

# Radiation Oncology and Patient Information

## Our Service

Calvary Mater Newcastle's Department of Radiation Oncology provides services for the assessment and management of oncological problems and the delivery of high quality radiation therapy treatment.

The Department of Radiation Oncology is a fully equipped treatment centre, currently housing

- 5 linear accelerators,
- Patient Management Record and Verify System,
- 1 remote afterloading high dose rate brachytherapy unit,
- Superficial/orthovoltage unit,
- 2 large bore CT simulators,
- The Eclipse 3-D planning system with IMRT capability and respiratory gating.

The department is staffed by a multi disciplinary team of radiation oncologists (RO), radiation therapists (RT), radiation oncology medical physicists (ROMP), nursing, allied health, clerical and domestic services personnel.

We are also committed to the high quality ongoing teaching of Radiation Oncology registrars, Radiation Therapy Graduates undertaking their professional development year, Medical Physics registrars, Allied Health students, nursing students and medical students. At some stage during a course of radiation therapy treatment, these staff will be involved in the treatment of our patients.

Radiation Therapy treatment requires several steps:

- Initial consultation with a Radiation Oncology Staff Specialist
- CT simulation for localisation of the region to be treated
- Treatment planning
- Delivery of the treatment course and progress checks.
- Patients are referred by another medical officer.

Radiation Therapy treatment may be administered on an inpatient or outpatient basis. Treatment appointment times are made in advance and are subject to change. It is advisable to inform medical centre staff of any special requirements for travelling eg, community transport, at the time of the initial consultation. Once treatment appointments are made, it is very difficult to alter them.

Calvary Mater Newcastle has limited accommodation for radiation therapy patients who live some distance from Newcastle, however, please be aware that accommodation at the hospital is limited and bookings are essential. All accommodation requests are assessed by a team of social workers and nurses.

Calvary Mater Newcastle also has limited car parking spaces available for patients receiving radiation therapy. Please click on the following link to access information about current parking conditions. Car parking keys for the Platt Street car park are issued to radiation oncology patients on a needs basis.

Radiation therapy is a high quality individualized treatment for patients with cancer. All patients are given information before, during and at the completion of treatment explaining what the treatment entails, skin care and possible side effects etc.

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## Your Treatment Plan

### Planning

Patients requiring radiation therapy treatment undergo a planning phase where the treatment is individualized for their specific disease. This planning phase involves a CT scan where the position for treatment is determined. Each cancer site has different needs and the radiation therapists are trained to determine the most appropriate position for that site. Occasionally, ancillary equipment is required for the treatment and this is organized on the day. Reference marks are placed on the skin, and in many instances patients will require one, two or three small tattoos (pin head size) to define this reference.

Some patients, particularly those requiring treatment to the head and neck area, will require a personal, plastic cast of this region to help them keep still during treatment and onto which the treatment marks are drawn.

This planning procedure can take from 15 to 90 minutes, depending on the individual patient. Patients attending the planning phase may eat/drink as normal (unless informed otherwise). An education session is usually given after the planning CT. This session discusses side effects etc and allows the patient to mention any issues they may have. Referrals to other allied health professionals can take place during this session.

At the completion of the planning CT, the patient is given an appointment for the Day One (1) commencement of treatment. The information from the CT is transferred to the treatment planning system. The Radiation Oncologist prescribes a course of radiation therapy treatment. The Radiation Oncologists and Radiation Therapists work closely together to produce an optimized treatment plan which is transferred to the Linear Accelerator Record and Verify System ready for the delivery of treatment.

### Treatment

Treatment is given with the patient laying in the same position as the planning procedure. On Day One (1) of treatment, patients are asked to arrive 20 minutes earlier to have a refresher education session. On this day and throughout the treatment course, measurements from the treatment plan are checked. Radiation Therapists, when setting up the patient for treatment, will often call out numbers, instructions and discuss measurements amongst themselves. As well, some digital xrays are taken. These are used to verify the treatment which has been prescribed by the Radiation Oncologist. These xrays and measurements can occur at any time throughout the treatment.

Due to the design of the treatment rooms and bunkers, relatives and friends are generally unable to watch the treatment. Patients are monitored via closed circuit television cameras and a microphone sound system. All patients are encouraged to mention any problems they may be experiencing during the treatment to the Radiation Therapists.

Patients will be given their appointment schedule which is for the duration of their treatment course. These appointments are subject to change and any changes will be notified in writing by the Radiation Therapists. All patients are reviewed during their treatment course by their staff specialist or registrar. These review appointments are made to coincide with the linear accelerator treatment time and Radiation Oncologist review clinic times.

Patients will also see the nursing staff regularly throughout their treatment to monitor their progress and also any issues such as side effects from the treatment.

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Some patients receiving treatment to large areas, especially in the region of the chest or abdomen, may require medication prior to treatment for the relief of nausea. The radiation oncologist will prescribe as necessary.

The department encourages the professional development of all staff members and the education of students in related disciplines. Much research is undertaken in the department and patients are often approached to participate in suitable clinical trials. The patient is also able to enquire if there are any trials they may be able to participate in.

On completion of the course of radiation therapy treatment, the patient is given advice on management of any side effects and an appointment for follow up – either back to the referring doctor or the treating Radiation Oncologist. Follow up appointments are held in the Medical Centre on Level 3.

### Your Treatment

Some patients will be sent for a CT scan sometime before attending the simulator. The CT scan will assist the doctor in planning treatment. Patients attending the simulator may eat/drink as normal.

Simulation to produce a plan for treatment prescribed by a radiation oncologist, is performed by radiation therapists and can take from 15 to 90 minutes, depending on the individual patient. Some patients, particularly those requiring treatment to the head and neck area, will have a personal, perspex mould made to help them keep still during treatment and onto which the treatment marks are drawn.

This is a simple procedure, taking up to 20 minutes, performed by radiation therapists in the mould room. It is done either on the same day at the first visit or at another convenient time. A further appointment for the simulator will then be required to complete planning before an appointment for treatment can be given.

### Treatment

Patients are allotted a specific treatment time which usually remains the same over the entire treatment.

Patients receiving treatment to large areas, especially in the region of the chest or stomach, may require medication prior to treatment for the relief of nausea. The radiation oncologist will prescribe as necessary.

All patients are advised to avoid washing the treated area with hot water or soaps. More detailed skin care advice is given verbally and in leaflets. Nursing procedures also cover skin care in detail. Dietary advice is given, where necessary, by a dietitian. Referrals to other Clinical Support Services e.g. Social Work and Physiotherapy are made as required.

Medical records should accompany ward patients to treatment. An escort should attend if an intravenous infusion is in process or the patient requires constant attention.

During the registration of a patient a separate record (flimsy) is produced containing diagnostic reports and radiation therapy information. This flimsy is located in radiation oncology.

The irradiation of blood products requires Blood Bank to organise a suitable time with the radiation therapist on the treatment machine. A "product for irradiation" form is necessary with donation number, product type, quantity and dose received being documented. Following irradiation each

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package is labelled with the dose received, date of irradiation and the signature of the radiation therapist. Also required on the request form is the patient, ward and the hospital of the recipient, if known.

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