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Clinical trials: How consumers, clinicians and researchers can initiate and participate in the best cancer trials

Overview

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These are exciting times. The last 30 years have seen major reductions in mortality from breast cancer, childhood leukaemia and testis cancer heralding what is possible for other cancers. These improvements are a direct result of clinical trials establishing the benefits of mammographic screening, adjuvant therapy, and treatments for advanced cancer and improving their effectiveness. Changes in community attitudes to sun exposure, tobacco use, and diet should cause major reductions in skin, lung, and colorectal cancer cancers over the next 30 years. Despite these major advances, about a quarter of people in the Western world will die from cancer, and many more will be affected. Why are clinical trials crucial to improving our lot?

Recent, rapid advances in cell biology, genetics, drug development, radiation biology and physics, surgery, supportive care and diagnostics have resulted in a plethora of promising new interventions against cancer. These promising new interventions have to be tried, tested and proven before they can be adopted in clinical practice. The history of medical science shows that only a precious few will translate into real improvements. Clinical trials are the only reliable way of determining the safety, activity and benefit of these promising new interventions.

The theme of this series is 'How consumers, clinicians and researchers can initiate and participate in the best cancer trials'. Changes in the nature of scientific progress, government involvement, commercial interests, and regulatory requirements are forcing us all to rethink our roles in oncology research.

The authors were selected because of their involvement in innovative, successful projects with lessons that I thought were applicable beyond their particular area, to other areas of oncology and medicine. Authors were asked to focus on what was innovative and interesting for a general audience, and to highlight lessons applicable to cancer trials research in general. All authors made related presentations at the International Clinical Trials Symposium held at Darling Harbour, Sydney in 2002.

Alan Coates sets the scene by describing the benefits, beneficiaries and challenges of cancer clinical trials research. He concludes that cancer trials are a good buy for patients, doctors and society.

Sue Lockwood considers collaboration between consumers and clinician researchers using the example of breast cancer, and the effects of recent controversies surrounding hormone replacement therapy. She concludes with the suggestion that researchers provide a community information abstract, summarising the results of their studies for an informed lay audience.

Mark Rosenthal reflects on the strengths and innovations of the Victorian Centre for Developmental Cancer Therapeutics. The model has been so successful in cancer that it will be applied to neurological and cardiovascular diseases through the establishment of Clinical Trials Victoria, which recently received an $8 million grant from the Victorian Government.

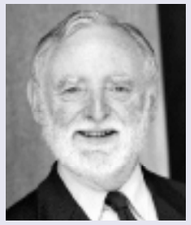
Nicholas Wilcken describes the opportunities and challenges associated with Australia's participation in HERA, a large international randomised trial of trastuzumab (Herceptin™). He concludes that studies like HERA raise new questions about how trials should be designed and conducted, and reinforce the need for conducting high quality clinical trials on which to base clinical practice.

Marie Malica describes the development of Cancer Trials NSW as a model for improving participation in and access to clinical trials. She emphasises the importance of collaboration, inclusion, consumer involvement and improving access and participation. She concludes that while much needs to be done, the future looks bright.

Leonie Young describes an innovative program to acknowledge the contributions of breast cancer trial participants by providing a network, education about breast cancer research and advocacy training. She concludes that increasing the community's awareness of the benefits of breast cancer trials will also help other areas.

Life is getting more complicated, but major improvements are on offer. Many have argued, in Australia and overseas, that increasing participation and access to high-quality cancer trials is the best way to improve outcomes for people affected by cancer. Getting cancer trials on the local political agenda may be our major battle in the war against cancer. Perseverance may be the key to helping more Australians survive the war.

Clinical trials: Benefits and challenges



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Clinical trials provide the evidence basis for rational decision-making in medical therapeutics. They provide benefits to participating patients, future patients, the community, third party payers (such as governments and private health insurers) and to participating clinical researchers.

Benefits

Patients participating in clinical trials receive treatment under rigorously defined, ethically scrutinised protocols. There is some evidence that such patients survive longer than similar patients treated with similar regimens outside trials[1]. While these assessments may be subject to bias, they may also reflect a better standard of care because of the clear guidelines and rigour of documentation required by the trial process. Interestingly, Joffe and Weeks recently noted and objected to the view of American oncologists (and especially paediatric oncologists) that benefit to the patient was a legitimate purpose of clinical trials[2]. Early access to new and more effective treatments is another potential benefit highly sought after by patients. Although many patients in phase I trials may receive ineffective low doses, Horng et al concluded that the consent forms used did not offer inappropriate inducements to trial participation[3]. Satisfaction of helping future patients is another, purely altruistic motive for trial participation.

Evidence from earlier trials is available to assist patients and their doctors in reaching treatment decisions. Such evidence includes benefits of treatment, side effects and impact of treatment on quality of life as judged by similar patients who have had similar treatment.

From the viewpoint of government and doctors, trials provide evidence to give security that the advice offered (and paid for) is appropriate, allowing preferential use of more efficacious, acceptable and economical treatment while (hopefully) discarding treatments shown to be ineffective.

Clinical discipline in the use of defined regimens, dose modifications and documentation may as noted above lead to better outcomes.

In short, trials tell us what works, such as screening for breast and bowel cancers, breast conserving surgery, adjuvant systemic therapy in breast cancer and bowel cancer, radiotherapy in breast, rectal cancers and chemo-radiotherapy for cancers of rectum, lung, head and neck, cervix and oesophagus. Trials also tell us what doesn't work. High dose methotrexate was once popular in many tumour types but comparative trials severely limited its applicability. An early attempt to justify government support for the costs of clinical trials as a good investment was based on this work. Laetrile was an "alternative" medication popular in the 1980s, and more recently we have seen the influence of clinical trials in reducing the use of high dose chemotherapy with stem cell support for breast cancer.

Challenges

Geography provides problems in multi-centre trials, especially if multiple time zones are involved, though modern communication is reducing this aspect of the problem.

Consumers reasonably want access to information about available trials, but apart from the United States, few countries provide reliable access to such information. Patient recruitment is highly variable, but generally low. There are many examples to support the claim that this is not due to patients being unwilling to participate, but rather to barriers at the doctor level[4].

Funding is a perennial problem – especially since research grants seldom cover the infrastructure costs of maintaining cooperative trials groups. Absence of such funding tends to deliver control of the agenda to those with money to pay for trials, largely the pharmaceutical industry, whose trials may be aimed more at commercial return from early registration of new agents rather than the broader approach to clinically important questions.

Consumer participation is important in trial design, conduct and interpretation. The Australian New Zealand Breast Cancer Trials Group for example has had consumer representation on its Scientific Advisory Committee for many years, and is also advised by a Consumer Advisory Panel.

So who benefits? Participating patients receive accurate treatment, and possibly better outcomes. Future patients have evidence to assist their decisions. Third party payers (government, private health insurers) gain knowledge about which treatments are effective, acceptable and cost-effective, while participating clinical researchers have the benefits of defined regimens, and benefit from early contact with new developments from other ongoing trials group research. Clinical trials are a good buy for patients, doctors and society.

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We've got a groovy thing goin' baby… or have we? Involving women in clinical trials

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Abstract

This paper explores how the number of women in clinical trials might be increased and the extent to which researchers, clinicians and women are jointly working to improve outcomes for women. It explores the issues from the perspective of women with breast cancer, but the arguments presented here are applicable to other diseases. It also considers the loss of trust in the research process that results from inappropriate promotion of results. The Women's Health Initiative trial is used as an example of how fear and loss of trust can ensue. Some mechanisms to improve trust are suggested, such as community information abstracts to complement the scientific information abstracts which are an integral part of every scientific paper.

Introduction

Women who have been diagnosed with breast cancer want the best possible treatment for themselves and other women with the disease. Clinical trials are an important mechanism for improving treatment outcomes, so women are very interested in the results of trials. Clinicians are also interested in improving outcomes through research. They also want better outcomes for their patients, but many of them are also interested in the intellectual challenges which research provides. Both women and clinicians have an interest in increasing the number of women in clinical trials.

Clinical trials have been very successful to date

In 2002, 84% of women diagnosed with breast cancer survived five years, whereas just 10 years ago this figure was 72%[1]. This is a great improvement, most of which is due to better detection and treatment. Much of the research providing these improvements has come from clinical trials.

But 30% of women diagnosed with breast cancer still die of it, and some of those who are cured suffer ongoing side-effects of their treatment, eg lymphoedema. It is therefore imperative that more work be done to improve outcomes. Both the effectiveness and safety of treatments must improve.

The only way to get improved outcomes faster is to increase the number of women participating in clinical trials. Greater numbers of women means faster results over a wider range of potential treatment options.

Encouraging more people to participate in clinical trials

The literature relating to encouraging patients to participate in clinical trials focuses on the fact that patients:

- don't understand the research process;
- find it difficult to deal with the concept of randomisation;
- feel that they are being used as guinea pigs; and, as a result
- may turn down the opportunity to participate in trials[2].

But there is another side to this litany of problems. Work done by the National Breast Cancer Centre surveying women who had been recently diagnosed and treated for breast cancer showed that most women were not invited to participate in a clinical trial. Only 6% of women were asked to participate, of these, half said yes. That is, 50% of women with whom a trial was discussed agreed to participate. So, while only 3% of women participated in trials, this was 50% of the women offered the chance to participate.

These figures indicate that the main problem is not with the women refusing to participate in a trial, but that so few women were asked in the first place. This experience is not unusual, and fits with data from other surveys[3,4].

But, where are the real impediments? Why aren't women being asked to be part of a clinical trial?

There are three options:

- more relevant trials;
- increased numbers of participants; and
- increased involvement of clinicians.

Perhaps there are too few trials. It is clear that there are many trials, but they all relate to areas of interest to research scientists and clinicians. Many of these are concerned with chemotherapy and different modes of delivering therapy. Although these are important questions, are they as important to women with breast cancer as they are to researchers? There are very few trials in radiotherapy and surgery and even fewer in the areas of psychosocial issues. The study of Australia's research into breast cancer which was carried out by the Kathleen Cunningham Foundation and the National Breast Cancer Centre entitled "Breast cancer research in Australia: current research and future priorities" demonstrated clearly that the views of women about what makes research projects worthwhile are very different from those of researchers or clinicians[5]. This situation will not have changed from 1996 when the study was done. So, there need to be more relevant trials. But relevant to whom - women, researchers, clinicians or all three parties?

Too few clinicians are involved in recruiting women to clinical trials. The actual numbers of clinicians involved with clinical trials in breast cancer is unknown in Australia. But it appears to be only a small proportion of the total number of specialists who are treating women with breast cancer. Overseas studies have shown that those specialists who are treating large numbers of women with breast cancer, or are working in larger specialty teams, are more likely to enrol women in trials[6]. It is hard to get the resources needed to support active involvement in clinical trials, most importantly access to data managers and study nurses. This may be the greatest barrier to more clinicians becoming involved. Perhaps the move to multidisciplinary teams and greater specialisation will lead to more clinicians offering women entry to clinical trials.

Perhaps recruitment will continue to depend on those few clinicians who have a direct interest in trials research. Some clinicians who are very supportive of clinical trials are able to recruit half their patients into trials[7]. Until more clinicians choose to become involved, it will be difficult to recruit increased numbers of women to participate in trials.

Despite the fact that so few women actually participate in clinical trials, larger numbers of Australian women are

recruited than in many other countries. The ANZ Breast Cancer Trials Group provides a focus for Australian involvement in both national and international trials. Australia has a significant involvement in international trials through its collaborations with the International Breast Cancer Study Group, the Breast International Group, and other international groups.

But perhaps there also needs to be some direct requests from the women themselves to participate in trials. This would encourage clinicians to become involved and encourage women to look for those clinicians who are interested in further research. The proposed national register of clinical trials and protocols will assist women to know what trials are available through different clinicians. This will be an effective tool to enable women to make their own choices about which trials might be of interest to them and approaching their clinicians to see if participation might be possible. This tool will only be effective if it includes consumer summaries. Similarly the New South Wales Directory of Breast Cancer Treatment and Services shows those clinicians who participate in trials. Again this gives women the option to choose clinicians who have an interest in improving practices through clinical trials.

It appears that many of these factors may be related. Trials that appear to be relevant to clinicians, researchers and participants are capable of attracting more recruits than those that are of interest to fewer participants.

Sentinel node biopsy trial in Australia: The SNAC trial

In 1998, women in Australia identified lymphoedema as one of the key problems facing women who have been treated for breast cancer. As a result of this concern, the National Breast Cancer Centre held a summit in Adelaide in February 2000. This included discussion of the need for more research in this area. At the same time, the Royal College of Surgeons in Australia was developing a proposal to conduct a clinical trial to ascertain the value of sentinel node biopsy in comparison with standard axillary clearance. It was possible to combine the two needs. One of the advantages of sentinel node biopsy is its potential to reduce the need for axillary clearance, and hopefully the incidence of lymphoedema. This trial has been enormously successful. It has encouraged surgeons to become actively involved in a clinical trial and has given them an opportunity to learn and perfect new techniques. Women find the trial of interest because it has the potential to reduce lymphoedema. It is also of interest to breast nurses, occupational therapists and physiotherapists.

To date, 478 women and 35 surgeons are participating in 26 centres[8]. This trial has recruited very quickly because it is of interest to all parties. It is a great example of how a trial can be successful if all those interested in the outcome get together, work up the proposal, arrange funding and help sell the concept.

So what can we learn?

From these experiences, we know some of the factors that encourage recruitment into clinical trials. They are:

- design win-win trials;
- use end points that are meaningful to participants;
- involve consumers in all aspects of trial design and management;
- educate and resource clinicians; and
- empower people – they are participants, not just subjects.

The other side of the coin – loss of trust

Asking individual women to participate in any sort of research is like asking them to take a leap into the unknown. Any new trial assumes, on the basis of the best evidence available, that the alternative treatment being offered is at least as good as current best practice, and offers a real prospect of improvement. But until the results of the trial are available, this is an assumption. It may be that the results of the trial do not show this, and it may be that the participants in the trial are actually at risk from some factor(s) that are not yet known. For this reason, consumer participation in research and clinical trials depends on trust. Women must be prepared to trust the researchers and clinicians to be offering them a new treatment that is, on balance, likely to work. But this trust is developed before the woman is ever diagnosed with breast cancer. It develops through years of experience, largely through stories in the media.

In 2002, a selection of research stories given prominence by the media were:

- breast self-examination doesn't work;
- breast screening doesn't work; and
- hormone replacement therapy (HRT) causes breast cancer.

These stories undermine the confidence the public has in the research community. These stories suggest that it doesn't matter what you do to try and find your breast cancer, that examining your breast is no good, and that if you go to the screening service, they won't find it either. So all the messages about finding breast cancer early – being the best way of avoiding dying from this disease – have been eroded by the work of research scientists. Similarly, the outrageous stories that were associated with the "increased risk of breast cancer because of the use of HRT" just infuriated women. HRT has been a "life-saver", physically and psychologially, for many women and now they find that their risk of breast cancer is supposedly so high that they will have to suffer in other areas of their life to avoid developing breast cancer. The views about the value of research were totally overwhelmed by the fear that was engendered in the community by the way in which the results were provided. This story came directly from the researchers and not from the media[9]. With stories such as these, trust is being eroded.

The research industry, like all industries, helps create its own image in the community. Some responsibility for the stories that appear in the media has to lie with the media. And the media, as a general rule, are not exactly careful to ensure that the complete picture is presented to the public. So it is easy to blame the media, but, if the HRT results are representative of the way in which research results are publicised, some responsibility must rest with the research community.

Nurturing trust

We all must be very careful to nurture the trust between the community at large and the research community. There are many ways of doing this. Here are some suggestions.

Community information abstracts

Each research paper has a scientific information abstract that describes, in a form of code, the results of the research in such a way that other researchers can understand the results. In the current world, many of the research results are of interest to the general public. It seems appropriate for community information abstracts to be provided for some key articles. These community information abstracts would be of use to many different groups as well as consumers of health services. Journalists, general practitioners, policy makers, and others would benefit from a simplified version of the abstract written in normal, ie not coded, language. Some journals, such as the Annals of Internal Medicine, are already undertaking such a task with excellent results. The abstracts are clear, standardised and give the results in language that most people in the community can understand.

Awards for excellence in communicating the results of trials

In many areas of science there are awards for excellence in the public communication of science. Every year in Australia, the Eureka Awards acknowledge the role played by scientists and the media in presenting science to the general community. Similar awards could be put in place for excellence in communicating the results of medical research and in particular, clinical trials.

The outcomes of clinical trials are of interest to many members of the community. They are not just the domain of clinicians and researchers. Consumers have a role in the development of trials which can attract many more participants. Consumers can encourage the recruitment of more women to trials and they can play an important role in the delivery of the results of research. Consumers can also play a role in improving the trust between researchers, clinicians and the community. Consumer participation in all aspects of clinical trials will provide better outcomes for everyone.

Conclusion

An effective partnership between researchers, clinicians and consumers will ensure that clinical trials are more relevant, more available, and that we get results sooner and achieve our mutual objective of improving outcomes for women.

Let's get a groovy thing goin' together… so that others may groove for longer.

This paper, and the talk it originated from, is dedicated to Fairlie Howard, a breast cancer consumer with a great interest in clinical trials, who died of her disease in October 2002. She will be remembered always.

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Maximising opportunities for clinical research: The Centre for Developmental Cancer Therapeutics

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Abstract

Clinical research provides laboratory scientists, translational scientists, clinicians and patients with the opportunity to participate in the evaluation of novel therapeutics. However, a significant proportion of clinicians interested in clinical research do not have the administrative wherewithal to conduct such studies. Novel approaches are required to facilitate and enhance clinical research in Australia. In Victoria, a new entity, Clinical Trials Victoria has been established based on the successful model of the Centre for Developmental Cancer Therapeutics, a collaborative cancer clinical research organisation.

Many oncologists seek opportunities to conduct clinical research. Clinical research and clinical trials provide intellectual stimulation, access to new therapies and additional options for their patients. Clinical trial medicine is usually conducted at the highest level of ethical and clinical care.

The effective conduct of clinical research requires substantial administrative effort. Interesting new therapeutics must be sought, protocols written, budgets agreed, contracts drawn up, standard operating procedures established, protocols and plain language statements submitted to ethics committees, adequate data management provided, adverse events reported and accrual achieved. Few Australian oncologists can perform such tasks in isolation. However, specialised administrative support can provide high levels of expertise in non-medical and non-scientific areas. Indeed, good clinical research infrastructure may provide basic scientists, translational scientists, clinicians and their patients with better access to novel therapeutics by establishing efficient, streamlined and successful organisations. Such abilities will be recognised by the pharmaceutical and biotechnology industries and will result in more opportunities to conduct clinical research.

The Centre for Developmental Cancer Therapeutics (CDCT) was formed in 1993 to provide a focus for cancer clinical research in Melbourne. Importantly, the CDCT aimed to establish a centralised administrative hub for its members in order to provide the specialised support detailed above. The CDCT is a collaboration between oncology units at four Melbourne hospitals (Austin and Repatriation Medical Centre, Peter MacCallum Cancer Institute, Royal Melbourne Hospital and Western Hospital) as well as the Walter and Eliza Hall Research Institute and the Ludwig Institute for Cancer Research. The six affiliates established an incorporated, not-for-profit company to conduct clinical research in cancer patients. It has over 120 members including scientists, clinicians, research nurses, data managers, research registrars and administrative staff. The CDCT clinical sites see over 2,500 new cancer patients per year, have conducted over 160 clinical trials, accrue 300 patients per year to the clinical trial program and have an international reputation, particularly in the field of early phase clinical trials. So much so that in 2002, Pharmacia contracted with the CDCT as one of only 10 "preferred providers" in the world to conduct early phase clinical trials of its products.

The CDCT has many strengths of which two will be highlighted. First, it is able to collaborate broadly across a range of disciplines and expertise. Thus, clinical trial design may include the use of functional imaging (PET scans) and translational bio-assays. Furthermore, members of the CDCT have a

broad range of interests including clinical trial design, sub-specialistation in specific tumor types and biologic interests including immunotherapy, angiogenesis and apoptosis. Thus, a pharmaceutical or biotechnology company can come to the CDCT knowing that it can provide broad expertise in pre-clinical data evaluation and clinical trial strategies, and might suggest some novel scientific or imaging approaches to "value–add" to the initial early phase trial. Furthermore, the CDCT members can highlight an effective road map for future clinical trial design in order that a novel therapeutic might find its way to market in a most efficient yet scientific manner.

A second strength of the CDCT is the administrative framework provided for its members. The CDCT has a Board of Management, a Scientific Advisory Board and regular meetings between all members. In addition, there are a number of subcommittees including those for bio-informatics and pharmacy. The CDCT has eight administrative staff including a manager, clinical trials team leader, ethics committee co-ordinators, project officers and an administrative assistant. More recently, the CDCT has appointed a half-time director. The clinical trials team leader is responsible for contracts, budgets, developing standard operating procedures and legal issues such as indemnity and insurance. The two project officers have played crucial roles in the development and co-ordination of Clinical Trials Victoria and a mutual acceptance program between four institutional ethics committees. The latter project is an attempt to streamline the process of ethics committee evaluation of multi-centre clinical trials.

The Victorian Government recognised that the CDCT provided a paradigm for a successful, collaborative clinical trials group with a "one-stop shop" approach providing a centralised administrative focus. As a result, $8 million was awarded in a competitive grant process to establish Clinical Trials Victoria (CTV). CTVs founding members are the CDCT (cancer), Neurosciences Victoria (neurosciences), Centre for Clinical Studies (cardiovascular and pharmacology) and Melbourne Health (multidisciplinary). The grant provides funding for infrastructure to the CDCT and CCS but more importantly establishes CTV. In the same fashion as CDCT, CTV is a not-for-profit, incorporated entity that will provide a "one-stop shop" for clinical researchers and clinical research groups in Victoria. In contrast to CDCT, which is entirely cancer-based, CTV will provide such support for any medical discipline and any therapeutic agent or device.

CTV will act as a service company for clinical researchers, providing clinical trial support, marketing, training and education, quality assurance, database management (bioinformatics), regulatory advice, legal and contractual support. CTV will establish strong links with sources of new therapeutics including the Victorian College of Pharmacy drug development program and Bio21, and will aggressively market Victoria as a site to conduct clinical research.

The degree to which a clinical researcher uses CTV clearly depends on experience. Thus a mature organisation such as the CDCT will mainly benefit from CTV providing a strong marketing of the CDCT at a national and international level. This will provide opportunities for the CDCT through new liaisons with pharmaceutical and biotechnology companies. In contrast, novice clinical researchers may seek assistance with protocol writing, statistical advice, contracts and the like. CTV will encourage new collaborations between clinical researchers and provide the necessary infrastructure to assist the conduct of clinical trials.

In conclusion, conducting clinical research with new therapeutics is an exciting, stimulating and rewarding component of an oncologist's work. Access to such opportunities is made significantly easier through collaborative networks and the provision of specialised administrative support. The CDCT is one successful example of such an organisation where the day-to-day administrative detail is taken out of the hands of clinical researchers, leaving them to focus on what they wish to do: clinical research.

The establishment of CTV moves this philosophy one step further. CTV will implement the CDCT paradigm for all clinical researchers whatever their medical speciality or area of interest. CTV will provide centralised administrative support to all clinical researchers, irrespective of their experience. As a consequence, clinical research in Victoria will become more streamlined, efficient and successful.

HERA – new lessons from a new trial

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The HERA trial is a large international randomised trial testing the efficacy of the new biological drug trastuzumab (Herceptin) in early breast cancer. HERA is being conducted in Australia by the Australian New Zealand Breast Cancer Trials Group in collaboration with the International Breast Cancer Study Group and the Breast International Group. This is the first time Australian centres have participated in a trial of a biological agent in the adjuvant setting and is an important learning opportunity for all those involved.

Background

HER2 (also known as erbB2 or neu) belongs to a family of receptors that are located on the surface of human cells, and when stimulated they transmit growth signals to the nucleus. In many cancers, these growth pathways become uncontrolled, contributing to cancer development or progression. For example, the receptor may mutate in a way that causes it to always be "switched on". In the case of HER2, about 15% of breast cancers have a gene amplification, so that too many receptors are expressed (and activated) on the cell surface. Cancer cell activity thus increases and "HER2 positive" breast cancers have a worse prognosis than "HER2 negative" breast cancers.

However, determining the HER2 status of tumours is not as straightforward as determining the estrogen receptor (ER) status. Immunohistochemical staining is carried out (and scored from 1+ to 3+), but a more accurate and expensive test is fluorescent in situ hybridisation (FISH), which measures the actual number of HER2 genes in the cells. Trastuzumab is a humanised monoclonal antibody that can block these overexpressed receptors.

Trastuzumab in metastatic disease

The first randomised trial involving trastuzumab compared chemotherapy with or without trastuzumab in women with newly diagnosed metastatic breast cancer[1]. Tumour response rates, time to progression and overall survival were better with the addition of trastuzumab. An unexpected finding was an increase in cardiotoxicity, especially when trastuzumab was given with an anthracycline. Additionally, as in earlier studies of trastuzumab given as a single agent, tumours with an immunohistochemical score of 3+ responded better to trastuzumab than those with a score of 2+.

Problems with an adjuvant trial

Given the activity of trastuzumab in advanced disease, an obvious question is whether it is feasible and effective if given as part of the adjuvant treatment of early breast cancer. An immediate problem is the required size of such a trial, since it will apply to only 15% of women with early breast cancer needing adjuvant treatment. It is important that testing for HER2 is standardised as much as possible, given the ease with which inconsistent results can be obtained. Lastly, while toxicity is always important, it is particularly so when new drugs are given to otherwise well women with potentially long lifespans. Thus intensive cardiac monitoring is a crucial part of any adjuvant trial using trastuzumab.

The HERA trial

Given all these considerations, it is clear that large resources are required to conduct an adjuvant trial. The HERA trial therefore brings together several clinical trials groups across the world, and has been designed and initiated in close consultation with the relevant pharmaceutical company, which is providing strong financial support without impinging on the scientific independence of the various trial committees.

Two biological considerations incorporated into the design of HERA differentiate it from the concurrent American trastuzumab trials. Recent information supports the use of trastuzumab in a three-weekly schedule, rather than the weekly schedule that has been used to date. Thus there will be the opportunity to make indirect comparisons between trials about the cost, patient acceptability and toxicity of these schedules. In addition, there are of course not yet any data on the appropriate duration of trastuzumab in the adjuvant setting, and the American trials are not testing this.

Thus HERA is a three-armed randomised trial. After appropriate adjuvant chemotherapy, 3,000 women will be randomised to either no trastuzumab, trastuzumab for one year or trastuzumab for two years. Follow-up will continue for 10 years. All breast tumour samples will require testing in a single reference laboratory. Frequent cardiac monitoring (either echocardiograms or radioisotope scans) will be carried out using the same protocol for all three arms of the trial. This is an important point, since such intense cardiac monitoring is not usually done in women having chemotherapy alone. This trial will therefore provide the opportunity to assess prospectively the level of cardiotoxicity associated with usual adjuvant chemotherapy protocols and thus accurately measure any additional effects seen with trastuzumab.

Because accrual to this trial will be challenging – over 30,000 women will need to be screened – there is a deliberately pragmatic approach to chemotherapy protocols. Recognising that evidence from randomised trials supports a number of standard chemotherapy regimens, the choice of chemotherapy is left largely to individual investigators.

Lessons to be learned

Participation in this large new trial offers the opportunity to learn several lessons that will be increasingly important to clinical trialists over the coming years. As cancer treatments inevitably become more targeted, so will the requirement to coordinate large-scale tissue collection and testing. In the face of such increasing complexity, it will be important to keep as many aspects of the trial as simple as possible. Thus HERA trialists will generally be able to employ the adjuvant chemotherapy protocols they are used to.

The evolving biological agents requiring rigorous testing in randomised trials will also change the way we monitor clinical trials. For example, we will need to be aware of new and occasionally unexpected toxicities. Even the traditional endpoints of clinical trials may need to be modified if some of these agents are found to have disease-stabilising effects rather than inducing tumour regression. We must therefore continue to scrutinise carefully all available phase II and early randomised trials of new agents before incorporating these new drugs into definitive large scale trails, and maintain an open mind about clinical trial design and conduct.

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Cancer Trials NSW: A collaborative initiative to support and promote cancer clinical trials research in NSW

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People with cancer who are treated in clinical trials are more satisfied and do better than people who receive the same treatment outside of a clinical trial. Despite this, less than 3% of NSW adults with cancer are currently enrolled in trials. Recognising the need to build capacity and infrastructure for clinical trials research, The Cancer Council NSW worked with key stakeholders to reach agreement on the steps necessary to achieve the mutual aim of improving participation and access to cancer clinical trials. This resulted in the establishment of Cancer Trials NSW (CTN), a collaborative initiative to support and promote a wide range of cancer clinical trials research throughout NSW.

Some of the most innovative aspects of the CTN program are:

- The extensive consultation and collaboration conducted in the development and establishment of CTN.
- A unique trial selection process, developed to ensure the best trials that need the most support get this crucial boost. This means more support for trials of radiation therapy, surgery, palliative care and supportive care, not just for trials of anticancer drugs.
- A unique centre selection process to direct funds for study nurse/data management support.

FORUM

Consultation and collaboration

Comprehensive consultation was done to help develop the most appropriate model for this collaborative initiative. Consultative committees were convened to provide advice and reach agreement on all aspects of CTN – including issues of policy, procedure, selection of trials and participating centres, finance, governance and management. All committees included consumers, health professionals and researchers. CTN is now well established with consensus from all the key stakeholders on suitable policies and procedures for a fair, rigorous and inclusive selection.

Trial selection

CTN trial selection occurs twice a year, with calls for applications in March and September. Continuing review and addition to the portfolio of CTN trials is designed to ensure that the mix of cancers and treatments in supported trials reflects the experience of cancer in NSW.

The CTN portfolio now includes 47 supported trials.

Trial Selection Committee

Our inclusive Trial Selection Committee comprises 26 individuals from all relevant disciplines, including three consumers, clinicians, researchers and staff of The Cancer Council NSW. Three assessment forms are used by the committee.

At least 10 committee members review and rate each trial application using:

1 the "CTN trial and concept rating form", an electronic form that allows raters to score each trial application against specific selection criteria developed for CTN.

A content expert and a methodologic expert do more detailed assessments using two other forms:

2 the "Protocol critical appraisal form" developed by Davina Ghersi of the NHMRC Clinical Trials Centre; and

3 a modified version of the "National cancer grants ranking form".

The results of these ratings and assessments are then summarised and form the basis of the committee's discussions and decisions.

Trial selection criteria

To help meet the aims of CTN, selection criteria were developed and integrated into a CTN trial and concept rating form. The form includes 24 aspects grouped in six domains:

- Importance, priority and impact
- Scientific excellence
- Collaboration and involvement
- Need and efficiency
- NSW perspective
- Overall rating

Centre selection

Part two of the CTN support process is to select the NSW centres that can best increase participation and access to the selected trials. Each successful centre receives a grant of $30,000 per annum, with annual renewal conditional on performance and evaluation. Each grant is to fund half a full-time equivalent (0.5 FTE) study nurse/data manager at the centre. Applicants are encouraged to collaborate with other departments within an institution, and for metropolitan centres to submit applications with associated regional and rural centres.

CTN now funds 14 half-time study nurse/data managers throughout NSW.

Centre Selection Committee

An inclusive Centre Selection Committee was convened with 19 individuals from all relevant disciplines, including two consumers, clinicians, researchers, cooperative trials groups, NSW Health, and staff of The Cancer Council NSW. Every committee member reviews and rates every centre application using the "CTN centre rating form", an electronic form that allows each centre application to be rated against specific selection criteria developed for CTN.

Centre selection criteria

To help meet the aims of CTN, selection criteria were developed and integrated into a CTN centre rating form that includes 21 aspects grouped into seven domains:

- Participation
- Access and equity
- Quality
- Economy and efficiency
- Multidisciplinary care
- Contribution to Cancer Council activities
- Overall rating

Ideal applications include substantial, realistic participation in a rational subset of CTN supported trials involving collaboration, networking and links between disciplines, centres, areas and institutions. In their application each centre outlines which trials they intend to do and their proposed recruitment figures. CTN sponsored centres are encouraged to take up new supported trials as they are approved, and patients recruited are included in the evaluation of that centre.

Vision – "research in practice"

We hope that by 2010, throughout NSW:

- Participation in cancer trials is an integral part of clinical practice.
- Everyone suitable is able to participate in cancer clinical trials, both patients and clinicians.
- World-class participation delivers world's best cancer care and outcomes.
- 90% of eligible patients are offered participation in CTN supported trials and 25% choose to take part. The targets are that everyone is given the choice, and that people are fully informed and free to choose.

What's in the future?

Increase funding

We plan to increase the number of CTN supported study nurse/data manager positions to 20 FTE over the next five years, contingent on the success of our fundraising efforts with The Cancer Council NSW. We anticipate future applications to support centres will be invited annually as funds become available.

Trials initiation

Our initial focus has been to improve participation and access in NSW by selecting and supporting greater participation in ongoing, high-quality trials. The next step is to identify important gaps in our cancer trials research program, and help establish high quality trials to address them. Through this initiative, CTN will provide a genuine vehicle to support locally initiated trials and build on the intellectual contribution from NSW to the global trials effort.

A national register of cancer trials

Information about each supported trial and centre is currently available on the Cancer Trials NSW website, which is part of The Cancer Council NSW website at www.cancercouncil.com.au. We aim to work with our key stakeholders and other state cancer councils to further develop this information as a basis for the establishment of a national register of cancer clinical trials.

Education and training

Educating advocates, consumers, clinicians and researchers about ongoing trials and the importance of participation is another important strategy for increasing participation and access throughout NSW. CTN has already contributed to training programs for consumers, and plans are in progress for educational programs for study nurses, data managers, clinicians and other researchers.

Conclusion

CTN provides a successful, effective model for building infrastructure to improve participation in and access to cancer clinical trials, and for developing a close collaboration between consumers, clinicians, researchers and funders. Effective involvement means inclusion at all levels including trial development, management and fund-raising, things that CTN will continue to champion in the future. CTN has only just begun and there is a long way to go, but with the continued

Australian New Zealand Breast Cancer Trials Group: IMPACT – Improving Participation and Advocacy for Clinical Trials

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Clinical trials research

We are now in the most exciting and productive time ever in breast cancer research. The genetics of breast cancer are being unravelled, new treatments are being tested and greater understanding of the controls of cell growth and mechanisms of development of breast cancer are being explored.

The most significant obstacles to new research are low recruitment to clinical trials and lack of infrastructure funding. Relying on the generosity of the community and industry does not allow for long-term commitment. Lack of ongoing infrastructure funding makes it difficult for health professionals to make a commitment to research and the number of institutions which offer clinical trials is limited.

Community education about clinical trials research is very important if participation rates are to increase. Not only is the general community ill-informed about clinical trials research, but so are many health professionals who are in a position to advise people diagnosed with cancer.

People diagnosed with cancer should be given as many opportunities as possible to participate in cancer clinical trials research. The involvement of partners, families and friends is also important in the decision of whether to participate in a clinical trial. Therefore, the whole community needs to be informed so appropriate enquiries can be made at the time of diagnosis.

There are still many myths of how trials are conducted. Perceived uncertainty or the "guinea pig" mentality is still very prominent.

Because of these misconceptions, many people still feel that by participating in a clinical trial they will be giving over their treatment to chance. People who are eligible to participate in a trial are reliant on good communication and full explanations about the trials they may be considering.

Positive community education is vital to influence decision-makers, politicians, health professionals and people in the general community who may face a diagnosis in the future. The myths surrounding cancer clinical trials research need to be openly refuted.

Consumer involvement in clinical trials research

Hanley et el[1] recently made the following points about consumer involvement in research.

"The consumers helped convince researchers and funders that the trial was possible and ethical."

"They were important in helping to refine questions."

"More relevant and clearer questions were… asked."

"They helped make a complex trial comprehensive to most patients."

"They provided insights into issues important to the community and patients."

"Their participation led to improved recruitment."

Australian New Zealand Breast Cancer Trials Group (ANZ BCTG)

Established in 1978 to create a national collaborative approach to breast cancer research through clinical trials, the ANZ BCTG collaborates with over 500 researchers in 60 leading medical and research institutions in Australia and New Zealand and with 15 countries internationally.

The ANZ BCTG initiated the inclusion of consumer representation to research planning in 1994 when a breast cancer survivor and a breast nurse counsellor were invited to become members of their Scientific Advisory Committee. They were invited both because of their own life experiences with breast cancer, and their academic expertise. They have contributed to the scientific discussion and have been responsible for reviewing and commenting on new trial protocols and participant information sheets. They also represent consumers' perspectives on various external committees and present consumers' viewpoints to the media, at conferences and at symposia.

Australian New Zealand Breast Cancer Trials Group Consumer Advisory Panel

In 1998, the ANZ BCTG extended consumer involvement in its research planning by establishing its own Consumer Advisory Panel (CAP). All CAP members are committed to clinical trials research and, as consumer advocates, aim to:

- become effective partners with researchers and health providers to increase nationally the number of women participating in breast cancer clinical trials;
- provide a voice for women who may be participating in breast cancer clinical trials;
- raise awareness and understanding about breast cancer clinical trials and breast cancer issues generally; and
- provide advice to researchers of the ANZ BCTG from the perspective of women who have had breast cancer and who are currently or have been clinical trial participants.

IMPACT – Improving Participation and Advocacy for Clinical Trials

IMPACT was established to further enhance consumer involvement. IMPACT aims to provide a positive voice in the community about breast cancer clinical trials research. The aims of IMPACT are to:

- recognise the important contributions made by women to breast cancer clinical trials research of the ANZ BCTG;
- increase participation to ANZ BCTG breast cancer clinical trials research;
- lobby for increased infrastructure funding for breast cancer clinical trials research;
- enhance links between health professionals with women who have participated in clinical trials research;
- provide reliable up-to-date information on breast cancer clinical trials research;
- educate women about the science of breast cancer and the processes of clinical trials research so they can become effective advocates for clinical trials research; and
- educate the wider community about clinical trials research.

The strategies for achieving the IMPACT program's aims include:

1 IMPACT Newsletter

2 Information sessions

3 IMPACT Education Program

The first aim, of recognising the important contributions made by women to breast cancer clinical trials research, is the most important aspect of IMPACT. High quality breast cancer trials are impossible without the participation of women with breast cancer.

The opportunity to network in a non-clinical environment and to meet with others who have had similar experiences reinforces how important and empowering each woman's contribution is and how much it is valued.

The ANZ BCTG wants to help consumers become more effective as advocates so that they can take a greater role in research development and planning. The information and education provided through IMPACT is designed to do this.

The IMPACT Newsletter is distributed regularly and provides information on research issues and educates readers about the research process. It also provides a vehicle for members to have a say and maintain a connection.

Information sessions are being scheduled nationwide. A brief overview of the IMPACT program and current research updates are presented. Most importantly, however, these sessions provide an opportunity for the ANZ BCTG to acknowledge the contributions of participating women to its research programs, and for participating women to meet others with similar experiences.

The IMPACT Education Program is offered to members who continue to show a commitment to the clinical trials process and an interest in learning the concepts of basic science, breast cancer research and policy issues.

The Education Program runs over three to four days. Presentations are made on subjects specifically designed to give the participants an understanding of:

- the biology of breast cancer;
- genetics;
- study design, statistics and interpretation;
- diagnosis and treatment;
- conducting clinical trials; and
- advocacy and communication skills.

IMPACT allows its members to make choices. However they choose to contribute, their participation is constructive, valued and they can continue to provide a broader consumer perspective.

What sets IMPACT apart is that it specifically aims to address issues relating to clinical trials research.

Inevitably, the positive messages about breast cancer trials will carry over to the benefit of other clinical trials research. This is another positive attribute of IMPACT. There is still a long way to go to eradicate breast cancer. Advocates cooperating and striving for a common cause can help achieve this sooner. IMPACT members will continue to make their contributions to the research process count.

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Testing for familial cancer susceptibility gene mutations

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Abstract

Genetic testing is a useful means of identifying individuals who are at an increased risk of developing familial cancer. This information assists such individuals to make lifestyle alterations and consider surgical intervention to minimise their risk of developing cancer. In WA, genetic testing is conducted free of charge to the public through Genetic Services of WA who provide an integrated service. This includes pre- and post-test counselling, testing, family support and a surveillance registry. However, the recent granting of an exclusive gene patent licensing agreement for familial breast cancer susceptibility genes threatens free of charge public testing services Australia-wide. Exclusive licensing effectively creates a monopoly on the testing services available, and accordingly there has been a great deal of controversy over the breast cancer gene patent and licensing agreements internationally. This article explores aspects of testing for familial cancer susceptibility gene mutations, focusing on experiences with familial breast cancer.

Genetic technology is revolutionising the way in which diseases are diagnosed and managed. An important outcome of the increasing application of genetic technology to health services has been the introduction of genetic testing, which has had particular relevance for cancer treatment. In recent times testing has been successfully utilised for detecting familial mutations in the breast and ovarian cancer susceptibility genes.

Breast cancer is the most common form of cancer among Australian women, and it is estimated that it will affect approximately one in 12 women in their lifetime[1]. While fewer than five per cent of all cases of breast cancer in Australia may be attributed to familial links, the risk of developing the cancer for potentially high-risk persons (less than one per cent of the population) is six to 10 times higher than the population average[1]. The causes of breast cancer are complicated by interactions between environmental factors such as diet, and genetic factors. In regard to familial breast cancer, currently identified environmental risk factors are thought to explain less than 10 per cent of breast cancers. This indicates there is still much to learn about why breast cancer runs in families more often than would be predicted by chance alone[2]. Genes associated with inherited risk of breast cancer other than BRCA1 and BRCA2 are likely to be discovered in the next few years[2].

The BRCA genes act as tumour suppressors. Mutations in these genes lead to increased susceptibility to uncontrolled cell replication, thereby resulting in cancer. These mutations, largely specific to a family, may be passed through several members, male and female. Population-based studies conducted internationally indicate that individuals who have inherited (deleterious) BRCA mutations have an elevated lifetime risk of both breast and ovarian cancer[3]. For those individuals at increased risk of developing familial breast and ovarian cancer, genetic testing may be an appropriate option to refine actual risk as a component of their risk management.

Genetic testing for familial breast cancer

Genetic testing is a complex process and involves searching for a gene mutation in an affected family member. Should such a mutation be found, predictive genetic testing may be offered to other family members who currently have no symptoms but are also at risk of carrying the same mutation. Even if a mutation is located, this only indicates that person has a higher risk of developing the disease – there is no certainty they will actually go on to develop breast or ovarian cancer. Moreover, there is no completely effective means of preventing either breast or ovarian cancer once a mutation is discovered. However, recommended screening and prophylactic strategies might reduce the morbidity and mortality from breast cancer in family members ascertained to be at "high risk" through genetic testing.

In WA genetic testing is conducted through Genetic Services of WA (GSWA), which is a multidisciplinary, state-wide service based at King Edward Memorial Hospital. GSWA has a long-established Familial Cancer Program that provides a comprehensive service to families with a history of breast, bowel and ovarian cancers, other less common cancers and related syndromes. The service incorporates important pre- and post-test counselling, family support, education, genetic testing and liaison with clinical specialists where relevant, for individuals or families with a history of cancer.

Comprehensive DNA-based testing for cancer susceptibility gene mutations has been offered through the Familial Cancer Program at GSWA since 1995. This testing detected most sequence variations, but until recently testing only detected specific known deletions or duplications. These sort of mutations are believed to be common in familial breast and bowel cancer and are now tested for in the GSWA laboratory with a novel test, the Multiplex Ligation-dependent Probe Amplification (MLPA), which identifies any exon deletions or duplications[4]. The GSWA laboratory stores DNA and RNA from family members and when new tests appear the stored material is re-analysed. The laboratory is currently using these improved technologies to investigate for mutations in stored specimens, in which previous studies were inconclusive.

In calculating an individual's estimated risk of developing cancer, based on mutations in the cancer susceptibility genes, a multitude of complex issues arise. Mutations in these genes increase an individual's risk for both breast and ovarian cancer, however the estimated risk is different. For example, in BRCA1 mutation carriers the estimated risk (to age 75 years) of developing breast cancer is 40-80% and the risk of ovarian cancer is 10-60%. Male carriers of the BRCA1 mutation also have a slightly higher lifetime risk of developing cancer of the prostate[1].

In BRCA2 mutation carriers the estimated risk (to age 75 years) of developing breast cancer is 40-80% and the risk of ovarian cancer is 10-40%. Carriers of mutations in the BRCA2 gene also have a slightly higher lifetime risk of developing cancer of the pancreas, male breast and prostate[4].

Despite these complexities, there are numerous benefits of cancer susceptibility gene mutation testing. These include early detection, appropriate surveillance and sometimes the option of preventative surgery. Through the course of genetic testing an individual is often alerted to other possible lifestyle changes that may keep cancer at bay[5].

The Familial Cancer Program also operates a cancer registry that provides surveillance for women identified as being at increased risk of developing various familial cancers, including breast or ovarian cancer. If no mutation is found in the family, members are still encouraged to follow screening measures due to their strong family history of disease. The Familial Cancer Program also invites such individuals to join the registry in the event that a new genetic mutation is identified in the course of future research or technological development. In addition, the service provides opportunities for individuals to participate in approved clinical trials and research projects conducted through the Familial Cancer Program and the Breast Cancer Risk Assessment Clinic at Royal Perth Hospital.

The holistic and multidisciplinary service in WA provides counselling and information to individuals considering undertaking genetic testing. The pre- and post-test counselling component of the program allows for the mechanisms of genetic transmission to be explained, and the likelihood that a mutation is present in a family being assessed. It also provides counsellors with an opportunity to clarify the advantages and limitations of genetic testing, as well as possible options for risk management[3]. A recent study of women tested for mutations in the BRCA genes suggested that counselling is effective in helping women throughout the genetic testing process, highlighting the need for a comprehensive genetic service[6].

An experience of genetic testing

Genetic testing for familial breast cancer mutations raises a multitude of psychosocial issues, which need to be considered before an individual undertakes testing. For example, in deciding whether or not to undertake testing the individual needs to consider the impact of the information on their own psychosocial coping, family dynamics and issues such as life insurance and employment. Ultimately, the choice is a personal one but genetics professionals can ease the decision-making process by equipping individuals with the best information about the issues involved so they can make the best choice for themselves and their family.

In response to the high prevalence of breast cancer in her family, one woman underwent a double mastectomy in order to minimise her risk of developing breast cancer. This woman states that "breast cancer has been casting a long shadow over the women in my family, it seems as if part of our family is devoid of women" and is therefore also currently considering genetic testing in order to add to the genetic knowledge in her family.

In another family, both mother and daughter undertook genetic testing through GSWA two years ago. Breast cancer has affected three generations of their family. They heard about the services offered by GSWA through a family member who is a GP and who felt that given their strong family history of breast cancer, there might be genetic factors involved. Both women were found to carry mutations in breast cancer susceptibility genes, but so far only the mother has developed ovarian cancer. Other family members have also undergone genetic testing, however some have elected not to receive this predictive information.

The daughter states that she was apprehensive about having the testing done, but the counselling support she received from the genetic counsellors and valuable written information assisted her in making the decision. She also noted that the explanation of the information by the clinical geneticists was most important in assisting her decision-making. Receiving the results that she carried a mutation was "frightening but you learn to live with it". Knowledge of the mutation has enabled her to be vigilant and prepared. The daughter states that "we're luckier than most people because we know what we're facing and we are watched closely". Both women are undergoing regular surveillance and have been encouraged to join the Familial Cancer Registry.

Gene patents

Despite the benefits clients derive through familial cancer services such as that offered by GSWA, the ability of public hospitals to provide free-of-charge genetic testing services to the public is threatened by the implications of gene patenting[7]. Recently a US-based biotechnology company, Myriad Genetics Inc, has taken out a broad patent for the BRCA genes in numerous countries, including Australia. Myriad has used the framework of exclusively licensing the use of its test to a very limited number of commercial genetic laboratories in specific locations[7].

Broad-based gene patents raise the controversial issue of whether or not it is ethical to patent a naturally occurring substance[8], and further to make a commodity out of it. Extending beyond this ethical issue is perhaps the more critical question of whether it is in the interests of public health and research to allow gene patents, and evidence increasingly suggests it may not be[9]. While it is acknowledged that patents support the protection of corporate interests and are a central tenant of international trade agreements between industrialised nations[10], these corporate interests need to be weighed against the public good. The exercise of exclusive and monopolistic gene patents will interfere with patient care by disrupting the integrated testing, clinical and counselling services already offered throughout Australia. It may also compromise the viability and expertise of publicly-funded genetic testing services, and divert testing services away from established Australian best practice guidelines[7] which serve to ensure the medical and psychological wellbeing of individuals undertaking testing.

Gene patents also have the potential to compromise public health by inhibiting biomedical research that could prevent an alternative genetic test from being developed. A researcher wanting to find a cure for breast cancer would have to negotiate with the patent holder for access to the BRCA1 and BRCA2 genes. In addition, they must also negotiate with all the other patent holders who have discovered and patented any of the hundreds of other mutations in these genes. The stimulus to patent genes in the last decade has been likened to a "genetic gold rush"[10]. A Victorian-based company, Genetic Technologies Limited, has patented 95% of all intronic DNA (also known as 'junk DNA') in the likelihood that this material may be found to be important[11].

Internationally, there have been very few legal challenges launched against gene patents, and there certainly have been no decisive legal moves to address directly whether human genes are even an appropriate substance to patent[9]. In the US, moves to reform legislation on gene patents have been introduced by Senator Lynn Rivers. The Rivers Bills aim to grant medical researchers and clinical geneticists protection from patent infringement, in an effort to minimise negative impact of gene patenting on health services. In Australia, a similar course of legislative action is yet to be undertaken, and in the interim gene patents remain a very real threat to the delivery of genetic testing as a component of our public health service.

Conclusion

It is currently known that a small number of cases of breast and ovarian cancer may be attributed to mutations in various genes, including BRCA1 and BRCA2. It is expected many more genes that contribute to cancer will be identified as research advances. In order to provide the highest standard of health service for individuals identified as being genetically at risk of developing familial breast or ovarian cancer, it is essential that a holistic service continues to be provided with equitable access at an affordable cost for all Australians.

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The impact of physiotherapy intervention on functional independence and quality of life in palliative patients

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Abstract

The Physiotherapy Department of the Royal Brisbane Hospital has conducted a review of physiotherapy services to palliative care patients in Australia. As part of this review, a trial was undertaken to investigate the impact of physiotherapy intervention on quality of life and functional level. The results indicated that the provision of an adequately resourced physiotherapy service incorporating early intervention and community follow-up can contribute significantly to the maintenance of functional independence and quality of life among patients receiving palliative care.

Introduction

In the mid to late 1960s, the concept of rehabilitation as a part of the cancer treatment process began to flourish. Dietz[1] developed the four-part framework for cancer rehabilitation – prevention, restoration, support and palliation. Physiotherapy involvement in the treatment of cancer patients began to develop at around this time, but with involvement often limited to the restorative stage[2]. During the 1970s, the input of physiotherapy in the support phase began to be noted. Zislis[3] reported the usefulness of physiotherapy to maintain range of motion post-operatively, and Mayer[4] noted that physiotherapists could implement a graduated exercise program contributing to maintenance of mobility. The role of physiotherapy in cancer rehabilitation was firmly established by the end of the 1970s, with many textbooks devoting space to the role of physiotherapy and also of the importance of a multidisciplinary approach to palliative care[5,6]. A series of publications by Doyle[7-9] demonstrates the development of the contribution of physiotherapy to palliative care. Anecdotal reports suggested that while physiotherapy involvement could value-add to the care of patients in the palliative stage of cancer, there was an inconsistent approach to the referral of patients to physiotherapy or even of the involvement of physiotherapists in palliative care teams and services.

The aim of this study was two-fold: (i) to understand where physiotherapists were involved in palliative care services in Australia, specifically identifying the impediments to those services, and primarily (ii) to conduct an outcome study of physiotherapy to patients receiving palliative care, measuring the effects of a standard physiotherapy service compared to an optimised physiotherapy service. In the context of this project, palliative care is defined as adding quality to life for patients in the non-curative stage of the disease process.

Method

Stage 1

In order to provide a benchmark service against which to assess physiotherapy outcomes, it was necessary to understand what constituted standard versus optimal physiotherapy practice. Prior to the commencement of the outcome study, a survey of physiotherapy service providers across Australia was conducted. The survey identified a number of impediments to the delivery of a quality physiotherapy service, including the fact that the average time spent in providing physiotherapy to palliative patients was less than 10 minutes per occasion of service.

Other limitations included delayed or absent referral to physiotherapy during hospital admission, limited resources (such as equipment and funding) to provide adequate services, and a lack of community-based services for follow-up after hospital discharge. The specialised physiotherapy service examined during stage two of this study was designed to reduce the impact of the limitations identified in stage one.

Stage 2

The study was conducted over 12 months in an oncology ward of a major metropolitan teaching hospital. The subjects were patients admitted for symptom control (palliative care patients). Forty patients were randomly allocated to receive the optimal trial physiotherapy service (characterised by time and

resource allocations, based on an experienced physiotherapist's ability to provide an enhanced/optimised service). The trial group was compared to a control group of 20 patients who received the usual physiotherapy service provided by the ward (characterised by time and resource constraints influenced by inadequate staff to patient ratios).

Subjects were allocated to the study groups in the following way. The project physiotherapist screened new admissions to the ward, and palliative patients with indications for physiotherapy intervention were identified. From this group, randomly selected patients were approached and invited to take part in the trial. These patients received the trial service by the project physiotherapist and were known as the "project group". Patients not randomised to the project group became subjects in the "standard group" when and if they were referred for physiotherapy during their admission. In this way, the standard group was representative of the usual process of referral and physiotherapy service delivery from the ward. Patients in the standard care group received physiotherapy from the staff physiotherapist rostered to the ward.

The trial service differed from the standard service in three main ways:

1 to overcome problems of delayed referral, patients were recruited on admission by the project physiotherapist;

2 the project physiotherapist limited her patient load to ensure that each patient received enhanced contact time, thus reducing the problem of limited resources; and

3 the project patients received regular community follow-up visits following hospital discharge.

Both groups received best-practice medical and nursing care appropriate to their condition.

The interventions undertaken by the project physiotherapist were numerous and varied but can be grouped into three intervention categories commonly used by physiotherapists.

a Pain and symptom management, including transcutaneous electrical nerve stimulation (TENS), appropriate positioning of patients to reduce stress on joints and muscles and to prevent development of pressure areas, and the treatment of lymphoedema by a combination of massage, compression and exercise.

b Education provided by the physiotherapist covered topics including safe and comfortable transfer and handling techniques to minimise discomfort and injury to both the patient and carer, and techniques to reduce work associated with activities of daily living.

c Mobility and independence were maximised by designing exercise programs specific to the individuals' needs, providing gait re-education and the provision of appropriate walking aids.

The trial outcomes were assessed with respect to:

- discharge destination;
- place of death;
- functional level;
- patient satisfaction; and
- quality of life (EORTC QLQC30).

The functional level of the subjects was measured using a tool developed for the project that assessed nine tasks. The tasks assessed were ability to roll in bed, transferring from side-lying to sitting up, sitting, transferring from sitting to standing, standing, mobilising (walking), negotiating stairs, toileting and entering/alighting from a car. Each task was graded based on the degree of assistance required to complete the task: independent (3), use of an assistive device (2), requirement for assistance provided by a carer ie supervision only (1.8), minimal assistance (1.5), moderate assistance (1.2), maximal assistance (0.9), two people to assist (0.5), inability to move (0). A score between 0 and 27 was obtained with 27 representing complete independence in all tasks. The tool was assessed for utility in a number of palliative care services prior to its use in this study.

Quality of life was assessed using the EORTC QLQ-C30 that produces scores ranging from zero to 100 for six function components and for nine symptom impact components. For the function components a score of 100 represents the best possible level of function, thus an increase in score represents an improvement in function. In the symptom impact components, a score of 100 represents the highest possible impact on QOL thus a decrease in score represents a decrease in the severity of the symptom.

Functional level and quality of life were assessed on admission, at discharge and at regular intervals following discharge.

Patient satisfaction of the physiotherapy service received was assessed at discharge and, where possible, at four week follow-up and subsequent regular intervals. Subjects were asked to rate a number of factors (amount of physiotherapy received, confidence in the abilities of the physiotherapist, consideration by the physiotherapist of the patient's wishes, understanding of advice and instructions given by the physiotherapist and helpfulness of advice and instructions given by the treating physiotherapist) on a five point Likert scale.

In order to develop standards for practice, physiotherapist workload data were collated using a simple bar-code reader. Time required for the management of various components of the episode of care was recorded when the bar-code reader was scanned across bar-codes according to the intervention strategy employed. For reporting purposes, intervention strategies were grouped into major treatment categories.

Results

Results were analysed using Wilcoxon ranked data analysis and chi-square frequency analysis. While the group numbers were relatively low, resulting in weak levels of significance, there were distinct differences between groups.

Length of stay, discharge destination and place of death

Participants in the project group were more likely to be discharged home than those in the standard group (p=0.0858). Patients in the project group were also more likely to die at home (p=0.0159). There was no statistically significant difference in length of stay (LOS) between groups. Patients in the project group had a mean LOS of 17.55 days, and patients in the group that received standard care had a mean LOS of 15.6 days.

Functional level

A comparison of the functional level between the groups was performed using a post-discharge assessment score obtained at a time that was half way between the date of discharge and the date of the patients' death. This method was chosen to ensure that the groups were comparable with respect to extent of disease and the stage of decline.

At admission and discharge, patients in the project group had mean functional independence scores of 16.5 (supervision to complete some tasks) and 15.5 while the standard group means were 14.6 (supervision with some tasks) and 14.3, respectively. The decrease in score at discharge in the project group is in the main due to the higher proportion of patients in this group who died during admission (15%). When these patients are excluded, the difference at admission is maintained at discharge (17.9). Figure one demonstrates that there was no statistically significant difference in functional ability between the groups at admission or discharge from hospital. At mid-survival follow-up assessment there were weak statistical (p=0.09) and clinically significant differences between the project and standard groups. The standard group required light to moderate assistance with all tasks, while the project group was functionally independent with the use of a walking aid in all tasks.

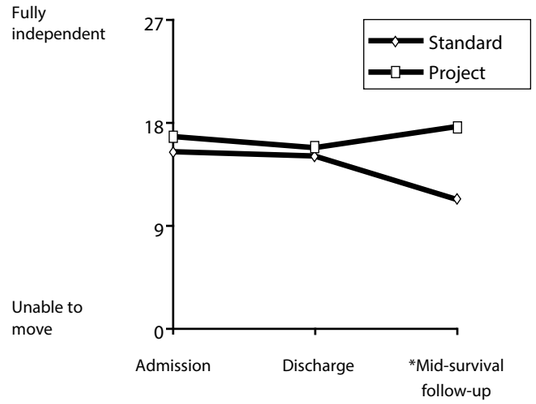

Figure 1: Functional level of project and standard groups at admission, discharge and mid-survival follow-up. At mid-survival follow-up assessment there were weak statistical (*p=0.09) and clinically significant differences between the project and standard groups.

Quality of life

Neither the standard nor the project groups experienced significant changes in any of the function components of the QLQ-C30 questionnaire over the study period. However, noticeable trends existed within the two groups. The trend within the standard group (figure two) was towards a decline in function whereas the trend within the project group (figure three) was towards improvement in function. Comparison of the functional independence measurement tool with the physical function component of the QLQ-C30 demonstrated a weak but significant positive correlation (r = 0.629, *p <

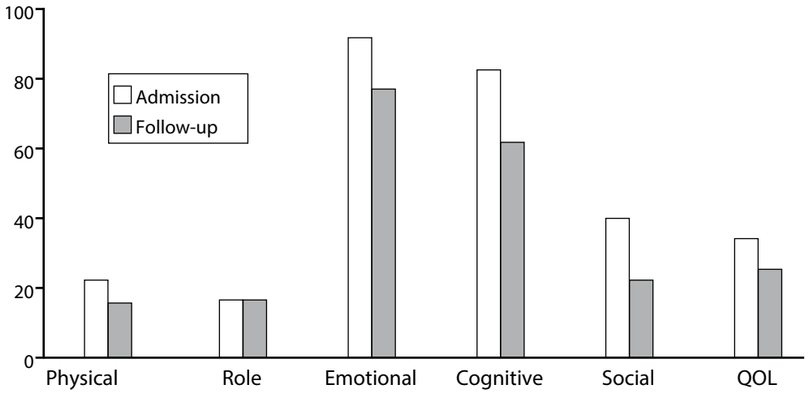

Figure 2: Functional scores for standard group subjects (EORTC QLQ-C30) at admission and follow-up. There was a trend towards decline in function.

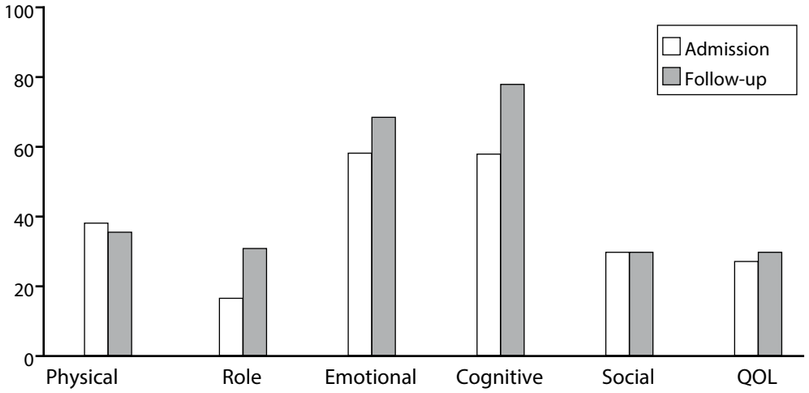

Figure 3: Functional scores for project group subjects (EORTC QLQ-C30) at admission and follow-up. There was a trend towards improvement in function.

For symptom impact scores between admission and follow-up, the standard group experienced a statistically significant increase in constipation (**p = 0.027) and a significant decrease in sleep disturbance (*p = 0.075). The project group experienced statistically significant decreases in fatigue (**p = 0.08), pain (***p = 0.052) and appetite disturbance (*p = 0.09). There were no significant differences in either group for the remaining symptom components.

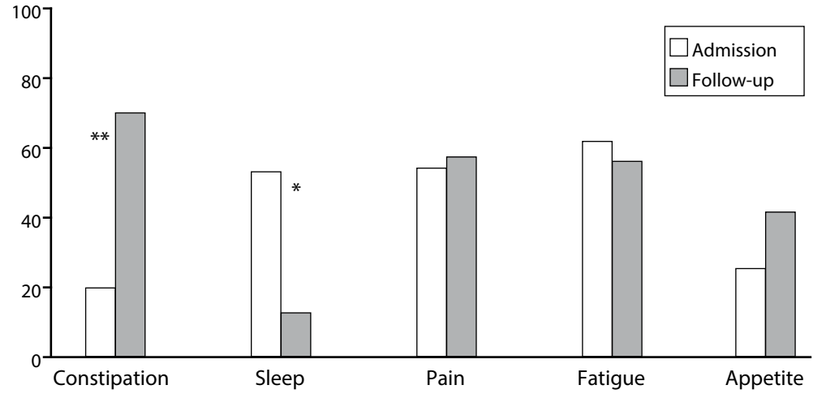

Figure 4: Symptom impact scores for standard group subjects (EORTC QLQ-C30) at admission and follow-up. Symptoms of constipation increased (**p = 0.027) and sleep disturbance decreased (*p = 0.075) significantly.

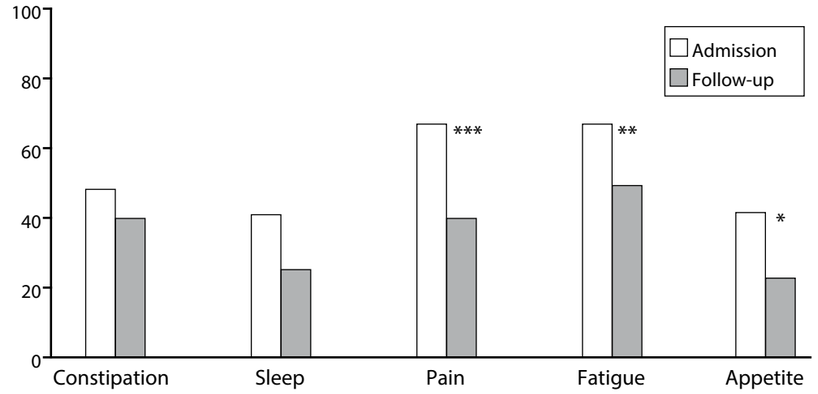

Figure 5: Symptom impact scores for project group subjects (EORTC QLQ-C30) at admission and follow-up. Symptoms of pain (***p = 0.052), fatigue (**p = 0.08) and appetite decreased (*p = 0.09) significantly.

Patient satisfaction

Both the standard and project groups were satisfied with the physiotherapy services received during admission (figure six). For the question regarding the understanding of advice and instructions given by the physiotherapist, patients in the project group were significantly more satisfied (*p=0.05) than those in the standard group.

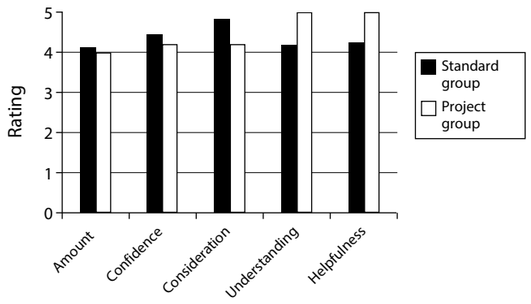

Figure 6: Patient satisfaction for project and standard groups. Understanding of advice and instructions given by the treating physiotherapist was significantly better among patients in the project group (*p=0.05).

Physiotherapist workload data

The average times devoted to physiotherapy management of patients in the project group and the standard group are presented in table one.

Table 1: Average duration of intervention (minutes:seconds) for each group of patients

Intervention	Standard group	Project group
Chart review	5:19	9:06
Chart entry	3:39	8:43
Cardiorespiratory assessment and treatment	12:06	18:24
Mobility assessment and treatment	13:10	21:42
Pain assessment and treatment	10:58	15:57
Handover/referral	4:14	11:17
Initial assessment and treatment	Not available	60
Follow-up assessment and treatment	Not available	40
Discharge assessment session	Not available	80

Discussion

Length of stay, discharge destination and place of death

Examination of the length of stay data revealed that patients in the project group had a mean stay of two days longer than those in the standard group. The specific reason for this was not apparent from the analysis, however it was noted that in general a higher proportion of patients in the project group died during admission. This may denote a difference in severity of illness status not discernible by other means.

Patients in the standard group were more likely to be discharged to another care facility instead of home than those in the project group. In order to determine whether this outcome was a consequence of stage or severity of disease or of diagnosis, further examination of the demographics of the patients in the standard group revealed that the subjects were a representative sample of all patients normally admitted to the ward. The fact that patients assigned to the project group were more likely to be discharged home than patients in the standard group was considered to be a positive outcome of the study. Anecdotal evidence suggests that there is an increasing trend towards patients and families wishing to care for loved ones in the home environment. Where possible, and due to shortages of beds in extended care facilities, the aim of discharge facilitation on the oncology ward is to discharge the patient home where possible, if the family and patient desire this outcome and are in a position to facilitate it.

The success of follow-up community physiotherapy among project group patients was affirmed by the fact that more patients in the project group were likely to die at home than those patients in the group that received standard care limited by lack of physiotherapist time, resources and community follow-up. When considering the place of death, it is important to remember that some patients elect to be admitted to a formal care facility in preference to dying at home. While there are many factors that influence a person's ability to remain at home until death, the ability of the carer(s) to effectively manage is a primary concern. The ability of the patient to move or be moved is a major component of the ability to cope at home. The greater proportion of project group patients dying at home suggests that the contribution of physiotherapy to the maintenance of mobility and function enhanced the choice of place of death.

Functional level

On admission, the project group had a higher level of functional independence. This was not considered to be sampling bias but rather a reflection of referral practices on the ward. Patients were randomly recruited to the project group on the initiative of the project physiotherapist as sufficient time and resources became available through the discharge or death of other patients. Patients recruited to the project group were newly admitted patients whose medical notes identified an indication for physiotherapy intervention and who had not at that time been referred for physiotherapy. Conversely, patients in the standard group were those who may have had indications for physiotherapy intervention at admission but who were not referred to the ward physiotherapist by medical or nursing staff until some time after admission. Such referral was often based on the inability of the patient to manage functionally on the ward even though he or she had been managing earlier in the admission. The ward physiotherapist had 15 years of clinical experience and had been working in the field of chronic care and palliative care over a number of years leading up to this study. The increased human and material resources available to the project physiotherapist, and the palliative-specific focus of the project service increased the variety and effectiveness of the physiotherapy interventions undertaken.

While the difference in admission levels of functional independence between the project and standard groups may be viewed as significant clinically, the difference reflects a crucial variable potentially affecting outcomes for physiotherapy intervention in palliative care. The ability to provide timely intervention is essential to maximise outcomes. The results from the standard group indicate that due to referral practices in existence at the time of this study, there was a population of patients passively being denied access to physiotherapy when they clearly had indicators for physiotherapy.

While the level of statistical significance is weak, there were distinct clinical differences between groups in patients' functional abilities. Such differences could be considered to have greater clinical significance when attached to related factors such as quality of life and ability to function effectively in the home. The comparison of the functional independence measurement tool with the physical function component of the QLQ-C30 demonstrated a significant positive correlation, suggesting that the components assessed were representative of factors contributing to the quality of life of the patients. At mid-survival follow-up, the patients in the standard group required light to moderate assistance of a carer with all tasks, while patients in the project group were independent with the use of a walking aid in all tasks. The level of independence alone strongly supports the benefits of optimising physiotherapy in outcomes for patients requiring palliative care. The deterioration noted in the standard care group of patients has an impact on the amount of carer support required, the costs of that support (financial, physical and psychological) and the potential need for re-admission to a formal care facility with the attendant costs of such care.

Quality of life

Patients in neither the standard nor the project group experienced significant changes in any of the function components over the study period. However, noticeable trends existed within the two groups. The trend within the standard group was toward a decline in function, whereas the trend within the project group was towards improvement in function. These trends are verified by the results acquired from the functional independence measurement tool.

While it is intuitively appealing to make sweeping claims from these results, it would be unwise to do so in the context of the lack of supporting data regarding pharmacological, dietary and other factors that may have influenced these results. It is interesting to note though, that the patients in the standard group experienced an improvement in symptoms during the inpatient period followed by a decline in five of six function components assessed at follow-up to a point below the admission score. Conversely, the project group maintained or improved function in all but one component over the same period. The results for each group are similar in the scores for symptom impact over the same time course. The links between quality of life factors, well-being, follow-up and physical independence/activity have been noted by other authors[10-12] and so it would seem reasonable to conclude that the maintenance of independence and physical activity, along with community follow-up, were likely to have been directly related to quality of life scores noted in the project group.

Patient satisfaction

While satisfaction with various aspects of physiotherapy services was high among patients of both groups, patients in the project group were significantly more satisfied with the advice

and instructions given to them by the treating physiotherapist. As the project physiotherapist had more time and was able to adjust her workload to maintain adequate patient intervention time, it may be expected that the project group would be more satisfied with the amount of physiotherapy received. It is important to emphasise that the individual skills or approaches of the physiotherapists concerned were not the subject of this investigation but rather the way in which the service was delivered. Given the extensive knowledge base and skills of physiotherapists it is not surprising that the two groups were equally satisfied. Regardless of the communication skills of the individual physiotherapists, the increased time available to the project physiotherapist would have influenced the ability to ensure understanding of advice and instructions contributing to this result. Where general commentary was given in the QLQ-C30, it was found that no patients reported dissatisfaction with the service provided by any of the healthcare professionals involved in their care.

Physiotherapist workload data

The individual treatment episodes provided by the project physiotherapist were longer than those of the ward physiotherapist. One must note that while the project physiotherapist was employed solely for the study and her time was quarantined for the provision of enhanced patient care, the ward physiotherapist providing the standard level of care was required to provide a service to three busy medical wards and a specialist outpatient clinic. Based on the results of the nation-wide survey (stage one), the latter situation is typical of physiotherapy work allocation in Australian public hospitals providing palliative care services.

The cost of providing the physiotherapy services under the project model of care was greater than the standard service. This was due to the increased time spent with each patient as well as the addition of community follow-up. However, a comparison of discharge destination and place of death indicates that the project group required less long-term formal care. While a detailed cost-efficiency analysis of the two models of physiotherapy service delivery is not possible without further investigation, given the increased costs associated with terminal stage care[9] it is likely that the project model of service would attract savings through the reduced utilisation of formal care facilities leading up to death.

The nation-wide survey of physiotherapy service providers conducted in stage one found that those patients receiving physiotherapy did so for an average of less than 10 minutes per day. An examination of the workload data of the project physiotherapist identified the time required to conduct an effective assessment and treatment session was well in excess of this (table one). Clearly, the physiotherapy services currently being provided by palliative care services are inadequate and severely impair outcome. The inadequacy of the current level of service is even more apparent when considering the potential numbers of oncology inpatients (and outpatients) who do not receive any physiotherapy despite known indications[13]. Given that all patients do not require daily treatment, and allowing time for administrative aspects associated with clinical positions, a conservative recommendation for physiotherapy staff to patient ratio is 1:12 based on the findings of this study. Community visits require approximately 120 minutes and in services where these occur, staff to patient ratios should be adjusted accordingly.

Conclusion

In summary, in comparison to the standard treatment group, patients in the project group were significantly more likely to be discharged home and significantly more likely to die at home. The provision of a specialised physiotherapy service resulted in significantly higher functional levels on follow-up assessment. A trend towards the maintenance or improvement of the functional component of quality of life and significant improvements in fatigue, pain and appetite were noted in patients who received optimised levels of physiotherapy time and resources. The provision of an adequately resourced physiotherapy service incorporating early intervention and community follow-up can contribute significantly to the maintenance of functional independence, patient satisfaction and quality of life among patients requiring palliative care. In turn, this may result in decreased demand for formal inpatient care and subsequent cost savings. A physiotherapist to inpatient ratio of 1:12 is recommended in order to produce such results.

Acknowledgements

To Ms Elaine Unkles for her sponsorship of the project and useful suggestions on the manuscript, Ms Pamela McNeil (social worker) for her support during the project, the staff of the Division of Oncology, Royal Brisbane and Royal Women's Hospitals Health Service District, for their professionalism and interest in the study, and most of all to the patients and carers who agreed to participate in the research.

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REPORTS

Support for research 2003

The state and territory cancer organisations, which comprise The Cancer Council Australia, are the major sponsors of cancer research and related activities in Australia. Grants are made following a competitive, peer-reviewed assessment from funds derived from donations and bequests.

In 2003 the value of these grants is $20 million.

In addition, the grants for breast cancer research made by the National Breast Cancer Foundation are listed. The Foundation has been established by the Federal Government, with an independent Board of Trustees to encourage research in all aspects of breast cancer.

THE CANCER COUNCIL NSW

RESEARCH GRANTS

J Kirk Westmead Hospital	kConFab: A national consortium for research into familial breast cancer	$55,000
A Grulich National Centre in HIV Epidemiology and Clinical Research, University of NSW	Cancer in dialysis patients and kidney transplant recipients: incidence, risk factors and survival	$36,200
P Hersey Newcastle Mater Misericordiae Hospital	Sensitization of human melanoma to killing by the immune system	$134,620
R Lock Children's Cancer Institute Australia for Medical Research	Targeting angiogenesis signalling pathways in childhood acute lymphoblastic leukaemia	$80,000
R Ward St Vincent's Hospital	The significance of CpG island methylation in the pathogenesis of hyperplastic polyps and colorectal cancer	$135,000
A deFazio Westmead Institute for Cancer Research	Molecular epidemiology of ovarian cancer study - WA, Tasmania and a national clinical follow-up core	$69,500
Total research grants		$510,320

CONTINUING RESEARCH PROJECT GRANTS

J Stevens Collaborative Health Education Research Centre, St Vincent's Hospital	Sentinel node vs axillary clearance trial	$13,000
S Tangye Centenary Institute of Cancer Medicine and Cell Biology	Lymphocyte activation and anti-tumour immunity mediated via SAP-associating surface receptors in health and disease	$70,000
R Lock Children's Cancer Institute Australia for Medical Research	Molecular mechanisms of drug resistance in childhood acute lymphoblastic leukaemia	$71,649
Q Dong University of Sydney	The role of FHL1 and SPINK1 in androgen-independent prostate cancer	$60,000
B Henderson Westmead Institute for Cancer Research	Regulation of beta-catenin nuclear trafficking in cancer	$80,000
R Mason University of Sydney	Role of 1,25dihydroxyvitamin D3 in photoprotection	$70,000
C Mountford Institute of Magnetic Resonance Research	MRI/MRS applied to breast cancer detection, diagnosis and prognosis	$70,000
M Tattersall University of Sydney	When the treatment goal is not cure: a randomised trial of decision aids in patients with incurable metastatic cancer	$141,800
J Wiggers Hunter Centre for Health Advancement	A randomised controlled trial of a computerised smoking cessation intervention in a surgical pre-admission clinic	$31,123
D Joshua Centenary Institute of Cancer Medicine and Cell Biology	Identification of the specificity of potential myeloma specific clonal CD8 T cells using TCR transfectants	$63,167
A Rice Children's Cancer Institute Australia for Medical Research	Development of targeted immunotherapy to treat relapsed leukaemia post stem cell transplantation	$66,940
W Rawlinson SEALS, Prince of Wales Hospital (South Eastern Area Laboratory Service)	The aetiology of breast cancer and the involvement of diet, hormones and the human homologue of the mouse mammary tumour virus	$75,548
M Stockler NHMRC Clinical Trials Centre	Antidepressants and subjective well-being in advanced cancer: a double blind randomised clinical trial	$15,705
P Hogg University of NSW Centre for	Tumour Angiogenesis	$211,000

G Marshall Children's Cancer Institute Australia for Medical Research	Defining the cause and improving the treatment of childhood neuroblastoma	$330,000
R Sutherland The Garvan Institute of Medical Research	Steroid and growth factor signalling in the pathophysiology of breast and prostate cancer	$400,000
Total continuing research program grants	$1,769,932	

RESEARCH FELLOWSHIP

R Reddel Children's Medical Research Institute	Carcinogenesis	$466,667
G O'Neill Children's Hospital Westmead	Career Development Research Fellowship Cas proteins and breast cancer cell response to chemotherapy	$150,000
Total research fellowships		$616,667

OTHER RESEARCH PROGRAMS

Cancer Trials NSW	$1,024,561
Cancer Epidemiology Research Unit	$690,000
Cancer education research program	$500,000
Hereditary bowel cancer registers	$235,000
Quality cancer research project	$300,000
Strategic research projects	$103,478
Total other research programs	$2,853,039

TOTAL RESEARCH FUNDED	$5,749,958

THE CANCER COUNCIL SOUTH AUSTRALIA

RESEARCH GRANTS

J Ainslie, W McCarthy, B Burmeister, M Smithers, J Thompson, M Henderson Division of Radiation Oncology Peter MacCallum Cancer Institute	A randomised clinical trial of surgery versus surgery plus adjuvant radiotherapy for regional control in patients with completely resected macroscopic nodal melanoma	$4,241
D Ben-Tovim, A Stapleton, C Pinnock Clinical Epidemiology and Health Outcomes Unit Flinders Medical Centre	The influence of coping strategies on outcomes in prostate cancer: a longitudinal study	$60,000
D Bowtell, A deFazio, M Davy Dept of Research Peter MacCallum Cancer Institute	Molecular epidemiology of ovarian cancer : Australian ovarian cancer study – Western Australia, Tasmania and a national clinical follow-up core	$36,000
R D'Andrea Child Health Research Institute	An expression cloning strategy for identification of a molecular lesion in polycythemia vera	$57,866
A Evdokiou, D Findlay, B Coventry Dept of Orthopaedics and Trauma Royal Adelaide Hospital	A novel non-toxic approach to bone cancer therapy	$66,808
G Forbes, F Macrae, P Bampton, J Edwards Dept of Gastroenterology and Hepatology Royal Perth Hospital	A comparison of screening tests for colorectal neoplasia in average risk asymptomatic subjects	$41,897
G Gill, J Kollias, M Bochner, D Walsh Dept of Surgery University of Adelaide	Sentinel lymph node biopsy versus axillary clearance in operable breast cancer	$53,376
G Goodall Hanson Centre for Cancer Research IMVS	Regulation of HIF-1a by PI3K signalling in breast cancer	$64,197
M Guthridge, A Lopez Hanson Centre for Cancer Research IMVS	Role of the 14-3-3 family of proteins in human GM-CSF and IL-3 receptor signalling in leukaemic cells	$54,505
J Hardingham, P Hewett Haematology-Oncology Dept The Queen Elizabeth Hospital	Detection of disseminated tumour cells in colorectal cancer using tumour-specific gene expression markers and immunobead RT-PCR	$67,808
P Hewett, J Moore, C Platell, B Iacopetta, A Ruszkiewica Dept of Surgery The Queen Elizabeth Hospital	Gender and anatomical site differences in the survival benefit from 5FU chemotherapy for colorectal cancer patients	$51,340
D Horsfall Dame Roma Mitchell Cancer Research Laboratories Hanson Institute	Modulation of prostate cancer cell attachment to stromal matrix by versican	
Y Hu, G Young, R Le Leu Flinders Centre for Digestive Health Dept of Gastroenterology Flinders Medical Centre	Do dietary interventions protect in a p53 deficient model of colorectal tumorigenesis?	$56,799
S Kumar Dept of Haematology Hanson Centre for Cancer Research	Regulation of caspase-2 activation and its implications in acute promyelocytic leukaemia	$66,000

G Lindeman, D Amor, J Kirk, G Suthers, J Goldblatt Victorian Breast Cancer Consortium Laboratory Walter and Eliza Hall Institute	kConFaB : A consortium for research on familial breast cancer	$55,000
AB Lyons, T Hughes Division of Haematology IMVS	Analysis of the biology of mutant forms of BCR/ABL resistant to the tyrosine kinase inhibitor imatinib (Glivec)	$60,607
P Mackenzie Dept of Clinical Pharmacology Flinders Medical Centre	Regulation of the chemical detoxifying UDP glucuronosyltransferases and their role in colorectal cancer	$68,268
I Olver Royal Adelaide Hospital Cancer Centre Royal Adelaide Hospital	Improving informed consent to chemotherapy : Written information versus an interactive CD-ROM	$47,800
P Reynolds, M Holmes Dept of Thoracic Medicine	Targeting TIMP gene delivery as a strategy against pulmonary metastases	$60,926
R Richards Dept of Molecular Biosciences University of Adelaide	Chromosomal fragile sites : The role of cis-acting elements and trans-acting factors in DNA instability in cancer	$65,041
W Tilley, P Neufing, M Yang Chair in Cancer Research University of Adelaide	Dominant negative androgen receptors: a novel approach to the treatment of metastatic prostate cancer	$68,268
M Whitelaw, J Gorman, D Peet Molecular Biosciences University of Adelaide	Role of the hypoxia inducible factor in tumourigenesis	$61,000
E Yeoh, R Holloway, A Luck, M Schoeman, F Bartholomeusz Dept of Radiation Oncology Royal Adelaide Hospital	Natural history, pathophysiology and treatment of radiation proctitis following radiotherapy for prostatic carcinoma	$69,757
Total research grants		$1,307,162

SENIOR FELLOWSHIPS

C Hahn, Hanson Centre for Cancer Research	$62,200
S Stephenson, The Queen Elizabeth Hospital	$62,200
Total senior fellowships	$124,400

FELLOWSHIPS

A Evdokiou, Hanson Centre	$57,860
G Buchanan, University of Adelaide	$57,860
Total fellowships	$115,720

W BRUCE HALL CANCER RESEARCH FELLOWSHIP

D Peet, University of Adelaide	$69,000

PETER NELSON LEUKAEMIA RESEARCH FELLOWSHIP

R D'Andrea, Child Health Research Institute	

OTHER RESEARCH PROGRAMS FOR 2003

Centre for Cancer Control Research	$222,000
Chair in Cancer Care – I Olver	$100,000
Travel grants	$30,000
Distinguished visitors	$15,000
Student vacation scholarships	$10,000
PhD Scholarship	$25,000
Data Managers Program	$80,000
Prostate Data Managers Program	$25,000
Radiation Therapy Scholarships	$8,000
Total of other research programs	$515,000
TOTAL RESEARCH FUNDED	$2,201,447

THE CANCER COUNCIL TASMANIA

RESEARCH GRANTS

G Woods University of Tasmania	Immunosuppression by carcinogen induced immature dendritic cells: Signalling molecules, potential pathways and intervention strategies	$30,000
J McKay University of Tasmania	The molecular genetics of familial prostate cancer in Tasmania	$20,000
D Amor Victorian Clinical Genetic Services	KConFab – A consortium for research on familial breast cancer	$10,000
R Lord University of Tasmania	Analysis of breast cancer using proteomics	$25,000
P Blomfield Royal Hobart Hospital	The Australian ovarian cancer study	$35,000
Following project jointly funded by David Collins Leukaemia Foundation and The Cancer Council Tasmania		
S Ragg University of Tasmania	The molecular basis of ceramide – mediated growth arrest and terminal differentiation	DCLF $45,000 TCCT $40,000
R Lowenthal Royal Hobart Hospital	Long term storage of blood stem cells for transplantation – clinical results and patient outcomes	DCLF $15,000 TCCT $15,000
Total research grants		$235,000

JEANNE FOSTER SCHOLARSHIPS

G Woods University of Tasmania	To attend the 7th International Sumposium on Dendritic Cells in Germany	$650
P Davies Nurse Calvary Health Care	To attend a Bereavement Counselling Course at The Bereavement CARE Centre	$600
S Bacic Genetic Co-ordinator Royal Hobart Hospital	To commence a Graduate Diploma in Genetic Counselling by distance education through Charles Sturt University, NSW and also to attend three compulsory residential schools	$800
C Wren Hospital Scientist Royal Hobart Hospital	To attend a course on Chromosome to Genes: Toward best practice guidelines and Australasian Society of Cytogeneticists and also to attend the annual scientific meeting of the Haematology Society of Australian and New Zealand	$800
S Roper Registered Nurse Royal Hobart Hospital	To undertake the Prostate Care Nurse Program (Distance Education under the auspices of The Cancer Council Victoria and Latrobe University)	$450
Total Jeanne Foster scholarships		$3,300

OTHER RESEARCH PROGRAMS

A More Oncology Nurse	Athena Foniadakis Leukaemia Scholarship	$5,000
E Whinnett, C Kidd	Athol Meyer Award – for excellence in media coverage of cancer issues	$1,000
Support for clinical trial data managers		$47,900
Familial bowel cancer registry support		$16,660
Total other research programs		$70,560
TOTAL RESEARCH FUNDED		$308,860

THE CANCER COUNCIL VICTORIA

RESEARCH GRANTS

N Ahmed, M Quinn Royal Women's Hospital	EGF-dependent alpha-v beta-6 integrin-mediated regulation of colon/ovarian cancer growth and metastasis	$65,000
D Ball Division of Radiation Oncology Peter MacCallum Cancer Institute	Tumour volume as an independent prognostic factor in non-small cell lung cancer	$35,000
D Bowtell, A de Fazio, D Wyld, D Whiteman, D Gertig, M Friedlander, P Harnett, M Davy, P Blomfield, N Zeps Peter MacCallum Cancer Institute	Molecular epidemiology of ovarian cancer: Australian ovarian cancer study - Western Australia, Tasmania and a national clinical follow-up core	$60,000
A Brooks, E Maraskovsky Dept of Microbiology and Immunology University of Melbourne	MICA expression in malignant melanoma: consequences for NK and T cell activation	$55,000
H Cheng Dept of Biochemistry and Molecular Biology University of Melbourne	Regulation of the tumour suppressor PTEN by phosphorylation and oligomerization	$4,000
P Choong, H Zhou St Vincent's Hospital	Urokinase plasminogen activator and osteoclast systems regulate growth and progression in osteosarcoma	$70,000
P Darcy, J Trapani, M Smyth Cancer Immunology Research Laboratory Peter MacCallum Cancer Institute	Immunotherapy of cancer using genetically engineered T cells	$50,000
M Ernst, P Waring Colon Molecular and Cellular Biology Unit Ludwig Institute for Cancer Research	The tumorigenic effect of overexpression of DNA methyltransferases on the intestinal epithelium	$60,000
P Gibson, E Nice Dept of Medicine	Molecular regulation of migration in normal and neoplastic colonic cells	$55,000

Monash University		
K Harder, M Hibbs, A Dunn Melbourne Tumour Biology Branch Ludwig Institute for Cancer Research	An analysis of the Lyn tyrosine kinase in myeloid cell tumour suppression using both loss- and gain-of-function mutant mice	$50,000
J Heierhorst St Vincent's Institute of Medical Research	A novel human DNA damage response protein that interacts with the CHK2 and PML tumour suppressors	$60,000
R Johnstone Peter MacCallum Cancer Institute	Mechanism of action of histone deacetylase inhibitors: novel anti-cancer drugs	$60,000
M Lackmann, P Gibbs Ludwig Institute for Cancer Research	The role of EphA/ephrin-A interactions in cutaneous melanoma: effects of Eph receptor activation on cell adhesion, mobility and viability during various stages of melanoma progression	$69,000
G Lindeman, D Amor, J Kirk, G Suthers, J Goldblatt Dept of Haematology and Medical Oncology Royal Melbourne Hospital	kConFab: A consortium for research on familial breast cancer	$55,000
F Macrae, B Leggett, J Jass Dept of Gastroenterology Royal Melbourne Hospital	A trial of aspirin and/or resistant starch in people at risk of hereditary colorectal cancer (CAPP2)	$30,000
G Mann, J Hopper, J Aitken, R Kefford, G Giles, B Armstrong Dept of Public Health University of Melbourne	Australian melanoma family study	$50,000
C Mitchell Dept of Biochemistry and Molecular Biology Monash University	The characterization of a novel 108 kDa inositol polyphosphate 5-phosphatase: regulator of cell death	$50,000
S Ngan, S McLachlan, J MacKay, R Fisher Division of Radiation Oncology Peter MacCallum Cancer Institute	A randomised trial of preoperative radiotherapy for stage T3 adenocarcinoma of rectum	$20,000
S Nutt, L Wu Immunology Division Walter and Eliza Hall Institute of Medical Research	The role of the proto-oncogene PU.1 in haemopoiesis	$60,000
M Plebanski, I McKenzie Austin Research Institute	The role of a novel suppressive T cell subset, Tr1, in breast cancer immunity	$60,000
L Purton, D Haylock, P Simmons Division of Haematology and Medical Oncology Peter MacCallum Cancer Institute	Enhancing ex vivo expansion of primitive haemopoietic progenitor cells by all-trans retinoic acid	$50,000
G Risbridger Institute of Reproduction and Development Monash University	Role of estrogens in prostate malignancy	$70,000
J Rossjohn Dept of Biochemistry and Molecular Biology Monash University	A structural investigation into the role of the alpha-v beta-3 integrin in cancer	$55,000
S Stacker, M Achen Melbourne Tumour Biology Branch Ludwig Institute for Cancer Research	The role of vascular endothelial growth factors in the metastatic spread of cancer	$66,000
D Thomas, M Trivett Dept of Medicine University of Melbourne	Interactions between cell cycle and differentiation processes in normal and malignant osteoblasts	$60,000
T Tiganis Dept of Biochemistry and Molecular Biology Monash University	Protein phosphatases and mitosis	$60,000
J Villadangos Immunology Division Walter and Eliza Hall Institute of Medical Research	Mechanisms of cross-presentation in dendritic cells	$60,000
E Vincan, W Phillips Peter MacCallum Cancer Institute	FZD7 signalling in colon cancer	$60,000
J Visvader Victorian Breast Cancer Research Consortium	SOCS genes in the mammary gland and other organs - potential tumour suppressor genes	$30,000
A Ward School of Biological and Chemical Sciences Deakin University	Isolation and characterisation of leukaemia mutants in zebrafish	$60,000
Total research grants		$1,598,000

POST-DOCTORAL RESEARCH FELLOWSHIPS

N Haynes, Peter MacCallum Cancer Institute	$27,500
R Jarred, Monash Institute of Reproduction and Development	$55,000
Total post-doctoral research fellowships $82,500	

POSTGRADUATE RESEARCH SCHOLARSHIPS AND VACATION STUDENTSHIPS

J Becanovic, Dept of Biochemistry and Molecular Biology, Monash University	$21,150
Y Cao, Baker Medical Research Institute	$4,969
A Deans, Peter MacCallum Cancer Institute	$5,288
L Dow, Peter MacCallum Cancer Institute	$21,150
S Foo, Ludwig Institute for Cancer Research	$2,263
H Gan, Ludwig Institute for Cancer Research	$27,150
K Horan, Dept of Biochemistry and Molecular Biology, Monash University	$21,150
R Redvers, Peter MacCallum Cancer Institute	$21,150
W Shi, Dept of Microbiology and Immunology, University of Melbourne	$27,150
J Stone, Dept of Public Health, University of Melbourne $21,150	
S Ting, Dept of Medicine, University of Melbourne	$6,788
Vacation Studentships	$20,405
Total scholarships and studentships	$199,763

FELLOWSHIPS

Carden Fellowship D Metcalf, Walter and Eliza Hall Institute of Medical Research	$200,000
Dunlop Fellowship A Roberts, Walter and Eliza Hall Institute of Medical Research	$93,888
K & H Fraser Fellowship P Colman, Walter and Eliza Hall Institute of Medical Research	$100,000
Lions Fellowship (variable) Walter and Eliza Hall Institute of Medical Research	$50,000
Total fellowships	$443,888

OTHER RESEARCH PROGRAMS

Medical and scientific activities	$109,000
Total other research programs	$109,000

CANCER CONTROL RESEARCH INSTITUTE PROGRAMS

Cancer Epidemiology Centre	$936,000
Victorian Cancer Registry	$906,000
Health 2000	$412,000
Centre for Behavioural Research in Cancer	$922,000
Centre for Clinical Research in Cancer	$1,098,000
VicHealth Centre for Tobacco Control (The Cancer Council Victoria contribution to VicHealth Centre)	$340,000
Total cancer control research institute programs $4,614,000	

TOTAL RESEARCH FUNDED	$7,047,151

QUEENSLAND CANCER FUND

RESEARCH GRANTS

C Baldock, Y De Deene, B Healy, A Whittaker, D Schlect Queensland University of Technology	Development of ultrasonic scanner for evaluation of radiotherapy polymer gel dosimetry phantoms	$70,000
D Bowtell Peter MacCallum Cancer Institute D Wyld, D Whiteman	Molecular epidemiology of ovarian cancer. The Australian Ovarian Cancer Study: WA, Tas, and a National Clinical Follow-up Core	$42,000
A Boyd, A Yap, G Burns Queensland Institute of Medical Research	The role of truncated transcripts of the Fat protocadherin in T lymphocyte tumours	$72,590
M Brown University of Queensland	Investigating the role of BRCA 1 in mammary differentiation and morphogenesis	$70,000
S Burrows Queensland Institute of Medical Research	T cell recognition of peptides derived from tumour antigens and bound to non-self-MHC molecules	$72,590
G Clark Mater Medical Research Institute	Characterisation of a new myeloid specific antigen as a potential leukaemic cell target	$72,590
I Frazer University of Queensland Centre for Immunology and Cancer Research	Evaluating therapeutic interventions to overcome tolerance to tumour antigen	$70,000
B Gabrielli, J Hancock University of Queensland	Mitotic regulation of the Ras/RafMEK/ERK pathway	$72,590
B Gabrielli UQ Centre for Immunology and Cancer Research	Mechanims of UV induction of the melanoma susceptibility gene product p16CDKN2A	$70,000
RA Gardiner, J Clements, V Hyland, M Lavin University of Queensland	Diagnosis and prediction of the natural history of prostate cancer: use of ejaculate for molecular profiling	$70,520
M Gattas G Lindeman, G Suthers, J Goldblatt, J Sambrook, J Kirk Peter McCallum Cancer Institute, Melbourne	KconFab: A national consortium for research into familial breast cancer	$57,035
A Green, K Horwood, D Wyld, A Clavarino	Comparison of quality of life and standard end-points	$70,000

Queensland Institute of Medical Research	of chemotherapy in advanced ovarian cancer	
K Halford, S Steginga, J Scott Griffith University	Development and evaluation of a self-directed, couple-based coping program "CanCOPE" for men with early stage prostate cancer and their partners	$70,000
D Hart Mater Medical Research Institute	Purified blood DC vaccination with defined tumour associate antigens for multiple myeloma	$70,000
N Hayward, G Kay Queensland Institute of Medical Research	Mouse models to understand the development of multiple endocrine neoplasia	$70,000
B Kelly, P Burnett, F Varghese, G Mitchell, J Turner, M Robertson Dept of Psychiatry University of Queensland	The impact of a structured intervention to improve doctors' care of dying patients	$70,000
A Kelso Queensland Institute of Medical Research	Functional plasticity of memory CD8T cells in a model of tumour immunity	$70,000
N Kienzle, A Kelso Queensland Institute of Medical Research	Interleukin 4-driven immune deviation of tumour-specific CTL responses and its implication for tumour clearance	$70,000
K Masato, D Hart Mater Medical Research Institute	Characterisation of novel fusion transcript of dEC-205/DCL-1 expressed in Hodgkin's Lymphoma	$72,590
R Khanna, J Seymour, M Wolf, S Elliott, P Marlton Queensland Institute of Medical Research	Profiling dynamics of EBV-specific cytotoxic T Cell responses in Hodgkin's Disease	$72,590
D Krause, KK Khanna Queensland Institute of Medical Research	The John McCaffrey Memorial Grant The roles of Nek2 and TLK 1/2 in mediating BRCA1 genome surveillance	$72,590
K MacDonald, R Thomas, G Hill Queensland Institute of Medical Research	Modulation of graft-versus-host disease by the granulocyte-monocyte lineage	$70,000
M McGuckin, A Lopez Mater Medical Research Institute	Exploiting the discovery of the CA125 gene to improve diagnosis, define targets for immunotherapy and understand the biology of ovarian cancer	$70,000
G Mann University of Sydney J Aitken	Australian melanoma family study	$70,000
G Monteith, S Roberts-Thomson University of Queensland	The plasma membrane calcium ATPase (PMCA) in breast tumorigenic cells	$72,590
J Neuzil, L Baseler, A Azzi Queensland Institute of Medical Research	Vitamin E analogues as selective inducers of apoptosis in malignant cells: mechanisms and potential application	$65,000
A Nicol, D MacFarlane, R Abraham University of Queensland	Phase I study of alpha-galactosyl ceramide pulsed dendritic cells in patients with metastatic malignancy	$145,180
P Parsons, G Boyle Queensland Institute Medical Research	Understanding and controlling gene expression pathways relevant to skin cancer	$70,000
M Smith, G Monteith University of Queensland	Pharmacological investigation of the toxicological effects of high doses of systemic morphine	$72,590
A Suhrbier Queensland Institute of Medical Research	Sustained CD8+ T cell effectors for protection against cancer; their regeneration by novel Kunjim vaccines	
K Tonissen, F Clarke Griffith University	Extracellular thioredoxin and breast cancer cell invasion	
Z Upton, D Leavesley, L Chopin, S McElwain Queensland University of Technology	Functional characterisation of a novel IGF-binding protein complex in the proliferation, migration and metastasis of breast cancer cells	$72,590
G Walker, I Tonks, S Pavey, N Hayward, G Kay Queensland Institute of Medical Research	Delineation of the key molecular events that underlie melanoma development	$70,000
M Wei, J Ramsay, S Scott, P Chen University of Queensland	Gene therapy for non small cell lung cancer (NSCLC): the development of a novel strategy for enhancing radio-therapeutic efficacy	$72,590
A Yapp, S Grimmond University of Queensland	Regulation of tumour cell locomotility and invasiveness by the cell adhesion molecule, e-cadherin	$72,590
D Young, A Spurdle Queensland Institute of Medical Research	Analysis of a novel X-linked gene which interacts with BRCA1 and assessment of its role in breast cancer predisposition	$70,000
K Zhao, I Frazer University of Queensland	How does tRNA correlate with codon usage to regulate the expression of papillomavirus late genes?	$72,590
P Zimmerman, K Fong, M Colosimo, L Clarke, E Duhig Prince Charles Hospital	Predicting lung cancer metastases	$67,410
Total research grants		$2,720,815

FELLOWSHIPS AND SCHOLARSHIPS

QCF Senior Research Fellow M McGuckin, Mater Medical Research Institute	$95,569
QCF Clinical Research Fellow 2003 G Buter, Cancer Epidemiology Group, Queensland Institute Medical Research	$35,100
NQ Cancer Control Scholarship M Nowak, James Cook University, Townsville	$20,100
Total fellowships and scholarships	$150,769

COLLABORATIVE STUDIES

QCF/QUT: Cancer patients' supportive care needs, awareness and use: Patient and provider perspectives	$35,065
QCF/School of Social Science UQ: The ethnic experience of cancer in Queensland – A case study of the Chinese and Vietnamese communities in Brisbane	$14,937
QCF/Griffith University: Cancer support centre (psychosocial oncology)	$100,000
QCF/School of Population Health and Institute for Molecular Biosciences UQ: Genetic science, molecular biotechnology and the public's perceptions of future prospects for the cure and prevention of cancer	$27,000
QCF/School of Public Health, QUT/School of Psychology UQ: Quality of life and unmet needs of colorectal cancer patients at the time of diagnosis and treatment	$55,000
Total collaborative studies	$232,002

EPIDEMIOLOGY AND BEHAVIOURAL RESEARCH PROGRAMS

QCF Cancer Epidemiology Unit	
QCF Behavioural Research Unit	
Total epidemiology and behavioural research programs	

OTHER RESEARCH GRANTS

Familial adenomatous polyposis register	$44,540
Australian paediatric cancer registry	$43,670
Total other research grants	$88,210

PhD SCHOLARSHIP PROGRAM

2001 – 2003	
R Ali, Dept Physiology and Pharmacology, University of Queensland	$19,500
S Duffy, Division of Cancer and Cell Biology, Queensland Institute of Medical Research	$19,500
S Wright, George Roberts Scholar, NQ Dept Physiology and Pharmacology, James Cook University	$19,500
2002 – 2004	
M Rinaldis, 2002 John Earnshaw Scholar School of Psychology, University of Queensland	$21,500
S Joseph, Institute for Molecular Bioscience, Queensland University	$19,500
L Papp, Signal Transduction Lab, Queensland Institute of Medical Research	$19,500
2003 – 2005	
L Packer, 2003 John Earnshaw Scholar Division of Cancer and Cell Biology, Queensland Institute of Medical Research	$21,000
K Jawerth, Division of Cancer Immunotherapy, Queensland Institute of Medical Research	$19,500
E Hacker, Division of Cancer and Cell Biology, Queensland Institute of Medical Research	$19,500
R Parlett, Mater Medical Research Institute	$19,500
Total PhD scholarship program	$198,500

TOTAL RESEARCH FUNDED	$4,069,896

CANCER FOUNDATION OF WA

RESEARCH GRANTS

L Abraham, D Spagnolo School of Biomedical and Chemical Sciences University of Western Australia	YY 1 and AP 1 expression in anaplastic large cell lymphoma	$55,000
B Dix School of Pharmacy Curtin University of Technology	An investigation of the specific targeting of cancer cells by adenoviruses	$47,272
G Forbes, J Edwards, R Mendelson, L Fritschi Department of Gastroenterology and Hepatology Royal Perth Hospital	A comparison of screening tests for colorectal neoplasia in average risk asymptomatic subjects	$31,423
M Garlepp, S Fox School of Pharmacy Curtin University of Technology	Induction of anti-tumour immunity by manipulation of endogenous antigens	$55,000
G Lindeman, J Goldblatt Genetic Services of WA King Edward Memorial Hospital and Princess Margaret Hospital	kConFab: The Kathleen Cunningham Consortium for research into familial aspects of breast cancer	$27,500
A Lee, C Binns, X Xie, W Lu School of Public Health Curtin University of Technology	Tea consumption and epithelial ovarian cancer survival: a prospective cohort study	$54,800
R Minchin Laboratory for Cancer Medicine University of Western Australia	Enhancement of cancer gene therapy by combination of nitroreduction and phase II metabolism	$55,000
D Nelson, B Robinson Department of Medicine University of Western Australia	Evaluating the effects of intra-tumoural cytokine therapy on tumour-infiltrating T cells and tumour growth	$55,000
J Olynyk, J McHutchison, G Yeoh Department of Medicine University of Western Australia	Determining the effects of antiviral therapy of chronic hepatitis C on hepatic oval cells and risk for hepatocellular carcinoma	$55,000
D Bowtell, N Zeps, I Hammond Peter MacCallum Cancer Institute Sir Charles Gairdner Hospital	Molecular epidemiology of ovarian cancer: The Australian Ovarian Cancer Study - WA, TAS and a national clinical follow-up core	$36,000

From bench to bedside and back again

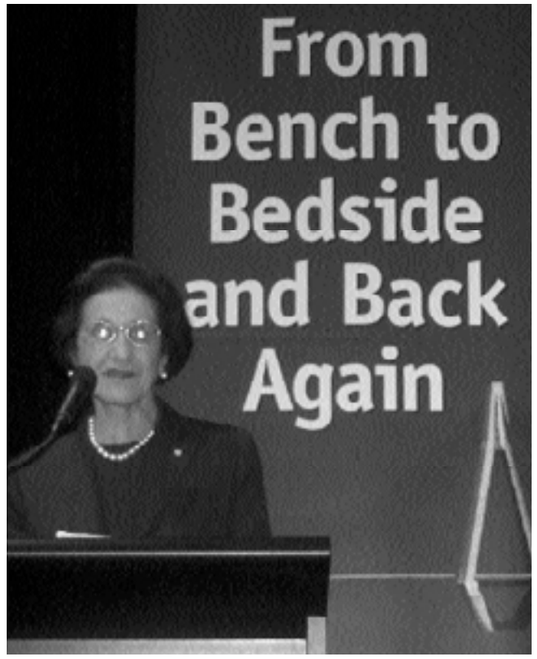
COSA Annual Scientific Meeting 2002

The 29th annual scientific meeting of COSA was held at Darling Harbour in Sydney in November 2002. This meeting represented a departure from the previous Brisbane meeting, with a decrease in the number of competing group sessions and an emphasis on joint sessions and multidisciplinary presentations and symposia.

Delegates heard from a wide range of speakers, courtesy of a number of concurrent or preceding meetings. Joint sessions were held with the Second Sino Australian New Zealand Conference on Surgical Oncology, the Australian Society for Breast Diseases, the Australian Association of Cancer Registries and the American Society of Clinical Oncology.

The first day was devoted to individual group meetings. The most heavily attended – with standing room only – was the Second Sino Australian New Zealand Conference on Surgical Oncology, where presentations were made with equivalent contributions from Australian and Chinese surgeons in colorectal cancer, oesophageal, gastric and breast cancers. Major overseas speakers included a distinguished Chinese faculty and Professor Irving Taylor from the UK on colorectal cancer related liver metastases, and Dr Hans Bonnenkamp from the Netherlands on gastric surgery. This proved to be one of the largest surgical oncology sessions ever held at COSA, and we hope it will lead to an increased presence of surgeons at future meetings.

Concurrently, the Australian Society for Breast Diseases and the Breast Group of COSA held a day-long program. Filled to capacity, the presentations included minimally invasive surgery, diagnostics, adjuvant therapy and issues of survivorship. In addition to a stellar local cast, the overseas speakers included Professor Kathy Pritchard from Toronto who did a major presentation on hormones in adjuvant therapy and on HRT, Professor Ian Tannock presenting novel work on fatigue and cognitive dysfunction after adjuvant therapy, and Jay Harness on minimally invasive surgery and mammography/ultrasound.



Prof Marie Bashir, Governer of NSW, opening the 29th conference.

All the groups had comprehensive and well-attended sessions on issues such as epidemiology, including geographic and survival analysis, communication and assessment of unmet needs, health services delivery research, a new drug research symposium, and patient care issues and innovative support programs.

A wine tasting highlighting the wares of the Mudgee region capped a busy day.

The meeting was able to provide a wide range of "meet the professor" sessions including "Good practice in surgical oncology" by Professor Irving Taylor (sponsored by the Surgical Society), "Breast cancer and HRT" by Kathy Pritchard, "Management of mucositis" by Dorothy Keefe, "Advances in radiation oncology" by David Ball and Andrew Turrisi (sponsored by Aventis), "Assessing quality of life" by Darius Razavi (jointly sponsored by the National Breast Cancer Centre), and Ian Tannock (sponsored with the Head and Neck Society) on "Critical interpretation of medical literature".

The formal opening by Professor Marie Bashir, Governor of NSW, on the second day of the meeting was followed by a keynote address by Professor Rick Kefford on molecular horizons in treatment. His overview of the translation of molecular knowledge to the delivery of novel therapies in the clinic was forceful and educational, with an outstanding use of multimedia.

State of the art symposia were held in management of lung and breast cancer, with participation of all disciplines from basic science to palliative care.

A highlight of the day was the "best of the best" abstracts session. Five presentations, originally nominated by each group and narrowed down by a larger panel, were presented. Our overseas guests judged the presentations. Winners of the main international travel prizes kindly donated by Pharmacia and Eli Lilly were Professor Patsy Yates for her paper on "Behavioural intervention for cancer pain" and Professor Graham Giles for his paper on the "Risk of colorectal cancer associated with food consumption".

A further travel prize by Mayne Pharma was given to Dr Rebecca Hagerty for her paper on "Metastatic cancers", and book prizes to Dr Trevor Leong for "Radiation in gastric cancer" and Dr Michael Dooley for "Dosing in obese patients".

This session highlighted like no other the great importance of COSA to cancer care delivery in Australia. A session of the best research in the meeting included an epidemiologist, a professor of nursing, a pharmacist, a psychologist and a radiation oncologist, all sharing the podium. No other cancer society in the world successfully combines the talents of so many different health professionals involved in the care of cancer patients.

The MOG Pierre Fabre award lecture was by Professor Lester Peters, one of the most famous radiation oncologists Australia has produced, on the international study headed by him and Dr Danny Rischin on a novel approach to treatment of head and neck cancer with a new radiosensitiser tirapazamine.

Concurrent workshops on sexuality and cancer, clinical trials recruitment, an update on hereditary cancer and on dealing with cancer in the family meant attendees were never short of options for learning opportunities. Lunch was also combined with poster reviewing and judging of the best awards. The winners were Dr Sayed Rizvi with "Targeting alpha therapy of breast cancer", and Cassandra Hobbs and Alison Read with "The new way home: Bridging the gap for oncology/ haematology patients".

That evening over 250 members and partners enjoyed the food and entertainment at the annual dinner with the memorable view of the city lights at night.

The final day was truly a marathon of content including a plenary on the impact of cytokines and cancer care by Dr George Morstyn (one of the pioneers in the field) and Dr Ian Davis from Melbourne. The joint ASCO/COSA great debate covered four major controversies:

- adjuvant therapy of melanoma (Professor Peter Hersey against and Professor Charles Balch for);
- tamoxifen as prophylaxis for breast cancer (Professor John Forbes against and Professor Gabriel Hortobyagi for);
- colorectal cancer screening (Professor Graeme Young against and Professor Joseph Lynch for); and
- prostate screening (Dr Geoff Hirst against and Professor Ivan Thompson for).

In each case the more cautious Australian approach won the audiences vote. A concurrent workshop on management of liver metastases, with input by major local and overseas leaders in the field was running simultaneously. This was followed by a presentation on the activities and achievements of the ALLG and ANZBCTG, and finally, a needed debriefing session led by Professor Stewart Dunn and Paul Heinrich on Burn out in professionals with the assistance of Darius Razavi was a much needed change for all attendees.

A huge vote of thanks must go to Rozanne Gilbert and our amazingly organised executive officer Lawrie Wright, his final COSA meeting pulled off as an impeccably run and efficient meeting on the usual shoe string budget!

The meeting attracted over 750 delegates and the format seemed much appreciated. The Perth meeting for 2003 appears to be following a similar format and should not to be missed!

Dr David Goldstein
Convenor

Clinical trials in cancer: an open forum for consumers

A national register of clinical trials in cancer would be an important step forward in improving participation in trials, delegates to this meeting agreed.

About 70 people attended the open forum at the Sydney Opera House on October 24 last year.

Organised by The Cancer Council Australia, the meeting was aimed at boosting understanding and awareness of clinical trials in cancer, and harnessing support for increased participation.

Meeting participants included people with cancer, representatives of cancer advocacy and support groups, researchers, clinical trials coordinators, and health professionals.

In opening the meeting the President of The Cancer Council Australia, Professor Ray Lowenthal, said the evidence shows that clinical trials lead to better health outcomes for the patients involved in them, and they contribute to all Australians receiving the best and most up-to-date medical care.

"Australia is helping lead the way in trials research, but participation rates are still low – fewer than one in 20 Australians who have cancer currently take part in clinical trials," he told the meeting.

"We're keen to see this change, and we want to enlist the support of as many people as possible to do this."

Background briefings and presentations from experts including trial participants, researchers and ethicists set the scene for discussions about community perceptions of clinical trials and whether these perceptions are based on fact or fiction, as well as barriers to participation in clinical trials and how they can be overcome.

The meeting heard that many people with cancer aren't aware they have the opportunity to take part in trials – trials are not widely publicised, and many doctors do not offer them.

Delegates agreed that some patients perceive trial participants as "guinea pigs", and that they see involvement as a last resort, after standard therapy has failed. Many people fear that participation in trials will increase their risk of side effects and death, and some fear they may be randomised to a placebo arm.

Delegates said many people believe trials only relate to drugs – they aren't aware there are also trials involving surgery and radiotherapy, as well as non-treatment cancer trials. Some people perceive that only public hospitals are involved in trials. Many of these negative perceptions are based on fiction rather than fact, and could be redressed through better information.

A lack of high quality, balanced, easily accessible information about clinical trials – both for patients and health professionals – was identified as a key barrier to participation. This includes information about what trials are and how they work as well as which trials are available, where, and how patients can become involved. Other barriers to participation identified included lack of health professional support for trials, geographical issues, lack of home support, inadequate government funding, and fears about being treated with something other than standard therapy.

Suggestions for overcoming barriers to participation included development of a national clinical trials registry, increased funding for trials, better information for patients (particularly at the time of diagnosis), education of clinicians, longer medical appointments to allow the opportunity to discuss trials, the development of support networks for trials participants, and public awareness campaigns.

Delegates undertook to increase awareness of clinical trials in cancer through their networks, and The Cancer Council Australia and other interested parties are working towards implementing some of the key recommendations from the meeting.

The Cancer Council Australia thanks Linda Reaby, Sally Crossing and Russell McGowan for their assistance in planning the open forum and the many speakers and delegates who took part, as well as the Sydney Opera House and Truffle Group for their pro bono support.

Jennifer Denholm
The Cancer Council Australia

Australian Behavioural Research in Cancer

This is a regular feature in Cancer Forum describing behavioural applications in cancer prevention.

Australia has five behavioural research centres: the Cancer Prevention Research Centre (CPRC) of the University of Queensland, the Centre for Health Research and Psycho-oncology (CHeRP) of The Cancer Council New South Wales, the Centre for Behavioural Research in Cancer (CBRC) of The Cancer Council Victoria, the Centre for Behavioural Research in Cancer Control (CBRCC) at Curtin University of Technology Perth, and the Centre for Cancer Control Research (CCCR) of The Cancer Council South Australia.

This report has been edited by Anne Gibbs (CHeRP) from the reports received.

New results

- Centre for Behavioural Research in Cancer (CBRC), VIC

Evaluation of the Prostate Care Nurse Distance Education Program

Nurses working with men with prostate cancer require ongoing education and training in prostate care to meet the multiplicity of needs faced by these men. The 13-week Prostate Care Nurse Distance Education Program developed by The Cancer Council Victoria and Latrobe School of Nursing and Midwifery is a tertiary-based education package for nurses, which can be undertaken as a stand-alone certificate or as part of a graduate diploma in advanced nursing. The program aims to educate nurses in the specialty areas of prostate cancer and prostate disease so they have access to up-to-date information, appropriate services, and ongoing education. It also enables students to develop the resources to establish a network of information and support across Australia and overseas for debriefing and professional development purposes.

An evaluation of the course, designed and conducted by staff at CBRC, was undertaken by students enrolled in the first two intakes in June and September 2001. Forty-six students participated in one or more stages of the evaluation. The topics that students reported as most helpful were treatment options (55%) and understanding and managing side effects of treatment (23%). Other topics reported as helpful included the topic on prostate cancer in general (19%), psychosocial and sexuality issues (19%), anatomy and physiology (14%), support services and resources (12%) and grief and loss (12%). Thirty-six (78%) students reported planned changes to their nursing practices as a result of what they had learned through completing the program and 30 (65%) students reported changes in their practices three months after completing the course. Readers interested in the Prostate Care Nurse Distance Education Program should contact Robyn Metcalfe, Cancer Education Unit, The Cancer Council Victoria, on 03 9635 5422.

Quit Victoria Research and Evaluation Studies Number 11, 2000-2001

Edited by Tessa Letcher and Lisa Trotter, Quit Victoria Research and Evaluation Studies Number 11, 2000-2001 was published in February 2003. This is the 11th volume in the series of Quit evaluation reports, the first having been produced in 1986. These volumes have reported on evaluation and researches conducted since 1985, and are prepared by CBRC for the Victorian Smoking and Health Program (Quit Victoria). In order to reflect the changing nature of the reports included in these volumes, the name of the series has been changed from Quit Evaluation Studies to Quit Victoria Research and Evaluation Studies. The latest volume includes, amongst others, reports on trends in smoking prevalence and consumption among Victorian adults and secondary students, quitting behaviour, public opinion, attitudes, knowledge and behaviour related to environmental tobacco smoke (ETS) and bans on smoking in public places as well as in the home. There are also reports on several studies funded by VicHealth related to recent amendments made to the Tobacco Act 1987 (Vic). These studies examined the processes of adaptation to mandated restrictions on smoking in dining areas and public opinion related to this, retailer and industry compliance with legislation that introduced bans on point of sale advertising in January 2002 in Victoria, staff attitudes towards and experiences of exposure to ETS in the workplace, and the relation between exposure to ETS at work and reported respiratory and sensory symptoms.

- Centre for Cancer Control Research (CCCR) and the Tobacco Control Research and Evaluation Program (TCRE), SA

Cancer statistics monograph series

A fifth report in this monograph series, entitled Lymphomas, myelomas and leukaemias, has been completed for printing. As for the earlier monographs, it is directed at providing secondary school and tertiary students, including students in the health field, and the public with information on cancer trends in South Australia, and opportunities for prevention and improvement in outcomes. Compared with cancers addressed in previous monographs, limited scope for primary and secondary prevention is apparent for these haematological tumours. Nonetheless, the monograph indicates the desirability of avoiding unnecessary exposures to ionising radiation, benzene and other solvents, chemicals, pesticides, herbicides, and to drugs and infections that suppress the immune system. The importance of further research into the causes of these cancers is highlighted. Progress is occurring in the treatment of these cancers, with gains in patient survival being most apparent for lymphomas and leukaemias, particularly childhood leukaemias. A reduction in mortality of approximately 40% from childhood leukaemia over a 20-year period in South Australia is attributed to advances in chemotherapy and associated bone-marrow transplantation. The Cancer Council South Australia also has drafted a sixth report in this monograph series, with participation from the CCCR, on survivorship following a diagnosis of cancer. Both monographs are due for release in early 2003.

Cervix screening coverage adjusting for hysterectomy rates

The CCCR has been examining socio-demographic trends in hysterectomy rates in South Australia and their effect on the likely coverage of the population with cervical screening. Hysterectomy rates were calculated using hospital inpatient statistics for 1992-2000. The percentages of women with an intact uterus were estimated from these data to reduce across the 20-69 year age span, with approximately 66% of South Australian women still having an intact uterus at 70 years of age. The results were similar to those obtained from a national interview survey which have been used uniformly by Australian cervix screening programs to estimate screening coverage in their jurisdictions. The South Australian data points to important geographic differences. Fewer women, who are socio-economically disadvantaged and from the country, have an intact uterus than metropolitan women. While the effects on estimated screening coverage of adjusting for geographic differences in hysterectomy rates generally were small, there were some geographic areas where important effects occurred, especially among older age groups. These findings will be relevant in the evaluation of screening coverage in South Australia and for setting priorities for health promotion.

Canberra Cancer Quality of Life Project

Further findings:
A comparison of patients with advanced cancer and their caregiver's knowledge of treatment intent (117 pairs) identified high levels of congruence (75%) that the illness was life-threatening but pronounced disagreement in perception in all other responses to the goals of treatment. One third of pairs were aware of the true nature of treatment goals, and one third were partially aware in that one respondent had correct perception. Among the final third classified as "non-aware", two distinct groups were identified: those where both respondents considered the aim of treatment was to cure (15.4%) and the other group defined as confused (22.2%) where both indicated they did not know the purpose of treatment intent, or one said they did not know, and the other party believed treatment was to cure. Significant predictors included gender and whether respondents lived in a metropolitan or non-metropolitan area for both patients and for caregivers, together with patient clinical characteristics marked by metastatic spread of disease and time to death.

- Centre for Health Research and Psycho-oncology (CHeRP), NSW [previously the Cancer Education Research Program (CERP)]

How might we improve adolescent use of sun protection measures?

Australia has one of the highest incidence rates of melanoma in the world. During the 1980s and 1990s Australia became a world leader in implementing public and professional education campaigns to minimise ultraviolet light exposure and so decrease the incidence and mortality associated with all forms of skin cancer. Although national monitoring has shown improvements in sun protection in the Australian population, adolescents' sun protection practices are particularly poor.

Dr Chris Paul and colleagues at the Centre for Health Research and Psycho-oncology, The Cancer Council NSW/University of Newcastle, undertook qualitative research to explore adolescents' perceptions regarding the influences on their sun protection behaviour. Seventeen focus groups were conducted with 12-17 year-old students, recruited through three public high schools in the Newcastle region. Single sex focus groups were conducted separately with three different age groups: those in years 7 or 8 (three male and three female groups); those in years 9 or 10 (three male and two female groups); and those in years 11 or 12 (three male and three female groups). Participants discussed the role of various factors influencing sun protection including the risk of discomfort, fear of skin cancer, peers, parents and policies. Age appeared to play a role in which factors were seen to be the most important influence on behaviour.

A number of potential avenues for intervention that might have a positive impact on adolescent sun protection emerged from this data.

- Centre for Behavioural Research in Cancer Control (CBRCC), WA

Moralisation, disgust and young people's response to graphic images in anti-tobacco advertising

Following the introduction of graphic health warning images on tobacco packaging in a number of countries, the Commonwealth Department of Health and Ageing commissioned this study in order to assist its decision on whether to implement a similar strategy within Australia. The resultant study has concluded that young people react as least as much as adults, and possibility more so, to advertisements depicting graphic images of the ill-health effects of smoking. It was therefore concluded that the placement of such graphic images on tobacco packaging would likely have a strong deterrence effect on young people.

The reaction of Bunbury residents to a possible total smoking ban in public bars and nightclubs

This study was instigated by the Cancer Foundation of Western Australia and the National Heart Foundation of Australia (WA). The study surveyed 506 adult residents in Bunbury who frequented licensed drinking establishments and concluded that the State Government would certainly not unleash a "hotbed" of general discontent if it imposed a total smoking ban in hotels, bars and nightclubs. Indeed the study revealed a general resignation and apathy of Bunbury residents towards the issue which seemed to indicate that introducing such a ban would be virtually cost neutral, if not positive, to the State Government.

Quantifying smoking incidences in media targeted at the 18 to 30 year old age group

The Commonwealth Department of Health and Ageing recently received the first draft of this study which monitored various media specifically targeted at the 18 to 30 year old age group for tobacco content. The media covered by the study included newspapers and magazines, movies, web sites, television programs, sporting events and music videos broadcast on television, and lyrics of popular music broadcast on the radio. Results of interest include that of 255 Internet sites monitored, approximately one in five contained a tobacco depiction and 93% of these portrayed smoking as socially acceptable. In addition, every film analysed contained at least one tobacco-related scene, with the six films studied containing 73 such scenes in total - 95% of which were classified as portraying smoking as socially acceptable.

- Cancer Prevention Research Centre (CPRC), QLD

Sun Protection in Secondary School Communities

SPISC was funded by Queensland Health and has recently been completed. It assessed the requirements of Queensland secondary schools for supporting sun protective behaviour. It was co-ordinated by Liane McDermott and investigated the level of implementation of sun protection policies in Queensland secondary schools and explored ways for improving the sun protective knowledge, awareness and behaviours of secondary school communities.

In total, 158 schools participated in a state-wide, web-based survey of sun protection policies and practices. While approximately half of the schools reported having a sun protection policy or procedure, the implementation of actual sun safety strategies were generally much higher. The incorporation of sun safety education was very high, but mostly limited to the year 8 curriculum. The most common strategies used to improve the provision of shade included seating under existing shade trees and providing shade at sporting carnivals and other outdoor events. While student hat-wearing remained the most challenging sun safety strategy for schools, many

schools adopted an 'any hat is better than no hat' policy with the approval of students wearing caps or 'bucket' hats. The main effort made in terms of sunscreen was to have sunscreen available for student use on specific occasions such as physical education, sports days and excursions. The most common strategy for minimising the time students spent outdoors between 10am and 3pm was the availability of indoor venues for students during lunchtimes and morning breaks.

Individual interviews and focus group discussions were also held with principals, teachers, students and parents from four school communities. These interviews explored facilitators and inhibitors to the development and implementation of sun protection policies and ways of improving the sun protection knowledge, awareness and behaviours of secondary school communities. While sun protection was recognised as an important issue, its priority was relatively low compared to other competing health issues such as drug abuse, mental health and obesity with which schools were dealing.

Having a sun protection policy was not seen to be as relevant for secondary schools as it is for primary schools, particularly with the expectation that high school students should be taking personal responsibility for their health and well-being. A key issue for the staff interviewed was not so much the development of a policy but the implications in terms of its implementation. The major barriers were time, trying to 'force' or manage the policy and teenage compliance.

Immediacy was found to be an effective means of promoting sun protective behaviours, such as staff handing out sunscreen to students at sporting events. The use of reminder systems for both students and staff were believed to be important in encouraging sun safe behaviour as well as having students having choice, particularly with being permitted to wear their own hats and sunglasses.

Research in the pipeline

n CBRC

Testing for the early detection of bowel cancer in rural Victoria

There is level 1 evidence that screening the population using the faecal occult blood test (FOBT) can reduce colorectal cancer (CRC) mortality by 15%-33% depending on the detection level of curable cancer within the target population, which is a product of adequate participation and the sensitivity of the test. The Commonwealth Government-funded early detection bowel screening pilot program is being implemented in rural and metropolitan sites across Australia. Little is known about the extent to which people in a rural setting are likely to participate in screening if recommended by their general practitioner. A team led by Trish Livingston is aiming to gain an understanding of the factors associated with participation in the early detection of bowel cancer using FOBT.

One hundred people aged 50-74 years who presented to a medical clinic in a rural Victorian city, were approached to participate in this study. Written consent was obtained and a brief questionnaire completed prior to the consultation with the doctor, during which the GP recommended that they take the FOBT home for completion. In addition, an anonymous tally was kept of those who declined to participate. The study will document rates of completion of the test and, using elements of the health belief model, investigate the characteristics of those who did and did not return tests. A report will be available shortly.

n CCCR and TCRE

Evaluation of Quitline 12-week program

TCRE is currently evaluating the South Australian Quitline's 12-week program. The program is available to all callers to the Quitline, and involves Quitline advisors ringing back callers at agreed times to offer advice and support throughout the first 12 weeks of quitting. A cohort of participants in the program was recruited in 2002 and 12-month follow-up interviews will commence in early 2003. Quit rates will be investigated, and data will also be collected regarding the experiences and opinions of the program participants.

Evaluation of phase 2 of the Breatheeasy! project

This project was run by the South Australian Department of Human Services through 2001-02, and encouraged workplaces to introduce smoke-free policies. The project involved the offer of free workplace "quit smoking" courses and subsidised (half-price) nicotine patches for smoking staff at participating workplaces. The evaluation of the initial phase of this project revealed very low uptake rates for the nicotine patches, with only 15% of patches vouchers issued being redeemed. This finding prompted a letter to the editor, appearing in the December edition of Tobacco Control, warning against investing large amounts of project funds into purchasing nicotine replacement therapy (NRT), as low rates of uptake are likely. The evaluation of phase two is currently underway and indicates similarly low rates of uptake.

An audit of nutrition and cancer information in popular magazines

The aim of this project is to determine the extent to which nutrition and cancer is covered in popular magazines, and to describe the type and nature of this information. The audit will review the 10 most frequently-read general, health or food related monthly or bi-monthly magazines (over a 12 month period) to identify all cancer-related articles that mention nutrition. It is intended that this study will be the first phase of a more detailed content analysis of nutrition and cancer coverage in popular magazines.

n CHeRP

Appropriate and timely referral of cancer patients to palliative care: a qualitative investigation of perceptions of health professionals

There is significant evidence to suggest that in the United States and Europe, a large percentage of cancer sufferers are referred to palliative care services late in the trajectory of the disease. Preliminary investigation indicates that referral patterns may be similar in Australia. While the optimum timing for referral to palliative care has not yet been identified, there is a growing body of evidence to suggest that the needs of advanced cancer patients may not be adequately met by later referral to palliative care.

A team of researchers comprising Associate Professor Afaf Girgis, Dr Chris Paul and Claire Johnson from the Centre for Health Research and Psycho-oncology, The Cancer Council NSW/University of Newcastle, is conducting research to develop a deeper understanding of current referral patterns, perceptions of palliative care, and barriers to the appropriate and timely referral of cancer patients to palliative care services.

Initially, a qualitative approach will be used to investigate the perceptions and range of potential influences on referral patterns and behaviour, attitudes to timely referral, and to investigate the use of predictors or triggers (eg patient circumstances or characteristics) to initiate referral to palliative care services. This will involve semi-structured telephone interviews across Australia with medical referrers to palliative care services, and focus groups of multidisciplinary health care providers to advanced cancer patients. Focus groups are to be conducted in New South Wales, Victoria and Western Australia. Outcomes from this phase of the research will include a list of potential barriers to referral, an understanding of perceptions and attitudes to palliative care services, and the identification of triggers used to initiate the referral process. This information will then be used to develop a quantitative instrument that will explore how extensively these particular issues influence the referral of cancer patients nationally.

As a result of this research interventions may be implemented to increase the utilisation of palliative care services in Australia, and to ensure equitable access for patients with cancer to palliative care, at an appropriate time in the disease trajectory. Key areas that require publicity and education will be identified.

n CBRCC

"Me No Fry" media campaign

Evaluation of the Cancer Foundation of Western Australia's 2002-03 "Me No Fry" media campaign continues, and a report summarising the findings of the tracking of the National Tobacco Campaign has been completed for the third volume of Australia's National Tobacco Campaign Evaluation Report.

n CPRC

The PLACE project

Physical inactivity has recently been identified as a behavioural risk factor for breast and colon cancer, both independently and through its influence on weight gain (see International Agency for Research on Cancer (2002) IARC Handbooks of Cancer Prevention, Volume 6 - Weight Control and Physical Activity. Oxford, Oxford University Press). As is the case for tobacco control and other areas of cancer prevention, successful regulatory, public policy and social and environmental initiatives will be required for population-wide reductions in risk. At CPRC, Neville Owen and Eva Leslie are conducting the PLACE project (Physical Activity in localities and Community Environments) to examine how objectively determined attributes of local community environments are likely to impact on adults' walking. For middle-aged and older adults, walking contributes the most to overall activity-related energy expenditure. The findings of PLACE will inform future environmental change strategies that have the potential to increase overall physical activity levels and to prevent weight gain. PLACE is a collaborative project with colleagues at the NSW Centre for Physical Activity and Health, the National Centre for Social Applications of Geographic Information Systems at the University of Adelaide, San Diego State University and the Georgia Institute of Technology in the US.

News

n CBRC

A CBRC team comprising Melanie Wakefield, Melissa Cameron, Lisa Trotter, Tessa Letcher, Graeme Inglis and David Hill plus Alistair Woodward from the University of Otago Department of Public Health in New Zealand, has received an award from VicHealth for "Excellence in Health Promotion Research". The award was presented at a ceremony at Government House, Melbourne in December. The winning research study "Staff exposure to second hand smoke in the hospitality industries", involved surveying 1078 members of the Australian Liquor Hospitality and Miscellaneous Workers Union (Victorian branch) to assess their relationship between exposure to second-hand smoke in the workplace and respiratory and sensory symptoms, and to also measure staff attitudes towards and experiences of exposure to second-hand smoke in the workplace. The paper is now in press in the Journal of Occupational and Environmental Medicine.

Victoria White has been awarded a International Union Against Cancer (UICC) Yamagiwa-Yoshida Memorial International Cancer Study Grant. She will spend three months from March 2003 working with Dr John Pierce in the Department of Family and Preventive Medicine at the University of California, San Diego, interrogating data collected as part of the evaluation of the Californian Tobacco Program. The primary focus of her research will be looking at adolescent smoking behaviours and trends in these behaviours

Helen Dixon has taken up a five-year appointment in CBRC as a behavioural scientist funded by an NHMRC Capacity Building Grant awarded to behavioural and epidemiological researchers at The Cancer Council Victoria. Helen will be working across a range of areas, including nutrition and smoking.

CBRC has been awarded two NHMRC project grants to commence in 2003. Victoria White of CBRC and Michael Lynskey of the Department of Psychiatry, Washington School of Medicine, US have been awarded a two-year grant for a project titled "Identifying the role of genes and the environment in the development of smoking and drinking behaviours of adults". Melanie Wakefield will investigate "Possible harmful influences of advertising for nicotine gum and patch" during 2003.

n CHeRP

After 14 years, the Cancer Education Research Program (CERP) has changed its name to better reflect its full range of research activities and future directions. The new title is the Centre for Health Research and Psycho-oncology (CHeRP).

Congratulations to Associate Professor Afaf Girgis, Associate Professor Kate D'Este and Ms Allison Boyes, who were awarded a National Health and Medical Research Council grant of $440,000 over three years from 2003 to 2005 for a population based longitudinal study of cancer survivors' psychosocial and physical wellbeing'.

In November 2002, CHeRP hosted a workshop on "Practical aspects of needs assessment in oncology" at the Sydney Convention Centre. This workshop was conducted as the first step in the development of a user's manual containing procedures for scoring, analysing, interpreting and reporting data collected via the Supportive Care Needs Survey. Thirty-three participants representing consumer advocacy, health care professionals, researchers, policy makers and health service administrators attended. The workshop was facilitated by Associate Professor Afaf Girgis and focused on the practical aspects of using the survey including: (i) current and potential uses of the perceived needs surveys, (ii) barriers to using the survey and data and (iii) additional resources or support required to facilitate use of the survey. The outcomes of the workshop will be considered by a group of statisticians in March 2003 to consider ways of analysing the data to best meet the identified uses of the survey.

CHeRP has had a number of papers published and accepted for publication, including:

- RA Walsh. "Nicotine lozenge trial: a 'real-world' perspective." Archives of Internal Medicine, 162, 22 (2002): 2632-3.
- RA Walsh, F Tzelepis, C Paul. "Environmental tobacco smoke in homes, motor vehicles and licensed premises: Community attitudes and practices." Australian and New Zealand Journal

of Public Health, 26, 6 (2002): 536-42.

- A Girgis, K D'Este, A Boyes. "NSW Cancer Survival Study." Joint Medical and Health Sciences Newsletter, December 2002: 5.
- B Thewes, P Butow, A Girgis, S Pendlebury. "The psychosocial needs of breast cancer survivors: A qualitative study of the shared and unique needs of younger versus older survivors." Psycho-Oncology, in press.
- RA Walsh, F Tzelepis. "Support for smoking restrictions in bars and gaming areas: review of Australian literature." Australian and New Zealand Journal of Public Health, in press.

n CBRCC

The CBRCC welcomed into its clutches Dr Owen Carter as a new Research Fellow in late 2002. Dr Nadine Henley, Senior Research Fellow, has moved out of the CBRCC and is now based at Edith Cowan University. Kerry Tumak, Health Promotion Officer from the Wheatbelt Health Region is at the Centre on secondment for four months.

n CPRC

Dr Alexandra Clavarino left the Centre in December 2002 and has taken a research fellow position with The University of Queensland's School of Population Health. Dr Warren Stanton resigned from his fractional appointment at the Centre in January 2003.

CPRC and Queensland Health sponsored a workshop on 13 February 2003, titled "Increasing people's daily physical activity for health, social and environmental benefits". This workshop preceded the Australian Society Behavioural Health and Medicine Conference and attracted 80 participants. The speakers were Dr Lawrence Frank (Georgia Institute of Technology), Professor James Sallis (San Diego State University), Dr J Salmon (Deakin University), Associate Professor Billie Giles-Corti (University of Western Australia) and Professor Neville Owen (CPRC).

Thanks to Kerri Beckman (CCCR and TCRE), Narelle Mills (CHeRP), Owen Carter (CBRCC) and Cathy Swart (CHPCPR) for contributions to this report.

NEWS & ANNOUNCEMENTS

NEWS

New report on reform of cancer care

A blueprint for the reform of cancer care in Australia - Optimising Cancer Care in Australia – was launched in Sydney on World Cancer Day (4 February).

The collaborative report was prepared by the Clinical Oncological Society of Australia (COSA), The Cancer Council Australia, and the National Cancer Control Initiative (NCCI), with input from and the full support of consumer groups. It provides the Federal Minister for Health and Ageing and her state and territory counterparts with a national model for cancer care.

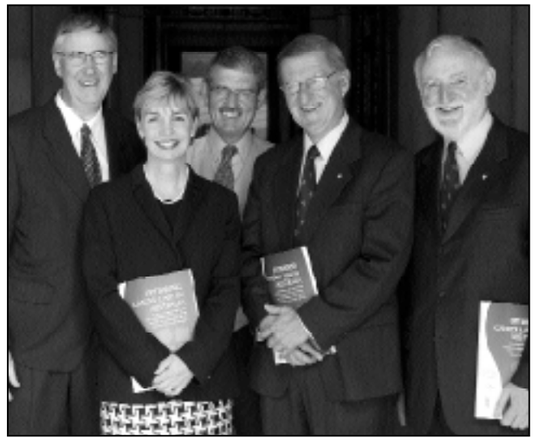
The chair of the steering committee that developed the consultative report, Professor Lester Peters, said the blueprint had emerged from a process of wide consultation with consumers, health care professionals, and policy-makers.

"Its essential message is that while cancer survival in Australia compares well with world standards, we could be doing much better in the way services are provided," he said.

"To achieve the best possible outcomes, we need to improve the entire cancer journey so that people can access appropriate care for their individual needs at all stages of their illness, in a coordinated and timely fashion.

"We're proposing a new approach to cancer care in this country, with services organised around the patient."

The report sets out three key areas where change is needed: the models of care (relating to the way care is provided and by whom, keeping in mind Australia's unique geography and demography); quality of care (including ensuring it is evidence-based); and resource issues (including workforce shortages, skills development, and patient access to services).



Prof Mark Elwood, Dr Liz Kenny, Prof Brian McAvoy, Prof Lester Peters and Prof Alan Coates at the OCCA launch

It contains 12 key recommendations addressing quality, access and resource issues, plus a proposed strategy for implementation. A further 19 action items are also listed.

The document proposes a national task force be set up to drive the reform process. Recommendations in the report will need to be assessed, costed and prioritised.

Copies of the report are available online at the NCCI website: www.ncci.org.au

Australia's Biggest Morning Tea – hosts set to raise their cups again in May

Now in its tenth year, Australia's Biggest Morning Tea (ABMT) looks set to capture the attention of thousands of participants yet again this May with 40,000 Australians expected to host morning teas.

The Cancer Council Australia's member organisations are already working hard to ensure the popular event – scheduled for 22 May – is a success, and the national target of $6 million is reached.

A new creative campaign will launch ABMT in April. Anyone interested can register as a host from March onwards via the new look website at www.biggestmorningtea.com.au or by calling 1300 65 65 85.

Hosts will receive a kit containing posters, Bushells tea bags, a donation box and other materials to ensure their morning tea is a huge success.

National conference to focus on investment in tobacco control

The case for greater long-term investment to reduce smoking rates will be the focus of a national conference to be hosted by The Cancer Council Victoria in April.

Delegates will hear from a group of outstanding international and Australian speakers at the 2nd Australian Tobacco Control Conference, to be held in Melbourne from 9-11 April 2003. Leading international tobacco control experts including Dr Michael Cummings and Dr Frank Chaloupka from the US, Dr Ann McNeil from the UK and New Zealand's Professor Alistair Woodward will present keynotes addresses.

A number of high profile Australian speakers will also be giving keynote addresses, including Australian Competition and Consumer Commission Chair Professor Allan Fels, and Professor Simon Chapman.

Lawyer Peter Gordon from Slater and Gordon will also give a keynote address about tobacco litigation and his firm's representation of Rolah McCabe in her lawsuit against tobacco company British American Tobacco Australasia.

The conference aims to show that tobacco control measures – like helping smokers quit and reducing the health effects of passive smoking – are one of the best investments communities can make to enhance their health – and their economic wellbeing.

It will also focus on new marketing tactics of the tobacco industry.

Full details about the conference themes and program can be found at http://tobaccocontrol03.conference.net.au

In the news – prostate cancer testing

Debate about the pros and cons of testing for prostate cancer has been in the headlines in recent months.

The Cancer Council Australia's position on this issue – that the decision to be tested is one to be made by individual men, on the basis of informed consent – is stated in a letter from CEO Alan Coates on its website (www.cancer.org.au). The Cancer Council's National Cancer Prevention Policy, which has a chapter on prostate cancer, is also available in the 'publications' section of the website.

Launch of CAN Australia

A new national cancer advocacy group was launched on World Cancer Day (4 February).

CAN Australia (Cancer Alliance Network) brings together consumers, carers, clinicians and policy-makers to identify and work together on shared issues of concern.

Interim Chair Mr Russell McGowan says CAN recognises that not just individual consumers but also consumer and advocacy groups need to network.

"One benefit in bringing these groups together nationally is for them to collectively identify areas that would make a real difference to the burden of care for individuals and their families," he says.

A fundamental principle behind the new non-government organisation is consumer participation in cancer services.

"Cancer consumers use services extensively and are often in a good position to identify how to produce better health outcomes," Mr McGowan says.

Other members of the interim CAN committee are Dr Don Baumber, Ms Marilyn Beech, Dr Liz Kenny, Mr Clive Deverall, Ms Merrian Oliver-Weymouth, Ms Emma Sayers, Ms Lyn Swinburne, and Professor John Zalcberg.

The launch of CAN Australia is welcomed by The Cancer Council Australia and COSA.

For more information about CAN, including an 'expression of interest' form, contact the Secretariat (Julie Claessens and John Stubbs) at jnj@bigpond.net.au

Common cause for prevention

The Cancer Council Australia has joined with four other major health-related NGOs to form the Australian Chronic Disease Prevention Alliance (ACDPA).

Other Alliance members are the Australian Kidney Foundation, Diabetes Australia, the National Heart Foundation of Australia and the National Stroke Foundation.

Its first focus will be to promote primary disease prevention through increased exercise and a healthy diet, especially the consumption of vegetables and fruit. These measures have the potential to reduce the incidence of all the disease types represented in the Alliance.

The Alliance has received seed funding from the Commonwealth, and established a joint secretariat in the National Heart Foundation of Australia. It will work closely with the relevant inter-government bodies, the Strategic Intergovernmental Nutritional Alliance (SIGNAL) and the Strategic Intergovernmental Forum on Physical Activity and Health (SIGPAH), as well as the Cancer Strategies Group and the corresponding specialist committees for the other disease types.

It is encouraging to note that the Commonwealth Government has recently given higher prominence to disease prevention – now known as the `fourth pillar' (together with the MBS, PBS and the Commonwealth/state agreement on hospitals) of health care in Australia. Hopefully resources will follow the rhetoric.

National Breast Cancer Hospital Services Directory

The first directory of breast cancer services provided by private and public hospitals around Australia is available online.

It enables women and GPs to search by service, hospital, area, or postcode.

The directory was developed by the National Breast Cancer Centre with the support of consumer groups, medical colleges, government bodies, divisions of general practice and public and private hospital organisations.

The directory can be found at www.isourcedirectory.com/hospitals/

Parliamentary briefing – Eat and Run

The links between cancer and nutrition, obesity and physical activity were the theme of the first meeting in 2003 of The Cancer Council Australia's Parliamentary Cancer Information Network.

It is estimated that between 30-40% of cancers could be prevented by appropriate diet and adequate physical activity.

Speakers Terry Slevin, Chair of The Cancer Council's Nutrition and Physical Activity Committee, and Dr Dallas English, Associate Director of The Cancer Council Victoria's Cancer Epidemiology Centre, addressed federal MPs at the breakfast meeting at Parliament House in Canberra.

For a copy of the latest issue of Cancer Update – which summarises presentations given at the briefing – please email info@cancer.org.au.

New offices

The Cancer Council Australia, Clinical Oncological Society of Australia (COSA) and the Australian Cancer Network (ACN) have moved.

Level 5, Medical Foundation Building
92-94 Parramatta Road
Camperdown NSW 2050
GPO Box 4708, Sydney NSW 2001
Telephone: (02) 9036 3100
Facsimile: (02) 9036 3101
Email: info@cancer.org.au
Website: www.cancer.org.au

The Australian Cancer Network
Phone: (02) 9036 3120
Fax: (02) 9036 3121
Email: acn@cancer.org.au
Website: www.cancer.org.au/acn

Staff changes at The Cancer Council Australia

A pivotal member of the COSA secretariat was farewelled in March.

Rozanne Gilbert helped organise five COSA annual scientific meetings during her time at The Cancer Council Australia, and her name and voice are familiar to many of COSA's members. The Cancer Council and COSA thank Rozanne for her hard work and dedication, and wish her all the best with her move to country NSW.

The Cancer Council has new staff in the form of Kerrin Burgess, PA to CEO Alan Coates; Sonia Gibbons, PA to Finance and Business Manager Robert Firth; and Matthew Wood, who joins the accounts department.

CEO profiles

In each edition of Cancer Forum this year we will be profiling CEOs of The Cancer Council Australia's member organisations.

Cancer Foundation of WA

Susan Rooney

The Cancer Foundation of WA appointed Ms Susan Rooney as its new Chief Executive Officer in April 2002, following the resignation of Mike Daube.

Ms Rooney has had extensive high-level experience in the leadership and management of non-government community organisations, having served as executive with the Fire and Emergency Services Authority, the Sydney Anglican Retirement Villages, Rehabilitation Tasmania and the Royal Blind Society of NSW. In each of these positions she has successfully implemented major change management programs.

Ms Rooney has a health background in physiotherapy, graduating from Curtin

University. She has since completed a MBA from the University of WA and the Advanced Program in International Management at the Copenhagen Business School.

The Cancer Council Victoria

Professor David Hill AM

Before becoming Director of The Cancer Council Victoria, Professor David Hill - a behavioural scientist - was founding Director of the organisation's Centre for Behavioural Research in Cancer.

Prof Hill is a Professorial Fellow at the University of Melbourne, an Adjunct Professor at Deakin University and an Honorary Professor at Monash University. In 2001, he was made a Member of the Order of Australia (AM) for "services to the promotion of community health, particularly in the development of cancer awareness and prevention programs".

Prof Hill, who received his PhD in psychology from the University of Melbourne, has authored or co-authored over 200 scientific articles and reports in the medical, public health and psychological literature. His published work includes research on the prevalence of adolescent and adult smoking, strategies for smoking cessation, reduction of smoking uptake, smoking regulation, behavioural aspects of screening mammography, management of primary operable breast cancer, efficacy of breast self-examination, monitoring trends in skin cancer prevention, and exploring determinants of behaviours related to skin cancer prevention.

In 1990 he chaired the International Union Against Cancer project on behavioural sciences, and was Secretary to the 1996 World Conference for Cancer Organisations. He holds senior positions on major national committees, including the NHMRC Health Advisory Committee.

Prof Hill has been successful in winning research grant funds in the NHMRC'S national competition, including as a member of teams of Principal Investigators which have been awarded grants totalling over $10m in 2001 and 2002.

In 1996, the Federal Minister for Health invited him to chair the Ministerial Tobacco Advisory Group to establish the first comprehensive national anti-smoking campaign launched in Australia. He is now chairman of the National Expert Advisory Committee on Tobacco, which is responsible for the National Tobacco Strategy to which all states and territories committed in June 1999.

Prof Hill's appointment followed the resignation of Professor Robert Burton, who had been Director of The Cancer Council Victoria from December 1995.

Queensland Cancer Fund

Dr Jeff Dunn

Dr Jeff Dunn took up the position of Executive Director at the Queensland Cancer Fund in January 2003, upon the retirement of Mr Graeme Brien. Dr Dunn is only the third person to hold this office in the 41-year history of the Queensland Cancer Fund, and brings to the role substantial experience.

Dr Dunn has been a staff member of the Queensland Cancer Fund since 1989, filling the role of Director of Community

Services, a department that incorporates the Prevention and Early Detection Unit, Cancer Support Services, the Cancer Helpline and more recently, the Cancer Advocacy Program. While developing and managing these areas, he has also fulfilled key roles nationally with The Cancer Council Australia and internationally with the International Union Against Cancer. In this regard, Dr Dunn has worked extensively in supporting the development of cancer support programs in South East Asia.

Dr Dunn holds a PhD in sociology and maintains academic appointments as Adjunct Professor, School of Social Science; and Associate Professor, School of Population Health both at the University of Queensland. In addition, he is the Chairman of the Board of Management of the Queensland Cancer Fund-Griffith University Collaborative Centre for Psychosocial Oncology – a project located in the Griffith University School of Applied Psychology.

Dr Dunn has a long commitment to volunteering, with a special interest in intellectual disability. As well as his cancer-related volunteer work, for the past 14 years he has worked as a volunteer in support of people with an intellectual disability.

The July edition of Cancer Forum will profile The Cancer Council South Australia's CEO, Associate Professor Brenda Wilson, The

REACHING FOR THE STARS – a profile of Professor Lester Peters, winner of the 2002 MOG/ Pierre Fabre Cancer Achievement Award

One of Australia's leading cancer specialists could have been lost to the cosmos.

As a young boy in country Queensland, Lester Peters wanted to be an astronomer when he grew up.

"I was all set to go into the science faculty – I'd planned to become an astronomer," he says. "But a family friend told me I was mad, that I'd never have any job options – I should do medicine, and if I wanted I could use that background to become a physicist or engineer."

But once Professor Peters, 60, started medical school, there was no going back – he soon became excited about a career in medicine. He decided on a technical specialty – radiation oncology – which in the late 1960s was the only medical specialty related exclusively to cancer.

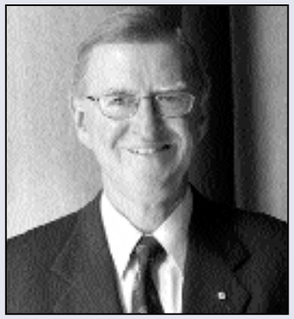
"I became fascinated with cancer as a disease – it was such a mystery at the time, and most of the treatments seemed empirical. I was strongly motivated to get involved in research," he says.

After registrar training in Brisbane, Professor Peters won a scholarship to do research work at the Gray Laboratory in the UK, which at the time was the leading radiobiology lab in the world. Four years later, with no possibility to pursue radiation biology back home in Australia, he joined the prestigious MD Anderson Center in Houston for a mix of clinical and lab work.

In 1982, the chair of the radiotherapy department at MD Anderson retired, and the position was offered to Professor Peters. He stayed in this role until 1995, during which time he became internationally recognised as a leader in academic radiation oncology. At age 53, he was lured back to Australia – with his Australian wife and two children – by the creation of the first professorial post in radiation oncology within the University of Melbourne at the Peter MacCallum Cancer Institute.

A year after taking up this position, he started work on research which he considers the jewel in the crown of his career.

Professor Peters and Peter Mac colleague Dr Danny Rischin, a medical oncologist, recognised the potential for a new treatment approach to advanced head and neck cancer while going through some pre-clinical work. Their idea was to use the triple combination of tirapazamine, cisplatin and radiotherapy. Tirapazamine is a currently unlicenced pro-drug that is selectively toxic to tumour cells starved of oxygen. In experimental tumour systems, it has been shown to enhance the effect of both radiotherapy and cisplatin. Drs Rischin and Peters persuaded the company that owned the patent on tirapazamine to let them conduct an exploratory study of the triple combination.



Although this Phase I trial was aimed at simply developing a suitable treatment protocol for further testing, the results were unexpectedly good – of the 16 patients who were near the end of the road with advanced disease, 14 had durable local eradication of their disease and 11 were long term survivors.

"This was an unheard of result in my experience and I've worked almost exclusively in head and neck cancer for the past 20 years, so I've treated a lot of patients. This was definitely worth pursuing further," Prof. Peters says.

A Phase II trial involving 123 patients then went ahead under the banner of the Trans-Tasman Radiation Oncology Group (TROG) comparing the combination therapy with a more standard form of chemo-radiotherapy.

Preliminary results of the Phase II trial confirmed the excellent results achieved in the Phase I study and showed that patients taking the experimental therapy fared substantially better than those receiving standard therapy. "The survival rates were very good compared with anything seen before."

Professor Peters and Dr Rischin are now leading an international Phase III registration trial which will involve 550 patients in 83 centres worldwide, including 13 in Australia and New Zealand. Interim results of this trial should be available in about 2 1/2 years.

At the beginning of 2002, Professor Peters resigned his position as Director of Radiation Oncology at Peter Mac to take on the responsibility of setting up a new Foundation to support the strategic goals of the Institute. More recently, he was elected Dean of the Faculty of Radiation Oncology.

The MOG/Pierre Fabre Cancer Achievement Award recognises a lifetime of achievement in the field of cancer. Last year's winner was Emeritus Professor Tom Reeve AC CBE, Executive Officer of the Australian Cancer Network.

BOOK REVIEWS

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ADULT LEUKEMIAS

P Wernik

Published by BC Dekker (2001)
ISBN: 1-55009-111-5. 324 pages.
RRP: A$346.72

This book, in the Atlas of Clinical Oncology Series, ambitiously sets out to cover diagnostic and management aspects of adult leukaemias. The first half of the book is about etiology and diagnostics. There are excellent chapters on epidemiology and genetics, pathogenesis, morphology, immunophenotyping, cytogenetics and associated molecular changes. In general, these chapters are well-written, comprehensively referenced, and beautifully illustrated. There are inevitable omissions resulting from "hot" new findings being published after publishing deadlines have closed, the major one being the discovery of prognostically important Flt-3 mutations in one quarter of cases of adult acute myeloid leukaemia.

My main criticism of the first half of the book is the frequent overlap and repetition of material between chapters. For example, overlapping sections on immunophenotyping appear in chapters three (Diagnosis), four (Morphology), and five (Immunophenotyping). Similarly, there are lengthy sections on cytogenetic abnormalities in three different chapters, with much repetition of material. Tighter editing could have avoided this unnecessary lengthening of the text.

The second half of the book covers clinical aspects of adult leukaemias, including treatment, its complications, extramedullary leukaemia, and a final brief section on supportive care. The largest of these chapters, written by Yousuf Ali and Martin Tallman, is on management, and covers treatment of all acute and chronic leukaemias, a major undertaking that perhaps could have been divided up among a larger group of authors. Nevertheless, this is an excellent and comprehensive review of treatment of the various types of adult leukaemias.

The section on the use of Glivec (STI-571) in chronic myeloid leukaemia is unfortunately brief and does not include important recent information on the use of this drug, while the section on chronic lymphocytic leukaemia omits mention of the highly promising results using the Fludarabine, Cyclophosphamide, and Rituximab combination. Inevitably, these sorts of issues arise whenever a textbook is written about a rapidly evolving area of medicine.

This book will interest advanced trainees in haematology, and perhaps medical oncology, wanting a comprehensive coverage of this topic in the one volume. Haematologists and oncologists regularly dealing with adult leukaemias may be attracted by the extensive bibliographies in each chapter, and the excellent illustrations, which might serve as teaching aids. The main drawback, as usual, is the high cost (A$346). The book comes with a CD containing all chapters in PDF format.

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Westmead Hospital
Westmead, NSW

BREAST CANCER SOURCEBOOK (1ST ED)

E Prucha et al
Published by Omnigraphics
ISBN: 0-7808-0244-6. 580 pages plus index.
RRP: US$78.00

First impressions of the Breast Cancer Sourcebook provide an enticing array of chapters and topics, which would interest health professionals and consumers alike. It was good to see an overall use of basic medical definitions and a glossary of cancer terms, which were concise and user-friendly. It was reassuring to read a contemporary overview around controversial issues, such as the role of antiperspirant deodorants, oral contraceptives, alcohol and fat intake in the development of breast cancer. There was an excellent overview of complementary and alternative medicines used in managing breast cancer, explaining the origin of each alternative approach and a summary of research to date.

Upon closer examination of the book, it was disappointing to find a very clinical, disjointed, lengthy text that was repetitious and resulted in a disturbing overlap between chapters. The greatest deficiency, however, was the lack of regard for psychological and support issues along the continuum of breast cancer. In what appeared to have been an afterthought, less than 20 pages of this 580-page text were allocated to address psychological issues of breast cancer for the woman and her family or carers. Similarly, issues of sexuality, body image and intimacy were addressed in a two-line summary, and the consumer voice was almost inaudible throughout the clinical text. Diagrams were minimal and of poor quality, and detail was lacking about specific chemotherapy options or treatment regimes for early breast cancer. Overall, this is not a user-friendly resource book.

A Hordern
Registered Nurse, VIC

There are many breast cancer books to be found in bookshops, and they vary in content and depth. The Breast Cancer Sourcebook is an extremely comprehensive and detailed text

on the topic. From a consumer's point of view a few words of caution before you embark on this text. Firstly, the book is American and therefore the statistics and references are all American. If you required specific Australian statistics and data, you would have to look elsewhere. Secondly, not every woman who is diagnosed with breast cancer wants to read about it in great depth. This is a text for someone who wants to learn all they can about the topic.

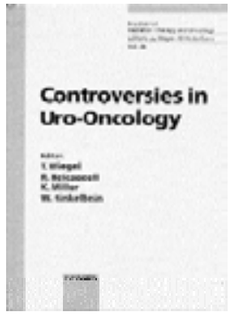
The book begins with an explanation of breast changes and factors that may lead to a diagnosis of breast cancer. It examines risk factors and provides reputable references to back up the content. Screening tools and possible treatments are explained in an easy-to-understand way. A clear explanation of the different stages of breast cancer is provided and many sections have glossaries of key terms, and in some sections there are suggested questions for consumers to ask health professionals. The Breast Cancer Sourcebook also provides detailed sections on clinical trials and genetic testing for people with a familial history of breast cancer.

The final section on coping with life after breast cancer is helpful although brief. It is pleasing to see that a section has been included to cover males with breast cancer and some complementary and alternative therapies.

As it is in hard cover form and from the US it may well be unaffordable to many consumers. It would be a useful reference book in a library or on loan to women in a support group.

D Wilson
Consumer Representative
Breast Cancer Network Australia
Melbourne, Vic

Controversies in uro-oncology



T Wiegel et al
Published by Karger (2002)
ISBN: 3-8055-7217-4. 191 pages plus index.
RRP: US$161.75

This publication covers the proceedings of the 5th International Symposium on Special Aspects of Radiotherapy, held in Berlin in May 2002. The topics range from detailed descriptions of the technical aspects of contemporary prostate radiotherapy and the rationale for dose escalation, to overviews of many modalities of care in prostate cancer, finishing with sections on bladder cancer and prostate brachytherapy.

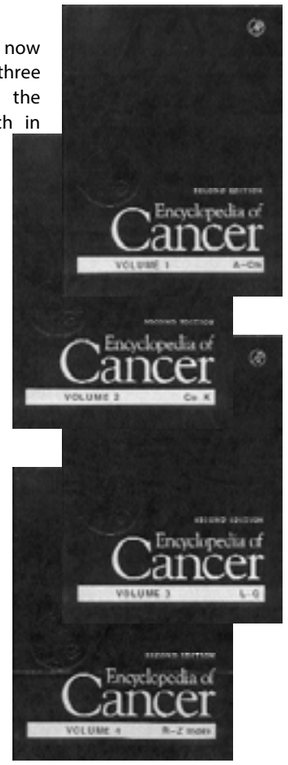
Although entitled Controversies in Uro-Oncology, many of the articles on prostate cancer are non-contentious and offer helpful reviews of current areas of interest (for example planning target volume definition in dose-escalation studies). Some articles themselves perhaps attempt to provoke controversy in a field of general agreement – the opening review states that "published data of thousands of patients demonstrate … remarkable improvements in terms of higher cure rates". Many others would contend that dose escalation strategies have yet to demonstrate definitive improvements in prostate cancer cure rates. There are interesting updates on intermittent androgen ablation, chemotherapy and lymph node irradiation, although it is likely that the information they contain will be superseded in the not too distant future. Bladder cancer is dealt with briefly, and here the controversial and diametrically opposing arguments for radical surgery and bladder-preserving approaches are ably presented. The final section on prostate brachytherapy contains short and somewhat superficial reviews of permanent seed implant dosimetry and results, and reports of local (German) experience with hyperthermia, and high dose rate brachytherapy.

In summary, the publication would make useful reading for radiation oncologists in training, or specialists wishing to gain a quick refresher on the current place of radiation oncology in urological cancer care. It is likely to lose its currency in the short to medium future.

G Duchesne
Peter MacCallum Cancer Institute
Melbourne, Vic

Encyclopaedia of cancer 2nd edition

J Bertino
Published by Elselvier Science (2002)
ISBN: 0-12-227555-1. 2,800 pages.
RRP: $1,568.60



The revised encyclopaedia now contains four rather than three volumes to accommodate the advances in cancer research in 220 articles. Typically of less than 12 pages each, they cover a range of topics from molecular biology and genetics through to epidemiology and cancer treatment. The authorship is predominantly, but not exclusively, North American. The encyclopaedic format, which arranges articles in alphabetical order by title, is somewhat artificial depending on how the title is phrased. Although the results in succeeding articles often bear no relationship to each other, navigation through the volumes is made easier by having the contents grouped by subject as well as listed in alphabetical order. It has an excellent index of over 7,500 entries and at the end of each article many of the entries are cross-referenced to other chapters. The format of each article, which contains a glossary, outline and defining paragraph to begin, enhances the ease of access to the information contained.

The strength of this reference is the excellent overview summaries of the state of knowledge of tumour biology including cell cycle checkpoints, signaling pathways growth factors and cytokines, which are concise and easy to comprehend. They are referenced typically with a few selected recent references for further reading rather than an extensive bibliography, which is clearly the editorial policy of this collection. Chapters on cancer genetics, angiogenesis, oncogenes, immunology and carcinogenesis complete a comprehensive overview of basic cancer biology.

The chapters on treatments include biological therapies and immunotherapy, chemotherapy and radiotherapy with radiobiology and photodynamic therapy. Specific articles highlight the development and mechanisms of action of commonly used chemotherapeutic agents while a dozen articles form a useful review of the mechanisms of drug resistance. There is also a section of updates on chemoprevention.

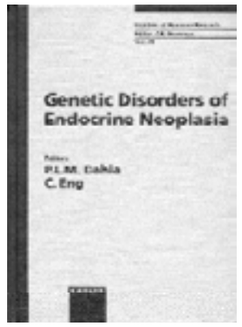
The brevity of the chapters on specific tumours means that they are of limited use in discussing treatment options in any detail, which is clearly not the focus of this collection and is better reviewed in other oncological texts. But aetiology and risk factors, when supported by the information in the basic biology chapters, are well covered. A small section on tumour imaging covers the more recent techniques of MRI, MRS and PET scanning.

The editorial staff have minimised the amount of duplication despite the large number of authors, and when this does occur it examines the material from a different viewpoint and tends to reinforce and clarify the concepts being presented.

This is an up-to-date reference that provides an excellent overview of multiple areas of the rapidly expanding field of tumour biology, while relating this to the aetiology, diagnosis and management of cancer. It will be a useful initial reference on a wide range of topics for cancer clinicians and researchers.

IN Olver
Professor of Cancer Care
University of Adelaide, SA

Genetic disorders of endocrine neoplasia



P Dahia et al
Published by Karger (2002)
ISBN: 3-8055-7203-4. 213 pages plus index.
RRP: US$239.25

The main focus of the text is genetics of endocrine neoplasms. Editors, Patrica Dahia and Charis Eng, together with individual chapter authors are renowned for their research in this field. Since the identification of germline RET mutations responsible for Multiple Endocrine Neoplasia type 2 (MEN2) in 1993, there have been rapid advances in our understanding of the molecular basis for this group of conditions. In addition to expanding our understanding of the disease pathogenesis, the availability of molecular testing allows accurate information for family members, which influences screening and management. This text provides a state of the art review on the molecular basis of inherited neoplasia, including its relevance to clinical practice. In addition to the previously well-characterised disorders such as MEN1, MEN2, and Von Hippel-Lindau disease, the text provides a comprehensive review on other conditions of emerging clinical importance such as hamartoma and lentigines syndromes.

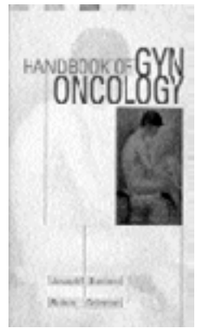
The introduction entices us into the body of the text by providing a brief, but interesting clinical and molecular overview of the inherited endocrine neoplasia syndromes, which are each covered in more depth in the following chapters.

The first chapter provides a succinct outline of fundamental concepts relating to cancer genetics in addition to more complex areas of importance such as gene methylation, imprinting, single-nucleotide polymorphisms (SNP) analysis, cDNA microarrays and proteomics with comprehensive referencing. The second chapter provides a detailed discussion and referencing of techniques for cloning disease-associated genes, which although clearly written, is aimed at an audience with some background knowledge of molecular genetics. The following chapters include the clinical and molecular aspects of MEN1, MEN2, Von Hippel-Lindau disease, Carney Complex; and Cowden, Bannayan-Riley-Ruvalcaba, Juvenile polyposis and Peutz-Jeghers syndromes. Large sections of the book are devoted to describing gene organisation, protein function and signaling pathways, which may be of particular interest to individuals with a strong molecular background or research interest. For the more clinically orientated reader, the molecular sections would serve as excellent reference material.

However, the sections covering clinical presentations, diagnosis, management of family members, treatment, genotype/phenotype correlation and molecular testing in individuals with apparently sporadic endocrine neoplasia are well presented and essential knowledge for specialist endocrinologists or cancer geneticists working in this field. The text is well researched, referenced and indexed. The content detail makes this a specialist text, which would be of valuable addition to an endocrinology, oncology or clinical genetics department library.

T Dudding
Hunter Genetics
Waratah, NSW

Handbook of GYN oncology



Santoso & Coleman
Published by McGraw-Hill (2002)
ISBN: 0-8385-3532-1. 373 pages plus index.
RRP: A$77.95

This handbook was designed for the use of medical students, residents and fellows. In the preface, the authors state their aim that "readers will use this Handbook of Gyn Oncology as a guideline: it should not replace the standard textbooks and good clinical judgement". The book meets its stated purpose and is a good quick reference source for those caring for gynaecological oncology patients. As a portable resource it would enable residents to cram in the early hours of the morning prior to the arrival of senior medical staff for a ward round. Its size leads you to believe the book was designed for a white coat pocket. However, Australian residents and fellows no longer wear white coats and may find it difficult to know where to keep their book.

There are separate brief chapters for each tumour site with the management recommendations being sound, well referenced and up-to-date. Current concepts such as sentinel node biopsy for vulval cancer and chemoradiation for cervical cancer are covered. There is also a balanced coverage of controversial issues, for example, lymphadenectomy in endometrial cancer, though the recommendations for bowel obstruction discuss only surgical management and do not cover the modern medical and palliative care approaches.

A major criticism would be the disproportionately large amount of space dedicated to the diagnosis and management

of medical diseases, as many of these conditions are rarely encountered in gynaecological oncology practice. In reality these complex situations would be managed by referral to a physician rather than consultation with a pocket handbook. The book also provides a description of surgical procedures, which seems to have been written to assist the surgical resident in dictating operative reports.

In all texts, differences in terminology and drug names are to be expected between the American and Australian systems. In a concise practical guidebook, however, these differences appear frequently and therefore limit the usefulness of the book. While being too brief to be a sole reference source for gynaecological oncology, the portable format of the handbook offers quick access to information on cancer types, treatment options and follow-up care.

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St Leonards, NSW

Handbook of statistics in clinical oncology

J Crowley
Published by Marcel Dekker (2001)
ISBN: 0-8247-9025-1. 543 pages plus index.
RRP: A$383.55

The intended audience for this book is statisticians working in clinical cancer research. At more than 500 pages it catalogues and describes the statistical strategies associated with clinical cancer research. It concentrates on the design and analysis of clinical trials, including phase I, phase II and phase III trials. There are also chapters on heath-related quality of life measurement, economic evaluation, prognostic factor studies and meta-analysis. The techniques covered have applications in other areas of clinical research.

It is not a book to be read from cover to cover. Instead it is a reference book to be consulted as the need arises. Statisticians will find it a useful resource, however, non-statisticians will probably find that much of the material is presented at a more technical level than they require.

More than 40 researchers (described as leaders in their fields) contributed to the book. This has created the (probably unavoidable) problem that the chapters are uneven in the way they deal with their topics. Admittedly, the focus of the book is clinical trials, and the chapters that deal directly with this area are comprehensive and up-to-date. However other topics, such as economic evaluation and meta-analyses, are dealt with in a more superficial way.

In short, a good reference book for statisticians who will be designing and analysing cancer trials.

M Coory
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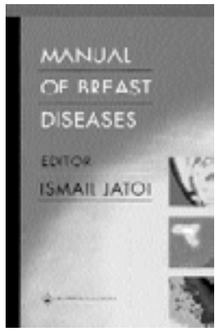
Manual of breast diseases

I Jatoi (Ed)
Published by Lippincott Williams & Wilkins (2002)
ISBN: 0-7817-2950-5. 538 pages plus index
RRP: A$151.80



I would highly recommend this manual for any medical specialist working in the field of breast diseases. It is, as titled, a manual and therefore perfectly sized as a desktop book for quick and ready reference. It covers such a broad range within the field of breast cancer diseases that there will undoubtedly be areas of interest even for the super-specialised breast clinician, be they a surgeon, oncologist, pathologist or radiologist. For its size, it is surprisingly comprehensive. At the present time, it's also current and evidence-based and hopefully it will remain so with subsequent editions.

The first few chapters deal with non-malignant disease, which is refreshing to see in a text like this. The anatomy and physiology is covered reasonably comprehensively as well as common benign conditions such as nipple discharge and mastalgia. There is even a chapter on management of common lactational problems and breastfeeding. This is a useful chapter, which is omitted from most textbooks. There is some excellent practical advice about the management and evaluation of breast masses and the supporting data for that rationale. There is also an excellent overview of the risk factors (HRT etc) and the epidemiology of breast cancer. While this is pre the National Women's Health Study, it is, not unexpectedly, fairly close to the mark. There is a number of chapters dealing with the principles of breast cancer screening, diagnostic imaging and newer techniques, which is a useful read for the clinicians amongst us. Pathology is dealt with in chapter 11, though there is a slight North American bias and not much information on less common pathologies like phyllodes. Surgery for primary invasive breast cancer has an historical introduction, which as the chapter title suggests, deals only with surgery (no mention of Beatson or McQuirter). There are a few unsupported statements regarding the surgical management of breast cancer, but I am perhaps being a little more pedantic here, having a surgical background. Overall, the author of this chapter, who is also the editor, has a balanced approach, in particular with dealing with issues of the management of the axilla and sentinel node biopsy.

There are then two excellent chapters on adjuvant systemic therapy and the role of radiotherapy, which are evidence-based overviews and reasonably current. Metastic cancer is also well dealt with in chapter 17 and if you have the strength for chapter 18, there is a critical review of hormone replacement therapy. Patty Ganz has contributed with a chapter on psychosocial support. Whilst it can only skim the surface, it covers most areas of concern and the briefness of the chapter precludes in-depth information, but is a good source for a focus on areas that perhaps do not receive enough emphasis in clinical practice. Again, this is an important chapter, often omitted from medical textbooks.

Genetic testing and breast cancer predisposition also have a good overview chapter and finally chemoprevention of breast cancer is dealt with.

At A$150, I think it represents fairly good value in terms of its content, though don't expect too much in terms of presentation, as it is a soft cover manual. I think that's what makes it so accessible however, and I was able to read it from cover to cover.

O Ung
NSW Breast Cancer Institute
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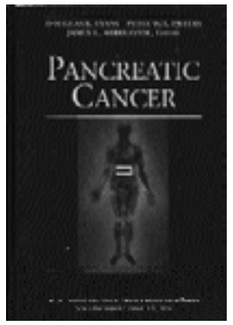
Pancreatic cancer

R Pollock
Published by Springer (2002)
ISBN: 0-387-95185-7. 405 pages plus index.
RRP: US$169.00



Pancreatic Cancer, which is part of the MD Anderson Solid Tumour Oncology Series, is an extremely worthwhile reference book for clinicians involved in the management of pancreatic cancer. The book introduces the reader to the current understanding of the molecular pathways thought to be important in the carcinogenesis of pancreatic cancer. The hope is that these molecular markers may one day be used to identify patients with "early" pancreatic cancer amenable to curative surgery. Chapters dealing with the surgery of pancreatic cancer and the literature that supports current practice then follow this. The emerging role of endoscopic ultrasound in diagnosis and staging of pancreatic cancer is discussed, together with radiological and laparoscopic staging in comparison to the lesser role that ERCP is playing in diagnosis.

The factors responsible for the marked improvement in morbidity and mortality of the "Whipple" procedure have led to discussion of patient selection and referral to centres of specialisation for this type of surgery. Some technical aspects of surgery are compared, pylorus preserving versus non-pylorus preserving pancreaticoduodenectomy and techniques of reconstruction. The role of more aggressive surgery including nodal and vascular resection for pancreatic head tumours is discussed as well as surgery for periampullary, body and tail of the pancreas tumours.

The next section discusses the results of adjuvant and neoadjuvant chemoradiotherapy trials and their differing regimes and modes of delivery. The experience of various centres involved in the development of adjuvant therapies is presented and their results discussed with a view to the running of further randomised trials.

The final section on emerging therapies takes one on a journey beginning in the laboratory with experimental models of pancreatic cancer. They are used to test the potential of various novel therapies, which have been identified as being important in the mitogenic pathways responsible for pancreatic cancer.

In summary, pancreatic cancer poses a difficult management problem for clinicians. An understanding of tumour biology by clinicians will assist with the introduction of these new therapies into clinical practice. This book will undoubtedly achieve its intended aim.

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Principles of palliative care: an introduction

B Pollard (Ed). Privately published.
Copies available from Dr B Pollard, 40 Chisholm St Greenwich NSW 2065
RRP: Single copy A$9.00, Ten or more A$8.00 each, plus A$1.00 postage

Brian Pollard was one of the founding fathers of the discipline of palliative care in Australia. Renowned as a clinician and teacher, he has for several years been delivering a well-regarded lecture with this title to medical students at the Northern Clinical School. Asked by the students for suitable background reading, he has responded by producing this short book as an overview of the area.

Covering such topics as the background and philosophy of palliative care, control of pain and other symptoms, communication and ethical issues, it provides an excellent summary of current practice. This will be of particular use to nursing and medical students new to the area.

For those interested in communication and psychosocial support, Pollard offers insights gathered from lengthy experience and keen observation. He highlights the role of the health professional in not only communicating honestly with patients about their illness and treatment choices, but in helping family members communicate amongst themselves on a level of reality and openness. In regard to hope, he argues that the role of the health care team is to help channel the patient's hopes along realistic lines, not to destroy them.

This book fulfills an important niche in palliative care literature.

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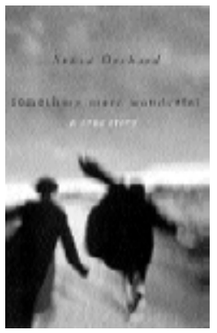
Something more wonderful

Sonia Orchard
Published by Hodder ((2003)
ISBN: 0-7336-1593-7. 253 pages.
RRP: A$22.95



Something More Wonderful is the true story of two young women – best friends – whose worlds fall apart when one of them is diagnosed with advanced liver cancer. Author Sonia Orchard, who was one of her friend Emma's carers, takes the reader through their journey together from Emma's diagnosis to her death five months later. It's also a story of their special friendship, and a tribute to a unique woman.

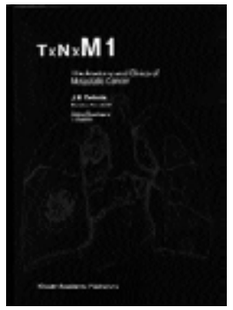
As well as covering the medical realities of Emma's illness – from her treatment to dietary changes and palliative care arrangements – the book explores the emotional reactions of Emma and those close to her. It describes their transition from optimism that she would be cured ("We'll write a book about it, teaching others with cancer how to get through it, how to

conquer those odds") to reluctant acceptance that she would not ("So – that's it. She's dying. As they all said. She can stop acting now. I can stop acting.")

Sonia Orchard wrote this book for herself – as an outlet for her grief in the months following Emma's death – and for the young son her friend left behind. It may not be recommended reading for people who have cancer or those caring for them, as it is unapologetically honest in its portrayal of a woman's physical and mental demise following diagnosis – and the anguish that she and those who love her go through as the disease progresses and after her death. But as someone who works in the field but has been lucky enough not to have someone close to me die from cancer, I found it an enlightening and moving insight into the cancer journey.

J Denholm
The Cancer Council Australia
Sydney, NSW

TxNxM1. THE ANATOMY AND CLINICS OF METASTATIC CANCER



J Debois
Published by Kluwer (2002)
ISBN: 0-7923-6195-4. 745 pages plus index.
RRP: US$230.00

Is your desk neat and tidy? Are all your articles filed away? This text will appeal to all those who have obsessive tendencies, and anatomists. It is an encyclopaedic work that examines in great detail the pattern of metastatic disease in a variety of cancers. The book is divided into two parts: (i) the metastasis and its primary, and (ii) the primary and its metastases. Chapters are arranged according to organs or organ groups, and within each chapter, the same logical order of discussion is preserved: anatomical pathways, incidence, symptoms and diagnosis. More common situations such as metastases to the liver are treated in more depth, with subheadings such as imaging and special situations (eg ruptured liver metastases) included. An extensive bibliography pertaining to the relevant organ is listed at the end of each chapter. References are up-to-date (circa 2000) and span three decades.

Dr Debois has painstakingly gathered and reviewed case reports and case series in the literature. The book is a compilation and study of all possible metastatic sites from a given tumour, and all possible primary cancers for a given metastatic site. One can even find a short paragraph and table on ciliary body metastases. There are many tables, which, in my opinion, are probably the best way to display the information. The text largely supports the tabular information, though some of it is repetitive. The poor editing, occasional spelling mistake, and the small font do not make for easy reading.

Other than adenocarcinoma of unknown primary (ACUP), I was unable to think of situations where the book might be put to practical clinical use. Even here, I found the book of limited use, since a few of my recent patients with ACUP had metastases to more than one site. Probably my poor understanding of anatomy made it difficult to appreciate the deeper truths of the way cancers behave, though there were some interesting insights such as the graph showing a declining linear relationship between metastases at diagnosis for non-small cell lung cancer and age. The moral of the book? All cancers can go anywhere, though there may be some recognisable and predictable patterns. Essentially, this is a reference book, or a book of curiosities so, as such, it has a place in libraries and at the NCI, or (less likely) perhaps on your neat and tidy desk.

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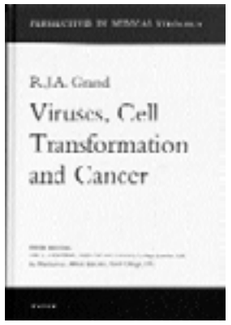
Kogarah, NSW

VIRUSES, CELL TRANSFORMATION & CANCER



A Zuckerman et al
Published by Elsevier (2001)
ISBN: 0-444-50496-6. 524 pages.
RRP: US$145.00

Viruses are rather like some administrators: they take our best ideas, use them for their own nefarious purposes, and leave us either non-viable or else transformed and ready to kill those around us. Still, you have to admire them, since they do it very effectively.

Recent years have seen rapid advances in our knowledge about viruses and this in turn has led too much greater understanding about the biology of cancer. Everything from signaling molecules associated with various receptors through to nuclear transcription factors can be used by viruses for their own ends. As we understand these processes better we will be more able to devise appropriate therapies for cancers, even those that are not related directly to viruses.

This book is an impressive and heavy volume of 524 pages and contains some very complete reviews on various aspects of virology as it relates to cancer. I see clearly that my own understanding of this field was very superficial. Having waded through this text I am not sure that I am any better informed, but I am encouraged that so much work has been done and it is handy to have access to a reference such as this. Some of the authors have really gone overboard, with more than 500 references for several chapters. I have not checked them all for accuracy. This level of detail means that the book will be most useful as a reference text for those in the field or those who need a high level of detail. Other more superficial reviews would be more suitable for weekend viro-oncologists.

The book is most useful where it describes the mechanisms of interaction of viral gene products with known cellular factors such as those involved in cell cycle regulation. There are intriguing chapters on the biology of agents such as human herpesvirus-8, a relatively newly described virus involved in primary effusion lymphoma and in Kaposi's sarcoma. Some of the later chapters of the book cover areas relating to vaccine design, with particular reference to human papilloma virus and including a discussion on VLPs, but I was disappointed to find that Ian Frazer's work was not discussed here.

The final chapter covers the use of adenoviruses in gene transfer approaches to cancer, an odd chapter given that it covers a wide range of genes very comprehensively but restricts itself to only one vector.

All in all, this book on viruses is not to be sneezed at. Now, if only someone would invent an administrator vaccine…

CALENDAR OF MEETINGS

CALENDAR OF MEETINGS – AUSTRALIA AND NEW ZEALAND

Date	Name of Meeting	Place	Secretariat
2003			
March			
1-4	7th National Rural Health Conference	Hobart TAS	Website: www.ruralhealth.org.au/seventhconf/seventhconf.htm
29	2003 Aspects of Evidence Symposium	Melbourne VIC	Australasian Cochrane Centre Monash Institute of Health Services Research Monash Medical Centre Locked Bag 29 Clayton VIC 3168 Tel: +61 3 9594 7530 Fax: + 61 3 9594 7554 email: selina.shapland@med.monash.edu.au Website: www.aspectsofevidence.org.au
April			
2-4	Ethics in Human Research Conference	Canberra ACT	DC Conferences PO Box 571 Crows Nest NSW 1585 Tel: +61 2 9954 4400 Fax: +61 2 9954 0666 Email: ehrc@dcconferences.com.au
9-11	2nd National Tobacco Control Conference	Melbourne VIC	Todd Harper Chair, Conference Organising Committee Email: nat.tobacco.conference@cancervic.org.au
30 Apr – 2 May	Australian Gene Therapy Society 3rd Meeting	Brisbane QLD	Dr Ming Wei University of Queensland, Prince Charles Hospital Brisbane, Queensland Email: d.wei@mailbox.uq.edu.au Web: www.agts.org.au
July			
25-26	6th Annual CNSA Winter Congress	Sydney NSW	Michelle McBean MP events Suite 1, 2 Walton Street Kew VIC 3101 Tel: +61 3 9852 9941 Fax: +61 3 9852 9961 Email: michelle@mpevents.com.au
August			
24-29	World Congress on Medical Physics and Biomedical Engineering Debates on Radiation Oncology and Chemotherapy	Sydney NSW	Tour Hosts GPO Box 128 Sydney NSW 2001 Tel: +61 2 9248 0800 Fax: +61 2 9248 0894 Web: wc2003@tourhosts.com.au
September			
9-12	7th Australian Palliative Care Conference – Time to Reflect	Adelaide SA	Lesley K Woods SAPMEA Conventions 68 Greenhill Road Wayville SA 5034 Tel: +61 8 8274 6055 Fax: +61 8 8274 6000 Email: lwoods@sapmea.asn.au Web: www.sapmea.asn.au
November			
15-19	6th International Symposium on Paediatric Pain: "Pain in Childhood: The Big Questions"	Sydney NSW	Dianna Crebbin DC Conferences Pty Ltd PO Box 571 St Leonards NSW 2065 Tel: +61 2 9439 6744 Fax: +61 2 9439 2504 Email: mail@dcconferences.com.au
16-20	9th International Conference on Oral Cancer	Melbourne VIC	ICMS 84 Queensbridge Street Southbank VIC 3006 Tel: +61 3 9682 0244 Fax: +61 3 9682 0288

26-28	30th COSA Annual Scientific Meeting	Perth WA	Ruth Lilian Pharma Events PO Box 265 Annandale NSW 2038 Tel: +61 2 9280 0577 Fax: +61 2 9280 0533 Email: conferences@pharmaevents.com.au

2003

April

25-29	18th World Conference on Health Promotion and Health Education	Melbourne VIC	Conference Manager Tel: +61 3 9667 1313 Fax: +61 3 9667 1375 Email: 2004wchphe@vichealth.vic.gov.au

August

4-8	International Society for Nurses in Cancer Care 13th International Conference on Cancer Nursing	Sydney NSW	MP Events Tel: +61 3 9852 9941 Fax: +61 3 9852 9961 Email: enquiries@mpevents.com.au

November

24-26	31st COSA Annual Scientific Meeting	Canberra ACT	Clinical Oncological Society of Australia GPO Box 4708 Sydney NSW 2001 Ph: +61 2 9036 3100 Fax: +61 2 9036 3101 Email: cosa@cancer.org.au

CALENDAR Of MEETINGS – International

Date	Name of Meeting	Place	Secretariat

2003

March

16-19	ICTR 2003: 2nd International Conference on Translational Research and Pre-Clinical Strategies in Radiation Oncology	Lugano Switzerland	Jacques Bernier Oncology Institute of Southern Switzerland San Giovanni Hospital Bellinzona – CH-6504, Switzerland Fax: +41 91 820 9044 Email: jbernier@iosi.ch Website: www.osg.ch/ictr2003.html
23-27	Modern Brachytherapy Techniques	Cairo Egypt	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be

April

2-5	8th Congress of the European Association for Palliative Care	The Hague The Netherlands	KENES International PO Box 50006 Tel Aviv – 61500, Israel Tel: +44 22 908 0488 Fax: +44 845 127 5944 Email: eapc8@kenes.com
5-9	94th American Association for Cancer Research (AACR) Annual Meeting	Toronto Canada	AACR Philadelphia, Pennsylvania, USA Fax: +1 215 351 9165 Email: meetings@aacr.org Website: www.aacr.org
23-27	6th World Congress in Psycho-Oncology	Banff Canada	Congress in Psycho-Oncology Email: banffcongress@cancerboard.ab.ca Website: www.capo.ca

May

1-4	Oncology Nursing Society 28th Annual Congress	Denver USA	Oncology Nursing Society Meeting Services Team Pittsburgh, Pennsylvania, USA Fax: +1 412 921 6565 Email: member@ons.org Website: www.ons.org
4-8	Radiation Oncology: A Molecular Approach	Tenerife Spain	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
6-10	Dose Determination in Radiotherapy: Beam Characterisation, Dose Calculation and dose Verification	Barcelona Spain	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
15-17	Annual Brachytherapy Meeting	Lübeck Germany	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
21-24	12th Reach to Recovery International Conference "Bridging the Gap: the Needs and their Assessment"	Lisbon Portugal	Vencer e Viver: Dr Henriette Nesbitt de Almeida Lima Nucleo Regional Do Sul Da Liga Portuguesa Contra O Cancro Lisboa, Portugal Fax: +351 21 726 3363 Email: cmatos@dpp.pt
25-29	Physics for Clinical Radiotherapy	St Petersburg Russia	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
31 May – 3 June	ASCO: 39th Annual Conference of the American Society of Clinical Oncology	Chicago Illinois USA	ASCO Alexandria, Virginia, USA Fax: +1703 2999 1044 Email: asco@asco.org Website: www.asco.org

June

1-3	2nd ESTRO Workshop on Biology in Radiation Oncology	Berg en Dal I Nijmegen The Netherlands	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
1-5	Imaging for Target Volume Determination in Radiotherapy	Nice France	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
19-22	National Conference of Cancer Self Help Groups Annual Conference	Manchester UK	Andrea Oz National Conference of Self Helps Groups 107 Crowther Road London SE25 5QS Tel: +02 0 8656 7520 Fax: +02 0 8656 7910 Email: nccshg@aol.com
19-28	23rd Congress of the International Society of Chemotherapy	Durban South Africa	International Society of Chemotherapy University of Natal of Durban Dept of Medical Microbiology Congella, South Africa Fax: +2731 206 4431 Email: sturm@med.und.ac.za
22-26	IMRT and Other Conformal Techniques in Practice	Amsterdam The Netherlands	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 5494 Email: info@estro.be Website: www.estro.be

August

3-8	12th World Conference on Tobacco or Health: Global Action for a Tobacco Free Future	Helsinki Finland	Dr Lisa Elovainio, MD, Secretary Gen Cancer Society of Finland & Pres Finnish Centre for Health Promotion Helskini, Finland Fax: +358 9 135 1093 Email: lisa.elovainio@cancer.fi
10-14	10th World Conference on Lung Cancer	Copenhagen Denmark	International Conference Services Vancouver, Canada Fax: +1 604 681 1049 Email: franziska@meet-ics.com Website: www.2003worldlungcancer.org

CALENDAR OF meetings

31 Aug – 2 Sept	Brachytherapy for Prostate Cancer	Kiel Germany	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
31 Aug – 4 Sept	Physics for Clinical Radiotherapy	Leuven Belgium	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be

September

15-18	7th ESTRO Meeting on Physics and Radiation Technology for Clinical Radiotherapy	Geneva Switzerland	ESTRO Office avenue E. Mounierlaan 83/12 1200 Brussels Tel: +32 2 775 9340 Fax: +32 2 779 54 94 Email: info@estro.be Website: www.estro.be
21-25	ECCO 12 – the European Cancer Conference	Copenhagen Denmark	FECS Conference Unit Brussels, Belgium Fax: +322 775 0200 Email: ECCO12@fecs.be Website: www.fecs.be
21-25	22nd Annual European Society for Therapeutic Radiology and Oncology (ESTRO 22)	Copenhagen Denmark	ESTRO Office Brussels, Belgium Fax: +322 779 5494 Email: info@estro.be Website: www.estro.be

October

8-11	SIOP 2003: International Society of Paediatric Oncology	Cairo Egypt	SIOP, Congrex Holland Amsterdam, The Netherlands Fax: +31 (0)20 5040 225 Email: siop@congrex.nl Website: www.congrex.nl
12-16	Basic Clinical Radiobiology	Santorini Greece	ESTRO Office Brussels, Belgium Fax: +322 779 5494 Email: info@estro.be Website: www.estro.be
19-23	45th ASTRO Annual Meeting (American Society for Therapeutic Radiology and Oncology)	Salt Lake City Utah USA	ASTRO Fairfax, Virginia, USA Fax: +1 703 502 7852 Email: meetings@astro.org Website: www.astro.org

November

2-7	XVI FIGO World Congress of Gynecology and Obstetrics	Santiago de Chile Chile	International Federation of Gynecological Oncologists London, United Kingdom Fax: +44(0) 207 935 0736 mail: figo@figo.org Website: www.figo.org/figo2003.asp
9-14	Evidence-Based Radiation Oncology: Methodological Basis and Clinical Application	Lisbon Portugal	ESTRO Office Brussels, Belgium Fax: +322 779 5494 Email: info@estro.be Website: www.estro.be
19-21	10th Hong Kong International Cancer Congress	Pokfulam Hong Kong	10th HKICC Congress Secretariat Department of Surgery University of Hong Kong Medical Centre Queen Mary Hospital Hong Kong Tel: +852 2818 0232 Fax: +852 2818 1186 Email: mededcon@hku.hk Website: www.hkicc.org

December

3-6	26th Annual San Antonio Breast Cancer Symposium	San Antonio Texas USA	Cancer Therapy & Research Center SACI, Rich Markow San Antonio, Texas, USA Fax: +1210 949 5009 Email: Rmarkow@saci.org Website: www.sabcs.org

2004

January

26-28	40th Annual Meeting of the Society of Thoracic Surgeons	San Antonio Texas USA	Society of Thoracic Surgeons Chicago, Illinois, USA Fax: +1312 527 6635 Email: sts@sba.com

March

18-21	57th Annual Cancer Symposium of the Society of Surgical Oncology	New York City New York USA	D K Kubis, SSO Arlington Heights, Illinois, USA Fax: +1847 427 9656 Email: diannekubis@acaai.org Website: www.surgonc.org
27-31	95th Annual Meeting of the American Association for Cancer Research (AACR)	Orlando Florida USA	American Association for Cancer Research Philadelphia, Pennsylvania, USA Fax: +1 215 351 9165 Email: meetings@aacr.org Website: www.aacr.org

April

29 April – 2 May	Oncology Nursing Society (ONS) 29th Annual Congress	Anaheim California USA	ONS, Meeting Services Team Pittsburg, Pennsylvania, USA Fax: +1412 921 6565 Email: meetings@ons.org Website: ww.ons.org

December

3-6	27th Annual San Antonio Breast Cancer Symposium	San Antonio Texas USA	Cancer Therapy & Research Center SACI, Rich Markow San Antonio, Texas, USA Fax: +1210 949 5009 Email: Rmarkow@saci.org Website: www.sabcs.org

THE CANCER COUNCIL AUSTRALIA

The Cancer Council Australia is the peak national cancer control organisation. Its members are the leading state and territory cancer councils, working together to undertake and fund cancer research, prevent and control cancer and provide information and support for people affected by cancer.

MEMBERS
The Cancer Council ACT
The Cancer Council New South Wales
The Cancer Council Northern Territory
The Cancer Council South Australia
The Cancer Council Tasmania
The Cancer Council Victoria
Cancer Foundation of Western Australia
Queensland Cancer Fund

AFFILIATED ORGANISATIONS
Australasian Association of Cancer Registries
Clinical Oncological Society of Australia Inc
Palliative Care Australia

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Dr K White PHD

THE CLINICAL ONCOLOGICAL SOCIETY OF AUSTRALIA INC

The Clinical Oncological Society of Australia (COSA) is a multidisciplinary society for health professionals working in cancer research or the treatment, rehabilitation or palliation of cancer patients.

It conducts an annual scientific meeting, seminars and educational activities related to current cancer issues. COSA is affiliated with The Cancer Council Australia.

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MEMBERSHIP

Further information about COSA and membership applications are available from
GPO Box 4708, Sydney, NSW 2001.

Membership fees for 2003

Ordinary Members: $140
Associate Members: $80
(includes GST)

INTEREST GROUPS

Breast Oncology
Cancer Research
Data Managers
Epidemiological
Gastrointestinal Oncology
Gynaecological Oncology
Lung Oncology
Medical Oncology
Melanoma and Skin
Oncology Nursing
(Cancer Nurses Society of Australia)
Paediatric Oncology
(ANZ Childhood Cancer Study Group)
Palliative Care
Pharmacy
Psycho-Oncology
Radiation Oncology
Regional and Rural Oncology
Social Workers
Surgical Oncology