Radiation Therapy Optimising Quality of Life in the Palliative Cancer Patient

Approximately half of all cancer patients receive radiotherapy at some point during their illness.

Radiation Therapy is seen as an important component of treatment of many cancers in many stages of disease presentation. Regarded for too long as a somewhat uninteresting highly technical speciality, radiation oncology (radiation therapy/radiotherapy) has in recent times developed into an exciting and rapidly moving medical speciality, with fascinating links to multidisciplinary areas of surgical, medical and haematological oncology. At Adelaide Radiotherapy Centre many of our patients are served by a multidisciplinary approach in which the radiation oncologist plays a key role in both the radical and palliative care of cancer patients.
Perhaps more than any other speciality, cancer medicine moves ahead at alarming speed. Whilst accepting that change is not always tantamount to progress, the technical, academic and clinical advances seen over the past few years in radiation oncology have certainly improved patient management.

This improved patient management, coupled with better systemic therapy has seen a substantial reduction in cancer deaths; patients with advanced disease are also living longer seeing the management of toxicity and quality of life as extremely relevant and important treatment care targets and outcomes.

**Palliative Radiation Therapy – Influencing and Improving Patient Outcomes**

Adelaide Radiotherapy Centre’s palliative radiation therapy protocols now utilise the high precision and technology tools traditionally applied in the curative patient setting. Using a conformal planning and treatment approach, the total dose and dose per fraction are precisely defined and targeted enabling improved coverage of our target volume whilst significantly sparing adjacent healthy tissue; reducing side effects and co morbidities. These methods are very effective in addressing tumour control and symptom relief and are delivered efficiently to better simplify the patient journey, minimise treatment times, side effects and with added benefit of effective tumour response and pain control.

The new palliative care radiation therapy program can be delivered with least inconvenience to the patient and their families. Our **Rapid Response Palliative Radiation Therapy Referral** program offers a service whereby patients can see one of our Radiation Oncologists and start their active treatment on the same day. It also has the added benefit of better enabling radiation therapy re-treatment options in instances of persistent disease and clinical recurrence.

**When is Palliative Radiation Therapy Used?**

Palliative Radiation Therapy is used for various reasons including:

- Relief of cancer bone pain
- Treatment of spinal cord compression
- Shrink a tumour to relieve pressure or a blockage
- Treat symptoms of cancer in the brain
- Treat symptoms of cancer in the lungs
- Control ulcerating tumours and reduce bleeding
- Treat a blood vessel blockage called SVCO
- Utilising a high dose stereotactic approach with Stereotactic Ablative Body Radiotherapy (SABR) and Stereotactic Radiosurgery (SRS) to control lung and brain metastases.

**Diagram 1** demonstrates two examples of Radiation Therapy dose plots for a patient presenting with a Metastatic T Spine Prostate Cancer Diagnosis. On the left is the previously used 2D Radiation Therapy against the more dose effective and side effect reduced 3D conformal radiotherapy on the right.

**Some Supporting Evidence**

- Breast cancer patients with metastatic disease are living longer with a median survival exceeding 2 years, but can approach many years depending on receptor status and location of metastases (bone only versus visceral) Ref: Sundquist, Kamor, Sweden EBCC 2011
- Colo-Rectal cancer patients with metastatic disease have a median survival approaching 2 years Ref: NO16966 trial BJC 2011
- Prostate cancer patients with metastatic disease have a median survival approaching 6 years Ref: INT0162 New Engl J Med 2013
- Lung cancer patients with metastatic disease have 1 year survival exceeding 30% Ref: Fosella JCO 2000

**Contact Information**

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