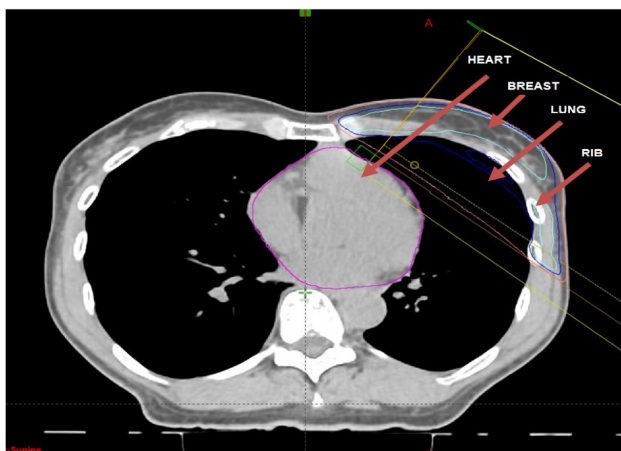
You may be required to hold your breath during the scan. If this process is required it will be explained in greater detail by your radiation oncologist.

At the CT scan small permanent tattoo marks will be given, photos taken of your position and measurements recorded to assist in the daily set-up for treatment.

Please inform a member of staff if there is any possibility that you could be pregnant.

Planning

Using the information obtained from the CT scan, an individual plan is produced. A 'target volume' is determined on the computer planning system. We calculate the best method and beam arrangement for the dose of radiation to be delivered to the 'target volume', which could include the breast, chest wall and/or nodal areas, while at the same time avoiding as much normal tissue as possible (see diagram below). Time is required for the planning calculations and checks to be done. Treatment is started as soon as possible following the completion of this process.



Beam arrangement and dose

External Radiation Therapy Treatment



Radiation therapy treatment machine

At treatment you will be set-up in the same position you were in at your planning CT scan. Your daily treatment requires specific positioning, so it is important to relax and allow the radiation therapists to move you as necessary. Once you are positioned correctly you will be required to keep still until the treatment is completed.

The radiation therapists must leave the room during treatment, however, they will monitor you on cameras from outside the room. There is also an intercom system if you were to need assistance, you can call out.

On your first day, imaging devices will be used to ensure you are in the right position before the treatment can be delivered. The direction of the beam is set by moving the machine and the couch, on which you will be resting, to the correct position. At times during your treatment we will take images and occasionally adjustments to the bed will be made before continuing with the treatment.

Treatment is usually given once a day. The time you spend in the department can vary for each individual depending on the area been treated. Depending on your beam arrangement, you will spend approximately 20 minutes in the treatment room but the actual prescribed daily dose of radiation is only a few minutes.

During treatment you will not see or feel anything, you will just hear a buzzing sound and that will let you know that the machine is on. You are welcome to bring support people with you when you come for appointments. They may accompany you into the treatment room, but will be asked to return to the waiting room before proceeding with your set-up.

Waikato Regional Cancer Centre is a teaching hospital and at times we have students in our department. If you don't wish to have the students involved with your treatment please advise a member of staff.

For more information please refer to:

<https://waikatodhb.health.nz/about-us/a-z-of-services/cancer-services/radiation-oncology/>

Effects of treatment

After your first treatment a radiation therapist will discuss your treatment plan, including potential side effects, skin care and how long you will be in the department for each day. This is a chance for you to ask any questions. It might be a good idea to write these down in the back of this book.

Radiation therapy is a localised treatment, so most side effects vary depending on the body site being treated. Everyone is affected differently by radiation therapy and the severity of side effects varies from person to person. If you experience any of the following side effects please notify a member of staff.

Potential side effects include but are not limited to:

Early side effects (can occur days to weeks starting radiation therapy treatment)	Late side effects (may occur months or years after radiation therapy treatment)
<ul style="list-style-type: none"> • Fatigue (tiredness) • Skin changes (redness, dryness, itchiness, blistering) • Oedema (swollen/tender breast) • Breast discomfort and sensitivity (mild aches and pain in the breast) 	<ul style="list-style-type: none"> • Skin changes (tanning, telangiectasia) • Increased firmness of the breast • Variable changes in shape and appearance of the breast • Rib fractures • Lung fibrosis (scarring of the lungs) • Pneumonitis (inflammation of the lung, cough, fever, shortness of breath) • Heart damage if left sided • Chronic pain/oedema (uncommon)
<p>If you are receiving irradiation of the glands in the armpit and/or base of neck area</p> <ul style="list-style-type: none"> • Lack of sweat in the axilla region • Lymphoedema (swelling of the arm) • Brachial plexopathy (damage to the nerves that control the arm and hand) 	

There is an extremely small risk of developing a second cancer many years after radiation therapy treatment.

*The **peak** of any reactions/side effects you may experience will occur approximately 7-14 days after the completion of your radiation treatment. This is due to the cumulative nature of the treatment.*

If you do experience lymphoedema (swelling of the arm) you will be referred to the Lymphoedema nurse for advice.

Doctor assessment (treatment review)

You will see your oncologist or registrar in a regular review clinic while you are on treatment. Clinic days and times are specific for each oncologist. We try our best to coordinate these times with your treatment time but it is not always possible. If you have any concerns before these appointment times please speak to the radiation therapists and where necessary they can organise for a nurse or oncologist to see you.

Skin care

A common side effect from radiation therapy treatment is a change to the skin in the area that is being treated (breast/chest wall/ nodal area).

You may notice the following changes:

- your skin gradually becomes pinker or darker, depending on your skin colour
- skin may feel dry, tight and/or sore
- a rash may also appear and feel itchy
- sometimes the skin may blister or peel.

Skin reactions may appear at any time but usually begin 7 to 10 days after starting your treatment, and can continue 10 to 14 days after treatment has been completed.

What causes a skin reaction?

The aim of radiation therapy is to deliver a sufficient dose of radiation to kill or inactivate any cancer cells, while causing minimal damage to the surrounding normal cells. However when the new cell production does not equal the loss of cells at the basal level of the skin, a skin reaction is the result. The extent of the reaction will vary on an individual basis.

What can affect my skin reaction?

- Receiving treatment to areas where there are skin folds. This includes the axilla (under arm) and under the breast.
- Having chemotherapy recently or during your radiation therapy.
- Smoking can increase your skin reaction. If you need help to stop smoking please ask a radiation therapist for further information.

The following advice may help minimise skin reactions while receiving radiation therapy. This advice only applies to the area being treated:

- Wash the area regularly with a mild, unscented soap and pat (not rub) the area dry with a soft, natural fibre towel.
- Shower or bath in warm water, not hot or cold.
- Deodorant can be used if the skin is still intact i.e. not broken
- Wear loose fitting natural fibre clothing next to the skin. Avoid wearing underwire bras. Try to minimise friction within the treatment area.
- Avoid shaving, use of wax or creams for hair removal.
- If you like to swim, you may continue to do so. We do not recommend swimming in chlorinated pools or rivers/other potentially polluted fresh water if you develop areas of broken skin. You may swim in salt water throughout treatment.
- Keep the area covered when out in the sun. **Do not** apply sunscreen to the area being treated while on treatment. Once the treatment has been completed and any skin reaction resolved, you should use a SPF30 or higher on the recently treated area.

What can I use on my skin?

Cetomacrogol cream

This will be prescribed by your radiation oncologist on your first day of treatment.

This is a moisturising cream that will keep your skin hydrated and may help reduce any itchiness you may experience during treatment.



Sorbolene cream with 10% Glycerin

Available at your local pharmacy (no prescription required).

This is an effective moisturiser that has retaining qualities, and has a mild anti-pruritic which acts as a soothing agent to reduce itching.

Calendula cream

Available at your local pharmacy (no prescription required).

This cream is derived from the marigold plant and some research indicates it is beneficial for itchiness and pain associated with radiation-induced skin reactions. However, the cream must be paraben free and with no additional fragrances.

If the skin reaction progresses:

Hydrocortisone cream

Available on prescription a doctor.

This may be used if the skin becomes itchy and/or irritated. It should always be used sparingly as excessive use may thin the skin. Continue with moisturiser as advised.

Manuka honey

Available from the radiation oncology nurses.

If the radiation reaction causes the skin to break down, Manuka honey may be recommended. Manuka honey is known for its antibacterial properties and can help avoid infection.

Silver Sulfadiazine cream

Available on prescription by a doctor.

This is used on broken skin once the treatment has been completed. It has antibacterial properties and is used to avoid infection.

Mepitel film

It is not supplied by the hospital but may be purchased online.

It is a transparent film which can be applied to the skin during treatment to possibly minimize friction. There have been some trials using Mepitel, but as yet it has not demonstrated consistent clinical benefits. Our staff are happy to discuss the use of Mepitel film with you and we advise you do this before purchasing. Our nursing staff will apply the film for you before treatment and replace it when needed (4-6 days).

Wellbeing

Mental wellness

The diagnosis of cancer and undergoing treatment can add additional stress to your life. Anxiety and depression are common among patients during and following cancer treatment. It is perfectly normal to feel emotional about the journey you are going through and everyone deals with the situation differently. You may find it helpful to talk to family and friends about how you are feeling. If you would like outside professional and psychosocial support please talk to your radiation therapist.

Diet and weight

It is recommended that you have a well-balanced diet. It is important that you remain the same body size while receiving radiation therapy treatment. Significant weight loss or gain can influence treatment accuracy and may result in your treatment needing re-planning.

It is very important that you keep up your fluid intake while having treatment.

Exercise

It is advised to continue with moderate regular exercise while receiving radiation therapy treatment. Studies have proven that the hormones released through exercise can help reduce tiredness (fatigue) which is a common side effect from treatment. During exercise it is important to recognise your limitations and don't overdo it.

Follow-up

At the completion of your treatment an appointment will be made for you to see your radiation oncologist. Your radiation oncologist will continue to see you at regular intervals for several years. You may be required to have further tests or scans done at the request of your radiation oncologist.

If you have any questions or concerns between the end of your radiotherapy treatment and this follow up appointment, you can contact your GP or one of the numbers on the following page.

Useful numbers

- Waikato Hospital switchboard 07 839 8899
- Blue machine ext: 98073
- Green machine ext: 98249
- Pink machine ext: 98221
- Yellow machine ext: 96191
- Breast nurse specialist ext: 98310
- ext: 95644
- Lymphoedema nurse specialist ext: 96803
- Oncology Outpatient reception 07 839 8604
- The Cancer Society's Lions Lodge 07 834 2351
- Cancer Society - Hamilton 07 838 2027
- Cancer Society Information Helpline Staff 0800 226 237
- Wilson Parking 07 839 8901

For more information on radiation therapy please visit:

<https://waikatodhb.health.nz/about-us/a-z-of-services/cancer-services/radiation-oncology/>

<https://www.healthnavigator.org.nz/>

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