

Seminar update on radiation pneumonitis

A joint partnership between the Queensland Co-operative Oncology Group and the newly formed Queensland Cancer Physics Collaborative (QCPC) enabled a special meeting to be held last month with visiting overseas specialist, Dr Thomas Guerrero.

The topic of his presentation was radiation pneumonitis and the correlation of toxicity with pulmonary metabolic radiation response. Dr Guerrero, a Radiation Oncologist from University of Texas, MD Anderson Cancer Centre provided an informative presentation that was recorded by the QCPC to be added to their growing collection of on line

seminars that are accessible via their website.

“The combined meeting with the Queensland Cancer Physics Collaborative was a great success and provided an opportunity for the wide range of professionals involved in the delivery of radiation cancer services to come together and to share and exchange ideas”, commented the director of QCPC Dr Christian Langton.

“This forum is a perfect example of how the Collaborative can help to overcome professional and institutional barriers and enhance education and training for its members”.



L to R, Dr Liz Kenny, Dr Thomas Guerrero, Prof Christian Langton

For further information on the Queensland Cancer Physics Collaborative or to access seminars via the internet portal please contact jackie.honsigerlenburg@qut.edu.au

Shorter Radiation Treatment Times for Patients With Breast Cancer – The Evidence to Reduce Waiting Lists?

For patients having breast conserving surgery, post-operative radiation therapy is a vital component of therapy. It is well known that radiation to the breast significantly reduces the risk of breast cancer recurrence. The standard therapy in Australia and many other parts of the world has been 50 Gy in 25 fractions to the whole breast followed by a 10 – 16 Gy boost to the tumour bed. The rationale for using this regimen has been based on the fact that doses of 2 Gy per fraction are damaging to tumour cells yet are unlikely to cause adverse effects on normal cell, thus not leading to significant cosmetic deformity. However waiting lists for radiation therapy remain excessive in most centres across Queensland and indeed, in most places in the world.

The Canadians have been using hypofractionated courses of radiation therapy for breast cancer for decades, and it has also has been popular in the UK. The Canadians have published a randomised trial in 2002 showing that a regimen of 42.5 Gy in 16 fractions was equivalent to the standard regimen¹. Despite this trial many clinicians have been slow to change practice.

Now results from two UK based clinical trials have confirmed the results of the Canadian study. The Standardisation of Breast Radiotherapy (START) A Trial randomised patients to receive 50 Gy in 25 fractions versus either 41.6 Gy or 39 Gy in 13 fractions². The START B Trial randomised patients to receive 50 Gy in 25 fractions versus 40 Gy in 15 fractions³. More

than 2000 patients were enrolled in each trial. The endpoints included locoregional relapse and late toxicity. At a median follow-up of more than five years in both studies, there was no significant difference in locoregional recurrence or late toxicity. The results of these trials should encourage clinicians to offer their patients shorter regimens of radiation therapy as this may lead to improved quality of life, especially for patients from rural areas and help to reduce departmental waiting lists.

Assoc Prof Bryan Burmeister

References:

1. Whelan T, Mackenzie R, Julian J et al. J Natl Cancer Inst 2002; 94: 1143.
2. START Trialists' Group, Bentzen SM, Agrawal RK, et al. Lancet Oncol 2008; 9: 331.
3. START Trialists' Group, Bentzen SM, Agrawal RK, et al. Lancet 2008; 371: 1098.

Update from 2008 ASCO meeting

Progress in Breast Cancer

Prevention

A significant finding reported prior to the ASCO meeting was the analysis of 512 women treated at university hospitals in Toronto, Ontario. After a median follow-up of 11.6 years, researchers found that, compared with women who had normal levels of vitamin D at diagnosis, women with vitamin D deficiency were 94% more likely to experience metastasis and 73% more likely to die¹.

Another finding in the breast cancer field highlighted the increase in women undergoing mastectomies. Data from the Mayo Clinic Rochester identified 5464 women who received surgery for early breast cancer between 1997 and 2006. The percentage of women who opted for mastectomy declined from 45% in 1997 to 30% in 2003, but then rose to 43% in 2006². The researchers speculate that the increase in preoperative breast magnetic resonance imaging (MRI) could be responsible for the pattern that was observed.

Treatment

New research presented at the meeting that may affect clinical practice included a study from Austria on women with good risk HR+ breast cancer. The trial involved premenopausal women with early breast cancer randomised to goserelin and tamoxifen ± zoledronic acid or goserelin and anastrozole ± zoledronic acid for three years. The results show that zoledronic acid significantly reduced the risk for relapse by 36%³. Disease-free survival after five years showed 54 events in the zoledronic acid group vs 83 events in the other group, resulting in a hazard ratio of 0.64 and a *P* value of .015. Also it is important to note that there was no difference in survival between the women receiving anastrozole or tamoxifen.

Progress in Non-Small-Cell Lung Cancer

Two of the highlighted findings related to non-small-cell lung cancer (NSCLC). A phase three clinical trial of 663 patients with advanced NSCLC, all of whom received platinum-based induction therapy, showed that those who

received maintenance therapy with pemetrexed had twice the time to progression as those who received placebo without increases in additional side effects⁴.

A group from Toronto presented details of a 15-gene expression signature that appears to identify patients with more aggressive disease, who stand to gain the most benefit from chemotherapy. They maintained that this test is an independent prognostic marker in early-stage NSCLC by identifying patients who are likely to benefit from postoperative chemotherapy more selectively than disease stage⁵.

A study known as the FLEX trial included a total of 1125 patients and the results showed improved overall survival when cetuximab was added to a regimen of cisplatin and vinorelbine⁶. Patients on this combination survived for 11.3 months, compared with 10.1 months in the control group. (A cost/QALY of > AUD\$500,000)

PET in Early Lung Cancer

A Canadian academic and community based trial looked at the use of PET scanning in early-stage lung cancer to see whether or not a PET scanner could replace the conventional work-up in staging a patient. PET plus CT correctly upstaged 14% of patients, while conventional imaging correctly upstaged 7% of patients⁷. This spared them from undergoing stage-inappropriate surgery. Also, PET plus CT understaged 11% of patients, while conventional imaging understaged 30% of patients.

Progress in Melanoma

There was a high level of interest in two new drugs, ipilimumab and tremelimumab, monoclonal antibodies that interfere with the inhibitory marker CTLA-4.

Results from two different phase II trials of ipilimumab at the optimal dose of 10mg/kg showed that up to 50% to 75% of patients with metastatic melanoma were alive at one year^{8,9}.

The results of a pivotal phase III trial were reported for tremelimumab compared to standard chemotherapy (dacarbazine or temozolomide), in untreated metastatic melanoma¹⁰. Following a planned interim analysis the trial was halted early because there was no statistical difference in survival

between the two arms of therapy.

Preliminary results from early phase studies of axitinib, an antiangiogenic agent and MEK (mitogen-activated protein/extracellular signal-regulated kinase kinase) inhibitor (AZD6244) show promising clinical activity in melanoma.

Progress in Colorectal cancer

Another study that will affect clinical practice showed that genetics determines whether a patient will respond to cetuximab. In a new analysis of the CRYSTAL trial (FOLFIRI ± cetuximab), patients with newly diagnosed metastatic colorectal cancer were likely to respond to the drug only if their tumors contained the normal form (wild-type) of the gene KRAS¹¹. For patients with a KRAS wild-type tumour, the hazard ratio for progression-free survival was 0.68. About one third of patients with colorectal cancer are positive for KRAS mutations, and they are unlikely to benefit from cetuximab.

Progress in Renal Cancer

Everolimus, an orally administered inhibitor of the mTOR pathway, showed activity in patients with metastatic renal cancer who had progressed on prior treatments. A randomised phase II trial of everolimus vs placebo was undertaken in patients with metastatic renal cell cancer whose tumours had progressed on prior sunitinib and/or sorafenib tyrosine kinase inhibitor therapy. The trial was stopped early at the second interim analysis because of a benefit in progression-free survival for everolimus compared to placebo, with a hazard ratio of 0.30 resulting in a 70% reduction in the risk of progression or death¹².

Associate Professor Paul Mainwaring

References:

ASCO Proceedings –
J Clin Oncol 26: 2008 (May 20 Suppl)

1. Goodwin PJ, et al Abstract 511
2. Katipamula R et al Abstract 509
3. Gnant M et al Abstract LBA4
4. Zielinski C et al Abstract 8060
5. Tsao MS et al Abstract 7510
6. Pirker R et al Abstract 3
7. Maziak D et al Abstract 7502
8. Urba J et al Abstract 3018
9. Weber JS et al Abstract 9010
10. Ribas A et al Abstract LBA9011
11. Van Cutsem E et al Abstract 2
12. Jac J et al Abstract 5113

Queensland Cancer Registry

The Queensland Cancer Registry (QCR) was established in 1982 as a population-based cancer registry to collect information on all new cases of cancer and deaths from cancer that occurs each year in Queensland. Cancer is a notifiable disease in all Australian states and territories and is the only major disease category for which an almost complete coverage of incidence is available.

Cancer Council Queensland manages QCR under an agreement with Queensland Health. QCR operates under the Public Health Act 2005 whereby all public and private hospitals, nursing homes and pathology services in Queensland must provide cancer registrations. The QCR receives on an annual basis more than 120,000 notifications about cancer.

Use of the QCR information

Each year a 'Cancer in Queensland: Incidence and Mortality' report is released which provides a comprehensive summary of cancer incidence and mortality statistics in Queensland. The information is freely available via the Queensland Health website www.health.qld.gov.au/hic or the Cancer Council Queensland website www.cancerqld.org.au.

Information is also collected and used in the compilation of Australia-wide cancer statistics and interstate comparisons. Australian national cancer data to which the QCR contributes is included in the International Association of Cancer Registries publication 'Cancer in Five Continents'.

Release of information

The Queensland Cancer Registry data is also available to use for research into the causes, prevention and early detection of cancer and to track changes in the incidence and outcomes of cancer. Since January 2007 registry data has been provided for 22 new studies proposed by researchers from Queensland and Australia. This



data can range from full access to all information within the QCR to matching a list of known cancer patients to the data in the QCR database.

Recently, Cancer Council Queensland has obtained agreement from Queensland Health to full access to de-identified information from QCR. This agreement is a significant break through for Cancer Council Queensland and removes the need to make individual requests for this type of data. Cancer Council Queensland researchers can now readily use this information to document and analyse the patterns and trends of cancer incidence, survival and mortality in Queensland and to investigate geographical variations in cancer outcomes across the state. The results of this work will be available through published reports to the public, clinicians, government and other interested stakeholders.

A significant amount of work is also undertaken by the QCR to produce de-identified tabulated ad-hoc reports. Many of these reports are requested by various health professionals; however there have been an increasing number of requests from the general public.

For further information or requests for access to data in the Queensland Cancer Registry please contact KerrieDennison@cancerqld.org.au

**Kerrie Dennison
Registrar**

Epidemiology Update

The Epidemiology Unit at Cancer Council Queensland undertakes a range of research projects using routine data collected from the Queensland Cancer Registry and other populations-based sources. Recently they have released the Queensland Cancer Statistics Online website www.cancerqld.org.au/research/QCSOL.asp which provides access to graphs and tables showing cancer incidence, mortality and survival. The source of this data is the most recent statistics from the Queensland Cancer Registry for the most common cancers in Queensland. This website complements the series of descriptive reports on cancer in Queensland.

The most recent publication is a comprehensive description of lung cancer incidence, mortality, survival, prevalence and geographical variations in Queensland, utilising the most recent data available from the Queensland Cancer Registry. The report also included comparisons with Australian and international results where applicable, along with detailed information on recently published research into lung cancer epidemiology and the effects of smoking. Copies of the report are available either on-line at www.cancerqld.org.au/pdf/lung_report.pdf or in hard copy by contacting research@cancerqld.org.au. A similar report focusing on colorectal cancer is planned for release later this year.



Clinical trial activity in Qld continues to grow

Since the announcement by the State government in 2007 to provide funding to support cancer clinical trials for unfunded multicentre studies, the number of patients recruited into phase II and phase III study group protocols has steadily increased.

Cancer Council Queensland (CCQ) has provided grants for Data Management support to hospitals and research institutes in Queensland since 2000. The annual value of these grants has increased significantly every year and in 2006 reached the maximum budget allocation. Following many years of lobbying by Cancer Council Queensland, the Minister for Health announced in mid 2007 funding of \$1.86 million over three years to support the Data Manager grants administered by QCOG and CCQ.

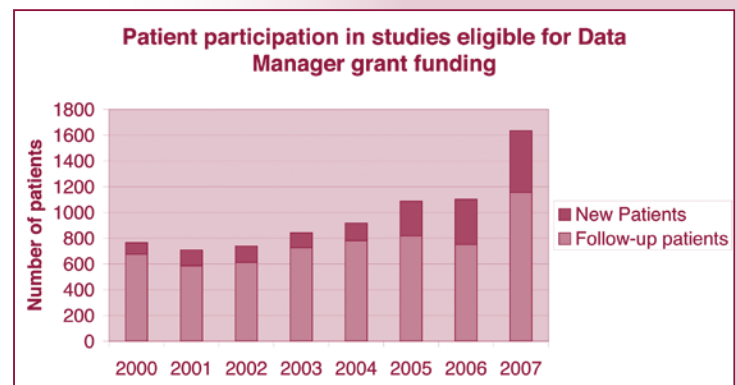
Eight new centres were funded in 2008 bringing the total number of centres receiving grants for data management support to 17, including four new centres that are establishing a cancer clinical trials program for the first time.

Results from a review of clinical trial activity undertaken earlier in the year indicates that over 1400 patients have been enrolled in clinical trial protocols or are undergoing active follow-up in Queensland centres. The highest patient numbers were enrolled in studies of breast cancer, followed by gynaecological, colorectal, prostate and paediatric cancers in decreasing

frequency. The mode of treatment under investigation in the majority of studies was evenly divided between chemotherapy, radiation therapy and surgical intervention.

Since the inception of the Data Manager Grant scheme in 2000 there has been a dramatic increase in clinical trial activity in those centres that have received funding as depicted in the graph below.

There is, however, opportunity for increased patient participation in cancer clinical trials. Further funding is available to support both new and existing centres that are involved in phase II and III, national or international multicentre studies endorsed by a recognised trials group. Copies of the application package can be obtained from the QCOG Professional Officer: qcog@cancerqld.org.au or (07) 3258 2306.



2008 Grant Recipients

Southern Zone Radiation - Mater Centre
Royal Children's Hospital
Wesley Research Institute
Holy Spirit Northside
Prince Charles Hospital
Gold Coast Hospital
Premion
Toowoomba Hospital
Toowoomba Regional Cancer Research Centre
Townsville Hospital

Princess Alexandra Hospital
– Radiation Oncology
– Haematology & Medical Oncology
– Surgery

Royal Brisbane & Women's Hospital
– Radiation Oncology
– Medical Oncology
– GynaeOncology
– Surgery

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