

Receiving Radiation Therapy to the Breast or Chest Wall

Radiation Therapy may be recommended for patients with breast cancer following surgery in the following situations:

- To the **breast**, where a woman has had a breast-conserving operation.
- To the **chest wall** (or chest wall and reconstructed breast) where a mastectomy has been performed.
- To the **nodal (gland) areas** around or draining the breast, including the axilla (armpit) and/or the supraclavicular nodes (nodes in the base of the neck), and/or (rarely) to the internal mammary nodes (nodes alongside the breast bone).

You should have received a copy of the ARO 'My Treatment Book' from your radiation oncologist specialist or the patient care specialist. It covers what to expect before, during and after your radiation treatment and useful information such as frequently asked questions and parking facilities. If you have not received your copy please ask any ARO staff member. It is important you read this information.

This sheet aims to provide information specifically for patients receiving radiation therapy treatment for breast and chest wall cancer at Auckland Radiation Oncology (ARO).

Topics include:

- [Overview of radiation therapy](#)
- [ARO team members](#)
- [Special instructions and information related to your treatment pathway](#)
- [Potential side effects](#)
- [Websites and organisations of interest](#)

For more information we encourage you to visit the ARO website www.aro.co.nz which includes this information and more. Our patients, their family and friends have found the website a useful way to learn more about what to expect before, during and after radiation therapy treatment.

WHAT IS RADIATION THERAPY?

Radiation therapy is a treatment in which an x-ray beam, coming out of a machine called a linear accelerator, is aimed specifically at the site of the cancer. The x-rays damage the DNA (genetic code) in the cancer cells, and this damage then results in the death of the cancer cells. Radiation therapy is planned to treat as little of the normal body as possible.

The machine moves around you for treatment and can treat from a number of different angles. The machine or equipment may come close to you but it will not touch you. You do not feel the radiation as it is being delivered.

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ARO TEAM

You will meet various members of the ARO team during your visits. The radiation therapists and nurses work closely together to deliver your treatment under the direction of your radiation oncologist.

We aim to give you the best possible care during your treatment. Please approach any ARO staff member with your concerns or questions. If they are not able to assist, they will direct you to someone who can. We also encourage you to visit the ARO website.

Team members and their roles:

Radiation Oncologist	A specialist doctor who is qualified in cancer treatment with radiation
Radiation Therapist	Qualified technical professionals involved in the planning and delivery of your radiation treatment as well as day to day care
Student Radiation Therapist	ARO is a training facility and there may be students involved in your treatment. You have the right to ask that students not be present during your procedures.
Registered Nurse	Experienced nurses with advanced knowledge of caring for cancer patients. The nurses and radiation therapists will provide advise on how to look after yourself during treatment.
Receptionist/Scheduler	Responsible for helping you with scheduling your appointments. They will also be able to discuss your account details
Medical Physicists	A scientific officer who performs regular checks to ensure the safety of radiation equipment and treatment plans
Engineer	Responsible for the maintenance of equipment

USUAL ARO TREATMENT PATHWAY

Your radiation treatment will be given at ARO located on the Mercy Hospital campus, Epsom, Auckland. Most patients will follow the seven steps in the ARO patient treatment pathway. Please refer to My Treatment Book.

Once you have met with your radiation oncologist specialist and confirmed your decision to proceed with treatment at ARO (step 1) we will require information as part of the orientation (pre-treatment planning) stage.

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SPECIAL INSTRUCTIONS AND INFORMATION

This information is **not** included in My Treatment Book.

Step 2:

ORIENTATION (pre-treatment planning)

The pre-treatment process will usually require you to have a CT scan. **Please eat and drink normally prior to this scan.**



Before the CT scan, the radiation therapists will determine the best position for you to lie in during your treatment. In most cases you will be lying on an angled board with both arms supported above your head. The therapists will make sure you are as comfortable as possible. The CT scan will then be performed with you in this position. Small permanent tattoo marks will be made on your skin to assist in the daily set-up for your treatment.

If you are having your left breast/chestwall treated, you will be considered for our breath hold technique. This technique aims to expand the lung and therefore move the area to be treated further away from your heart. Please refer to www.aro.co.nz treatment techniques to learn more.

Should health problems prevent us using the breath hold technique or you are unable to achieve the required length of time for breath hold you should not be concerned as we are still able to plan your treatment and prevent dose to your heart.

If you are able to get pregnant, remember to be conscientious with protection during this time as pregnancy is not recommended. If you are concerned or suspect you are pregnant when you come in for your initial appointment at ARO or at any stage during the treatment course, please talk to a member of the team.

POTENTIAL SIDE EFFECTS

X-rays used in radiation therapy can damage the DNA (genetic code) of cells. The radiation also affects the normal tissues of the body, and this can cause side effects. However, we know that normal tissues are better able than cancer cells to heal the radiation damage, and most of the normal tissues will recover.

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Due to improvements in treatment planning systems and treatment delivery, the side effects of radiation therapy have been reduced remarkably. However, some side effects still occur and can be categorised as Acute (short term) or Chronic (long term) side effects.

ACUTE SIDE EFFECTS (Short Term)

These are side effects that occur *during* the treatment course and usually take a few weeks to resolve after completion of treatment. At the beginning of the course you may notice little change, except perhaps, some fatigue. At about half way through and then increasing toward the end, the acute side effects may appear. These include fatigue, skin reactions and pains in your breast.

Your treatment team will help you manage any side effects.

The peak of any reactions and/or 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.

COMMON ACUTE REACTIONS

Fatigue

General tiredness may occur during and after the treatment course. Some people may still be able to work and only take time off for the daily appointment, but others may find it too tiring and prefer to stay at home. Also, you may be more emotional than usual and wish to call on family and friends to help during this time.

Advice to help combat fatigue includes:

- It is recommended that you keep up your fluid intake while on treatment (1.5-2L a day).
- We recommend you maintain a well-balanced diet
- Mild exercise e.g. walking for 30 minutes three times per week has been shown to be beneficial in dealing with the fatigue associated with radiation therapy. Generally you can carry on your usual level of activity, however, it is important that you listen to your body and do not over exert yourself if fatigue is an issue.
- Getting plenty of rest each day facilitates the normal body tissues to recover on a daily basis from the effects of the radiation therapy.

Skin reddening and irritation within the treatment area

Skin in the area of treatment may pinken or darken as you go through the treatment course. Some people also find the skin becomes irritated or rashy. The timing of the skin changes depends on the course of treatment prescribed, but commonly slight reddening occurs by the second week of treatment. The skin becomes increasingly red towards the end of treatment, with the peak of the reaction occurring 7-14 days after the completion of treatment.

However, experience of a skin reaction should be minimal due to advancing techniques and care. Your treatment team will be able to advise you on where these skin reactions are likely to occur.

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The use of Mepitel film (a thin silicone dressing) can help reduce skin reddening and irritation within the treatment area by preventing friction. This film will be applied on one of your initial days of treatment and reapplied as required throughout your treatment. You are able to shower and bathe as normal with this dressing in place, though the nursing or treatment team will give advice how best to care for this area.

Advice to help combat skin reactions includes:

- When washing in the treatment area, use warm water, avoid scrubbing, and pat dry. You may use any mild soap such as Dove Extra Sensitive or Simple Soap.
- If mepitel is in place, keep your back to the shower, do not submerge the area in water. More advice can be given when the dressing is applied.
- Do not apply heating or cooling devices in the treatment area. This includes: heating pads, hot water bottles, ice packs, hairdryers, etc.
- It is recommended that you avoid wet shaving/waxing hair under the arm on the treatment side during the course of treatment and until any skin reaction has completely settled. You may use an electric razor.
- Avoid hot pools while on treatment and until any skin reaction has completely healed. Discuss swimming in salt or chlorinated water with your Oncologist, as this may be determined on an individual basis.
- Be aware of the clothing you wear over the treatment area. Loose fitting, soft, cotton clothing is recommended. Underwire bras are not recommended, use a soft cup bra and go without as much as possible. Try to keep the treatment area protected from the sun and wind. However, **do not** apply sunblock to the treatment area while you are on treatment.
- Even after you have completed your treatments the irradiated skin will always be more sensitive to the sun, and therefore ongoing care is necessary. Anytime you are out in the sun, cover previously treated skin with a hat or clothing or apply a sunblock with a SPF of 30 or higher. Before applying sunscreen make sure skin is well healed from the radiation.

Inflammation and pain

- The treated area may be mildly swollen and tender.
- There may be aches and pains in the treatment area (often described as stabbing or shooting). Most patients feel minor twinges and do not require any pain medication, but paracetamol or panadol may be used when necessary. Please follow instructions on the pack if you choose to take pain medication.

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IF YOU ARE RECEIVING TREATMENT TO NODAL AREAS, YOU MAY ALSO EXPERIENCE

Hair loss

If the glands in the armpit are being treated this can cause a loss of hair in the armpit (sometimes this is permanent).

UNCOMMON ACUTE REACTIONS

Skin blistering or peeling

Very occasionally the skin in the armpit and or under the breast (if you have one) blisters. This is due to the rubbing of the skin in these areas. At this time, special creams or dressings may be required. Sometimes treatment may be interrupted to allow time for the skin to heal.

Nausea

Nausea is uncommon, but medication may be prescribed if it does occur.

CHRONIC SIDE EFFECTS (Long Term)

Most people return to 'normal' after completion of their treatment, but a few may experience some long-term side effects. Chronic side effects may arise many months or even years *after* the completion of radiation therapy. These side effects relate to the 'scarring' effects of the radiation therapy on normal tissues within the area of treatment.

COMMON CHRONIC REACTIONS

Skin changes

- Skin breakdown can occur. A district nurse referral may be required if you have had skin breakdown and require dressings. Your doctor or the nurses at ARO can arrange this should the need arise.
- Skin pigmentation can change temporarily.

Inflammation and pain

- Discomfort and sensitivity of the treated area. This usually settles with time.
- Swelling of the treated area (oedema). Mild swelling may persist for up to one year or more.
- Increased firmness of the breast/chestwall with variable change in shape or appearance.

If you are receiving treatment to nodal areas, you may also experience:

Lack of sweat from axilla region.

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UNCOMMON CHRONIC REACTIONS

Skin changes

The skin within the treatment field may appear darker) for a while. *Telangiectasia* may develop. These are tiny blood vessels under the skin that may become swollen. These can be unsightly but do not require treatment.

Lung Inflammation & scarring

The breast or chest wall is in front of the lungs therefore, a small volume of lung will be included in the treatment area in order to cover the entire breast.

- Inflammation (Pneumonitis) may present as a cough and shortness of breath 6 weeks – 6 months after the completion of radiation therapy. Pneumonitis can be treated with prescription medications and will settle.
- Scarring (fibrosis) can occur in the treated area. It may be visible on a chest x-ray, but does not give rise to symptoms

Heart

A breath hold technique can be used at ARO to help limit radiation exposure to the heart and lungs for patients with cancer of the left breast/chestwall. Through the use of current technology and treatment techniques, risk to the heart is kept to a minimum. There is a theoretical risk of damage to the heart muscle and vessels in the long term.

Rib fractures

There is a small risk (~1%) of developing rib fractures due to the weakening of these bones after radiation.

Second cancers

There is a theoretical risk of developing second cancers, usually many years after radiation. This is an extremely rare side effect (<1/1000).

IF YOU ARE RECEIVING TREATMENT TO NODAL AREAS, YOU MAY ALSO EXPERIENCE

Lymphoedema (swelling of the arm)

This may require advice from a specialist nurse regarding self-management with exercise, massage therapy and compression garments.

Brachial plexopathy

Damage to the nerves that control the arm and hand. This is rare. It may result in pain, numbness and weakness in the arm and hand.

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WEBSITES AND ORGANISATIONS OF INTEREST

Dove House: <https://www.dovehospice.org.nz>.

Located in Glendowie, Auckland. Offers a range of non medical therapies to support you through the challenges of living with a life threatening illness. All services are free of charge.

Breast Cancer Support: www.breastcancersupport.co.nz

Pinc and Steel: <https://www.pincandsteel.com>.

PINC & STEEL was founded on the basis of developing a world-class program for cancer survivorship, which is committed to supporting people affected by any type of cancer through all stages of their treatment and recovery. **Funding can be applied for.**