

William Buckland Radiation Oncology (WBRO) has continued research efforts in radiation oncology medical physics, clinical trials, image-guided radiation treatment/stereotactic techniques, and in specific tumours such as those of the CNS, breast, prostate, head and neck. WBRO has an outstanding dataset containing patient, disease, treatment and outcome details of all patients treated over the 18-year history of the centre, which acts as a resource for reviews of outcomes for specific subsets of patients. This scientific effort has led to consistent and ongoing modifications in the way in which we treat our patients, applying radiation research to the radiation 'bedside'.

## Highlights

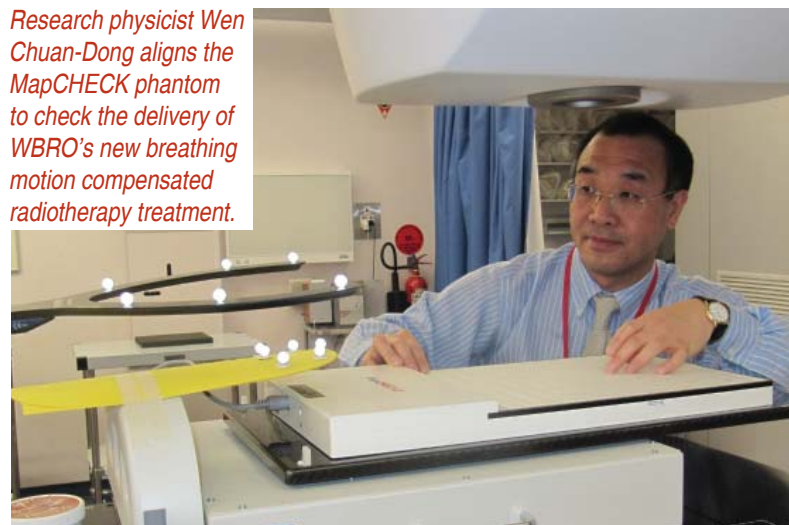
- WBRO staff were chief investigators in a number of collaborative research projects awarded almost a million dollars in NHMRC and Victorian Cancer Agency grants in 2010
- Ryan Smith received a conference grant from RMIT University to attend the 11th Workshop on Electronic Portal Imaging in Belgium
- Joanne Brooker submitted her PhD thesis on quality of life outcomes among acoustic neuroma patients
- WBRO fulfilled the requirements to become a European Organisation for Research and Treatment of Cancer (EORTC) accredited radiation oncology department
- WBRO was accepted to participate in the Trans Tasman Radiation Oncology Group (TROG) Assessment of New Radiation Oncology Technology and Treatments (ANROTAT) project
- Development of the Surveillance Therapy Against Radical Treatment (START) trial in Australia

## Current Projects

- Scatter measurements with intensity modulated radiotherapy treatments (J Ruben)
- Factors to be used with IAEA TRS398 for low kilovoltage x-rays (T Ackerly)
- Synchrotron microbeam radiation therapy (J Crosbie)
- Glioblastoma multiforme patient treatments and outcomes June 2005-June 2006 (A Shorthouse)
- Primary chemotherapy with temozolomide versus radiotherapy in patients with low grade gliomas after stratification for genetic 1p loss: a Phase 3 study (J Ruben)
- Whole brain radiotherapy following local treatment of intracranial metastases of melanoma – a randomised Phase 3 trial (J Ruben)
- Neurocognitive function in AVM patients (M Dally)
- Stereotactic radiosurgery for treatment of Cushing's disease (L Wein, M Dally)
- A long-term outcome for glomus jugulare tumours treated with radiotherapy at one institution (R Limb, M Dally)
- PRIME Phase 2 – Scottish Breast Cancer Trials Group: post-operative radiotherapy in minimum-risk elderly (K Taylor)
- Phase 3 study of radiation doses and fractionation schedules in non-low risk ductal carcinoma *in situ* of the breast (K Taylor)
- Breast bolus: can 2mm bolus for the whole course replace the use of 5mm bolus for two regimes? (K Taylor)
- POST – post-operative concurrent chemo-radiotherapy versus post-operative radiotherapy in high-risk cutaneous squamous cell carcinoma of the head and neck (S Davis)

- RadioHum – radiotherapy with humidification in head and neck cancer (S Davis)
- Oropharyngeal SCC treated with radiotherapy: a 16-year experience at WBRO (N Haghghi, S Davis)
- TOAD – a collaborative randomised Phase 3 trial: the timing of intervention with androgen deprivation in prostate cancer patients with a rising prostate specific antigen (J Millar)
- Improving treatment with permanent <sup>125</sup>Iodine seed implants for prostate cancer using dosimetry with either fused CT/MR images or fused CT/US images (R Smith)
- Development of a population-based prostate cancer clinical registry (J Millar)
- RAVES – a Phase 3 multicentre randomised trial comparing adjuvant radiotherapy with early salvage radiotherapy in patients with positive margins or extraprostatic disease following radical prostatectomy (B Matheson)
- Outcomes after 'top up' in men implanted with radioactive iodine seeds for the treatment of prostate cancer (S Miller)
- The protective role of physical activity against psychological distress in men undergoing androgen deprivation therapy for prostate cancer (K Chipperfield, R Smith, T Oh, J Millar)
- A Phase 3 international randomised trial of single versus multiple fractions for re-irradiation of painful bone metastases (B Matheson)
- PETACC-6 – preoperative chemoradiotherapy and postoperative chemotherapy with capecitabine and oxaliplatin versus capecitabine alone in locally advanced rectal cancer (J Shapiro, I Porter)
- Registry of Clinical Cancer Trials in Southern Melbourne enlarged to form the Victorian Cancer Trials Link (J Millar with DEPM)
- Quality of life in stage 1 seminomatous germ cell tumour patients treated with either adjuvant carboplatin chemotherapy, adjuvant radiotherapy, or high intensity chemotherapy (J Lewin, J Millar)
- Review of Alfred rectal cancer patients treated with radiation (A Tafreshi, L Kirszbaum, J Millar)
- Initial evaluation of the AlignRT surface imaging system (K Fox)

*Research physicist Wen Chuan-Dong aligns the MapCHECK phantom to check the delivery of WBRO's new breathing motion compensated radiotherapy treatment.*



## Postgraduate Students

1 PhD Student  
3 Masters Students

## Publications

8 Journal Articles