

# CT SCAN

Before you start your Radiation Therapy, a CT scan of your body in the treatment position is needed to plan your individualised treatment. Even if you have had other scans, this scan is required to plan your treatment in the correct treatment position.

Most treatment positions involve lying flat on your back, others with your arms above your head, and some lying on your front. The Radiation Therapists will determine a suitable position for the type of treatment you need. Various pieces of positioning equipment will be used.

Clothing needs to be removed around the area scanned (and during treatment), so most patients will be asked to change into a gown.

The Radiation Therapists will draw marks on your skin using a felt pen and take some measurements. All you need to do is find a relaxed position, keep still and breathe normally throughout the appointment.

To operate the CT scanner the Radiation Therapists go into a control room where they can see you throughout the scan. You will pass through the scanner several times as it takes x-ray images used to plan your treatment. Some people find it comfortable to close their eyes during this. No treatment is given at this time.

The felt pen marks on your skin are reference marks for your treatment which are in a different place for each person. It is beneficial to make small permanent dots at some of these points which will not wash off. We call these dots tattoos. A drop of ink is placed on your skin and a pin prick on the area makes the mark permanent. Most people find the dots small and barely noticeable (see photo – right). To assist us finding these marks at treatment and reproduce your position, photos are also taken including a face photo to help us identify you for treatment.

This appointment may take an hour or more. While at CT you may be given an appointment to start treatment, or you may be contacted later.

The CT images taken are used by the Radiation Oncologist to define the exact area to be treated and your individual treatment plan will be designed in consultation with the Radiation Therapists and checked by Medical Physics staff. This may take several hours or days depending on the complexity of your treatment plan.



# TREATMENT

## How long does treatment take?

Courses of treatment are individually prescribed by your Radiation Oncologist and vary with each patient. Treatment schedules can range from a single treatment to a course of treatments delivered five times a week for up to seven weeks or more.

Usually the first treatment appointment will take twenty minutes or longer. The

average time in the treatment room is about ten minutes. Some treatments take longer; your Radiation Therapists will let you know. The treatment itself takes only a few minutes – most of the time is spent accurately positioning you for treatment.

## Daily routine

When you come for treatment please bring your appointment card with you and report to Reception each day. Most patients will be asked to change into a gown for treatment, as for CT, because clothing needs to be kept clear of the treatment area. Baskets are provided to take your belongings with you to the treatment unit.

The Radiation Therapists will show you into the treatment room and position you on the treatment couch. All you need to do is find a relaxed position, and stay as still as possible throughout the appointment. Using the tattoos

(permanent dots) on your skin, the Radiation Therapists will move you to ensure you are in the correct treatment position and then position the treatment machine around you.

To deliver the treatment the Radiation Therapists leave the room for the short time the machine is on and watch you on closed circuit television. There is also an intercom for treatment staff to listen, or talk to you. During this time the machine will move around you to deliver your treatment. The radiation switches off automatically after your prescribed dose has been given. If required, the treatment machines can easily be switched off at any time.

It is normal to feel a bit anxious about the machines. Just try to relax. Remember the Medical Physics Staff and the Radiation Therapists regularly check the machines to ensure they are working accurately.



# HEAD & NECK TREATMENT

If you need to have treatment to the head or neck area you may need a plastic shell (mask) to support your head for accurate positioning during your CT and treatment. Your doctor will inform you if you need a shell.

To make the shell, a soft, warm plastic netting will be gently moulded around your head and neck area. After about 3 to 5 minutes the plastic netting hardens and forms a permanent shape that accurately supports your head. The mask is lifted off your head and re-used each day for treatment.

At treatment the mask is gently placed on your head and clipped to the treatment bed to help you maintain the same position for each treatment. Depending on your treatment plan you will need to wear the mask for between 5 to 20 minutes each day. The mask needs to be a snug, firm fit to help you maintain your position. At first it may feel uncomfortable however it does soften slightly and warm up from contact with your skin.



# SIDE EFFECTS

Side effects are not troublesome to everyone receiving Radiation Therapy. Often medication can be given to lessen any side effects. Your Radiation Oncologist will fully discuss with you any expected side effects before you are asked to consent to treatment.

Fatigue or tiredness is one of the most common; other side effects depend on the area of the body treated and the amount of radiation given. **You will receive side effect leaflets specific to the area of treatment from the radiation therapists or oncology nurses** to help you deal with any expected short term side effects from your treatment.

Radiation Therapy destroys tumour cells, but it may also damage normal cells in the treatment area. Injury to normal cells can produce a variety of side effects that can be divided into two categories – Short Term and Long Term. Short Term side effects begin during a course of Radiation Therapy and may peak one or two weeks after treatment is complete; however a few weeks after treatment these side effects should have settled. There is a small chance of Long Term side effects. These could begin months or years after a course of Radiation Therapy. Your Radiation Oncologist will discuss these with you before you consent to treatment.

While you are attending treatment the Radiation Therapists will ask you whether you are experiencing any side effects and refer you to the Oncology Nurses if necessary. Should you have any problems whatsoever, please tell your Radiation Therapists, Radiation Oncologist, Registrar, or Oncology Nurses – they are here to help. For conditions that aren't related to Radiation Therapy you will be referred back to your GP.

## Skin changes

During Radiation Therapy some of the radiation dose is absorbed by the skin in the treatment area and this may result in temporary skin reactions of varying intensity. However, many patients will not develop any noticeable skin reaction.

Skin in body folds and creases within the treatment area (e.g. under breasts, arms and between buttocks) is more likely to show a skin reaction. Reactions that can occur in the treatment area include itchiness, redness, dry or moist peeling of the skin. Hair loss from Radiation Therapy occurs only in the treatment area and may be noticeable for some patients.

Timing of skin reactions is variable. Most commonly they begin 10-14 days after starting treatment and may become more noticeable before subsiding within 4-8 weeks of completing treatment. It is important that you follow the instructions given to you from the start of treatment. The Radiation Therapists and nursing staff will monitor your skin during your treatment course so that advice and treatment can be given. Most skin reactions will improve rapidly following completion of treatment.

# APPOINTMENTS

As so many people come to the Oncology Centre for treatment each day we ask that you arrive on time for your appointment, even if you may sometimes have to wait for your treatment. Every effort will be made to give you a convenient treatment time; however this is not always possible because many other patients need treatment each day.

A course of Radiation Therapy needs to be delivered over a set period of time so unplanned breaks in treatment, other than weekends, need to be avoided. **You need to attend all the appointments prescribed by your Radiation Oncologist. If you are unable to attend your appointment for any reason, or are having problems regarding your treatment, please contact the Department as soon as possible.**

## Treatment Reviews

Most people will see their Radiation Oncologist or Registrar to review progress while on treatment. Appointments will be made for you, however, please do not wait for this time to ask questions or mention problems – your Radiation Therapists or Oncology Nurses are available every day to help and offer advice.

Please ensure that your Radiation Oncologist is aware of all medications that you are taking. If you are on any anti-nausea and or pain relieving medications, we advise that you bring these in with you for each appointment in case you require them.

## Who will be involved with my treatment?

The staff consists of experts working together to provide you with the best possible treatment and care.

## Radiation Oncologists:

Doctors who specialise in the use of radiation for the treatment of tumours. They are responsible for your overall medical care during this phase of your care and prescribe your treatment plan.

## Registrars:

Qualified Doctors working alongside the Radiation Oncologist sharing the care and management of your treatment.

## Radiation Therapists:

Specially trained staff who plan and deliver your radiation treatment. They will see you throughout your course of your treatment.

## Oncology Nurses:

Registered nurses working within Radiation Therapy who have specialised training in the care of patients receiving Radiation Therapy. The nurses are responsible for nursing assessments and ongoing management of side effects.

## Physicists:

Scientists who are responsible for dose measurements, radiation safety, and helping with the treatment planning of patients. These people are not always visible as members of the team, but work behind the scenes to ensure the accuracy of your treatment.

## Students (Radiation Therapists, Nurses and occasionally Medical Students):

All Students in training are fully supervised. You will be asked if you consent to students participating in your care and they are obliged to introduce themselves to you. You have the right to decide whether or not you wish students to be involved. A refusal will not compromise your care. Students may be involved in the planning and delivery of your treatment.

## What do I do if I'm worried?

Throughout your investigations and treatment it is not unusual to feel concerned, anxious or upset. Reactions differ from one person to another. If your feelings are too much for you, please talk to the treatment staff. There are many people in the department who may be able to help and support you, for example a Psychologist, Specialist Nurses, Social Worker, the Chaplain, Kai Atawhai (Maori Health Services). If you would like to contact a particular person, please ask staff.

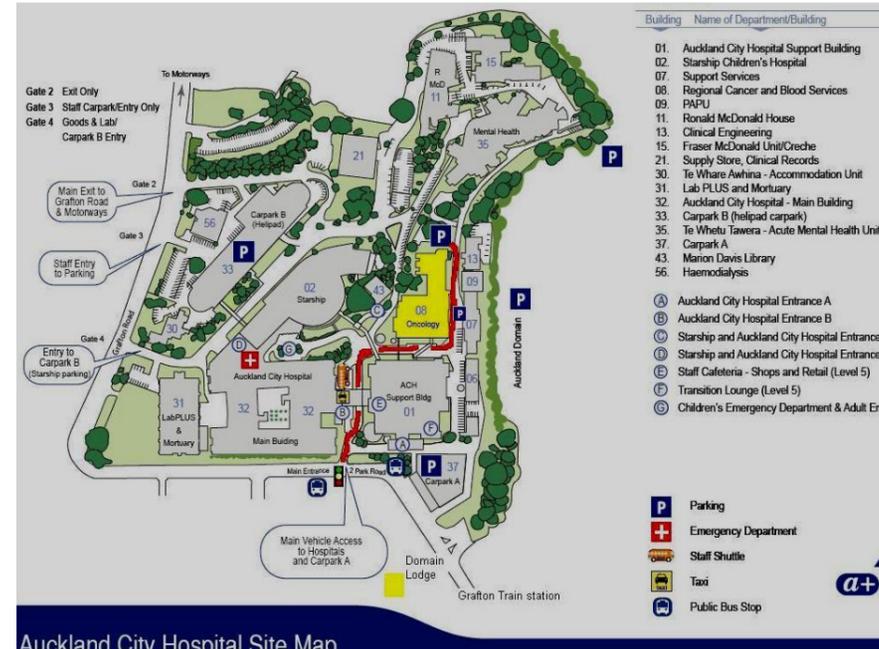
**Cancer Society: The Cancer Society provide a variety of support services. They operate a toll-free information service 0800-226-237, Monday to Friday between 8.00-5.00.**

# VISITING

The Radiation Therapy department is located at **Auckland City Hospital, Park Road, Grafton, Building 8 (Regional Cancer and Blood Services - see map below) on Level 4.** The building is an orange brick building behind the main hospital buildings. **The main entrance is opposite Buildings 7 and 9.**



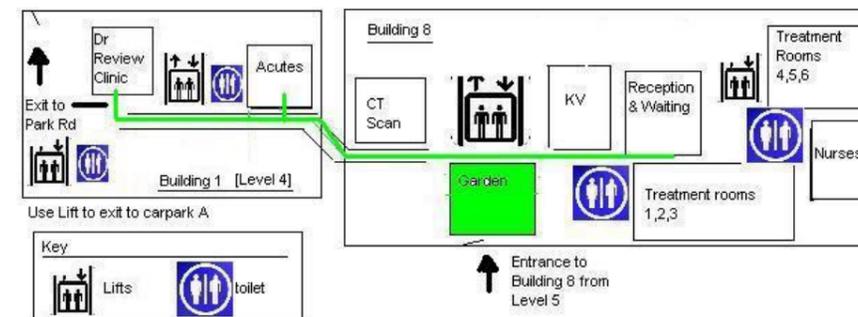
**Parking** is difficult at the hospital. Limited parking is available for patients in the designated 'Oncology' spaces outside Building 8, and just after Building 8 (see map below). Please ensure you get a parking permit from our Reception and allow extra time to find a park. Alternatively, Carparks A and B (37, 33 below) are available at an hourly rate or you can park in the Auckland Domain, this is free but the time limit is monitored by Auckland City Council.



## Auckland City Hospital Site Map

Several buses, including the Inner Link Bus, stop outside building 1 of the hospital. The Grafton train station is 500m from the hospital. **You can also enter the department from Building 1 – on level 4.**

Follow the Green Line on the floor to the department. **Map of Radiation Therapy Department:**



## What happens after treatment is finished?

After treatment is complete, regular check-ups are important to monitor the effectiveness of treatment and to deal with any problems you may have. You may be asked to return to the hospital for one or more visits to see your Radiation Oncologist or you may be discharged to the care of the specialist or department who referred you. The doctor who referred you to the Oncology Centre and your GP will receive a complete report on your treatment and follow-up care.

Regular check-ups will continue as long as your Radiation Oncologist considers necessary. As time passes your appointments will probably become less frequent. However, if you have any concerns or worries relating to your treatment between appointments, contact the Department to arrange an earlier visit. Your GP will continue to provide for your health needs and can refer you to this Department if necessary.

**Radiation Therapy Department, Ph (09) 307 49 49 ext 22631**  
Typical Hours Mon-Fri: 7.30am – 9.30pm  
Further information: see our ADHB website [www.adhb.health.nz/our-services/a-z-services/radiation-therapy/](http://www.adhb.health.nz/our-services/a-z-services/radiation-therapy/)

# RADIATION THERAPY AUCKLAND CITY HOSPITAL



## What is Radiation Therapy?

Radiation Therapy is the use of radiation to treat cancer and some non-malignant growths. A machine, called a linear accelerator, is used to deliver the treatment. It is a localised treatment and is painless. The treatment does not make you radioactive, so it is perfectly safe for you to be with other people, including children and pets, immediately after treatment.

## How does Radiation Therapy work?

Radiation Therapy is directed to a localised area of the body and has a biological effect on cells within its reach. A dose of radiation is given at each treatment. Cells are very sensitive to damage when they are about to divide. Since the major function of a tumour cell is to divide (reproduce), then more of these cells are susceptible to damage than the normal cells in the treatment area. Careful treatment planning minimises the dose delivered to the normal cells.

## Why is Radiation Therapy used?

Tumours can be treated by Surgery, Chemotherapy, Hormone Therapy, Radiation Therapy, or a combination of some or all of these treatments. Treatment options depend on the type of tumour and its stage. Radiation Therapy is also used to treat microscopic disease after a tumour has been removed. It can also be used in palliative care to manage cancer symptoms such as pain.

## What happens first?

After referral to the Oncology Centre by your GP, surgeon or other specialist, you will be given an appointment to meet your Radiation Oncologist. This first appointment is an assessment clinic and can take an hour or longer. Several steps are necessary to plan your Radiation Therapy, beginning with a review of your clinical history, a physical examination and results of tests.

After you have been assessed, your Radiation Oncologist will discuss with you the benefits and possible short and long-term effects of treatment. You will be asked to sign a form agreeing to proceed with treatment. After this initial visit you will be given an appointment for a CT scan and/or further tests. No treatment will be given at this appointment.

## Pregnancy

For women of childbearing age, it is strongly recommended that you do not become pregnant while receiving Radiation Therapy. Please discuss this issue with your Radiation Oncologist.

## Pacemaker

If you have a pacemaker please advise your Radiation Oncologist or Radiation Therapist before starting your CT scan.

**We are aware this is a new experience for you. The staff will do all they can to explain each phase of your treatment as it progresses. Additional advice and relevant information sheets specific to the site being treated will be given to you by the staff as appropriate.**

