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FORUM

New anti-cancer drugs: out of the black hole and coming to a clinic near you

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It is almost 30 years since US President Nixon declared “War on Cancer”. Cynics would say it was a ploy to distract attention from the Vietnam War, then grinding to a close. A National Cancer Act led to the identification of funding for Comprehensive Cancer Centres, and a massive increase in resources for basic cell biology research with the hope of uncovering the magic bullet that would be “a” cure for cancer that wouldn’t cause collateral damage for normal cells. Until recently, the billions were pouring into the black-hole and there was little change in the types of therapy the average cancer patient received, although outcomes improved inch by inch with better application of conventional therapy in a multidisciplinary setting.

For the past five years however there has been a new sense of excitement at international research meetings, followed by ripples in the clinical world, and the first agents based on our new understandings of molecular pathways controlling cancer formation have at last emerged into the clinic. Understanding the genes controlling cellular growth, which are overactive in cancer cells, has allowed development of targeted molecules to interrupt these pathways. Some agents target cell surface receptors (Trastuzumab, Cetuximab), others the signalling pathways connecting receptor to nucleus (imatinib, Iressa), and others nuclear structures directly (Oxaliplatin). In order to improve the therapeutic index, drugs which are preferentially activated by enzymes within malignant cells deliver a high dose to cancer cells and spare normal tissues (Capecitabine). Agents which target the normal cells that are recruited into assisting in metastasis formation (bisphosphonates) aim to render the environment hostile to cancer cell growth. Each of these agents is described in more detail in the articles in this series, and all are based on fundamental insights into cancer cell biology that have emerged within the past 30 years. Each targets better the malignant cell, and has fewer side effects than conventional chemotherapy. Antiangiogenic agents are also promising, but as yet have not entered clinical practice and are not reviewed here.

Yet it turns out that curing cancer does not require a single bullet – more a steady stream of machine-gun fire. Each of these agents is given continuously – this has become possible as their toxicity is more manageable. We anticipate that they will work even better when combined with one another, or with conventional chemotherapy and radiotherapy. Perhaps we will be maintaining control or remission, rather than “curing”? Cancer treatment may become like treatment of blood pressure or diabetes or asthma – rarely are these cured, and combination oral therapy is the norm. Nixon presumably did not envisage we would be “sleeping with the enemy”.

What is clear is that these agents challenge our paradigms – oral administration allows patients coveted freedoms, yet the potential for toxicity requires that supervision be maintained, perhaps in different ways. Prospective pharmacoeconomic evaluation will be critical as overall costs of these agents are high – they are harder to produce and have been tooled up out of expensive basic research, the markets are small for individual agents, chronic use and combinations will add to the overall outlay. For these reasons the developmental emphasis should shift to the incorporation of these agents into definitive treatment and adjuvant treatment strategies. Meanwhile improved survival and quality of life for patients with advanced cancer will be the immediate outcome of their availability in Australia, assuming we can find a mechanism to pay for the peace.
The epidermal growth factor receptor (EGFR) is one of the first proto-oncogenes recognized. Avian viral erb-B II produces a constitutively activated protein that induces avian erythroblastosis. In humans there are four members of the erbB (or HER) family. Ligands for the erbb family of receptors (Her1, Her2, Her3 and Her4) bind to and activate the corresponding receptor tyrosine kinases (RTKs). The erbB family of receptors include the EGFR, the erbB2, erbB4, and Trk receptors. These receptors are composed of three principal domains: the extracellular domain, the transmembrane domain, and the intracellular domain. The extracellular domain consists of four immunoglobulin-like domains which are homologous in all four members of the erbB family. The transmembrane domain is translocated through the cell membrane and contains a single transmembrane spanning α helix. The intracellular domain is composed of a C-terminal tyrosine kinase domain which is able to autophosphorylate in response to ligand binding. EGFR is not just a proliferative signal but one of many structural and functional receptors which govern the structure and function of cellular growth and differentiation. EGFR knockout in mice is lethal, with a high incidence of spontaneous tumours. In experimental systems there is evidence from small series that EGFR or ligand over-expression is a potential oncogenic event. Examples of receptors important in oncogenesis are HER2, and HER3. These agents have been developed to perform FISH when the IHC is equivocal for HER2, and are less observer-dependent, but technically more difficult and less widely available at present. Reference laboratories have been developed to perform FISH when the IHC is equivocal (2+ or patchy). These tests are expensive and do not currently attract a rebate. Data presented at the annual meeting of the American Society of Clinical Oncology in 2001 suggests that FISH positivity is a better predictor of response and survival 4.

To determine suitability for treatment, over expression of HER2 needs to be determined. HER2 expression is measured on breast cancer cells, usually from a sample stored after initial surgery. There are a number of different methods. Immunohistochemistry (IHC) and fluorescence in situ hybridisation (FISH) are currently the best methods of measurement. By IHC, HER2 expression is characterised as 0, 1+, 2+ or 3+. Overexpression is defined as moderate (2+) or high (3+) staining. FISH is more sensitive, less observer-dependent, but technically more difficult and less widely available at present. Reference laboratories have been developed to perform FISH when the IHC is equivocal (2+) or patchy. These tests do currently attract a rebate. Data presented at the annual meeting of the American Society of Clinical Oncology in 2001 suggests that FISH positivity is a better predictor of response and survival.

Tyrosine kinase inhibitors

The second class of agents that target EGFR do so by inhibiting the tyrosine kinase activity or the receptor. These agents include HER2, and the third generation of EGFR inhibitors. This includes the small molecule carbonic anhydrase inhibitor (CAI) and the monoclonal antibody (mAb) that targets the HER2 receptor. The former is selective for EGFR, whereas the latter is selective for HER2. The latter has been shown to be active in breast cancer cells expressing HER2.

Trastuzumab (Herceptin®)

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Our understanding of cancer has progressed dramatically in the past two decades, following the discovery that changes in the human genome can cause cancer. The most common change is the overexpression of HER2. This occurs in about 25-30% of women with advanced breast cancer. The gene encodes a transmembrane protein known as HER2. Trastuzumab (Herceptin®) is now commercially available in most of the Western world, including Australia, for the treatment of women with advanced breast cancer who overexpress HER2 receptors.

Biological activity

Trastuzumab (Herceptin®) is a recombinant humanised mouse/mink monoclonal antibody (mAb). It is designed to bind to the HER2 receptor. It induces immune attack on the cell, blocks receptor function and growth factor binding, and promotes the degradation of the receptor. It also appears to enhance chemotherapy cytotoxicity.

Pharmacology

Trastuzumab is administered intravenously over 30-90 minutes, weekly, either alone or together with cytotoxic chemotherapy. An initial loading dose of 4mg/kg is followed by maintenance of 2mg/kg 3. Third weekly schedules are currently under investigation as the half life is long.

The EGFR antagonists appear to have enormous potential in the clinic. Although the final results of phase II studies are awaited with interest to see whether the encouraging response data translate into survival advantages. There are a number of significant issues that will need to be resolved with these drugs. Given the synergy of these agents with radiation and cytotoxics it is logical to develop them as a combination therapy, as is illustrated by the phase III studies in progress. It is probably helpful, however, to know their activity as single agents prior to registration and to facilitate the planning of trials of maintenance therapy and chemotherapy.

Prior to the demonstration of anti-tumour activity these agents had conceptually been thought of as cytostatic agents. In some settings, particularly in colorectal cancer, this is now being reconsidered. If the drug is given at a tolerated dose (MTD) and allowed the design of phase III trials in non-small cell lung cancer that combine either carboplatin and taxol or gemcitabine and cisplatin with or without erbitux as a combination therapy. 6 F Ciardiello. “Epidermal growth factor receptor tyrosine kinase as a target for anticancer therapy”. Drugs, 60, 1 (2000):15-23.


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Background

The human receptor protein-tyrosine kinases (RTKs) constitute a large family of membrane spanning receptors that govern diverse physiological and pathological pathways. There are currently over 90 recognized protein tyrosine kinases of which 58 are associated with receptors. These form 20 distinct subfamilies that are sufficiently different in the structure and function of their cellular domains, kinase domains and downstream functions to represent distinct targets for pharmaceutical intervention. Dysregulation of these pathways by over-expression or mutation is a potential oncogenic event. Antagonists of the epidermal growth factor receptor (EGFR), insulin receptor, platelet-derived growth factor receptor, vascular endothelial growth factor receptor and fibroblast growth factor receptor.

Carcinoma, gastric and oesophageal carcinoma, breast non-small cell lung cancer, epithelial ovarian cancer, colorectal chemotherapy and radiation.

Survive in the face of cell damage induced by insults such as irradiation and chemotherapy. It also appears to enhance the degradation of the receptor. It also appears to enhance immune attack on the cell, blocks receptor function and growth factor binding, and promotes the degradation of the receptor. It also appears to enhance chemotherapy cytotoxicity.

Acneiform rash commonly seen in the face of skin damage induced by insults such as irradiation and chemotherapy. It also appears to enhance immune attack on the cell, blocks receptor function and growth factor binding, and promotes the degradation of the receptor. It also appears to enhance chemotherapy cytotoxicity. Cancer Forum - Volume 25 Number 3 - November 2001 Cancer Forum - Volume 25 Number 3 - November 2001
prior to commencement of therapy, particularly in patients pretreated with anthracyclines, and at regular intervals. Cardiac dysfunction is to be monitored to permit and to respond to ACE inhibitor therapy, and reintroduction of trastuzumab may be possible. Patients with extensive pulmonary involvement with metastatic breast cancer may require investigation with deterioration in respiratory function, presumably due to an acute inflammatory response. Caution is advised in this setting.

Trastuzumab in advanced breast cancer

In highly HER2-over-expressing patients with advanced breast cancer who had received prior chemotherapy, trastuzumab was used alone in much larger doses, resulting in significant improvements in objective response rates, progression-free survival, and overall survival when compared with chemotherapy alone. In a large double-blind, placebo-controlled trial in which patients received trastuzumab alone or in combination with cisplatin and docetaxel, the overall response rate was 48% at four weeks and 47% at eight weeks. In patients selected by fluorescence in situ hybridisation (FISH), the overall response rate was 42% at four weeks and 41% at eight weeks. In patients with HER2-positive metastatic breast cancer who had previously received chemotherapy, trastuzumab plus docetaxel resulted in a complete response rate of 28% and a partial response rate of 26%. In patients previously treated with both chemotherapy and trastuzumab, the response rate was 15%.

Current trials are exploring other combinations of trastuzumab and chemotherapy. Combination with Vinorelbine yielded a response rate of 75% in a phase II study in pretreated women, and preliminary data in the postmenopausal women dosed with docetaxel and cisplatin also appear promising. Preclinical data suggests that synergy with these agents will occur, rather than the additive benefit with paclitaxel and anthracyclines. A number of international adjuvant studies are either underway or in final planning stages. Cardiotoxicity will be of greater concern in the adjuvant setting and close monitoring is planned.

First line controlled studies of trastuzumab plus chemotherapy (paclitaxel or doxorubicin) compared to the same chemotherapy alone have shown that the addition of trastuzumab significantly improves response rate (52% vs 45%), time to progression (17 vs 6 months), one year survival (78% vs 67%) and overall survival (25 vs 20 months). Survival benefits are probably underestimated as two-thirds of patients receiving initial chemotherapy crossed over to trastuzumab when they progressed. Significantly larger proportions of patients in the combination arms experienced an improvement in the quality of life. Benefits were greater in the HER2 highly over-expressing group but also occurred in the HER2 moderately over-expressing group. Older patients (>60 year old) had worse outcomes but still benefited from the addition of trastuzumab. Patients responding after combination therapy for six months were continued on trastuzumab until progression. Because of the high risk of cardiotoxicity in the anthracycline arm, continuation of anthracyclines and trastuzumab are not recommended.

References


Other nonhaematological toxicities, the drug should be ceased until the event has resolved or been appropriately treated. For other nonhaematological toxicities, the drug should be ceased while the patient remains on the drug. In solid tumours the drug should be ceased while the patient remains on the drug. In solid tumours.

Imatinib mesylate (STI571, Gleevec)

Imatinib is a novel small molecule that functions as a tyrosine kinase inhibitor. Specifically it inhibits the tyrosine kinase receptor for BCR-ABL, c-kit, stem cell factor (SCF) and platelet derived growth factor receptor (PDGF). The drug is taken orally, presented as 100mg capsules. It has a peak plasma concentration within two to three hours of administration and is metabolised by the liver. Tracer studies of the metabolite is with CYP3A4. The disadvantage of this is that it is susceptible to induction or inhibition of metabolism with other drugs also metabolised by the same route. Elimination is largely renal. Carcinogenicity studies have not been completed, however it is teratogenic in rat models and should be avoided by pregnant and lactating women. To avoid GI upset, it is recommended that the drug is taken with a full glass of water and that it be taken at meal times with food.

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Two large randomized trials have measured the objective response rate, which was significantly increased. However, when oxaliplatin was added to first-line chemotherapy in metastatic colorectal cancer, patients with advanced ovarian cancer and preliminary trials in breast cancer, squamous cell carcinoma of the head and neck, small-cell lung cancer, mesothelioma, malignant melanoma, and pancreatic cancer. The current data is from small patient studies in these tumours, measuring response rate, with limited survival and progression time results reported. Additional large patient number studies are required to evaluate its effect in these tumour types. The largest studies to date have been reported in breast cancer (n=337) and mesothelioma (n=38) examining oxaliplatin in combination with other chemotherapy agents, with or without oxaliplatin in previously untreated patients with malignant melanoma. The five-year survival rates were 53% vs 16% (p<0.001) and 50.7% vs 22.3% (p<0.001) (EFC2960 and EFC2963) examined the activity of oxaliplatin as monotherapy. Two preliminary small multicentric Phase II studies (EFC0393 and EFC0394) compared the combination of Oxaliplatin/Cyclophosphamide to Paclitaxel and Cyclophosphamide, however a number of these studies have been in small patient populations and data is limited.

References
Carcapitabine (Xeloda) is an oral fluoropyrimidine, which inhibits thymidylate synthetase (TS), after activation by thymidine phosphorylase (TP). It is currently approved in Australia for use in metastatic breast cancer after failure of standard therapy, and for advanced or metastatic colorectal cancer (CRC). Trials are underway examining the efficacy of carcapitabine in all the other malignancies currently treated with 5-Fluorouracil (S-FU), and in combination with other agents.

Pharmacology
Carcapitabine taken daily or twice daily has been shown to increase tumour drug concentrations but lower systemic 5-FU tumour cells. This has the advantage of tumour selectivity with increased tumour biochemical markers (TP, DPD) and in combination with other agents. Other malignancies currently treated with 5-

5-fluorouracil (5-FU), doxorubicin, vinorelbine and oxaliplatin. Adjuvant studies have been completed and results are awaited. In summary the oral administration of fluoropyrimidines appear to offer at least equivalent efficacy to intravenous 5-FU but with significantly less toxicity, increased patient acceptance1, with the advantage of a home based treatment, and possibly a reduction in the total healthcare costs associated with 5-FU sensitive tumours.

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6. Xeloda Product Monograph

Bisphophonates

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Bone metastases are a major cause of morbidity in patients with solid tumours, particularly those with breast, prostate, lung, kidney and thyroid cancers1. Common bone related complications include pain, pathological fractures, hypercalcaemia, spinal cord compression and reduced mobility. The pathophysiology of bone metastases is multifactorial resulting in osteolytic metastasis (when increased bone destruction exceeds bone formation) and osteoblastic metastases (when increased osteoblastic activity predominates) or mixed osteolytic and osteoblastic metastases. Bisphophonates are chemical compounds known to inhibit osteoclast function and bone resorption. They are effective in conditions characterised by osteoclast-mediated bone resorption such as Paget’s disease and osteoporosis, and, since the 1990s they have become the treatment of choice for tumour induced hypercalcaemia. Many studies have investigated the use of bisphophonates in reducing skeletal complications (hypercalcaemia, bone pain, fractures, need for surgery or radiotherapy) associated with bone metastases, particularly in patients with multiple myeloma (MM) and breast cancer.

Pharmacology
Bisphophonates, analogues of naturally occurring endogenous pyrophosphate, are drugs that have a high affinity for bone mineral. This is determined by their common crystal structure (P–C–P), whilst their potency and side effects is determined by the structure of their side chains1. The precise mechanism(s) of bisphosphonate inhibition of bone resorption is not known.

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Bisphosphonates are available in both oral and intravenous forms. Of the oral formulations approved for use in malignancy, clodronate is the oldest. Whilst there have been published studies indicating some benefit from oral pamidronate, its oral bioavailability, gastrointestinal toxicity and the superior efficacy of intravenous pamidronate have kept the oral form out of the clinic. In Australia there are currently two bisphosphonates commercially available: clodronate (Bonosol, oral) and pamidronate (Aredia, intravenous).

The recommended dose of sodium clodronate is 1,600mg p.o. daily, 2/3 hour before a meal or two hours after a meal, whilst that of disodium pamidronate is 90mg i.v. over one to two hours every three to four weeks. Toxicity with oral clodronate is usually mild and in the form of gastrointestinal disturbance that can be alleviated with divided dosing. Common adverse reactions with disodium pamidronate are asymptomatic hypocalcaemia, influenza-like symptoms and mild fever. These are usually mild and transient. Monitoring of electrolytes, calcium, magnesium and phosphate is nonetheless recommended.

More potent bisphosphonates under clinical evaluation or approved overseas for use in malignant states include ibandronate (1,000 times more potent than clodronate) and zolendronate (10,000 times as potent as clodronate)4. However ibandronate (1,000 times as potent than clodronate) and zolendronate (10,000 times as potent as clodronate)4. However ibandronate and pamidronate are effective in the treatment of bone pain in patients with metastatic breast cancer or multiple myeloma (462 patients) and two other pamidronate studies (404 and 295 patients respectively). The oral bisphosphonate studies in advanced breast cancer were all relatively small studies, with a range of 10 to 173 patients included in each.

The primary study endpoints varied across the studies but included at least one of the following outcomes: skeletal events (defined as any or all of the following: new bone metastases, pathological fractures, spinal cord compression, irradiation of surgery to bone or the development of progression of bone pain); Quality of life (QoL); bone pain; survival. A pooled comparison of efficacy across these studies is difficult because of differences in patient selection, concomitant therapies and outcome measures. Nonetheless, one can still consider the global effect of bisphosphonates on skeletal events, where the observed clinical benefits include reduced hypercalcaemic episodes, pathological fractures, the need for surgery and bone pain. Only six studies adequately evaluated QoL.

With regards to skeletal events in women with established bone metastases the strongest evidence for benefit is seen with the use of pamidronate i.v. (90mg every three to four weeks) which reduces the risk of developing skeletal morbidity by 35% (p<0.001), in Aredia Study Group Studies 18 and 19. There was a significant reduction in the cumulative number of skeletal events observed with 60mg pamidronate every three to four weeks for two years (p=0.01), whilst a significant delay in progression of bone metastases and reduction in bone pain was observed with 45mg pamidronate i.v. every four weeks (increase median time to progression by 48%, p = 0.02). There was a 44% reduction in the skeletal event rate observed with the use of pamidronate i.v. monthly (p = 0.025). There was a trend for improved overall QoL and significantly reduced bone pain with 90mg pamidronate i.v. and significantly improved QoL and reduced bone pain with high dose ibandronate 6mg i.v. monthly. No study showed an effect of therapy on survival.

The use of oral bisphosphonates is associated with a 36-60% reduction in skeletal events in women with advanced breast cancer. This evidence comes from the two largest clodronate studies (N=133 and p<0.01, and N=173 and p=0.001 respectively) and a single oral pamidronate study (N=161, p<0.001). In women with advanced breast cancer but no bony metastases, one of three studies showed that oral clodronate compared to placebo significantly reduced the incidence of bone metastases (32 vs 63, p<0.005) however the number of patients affected was not significantly different (15 vs 19 respectively).

From this evidence the American Society of Clinical Oncology Bisphosphonates Expert Panel recommended in 2000 the use of i.v. pamidronate over one to two hours every three to four weeks in women with metastatic breast cancer and radiographic evidence of bone metastases who are concurrently receiving hormonal therapy or chemotherapy. In Australia, i.v. pamidronate has been approved for several years by the Pharmaceutical Benefits Scheme (Highly Specialised Drugs Programme) for patients with lytic bone disease from breast cancer, whilst the indication for oral clodronate has recently been extended to permit its use in this setting.

The optimum timing and duration of bisphosphonate treatment for women with advanced breast cancer is not known. Safety data is available beyond three years for oral clodronate and up to six years for i.v. pamidronate and zolendronate4. This data suggests that women with advanced breast cancer could be treated indefinitely.

Bisphosphonates in early breast cancer

In the adjuvant setting three studies have been presented of results to date. Two published studies compared adjuvant oral clodronate (up to three years) in addition to standard adjuvant chemotherapy or hormonal therapy with an open control in women with high-risk early breast cancer8. These two studies showed contradictory results9. The third and largest study compared the addition of oral clodronate to placebo for two years in over 1,000 women. Results from this study are only available in abstract form with final study results in preparation10. Interim pooled analysis of these studies shows a 37% reduction in the risk of developing bone metastases with the use of oral clodronate (Relative risk of developing bone metastases 0.73; 95% CI 0.55-0.98), unpublished results). Whilst the use of bisphosphonates as adjuvant therapy to reduce bone metastases remains open, there is some evidence indicating reduced decline in bone mineral density with the use of adjuvant clodronate11.

The NSABP-B34 study, a double blind randomised placebo-controlled study of oral clodronate in women with early breast cancer, has recently commenced.
Breast cancer: The value and meaning of breasts

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Abstract
Understanding the value and meaning of the female breast for women with breast cancer and their partners can assist health professionals in understanding how a woman may react to breast cancer surgery and enable appropriate interventions to be implemented. One in eleven women in Australia will develop breast cancer by the age of 75.1 According to the National Breast Cancer Centre and endorsed by the National Psychosocial Clinical Practice Guidelines produced by the Australian Catholic University and the Australian Breast Cancer organisation22. During this time of developing body image, young girls are growing up with their cultural and societal values. It is during this time that women are influenced by fashion magazines, clothing designs, music and movies. The meaning and value of women’s breasts in this post-modern and post-feminist era varies from woman to woman.20 Women and men’s different meanings reflect the postmodern thinking of today’s society. Therefore it is important for health care providers to be aware of the dual meaning and value they contribute to a woman’s body image. The first paper in this issue by C Boyd, provides an overview of the literature on the value and meaning of breasts and their loss, while the second paper reports an evaluation of the Look Good Feel Better program, a free cosmetic workshop for women undergoing chemotherapy and/or radiotherapy for cancer.

Historical perspective
Research has traced the ways in which both sexuality and functionality have contributed to the meaning and value of the female breast. In literature, art and religion female breasts are more commonly portrayed as objects of sexuality and desire.3 For example, the chorus in Greek tragedy mention women’s breasts in their works, referring to the sensual desire associated with them.4 De Mondeville, a 12th Century philosopher (1260-1320), philosophises that women’s breasts were an attack on Agatha’s fertility and femininity. A woman maimed, rendered unattractive and unable to rear young children was sentenced to death. This form of punishment of women continued throughout the middle ages. Women who committed certain crimes were punished by the removal of one or both breasts. Male domination of women was perpetuated through threats to this sacred part of a woman’s body rendering her both dysfunctional as a mother and undesirable to men.

Contemporary meaning
Body image is developed during the first 12 years of life, with the “beauty ideal” held in the world’s media and the World Health Organisation35. During this time of developing body image, young girls are growing up with their cultural and societal values. It is during this time that women are influenced by fashion magazines, clothing designs, music and movies. The meaning and value of women’s breasts in this post-modern and post-feminist era varies from woman to woman.20 Women and men’s different meanings reflect the postmodern thinking of today’s society. Women’s breasts remain to be sensuality, nurturing and femininity. Women’s magazines and fashion constantly reflect these themes.

Post-feminism has enabled a diversity of meaning attributed to the female breast, both real and imagined. The meaning and value of the female breast is closely connected to the history of today’s society reinforcing contemporary values and meanings attributed to the breast36.

Summary
Throughout history, in literature, art, religion and contemporary Australian society, breasts have a dual meaning. On one hand they have to do with sensuality and femininity. On the other hand, they function to support life of the young. The amplification of a breast or breasts can alter the body image of the woman. A diagnosis of breast cancer and its associated treatments pose this same threat but also impose changes in lifestyle.

Implications for practice
By showing an understanding of personal, cultural and societal values, health care professionals can show their interest in providing care in context with their population of patients. This principle of contextual care goes beyond breast cancer and women, to those in need of any health intervention, regardless of race, culture or gender. Caring with such empathy and understanding the “person on the mattress” perspective, may improve health outcomes and increase their satisfaction with their care. For the health and care for each woman is of paramount importance. Health professionals should assess each woman’s value and meaning of their breasts through treatment and offer appropriate treatment and support for each woman and their partner. Research is needed in this area.

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The Look Good...Feel Better program: A pathway to self-esteem for women with cancer

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Bay Village, NSW

Abstract

The Look Good...Feel Better program offers a free cosmetic workshop to women undergoing chemotherapy and/or radiotherapy for cancer. The central aim is to improve the self-image, self-esteem and confidence of each participant, through providing women with the knowledge, techniques and encouragement to use make-up to make themselves look better. This paper documents an evaluation of the Look Good...Feel Better program carried out in 1998, and further improvements to the program since that time. The evaluation showed that the program achieved modest but statistically significant gains for participants in a number of areas relating to their self-image, sense of confidence and self-esteem. Women of all ages gained from the course, but the largest overall gains were made by younger women (under 45 years), who were initially significantly more unhappy about their overall appearance. The reaction of the participants was overwhelmingly positive, and their feedback has led to further improvements in the program.

Introduction

Look Good...Feel Better, a program that offers a free cosmetic workshop to women undergoing chemotherapy and/or radiotherapy for cancer, has been offered in Australia since 1990. The central aim of the program is to improve the self-image, self-esteem and confidence of each participant. Look Good...Feel Better, which is also offered in the United States, Canada, the United Kingdom and New Zealand, is now available in this country at over 90 hospitals and cancer centres and was attended by some 4,100 women in 2000.

The Look Good...Feel Better workshops are presented by professional beauty advisors, who volunteer their time to teach women how to apply skin care and cosmetics, paying special attention to the physical changes that have occurred as a result of treatment. About 15 women are generally enrolled in each workshop, with six to eight beauty advisors. Over the two hours of the workshop, the beauty advisors provide women with techniques to combat changes in skin texture and pigmentation, and loss of eyelashes and eyebrows, and they demonstrate how wigs, turbans, hats and other accessories can be used — often with flair — for dealing with partial or total hair loss. As each technique is demonstrated, the women are encouraged to practice it, and each woman receives her own complimentary kit of skin care and make-up products, tailored to her particular needs, to enable her to learn ‘hands-on’ the techniques being taught, and to take home.

The volunteer beauty advisors all receive basic training in working with women with cancer, with annual updates and opportunities to workshop the skills they learn. The training includes how to best work with women who are upset or emotional, but volunteers are encouraged to focus on the workshop techniques and positive aspects of the workshop, and discouraged from becoming involved with women’s emotional issues. The beauty advisors are also encouraged to defer to their State Look Good...Feel Better managers.

The program is sponsored and funded by the cosmetics industry, through the member companies of the Cosmetic, Toiletry and Fragrance Association. This covers the cost of running the program and all the products used in the workshops, a contribution worth over $1 million per year.

How does it measure up? Evaluating the program

In 1997-98, Colmar Brunton Research was contracted to evaluate the effectiveness of the Look Good...Feel Better program. The aims of the evaluation were to provide an understanding of:

- the program’s immediate and longer term effects on women with cancer, specifically in terms of their self-esteem, body image and perception of attractiveness; and
- the key needs of these women, which of these needs the program met, which elements of the program met these needs, and where improvements could be made.

How was the evaluation done?

The evaluation provided quantitative data through three questionnaires, one before the course, the second three days after completing the course and the third one month later.

The questionnaires asked women to rate body satisfaction in relation to a range of indicators, using a mark on a linear scale. They were also asked to indicate their mood and feelings (eg attractiveness, self-esteem, anxiety, pain), and to express their degree of agreement with a number of statements relating to mood and feelings.

In addition, two focus group discussions, one three days after the course and the second a month later, provided qualitative insights into women’s experiences of the course and their suggestions for improvements.

The women involved

Ninety-six women were recruited and completed the first questionnaire, 90 completed the second, and 78 the third. The two focus groups involved four and five course participants respectively.

Over half of the initial 96 women (55%) had a diagnosis of breast cancer, with others spanning a range of diagnoses. The large majority had been diagnosed within the previous six months, 44% within the past three months, and 33% within three to six months.

Three-quarters of the women (75%) had undergone surgery for their cancer at some stage, most at least two months ago. At the time of the evaluation, however, the majority (68%) were undergoing chemotherapy and 23% were receiving radiotherapy, and almost four in every five (78%) had had treatment within the last four weeks.

Almost three-quarters of the women (74%) were married. One-third (34%) were aged over 55 years, another third (33%) aged 46-55 years, and the remainder younger than this, including one under 18 years.

Results from the questionnaires

Before the course

Before attending the course, the women rated fairly low their satisfaction with their hair, the look and feel of their skin and eye area, and their body weight, as shown in table 1. They were more satisfied with their face and nails although even here the mean score was around five on a scale of one to 10.

For the most part, as shown in table 2, the participants did not feel particularly beautiful, attractive or desirable. Most, however, felt generally optimistic, with a moderately high quality of life and a sense of control over their lives. They were not generally feeling a great deal of pain or nausea, nor were they particularly anxious or emotionally upset, although some had significant problems in these areas.

Most of the women also felt they could still confidently communicate with others, and that their appearance had not had a negative impact on their interaction with others, particularly close family and friends — areas of confidence that the later questionnaires showed to be maintained (see table 3).

On completion of the course

The questionnaire completed three days after the course showed a significant improvement in the women’s body satisfaction in all areas other than nails and body weight (areas that had not been addressed at any length in the course) (see table 1). The improvements were not dramatic, with mean scores in the moderate range, from 4.5 for hair to 6.3 for overall appearance (a mean of 7.0 would be considered high). These are the sorts of gains that might be expected by a course that, rather than offering a ‘m miracle cure’, aimed to make women feel better through helping them to cope with symptoms and side-effects of treatment.

Moods and feelings also improved, with statistically significant gains in confidence and self-esteem; feeling attractive, desirable, beautiful; and the women’s sense that they ‘looked more normal’ (see table 2). There was also a trend towards feeling more normal, though this was not statistically significant.

The general trend was that the women felt better and more confident overall, and this was reflected in the significant increase in the level of agreement with the statements 1 feel confident about myself because I know I look good’ and ‘I feel better about myself because of how I look’, as shown in table 2.

Women found the make-up used in the course to be very useful, and most of the make-up provided was used following the course. Many of the women were using a wider variety

| TABLE 1
<table>
<thead>
<tr>
<th>Body satisfaction before and after the course</th>
</tr>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Nails</td>
</tr>
<tr>
<td>Overall appearance*</td>
</tr>
<tr>
<td>Facial appearance*</td>
</tr>
<tr>
<td>Eye area*</td>
</tr>
<tr>
<td>Feel of my skin*</td>
</tr>
<tr>
<td>Look of my skin*</td>
</tr>
<tr>
<td>Body weight</td>
</tr>
<tr>
<td>Hair*</td>
</tr>
</tbody>
</table>

0 = very unsatisfied, 10 = very satisfied, * Significant difference, p<0.05

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of cosmetics and skin care products, and using them more often. This included products previously used, as well as eye shadow, eyebrow pencil, lip liner, face concealer, face powder and toner. There was also a slight increase in daily use of head wear, possibly reflecting some experimentation.

The overall reaction to the course was overwhelmingly positive, with participants finding it enjoyable, useful and relevant, and the course leader and volunteers helpful and friendly. In general, women felt that the course exceeded their expectations.

One month later

One month later, the positive gains of the course had been maintained. The women's level of satisfaction with their bodies remained at a similar level, with a slight but statistically non-significant further gain in most areas (see table 1). All gains in mood and feelings had also been maintained, with the largest overall gains in this area being improved confidence and self-esteem (see table 2). In addition, at this stage participants felt significantly more happy, compared to their pre-course feelings - a gain not seen initially after the course. Perhaps this reflects time taken for others to notice and comment on the changes, or for feelings of happiness to grow out of increased confidence.

Women continued to use the cosmetics provided, and continued to use more cosmetics than before the workshop. Their patterns of use remained very similar to those seen in all other areas had brought them to the same levels as the women aged 45 years and over.

Patterns of improvement also varied with relationship status. Before the course, there were few differences between those who were in a married or de facto relationship, compared to those not in a relationship. Immediately after the course, however, there were many significant differences. Those not in a relationship were significantly more likely to feel lower self-esteem, more emotionally upset, believe they had worse nausea and not feel good, be more pessimistic and negative about the future, be less confident about themselves, and think they looked different from their appearance before they were ill. A month later, most of these differences had disappeared. Women not in a relationship had made significant gains across a range of areas relating to appearance, moods and feelings, and the only significant difference between the two groups was that those not in a relationship were more likely to feel unsure about themselves because of the way they looked. This same pattern was seen in those not working: the benefits of the course tended to increase over the month following the course, whereas there was little different over the month for those who were working.

The focus groups: a spur to further improvement

The two focus groups confirmed women's positive experience of Look Good…Feel Better. Typical comments were, 'it wasn't a very big course but it really worked', '1 can bring back some control that I didn't have', 'it's a boost, I feel like a new person', 'I feel more confident', 'the whole thing made you feel special... I've got to like myself better', 'if it wasn't for Look Good...Feel Better saying 'fix yourself up', I wouldn't have, 'somehow it made a big difference'. There was also a strong sense that the individual attention and the cosmetic gift bags for each woman made the women feel special.

The groups identified a number of things that could further enhance women’s experience of the program, and their comments and recommendations have led to a number of improvements.

The American video shown at the start of the session has been replaced by a new, Australian production that is culturally more relevant to the experiences of Australian women, and an Australian patient booklet has also been prepared and is given out at the workshops. Publicity for the course has improved, with new patient brochures and posters to promote the program, a website (http://www.lgfb.org.au), and a 1800 telephone line. Publishing companies have supported, free of charge, an advertising campaign that has run through 2000 and into 2001.

These developments have fostered considerable further growth in the program. The number of centres offering Look Good…Feel Better in Australia has grown from around 55 at the start of the evaluation, in 1997, to over 90 in 2001, and the number of women attending has increased from 2,975 in 1997 to 4,100 in 2000.

Conclusion

Women’s agreement with statements before and after the course

<table>
<thead>
<tr>
<th>Statement</th>
<th>Pre-course</th>
<th>Initially post-course</th>
<th>1 month post-course</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>I feel positive about the future</em></td>
<td>7.0</td>
<td>7.4</td>
<td>7.3</td>
</tr>
<tr>
<td>1 feel better about myself because of interaction with other cancer sufferers*</td>
<td>5.4</td>
<td>6.0</td>
<td>5.9</td>
</tr>
<tr>
<td><em>I feel unsure about myself because of how I look</em></td>
<td>4.4</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td><em>I feel confident about myself because I look good</em></td>
<td>4.4</td>
<td>5.5</td>
<td>5.6</td>
</tr>
<tr>
<td><em>I feel better about myself because of how I look</em></td>
<td>4.3</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>The way I feel now makes me feel less confident in my day-to-day life*</td>
<td>4.1</td>
<td>3.7</td>
<td>3.5</td>
</tr>
<tr>
<td><em>I feel that I look good but I don't feel good</em></td>
<td>3.8</td>
<td>4.7</td>
<td>4.0</td>
</tr>
<tr>
<td><em>I feel just the same as I did before I was ill</em></td>
<td>3.8</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td><em>I feel that it's obvious that I have cancer by the way I look</em></td>
<td>3.7</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td><em>I don't feel as confident in communicating with others now</em></td>
<td>3.4</td>
<td>3.3</td>
<td>2.6</td>
</tr>
<tr>
<td>1 feel that other people have taken over control in my life*</td>
<td>3.1</td>
<td>3.2</td>
<td>2.7</td>
</tr>
<tr>
<td>The way I feel has changed the way people in my community interact with me in a negative way*</td>
<td>2.6</td>
<td>2.4</td>
<td>2.3</td>
</tr>
<tr>
<td><em>I feel the way I look affects the way my close family and friends interact with me in a negative way</em></td>
<td>2.1</td>
<td>2.0</td>
<td>1.9</td>
</tr>
</tbody>
</table>

0 = strongly disagree, 10 = strongly agree, * Significant difference, p=<0.05
Training of medical and radiation oncologists: the views of Australian and New Zealand trainees

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and its assessment.

Design and setting: Postal questionnaire survey of medical oncology trainees in Australia, and radiation oncology trainees in Australia and New Zealand.

Main outcome measures: Experiences of and views about training.

Results: Currently, 40% of medical and 59% of radiation oncology trainees rotate to the other specialty during training. All medical oncology trainees thought it was important to train in radiation oncology (36% very important) and 97% of radiation oncology trainees thought it was important to train in medical oncology (54% very important). In addition, training in palliative care for three or more months was thought important by all medical and 96% of radiation oncologists (48% and 24% respectively rating it as very important). Overall 72% of trainees considered that a common modular basic science curriculum would be useful, and 48% were in favour of joint training during the first year to a common experience for both groups of trainees. Medical oncologist trainees were not supportive of formal assessment of training, and radiation oncology trainees were supportive of the FRANZCR examinations.

Conclusions: Trainees in medical and radiation oncology favour experience in the other discipline, although the minority of medical oncology trainees have formal radiation oncology training experience. The majority of both groups also favour training in palliative medicine, for between three to six months. They support a modular core curriculum with some form of assessment. The views of trainees should be considered in postgraduate oncology training.

<table>
<thead>
<tr>
<th>TABLE 1</th>
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</thead>
<tbody>
<tr>
<td>How would you rate the importance of training in the following departments on a scale of 1 to 5?</td>
</tr>
<tr>
<td>Not important (Score 1)</td>
</tr>
<tr>
<td>MOT</td>
</tr>
<tr>
<td>Medical Oncology (for MOTs)</td>
</tr>
<tr>
<td>Radiation Oncology (for MOTs)</td>
</tr>
<tr>
<td>Palliative Care</td>
</tr>
<tr>
<td>Haematology</td>
</tr>
<tr>
<td>General surgery eg to observe an axillary dissection</td>
</tr>
<tr>
<td>Gynaecological oncology</td>
</tr>
<tr>
<td>Radiology</td>
</tr>
<tr>
<td>Pain management</td>
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<tr>
<td>Multidisciplinary clinics</td>
</tr>
</tbody>
</table>

MOT: Medical Oncology Trainee  ROT: Radiation Oncology Trainee

Introduction

Excluding non-melanocytic skin cancer, there were almost 80,000 new cancer cases diagnosed and 34,000 deaths due to cancer in Australia in 1997. Cancer is the commonest cause of death in Australia, comprising a quarter of all deaths. A large and increasing proportion of people with cancer will be assessed and treated by oncologists. The revolution in molecular biology of the past 30 years has vastly increased our understanding of the basic science and mechanics of oncogenesis, and new biological treatments are now becoming a reality. Likewise, advances in cancer genetics have resulted in a new subspecialty. Combined treatment programs comprising both radiotherapy and chemotherapy are increasingly used, based on evidence of enhanced effectiveness. An increased diversity amongst cancer specialists seems likely to become necessary as our knowledge base increases. The quality and appropriateness of oncology training is therefore of major importance both to the medical profession and to the wider community.

The traditional division of cancer specialists into medical and radiation oncologists is a source of professional identity and pride. In Australia and New Zealand, medical oncology trainees enter the training program with part I FRACP, and have to complete a minimum of two years clinical training in oncology and a further elective year, often spent in research. Many undertake a formal research degree. Radiation oncology trainees, after completing resident training (commonly two years), enter a four years training scheme in which they take parts I and II of the FRANZCR examination. After obtaining the FRANZCR they are eligible for consultant appointment, although many undertake a year’s further training as a research fellow.

Rather than divide into modality specialists in line with the model practiced in the United States and, to a large extent, in Australia and New Zealand, opinion in the UK has generally been in favour of closer integration of the specialties, particularly during training, as much of cancer medicine is common to both specialties. Against this background, a questionnaire was conducted in 1997 by the junior radiologists forum in the UK, which sought the opinions of registrar grade medical and clinical (radiation) oncologists about training. As the contexts are very different, we felt it would be interesting to survey medical and radiation oncology trainees in Australia and New Zealand using and assessment of training. General comments were also invited. Questionnaires sent to MOTs and ROTs were almost identical apart from specific items on rotation to other specialties.

Amendments to the questionnaire

There were three minor differences from the British questionnaire. Multidisciplinary clinics were included in the question on training in other departments (table 1), because of increasing recognition of their importance in patient management. A question on medical oncology training after completing the FRACP Part I was added because of its relevance to trainees in Australia. In the final question (figure 4), an option of ‘no planned period of research’ was included in the Australian questionnaire.

Results

Responses were received from 66% of trainees overall, including 68% of 56 radiation oncology trainees (ROTs) and 64% of 39 medical oncology trainees (MOTs). Replies were received from all Australian states with trainees. Medical oncology trainees in New Zealand were not surveyed.

Rotation to other oncological specialties and units

Forty percent of MOTs and 59% of ROTs said that they had rotated to the other discipline, and virtually all had found the rotation useful. For MOTs, the length of rotation was three months for 70% and four to six months for the remainder. All had attended general radiation oncology clinics, 89% had attended radiotherapy planning sessions and 78% had observed brachytherapy. Amongst ROTs, 27% had rotated to medical oncology for two to three months, 50% for four to six months and 23% for more than six months. General medical oncology clinics were attended by the majority and over half observed patients having high dose chemotherapy.

All MOTs and 95% of ROTs felt it was important to spend some time in other departments and they were asked to score the importance of training in a variety of specialties (table 1).

Most MOTs and ROTs rated supervised training as fairly or very important. Similarly, most trainees felt it was unimportant or not very important for their optimal learning to be an observer without clinical responsibility.

All trainees were asked what was the optimal time for a medical oncology trainee to rotate to radiation oncology, and vice versa. The results are shown in figures 1 and 2. They were also asked about training in palliative care and most felt this was important (figure 3). Assuming trainees spend several years in the same cancer centre, rotation to other centres was thought to be necessary by all MOTs and by the majority of ROTs. The later training years was the preferred time for this rotation by 60% of MOTs and 80% of ROTs. More than two-thirds of MOTs and more than half the ROTs felt they should rotate to work for oncology consultants based at district hospitals. Most of the ROTs felt that three months was the optimal length of time for a district hospital rotation, but for MOTs, three months was favoured by 35%, three to six months by 30%, six months by 30% and 12 months by 5%.

Common core curriculum and assessment

Trainees were asked whether they felt all oncology trainees should attend a course with a common core curriculum (during...
which medical and radiation oncology trainees would have lectures together on, for example, basic radiotherapy, cancer epidemiology, ethics. More than two-thirds of both MOTs and ROTs favoured this proposal if the common course led to a Masters degree, trainee preferences for assessment were sought. Some gave more than one preference. Eight per cent of MOTs and 18% of ROTs preferred a single examination at the end of the course but more than half the MOTs and 66% of ROTs preferred short examinations at the end of each course module. No formal assessment was the preference of 32% of MOTs and 26% of ROTs.

With more structured training, assessments and closer integration between radiation and medical oncology (perhaps with a Masters degree), trainees were asked what should be done with Part II FRANZCR (this examination may make the integration of radiation and medical oncology training difficult). Again, many respondents gave more than one preference. Ninety per cent of MOTs and 80% of ROTs felt that it should be kept as an examination for those wishing to give radiotherapy, but 5% of MOTs and 11% of ROTs thought it should be abolished. A replacement modular examination for medical and radiation oncology trainees was preferred by only 14% of MOTs but by 48% of ROTs. ROTs only were asked what should be done with the medical oncology training after FRACP part I was preferred, and 96% thought that an exit exam should not be introduced.

Forty per cent of MOTs and 54% of ROTs thought it appropriate that new trainees should start as general oncology trainees and spend some time working in both radiation and medical oncology departments for the first year before deciding whether to train as a medical or radiation oncologist. Trainees were asked how the current training influenced their decision to do some research. Two-thirds of the MOTs were encouraged, none was discouraged and 20% felt it would be of no value. Corresponding figures for ROTs were 45% encouraged, 24% discouraged and 30% no influence.

Trainees were then asked if they wanted to do one year of research leading to a Masters degree or one-and-a-half years for an MD or three years for a PhD, or to undertake no planned period of research. The results are shown in Figure 3.

**Discussion**

**Rotation to other oncological specialties and units**

Forty and 59% of medical and radiation oncology trainees respectively rotated to the other specialty during training. The great majority of these rotations were considered valuable. However all medical oncologists and 97% of radiation oncologists thought training in the other discipline was of importance even though only 36% of MOTs and 54% of ROTs rated training in the other specialty as ‘very important’. Half of the MOTs felt that three months training in radiation oncology would be adequate, whereas more than two-thirds of ROTs thought MOTs should spend at least four months in radiation oncology. More than three-quarters of ROTs wished to spend four months or more training in medical oncology.

Training in palliative care was regarded as very important by half of the MOTs and one-quarter of the ROTs. The most popular length of palliative care training amongst all trainees was three months. Although a third of MOTs felt that six months was more appropriate. Approximately half of the workload of medical oncology is palliative treatment and 30-40% of radiation therapy courses are for palliation. Experience in other specialties was generally rated as less important, although the value of multidisciplinary clinics was recognised. Rotation to other cancer centres during training was thought to be necessary by both MOTs and ROTs. Rotation to district hospitals was considered to be less important, particularly by ROTs.

**Common core curriculum and assessment**

A course with a common core curriculum was popular with most MOTs (76%) and ROTs (71%) with some respondents commenting that they already attend joint lectures. If a Masters degree was the outcome of such a course, a modular examination was preferred by 52% of MOTs and 66% of ROTs. In contrast 96% of MOTs were opposed to an exit FRACP exam. The FRANZCR examination was strongly supported, with 80% of ROTs in favour of keeping its current form, although 48% felt it could be replaced, as a modular exam and include MOTs. Only 14% of MOTs were interested in this possibility however. Combined training during the first year was supported by 54% of ROTs and 40% of MOTs. A research year was the most popular option for both MOTs and ROTs, although 36% of MOTs and 11% of MOTs favoured no planned period of research.

**Comparison with UK trainees**

In the United Kingdom, the division between non-surgical cancer specialties has traditionally been more blurred, and clinical (radiation) oncologists are trained in the use of both radiotherapy and chemotherapy with an emphasis on cancer site specialisation. Medical oncologists, whilst originally mainly academically based, are increasingly involved in chemotherapy administration at a community level, as the indications for chemotherapy widen. Medical oncologists undergo four years of clinical training following general physician’s training during which MRCP Parts I and II if are undertaken. There are no oncology examinations, although recently more thorough assessment of training has been introduced and most trainees attend lecture courses, and undertake a formal research degree. Clinical oncology trainees also enter the training scheme after a postgraduate diploma, most commonly the MRCP. There are five years of clinical training and during the first three years the FRCP examination is taken. The final two years are advanced professional training with cancer site specialisation. Up to

![Figure 3](https://example.com/figure3.png)

**How long would you like to train in palliative care?**

- 0% 2 months
- 10% 3 months
- 30% 4 months
- 40% 5 months
- 30% 6 months

**Figure 4**

What period of formal research would you prefer?

- 60% 1 year
- 40% 2 years
- 20% 3 years
- 80% None

A year of this may be spent in research, and many trainees undertake a formal research degree.

Forty per cent of MOTs in Australia and 30% in the UK had experience in a radiation oncology department. Although the rotations were shorter (mostly three months in Australia rather than six months or more in the UK), the quality of training was better in Australia with most trainees observing radiotherapy planning and brachytherapy. All MOTs who rotated to radiation oncology found it useful but overall, only 36% of Australian MOTs rated radiotherapy training as ‘very important’ as opposed to 76% of UK MOTs. The ideal length of rotation to radiation oncology was stated as three months by 48% and four to six months by 45% of Australian MOTs; 70% of UK MOTs wished to train in clinical oncology for at least six months.

Rotation of radiation (or clinical) oncology trainees to medical oncology was also more common in Australia/NZ with 59% rotating as opposed to 43% in the UK. The experience obtained appeared to be equivalent and 50% rotated for at least six months. The vast majority of UK clinical oncology trainees and 54% of Australian/NZ MOTs rated training in medical oncology as very important. Two-thirds of UK clinical oncology trainees wished to rotate to medical oncology for at least six months.

Training in palliative care was rated as ‘very important’ by 72% and 62% by MOTs and clinical oncology trainees in the UK. Both these figures are considerably higher than in the Australian/NZ counterparts. This difference may reflect different exposure to palliative medicine between the cancer training institutions in the two countries.

A course with a common core curriculum was a popular proposal amongst both Australian/NZ and UK trainees. If a Masters course was to be introduced, the majority of trainees would value multidisciplinary clinics was recognised. Rotation to other cancer centres during training was thought to be necessary by both MOTs and ROTs. Rotation to district hospitals was considered to be less important, particularly by ROTs.

**References**


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

Australia has four behavioural research centres: the Centre for Health Promotion and Cancer Prevention Research (CHCPPR) of the University of Queensland, the Cancer Education Research Program (CERP) of The Cancer Council New South Wales, the Centre for Behavioural Research in Cancer (CBRC) at the Anti-Cancer Council of Victoria and the Centre for Behavioural Research in Cancer Control (CBRCBC) at Curtin University of Technology, Perth.

This report has been edited by Cathy Swart (CHCPPR) from the reports received.

New results

n Centre for Health Promotion and Cancer Prevention Research (CHCPPR), Queensland

Prevention of regular smoking among adolescents

This qualitative study aimed to determine the processes associated with the progression from experimentation to regular smoking among the adolescents. The study specifically examined factors and contexts surrounding the influences on youth to become regular smokers and the resistance by other youth who have been or are experimenting and have not become regular smokers.

Results of the study indicated that the question may need to shift from how do we prevent experimentation by youth to how do we slow down the progression from experimentation to regular smoking. The study highlighted the diversity in adolescents’ progression along different smoking trajectories indicating the need to examine multiple approaches to the prevention of regular smoking by adolescents.

Specifically, participants demonstrated a broad range of themes that partly reflect those found in the literature. These themes reflected the external and internal forces surrounding contexts for regular smoking, and resistance to regular smoking, for this group of adolescents, and include the reasons for smoking and the strong social focus given to smoking.

In addition, other unique themes emerged, including:

- Initiation and experimentation with smoking were viewed as normative behaviour.
- Although firmly bedded in the lifestyle of many regular smokers, smoking itself emerged as of little conscious importance.
- Many participants were unaware of the factors associated with progression from experimentation to regular smoking.
- Regular smoking was often simply a consequence of continued experimentation with few adolescents making conscious efforts to resist regular smoking or to become a regular smoker.
- Movement from experimentation to regular smoking was defined by a change in the status of smoking from “incidental” to “instrumental”.

n Centre for Behavioural Research in Cancer (CBRC), Victoria

The impact of a media campaign on cervical screening knowledge and self-efficacy

A three-phase cross-sectional face-to-face interview study has recently been completed. It investigated the impact of the PapScreen Victoria media campaign, and the extent to which a media campaign can influence women’s perceived self-efficacy associated with having a Pap test. Madeline Fernbach’s paper has been accepted for publication in the January 2002 edition of the Journal of Health Psychology.

In total, 1571 women aged between 25 and 69 years were interviewed about prompted and unprompted recall of media messages, intention to have a Pap test and perceived self-efficacy associated with having Pap tests, and barriers to cervical screening. Chi-square and logistic regression analyses revealed that women’s attitude of Pap testing messages and priority of this health issue was greater at the first follow-up, and was maintained at the second. Multivariate analyses of variance indicated that it was perceived as more difficult to choose a practitioner and give Pap results for the first follow-up, and perceived self-efficacy was lower then than at baseline. However, the screening rate increased over the campaign period so it appears that women become aware of the barriers to screening before over coming them to have a Pap test.

Public reaction to the movie “The Insider”

A paper exploring public reaction to the movie “The Insider” by Dixon, Hill, Borland & Paxton was recently published in Tobacco Control. Results suggest the anti-tobacco content of the movie served to promote an anti-smoking message to viewers.

n Centre for Behavioural Research in Cancer Control (CBRCBC), WA

The Healthway-funded ‘disgust project’ is into the second phase, Nadine is interviewing 14-16 year olds about what they see, feel, think and do around the issues of smoking in particular. The first phase, interviewing youth aged 13-15 years, gave us several new leads on message strategy.

After several pilot studies, we are in the data collection phase of the Healthway-funded study of people’s evaluations of the multiple consequences of health behaviours, and Sandra is delighted to note that the data are supporting the hypotheses. Data collection is in full swing on the population survey of people’s perceptions of cancer, and Sandra will be commencing the data analysis within a few weeks.

In 2001, the Cancer Foundation of WA (CFWA) conducted its seventh nationwide awareness campaign, “Cancer Update”, to raise awareness of cancer-related issues in Western Australia. Following the completion of the information campaigns (in September), telephone surveys were conducted in both the metropolitan and country areas to measure awareness of the Foundation and the services it provide to the community. Analysis of the data is in progress.

Focus groups with 14-16 year olds are being conducted this week with seven new groups on message age and targeted age groups this summer. We tested two previous ads (“Egg” and “Home and Away stars” ads) with a total of 280 children aged 12-17 year surveyed in schools. We found that the “Egg” ad could be run for the younger age group as it appears to perform quite well, but if the primary group is the older age group, we recommended a new ad.

Rob and Geoffrey have almost completed the book chapter reporting details of the tracking survey undertaken by the National Tobacco Campaign Research and Evaluation Committee, as part of a comprehensive evaluation of the National Tobacco Campaign. Rob and Nadine are working hard on completing the textbook they’re writing on Social Marketing.

Research in the pipeline

n CHCPPR

Is there a place for complementary and alternative medicine (CAM) in palliative care? The experiences of patients with advanced cancer.

The use of complementary and alternative medicine (CAM) by patients with cancer has been documented in Australia and elsewhere. However, few studies have explored cancer patients’ perceptions of the use of CAM and the role these therapies play in palliative care. Dr Ignacio Correa-Velez, a PhD candidate, and colleague are currently carrying out a study, funded by the Centre for Palliative Care Research and Education (Brisbane), to longitudinally explore the experiences of patients with advanced cancer who use CAM. Participants are being followed up at monthly intervals until close to death. The study focuses on patient’s beliefs about CAM and their reasons for using it, the perceived risks and benefits of the modalities used, the factors affecting changes in the use of CAM over time, and patients’ views regarding the possible integration between CAM and conventional medicine in palliative cancer care.

n CERP

Improving rates of sun protection in adolescents

Australia has the highest rate of malignant melanoma in the world. While there have been improvements in sun protection behaviour in the Australian population, the sun protection practices of those in their teens and early 20s have been shown to be particularly poor. Those aged 14-29 are less likely than older groups to wear clothing covering most of their body, less likely to wear hats and more likely to wear brief clothing to get sun.

Dr Chris Paul and colleagues are undertaking qualitative research in order to explore adolescents’ perceptions about sun protection and suntan. Eighteen single sex focus groups are being conducted with students aged between 12 and 17 years, recruited through public high schools in the Newcastle region. Focus groups are being conducted within each of the following age groups: years 7 or 8 (aged 12-13), years 9 or 10 (aged 14-15) and years 11 or 12 (aged 16-17) and are single sex to enable gender specific issues to be examined. Information about participants’ age, hair, skin and eye colour and usual tanning and sun protection behaviour is collected before the commencement of focus group by a brief anonymous self-report questionnaire. This research will provide a better understanding of the factors influencing levels of sun protection among 12 to 17 year-old Australians and help guide the development of Cancer Council NSW policies and programs in this area.
The 13th Australian Health Promotion National Conference was attended by Liane McDermott and Lynette Saek. Liane McDermott presented ‘Collaborating with the Wiggles: Can “Dorothy the Dinosaur” help parents protect their young children from the sun?’

Warren Stanton attended the first national Tobacco Control Conference in Adelaide, and presented ‘Predictors of adolescent smoking trajectories’.

A/Professor Afaf Girgis and PhD student Michele Bandaranayke recently attended the 8th World Congress on Cancers of the Skin in Zurich, Switzerland. Afaf gave a presentation on community practices in relation to early detection of melanoma. Michele gave a presentation on the reasons why some non-melanocytic skin cancers reach an advanced stage before they are diagnosed.

Dr Raoul Walsh and Dr Christine Paul recently attended the First National Tobacco Control Conference in Adelaide. Raoul gave two presentations, one about public practices and attitudes in relation to environmental tobacco smoke and another on smoking cessation pregnancy. Chris gave a presentation on inappropriate use of nicotine replacement therapy in the Australian community.

Congratulations are extended to Dr Raoul Walsh on his appointment as Deputy Editor of the Drug & Alcohol Review.

Dr David Hill, Director of CBRC, has been awarded an AM in the recent Queen’s Birthday Honours. David’s award is for “service to the promotion of community health, particularly in the development of cancer awareness and prevention programs.”

Nadine has joined the WA Cancer Foundation Consumer Services Department over two years as part of their Stronger Community approach, primarily using a media campaign to recommend strategies to prevent bullying. Our intention is to change social norms about bullying from seeing it as a school-based problem to seeing it as a community issue.

The Centre was very happy to welcome back Liane McDermott in July after she decided to defer her studies in Perth. Liane is a Senior Research Assistant and is currently working on two projects: the Australian Longitudinal Study on Women’s Health (ALSWH) and Sun Protection in Community Settings (SPCS).

Professor John Lowe, former Centre Director, spent a couple of days at the Centre (Sept 27, 28 and Oct 1) during a recent trip to Australia. John was in Australia to attend the PHAA Conference in Sydney and talk on bioterrorism.

Dr Paul McDonald, Assistant Professor at the Department of Health Studies and Gerontology, University of Waterloo, Ontario, Canada, visited the Centre on Sept 28 to meet with like researchers. Dr McDonald gave a presentation as part of the School of Population Health Seminar Series on ‘Increasing the population impact of treatment programs for smoking through improved recruitment/utilization’. This was a very interesting and well-received presentation.

Call for bipartisan support for cancer priorities

The Cancer Council Australia has called on all major political parties to commit to action to help drive down cancer rates and reduce the impact of the disease on patients and their families.

In the lead up to the federal government election, The Cancer Council Australia wrote to the leaders and health spokespersons of the Liberal and National parties, the ALP and the Democrats seeking a commitment to national initiatives to address eight priorities:

- A comprehensive tobacco control program
- Support for clinical trials, to increase patient access and benefit
- A national skin cancer prevention program
- Enhancing palliative care, to ensure all people with cancer have access to care and support
- Improving radiation oncology services, to ensure timely access to treatment
- Increased support for cancer research, to advance prevention, detection and treatment
- Improving rural and regional services, to ensure equitable access to treatment, support services and information for all Australians with cancer
- A comprehensive colorectal cancer campaign, to reduce preventable deaths and illness caused by the most common serious cancer in Australia.

The document, Cancer prevention, control and care: Priorities for the federal agenda, includes further detail about the eight priorities and recommendations for action and funding. It also was sent to every federal election candidate, seeking their support.

The Cancer Council said any party that does not include commitments to improve cancer control in its election platforms is ignoring the concerns of a majority of voters. More than 60% of Australians nominated cancer as the health issue they considered most important in a recent Roy Morgan poll.

The president of The Cancer Council Australia, Professor Ray Lowenthal, said there were many actions governments could take, which would have a massive impact on cancer incidence and mortality.

“The next Federal Government will need the courage and commitment to apply the knowledge we now have to improve prevention, treatment and care,” Professor Lowenthal said. “We hope all parties will commit to doing so.”

For further information or a copy of the document, please contact Lisa-Maree Heron: (02) 9380 9022 or lisa.heron@cancer.org.au

New appointment for Cancer Foundation CEO

The chief executive of the Cancer Foundation of WA, Mike Daube, has been appointed director-general of the state’s Health Department.

A former acting health commissioner, Mr Daube this year chaired the government’s Health Administrative Review Committee. He has a long and distinguished history in the health industry both in WA and internationally, having worked in many senior roles within Government, including Assistant Commissioner, Public Health, and chief executive of Princess Margaret Hospital.

SunSmart: Twenty years on

A summary of the development and achievements of the SunSmart program has been published as a monograph by the Anti-Cancer Council of Victoria. The monograph describes the social, political and economic contests within which the SunSmart program developed and what, importantly, have been the key factors and lessons learned since 1980. The monograph is an edited extract from the paper “Slap! Slap! Slap!” and SunSmart 1980 to 2000: Skin Cancer Control and 20 years of Population Based Campaigning by Meg Montague, Ron Borland and Craig Sinclair, published in Health Education and Behaviour (Vol 28 No 3 June 2001). Copies of the monograph can be obtained from the Cancer Education Unit, Anti-Cancer Council of Victoria on...
Herceptin decision prompts call for drug funding review

The Cancer Council Australia welcomed Federal Health Minister Michael Wooldridge’s announcement on October 12 that the Government will fund Herceptin for women with advanced breast cancer.

While welcoming the Minister’s decision to make the drug available, The Cancer Council urged the next government to face the issue of new drug funding in a more comprehensive way.

The Cancer Council Australia CEO Professor Alan Coates said the current Pharmaceutical Benefit Scheme approval process seems to place too much emphasis on cost rather than value.

“Australia aspires to offer a world-class health service, as part of which government has an obligation to properly consider funding for new drugs which are proven to be effective,” he said.

“I expect this will mean doubling what we’re currently spending on cancer drugs, because many new drugs now in the pipeline may have the capacity to extend the lives of cancer patients.

“Increasingly the focus will shift from ‘cure’ to improving quality of life for people who are living with cancer, particularly those in whom the disease cannot be eradicated. In many cases this will involve drugs offering long-term disease control.”

UIICC Translational Research Fellowships

The UIICC has announced that, in addition to AstraZeneca and Novartis, Aventis Pharma Recherche-Développement (France) has agreed to sponsor a third TCWF fellowship to be awarded at the Spring 2002 selection. This fellowship will support projects that concern any aspect of the study of solid tumours.

Applications for these fellowships (and the American Cancer Society, UIICC International Fellowships for Beginning Investigators) must be received by the UIICC by 1 December 2001.

For further information, see http://fellows.uiicc.org

Brain Tumours - An Encyclopaedic Approach, Second Edition

A Kaye and E Laws Jr (Eds)
PUBLISHED BY CHURCHILL LIVINGSTONE (2001)
RRP: $608.99

The text is designed to provide a comprehensive coverage on as the editors state, “an encyclopaedic approach.” In addition to the two editors there is an extensive author panel of neuro-oncologic (principally neurosurgical) authorities. Neurosurgeons appear to be the primary target audience of the book. The relative details and selection of authors are consistent with such a strategy. Despite this emphasis, the approach is broad, albeit at times superficial. There are examples of suboptimal review of the non-surgical literature, not only with respect to detail and depth but also prioritisation.

The text is divided into two components. Section 1, Basic Principles, covers in 23 chapters a range of subjects from the historical, through recent scientific advances to particular aspects of therapy and its complications. Section 2 is divided into 10 parts which, through 26 specific chapters, cover the range of specific tumour types and locations. The second edition seeks to systematically update the content and introduce new contributions in evolving fields.

The format is reader friendly, consistent, systematic and accompanied by helpful illustrations. The content is relatively cohesive given the multiplicity of authors with some repetition and limited discord. Despite the challenge of this enormous task the text provides a useful reference resource not only for neurosurgeons but others interested in aspects of neuro-oncology.

L White
Sydney Children’s Hospital
Randwick, NSW

Cancer Medicine - 5 Review

R Bast
Published by Holland & Frei (2000)
RRP: $59.40

This small book of multiple choice questions is based on the Holland & Frei text book, Cancer Medicine (reviewed in the July issue).

The book is divided into three sections: cancer biology and epidemiology, treatment principles and specific neoplasms. The book includes answers which are given in some detail with an appropriate reference to the text book.

Advanced trainees may find this a useful aid to be used in association with the reading of the text book. It would allow a degree of self assessment. Basic trainees in internal medicine may also find the multiple question format helpful in their own exam preparation.

D Bell
Department of Medical Oncology
Royal North Shore Hospital

The Effects of Low and Very Low Doses of Ionizing Radiation on Human Health

World Council of Nuclear Workers (Ed)
PUBLISHED BY ELSEVIER (2000)
RRP: $US183.50

This book contains the Proceedings of the First International Conference on the Effects of Low and Very Low Doses of Ionizing Radiation on Human Health, held at the University of Versailles in 1999. The Scientific Committee and contributors comprise a global “who’s who” of low dose exposure radiation researchers and policy makers. The volume is representative of a growing trend in radiation research publications where many of the most relevant and informative publications are expansions of conference proceedings.

The subject is one of growing interest for those in policy and regulatory areas and is receiving increasing attention, as reflected in the extensive research program currently underway and funded by US authorities. A recent funding allocation from...
that program that researchers at Flinders Medical Centre further increases the local interest in this subject.

The range of topics discussed includes natural radiation exposures, industrial exposures, religious beliefs, genotoxic instability after low-dose irradiation, molecular biological mechanisms, difficulties encountered in epidemiological studies at low exposures and the controversy surrounding the validity of the linear no-threshold hypothesis. Some of the highlights of this excellent book are given below.

Tubiana provides an excellent discussion of the reasons why radiation protection specialists have not formally rejected the linear no-threshold hypothesis despite evidence contradicting it, and he outlines the detrimental psychological impact of the use of the hypothesis in risk calculation after the Chernobyl accident. An alternative way to deal with the control of dose that is currently being discussed by the International Commission on Radiological Protection is the philosophy of Controllable Dose, which is outlined by Clarke. It represents a shift from an individual-oriented to a societal-oriented basis, as the risk to the most exposed individual is trivial, then the total risk is regarded as too impractical to consider. A number of ways are exposed.

Gustafsson of the International Atomic Energy Agency considers the impact of the model of the dose-response relationship on the regulation of low-level exposure. The epidemiological evidence for risk estimates for radiation-induced cancer is discussed by Kellere, including a discussion of the A-bomb survivor data and the uncertainties in the neutron data, recent developments and their implications. Mothersill and Seymour detail the implications of genomic instability for risk assessment of low-dose irradiation, including the many uncertainties involved. Trott and Rosemann outline the multistage process of carcinogenesis and models of radiation carcinogenesis, cautioning the reader that the linear non-threshold hypothesis should not be mistaken as a stringent scientific conclusion derived directly from the present state of knowledge of the processes involved in radiation carcinogenesis.

This book provides an excellent overview of this evolving and controversial field and would make a worthwhile addition to the libraries of researchers, policymakers and regulators.


This is an excellent text, which provides an almost comprehensive overview of the advances that have been made by use of what are, mostly, endoscopic techniques. A surprising omission from the text is reference to gynaecological surgery, particularly as its discipline of gynaecology that laparoscopy initially held sway. Despite this, the book is an up-to-date description of detailed general principles. These lead on to chapters divided according to sentinel lymph node biopsy. Questions are also asked about the effect on survival of a false negative finding when this procedure is performed for melanoma or for breast cancer. The text calls for development of clinical pathways to ensure the appropriate use of new technology and it concludes with the following quote (in a book written by enthusiasts): ‘We must constantly be aware that, no matter what other than knowledge, which, in turn, moves faster than wisdom’.

Finally, the book is based on the premise that surgery is ‘the ultimate curative endeavour, with far and wide the largest proportion of patients with cancer cured by surgical means than by all others’ (p. 36). One of the most striking and important statements in this book is the pivotal role that nurses play in delivery and coordination of that care. This book is recommended as a resource for haematology nurses, a growing number of generalists nurses involved in caring for these patients and indeed interested allied health professionals and general medical practitioners.

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PRINCIPLES & PRACTICE OF ONCOLOGY 6TH EDITION
J DeVita Jr et al (Eds)
Published by Lippincott Williams & Wilkins
RRP: $595.10

The latest version of this comprehensive standard text is organised in sections, which means that information on a given topic will be found in several places. As it is unlikely, due to its weight (Skg), that it would be ever be read cover to cover, this means an excellent index and a willingness to cross reference are required.

Part 1: Oncology Science
Updates basic and applied molecular biology, signal transduction and immunology.

Part 2: Principles of Oncology
Updates cytogenetics, the cell cycle, apoptosis, invasion and metastasis, and angiogenesis. Sections on etiology and epidemiology, surgery, radiation therapy and chemotherapy and biological therapies (including detail on all classes of anticancer drugs) are excellent.

These background areas are followed by the more applied Part 3: Practice of Oncology.

This section includes: Prevention, Screening, Diagnosis, Cancers categorised by disease site (each reviewing pathology, epidemiology and management), Oncological Emergencies, Metastatic Disease by site, Supportive Care (including management of toxicity, pain, psychosocial issues, rehabilitation), Palliative care – alternative/unproven methods, Ethics and information issues and Emerging therapies.

The scope is unlike that of more portable references, and the detail is also impressive, comparable to that seen in a well-referenced review article in a major journal. This is a book for every oncologist’s shelf and every clinic and hospital library to own as a reference.

This text would also be an invaluable resource for those aspiring in oncology or for those junior medical staff seeking answers on oncology wards. It would be easy to imagine getting lost among its 3,000+ pages, but there is a wonderful sense of order to this book (aided by a detailed index). Initially, well-explained and readable sections on the science behind cancer, through to comprehensive information on the current practice of oncology (including references from the year 2000), with effort made to incorporate knowledge of advancing technologies and emerging therapies. Put to the test, on questions as diverse as tumour lysis, PET scanning in cancer and genetic counselling, it seems nothing is amiss, except, of course, Australian statistics.

F Boyle and A Rutkowski
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Royal North Shore Hospital
Sydney, NSW

RENAL CANCER: METHODS & PROTOCOLS
J Myldlo (Ed)
Published by Humana Press (2001)
399 pages plus index.
RRP: $519.00

According to the Editor Renal Cancer: Methods & Protocols provides an introduction to the surgeon, clinician, investigator and research scientist to the basic methods employed in the diagnosis and treatment of renal cancer. Indeed this aspect of the book represents less than 10% of its content. The bulk of the book describes in vitro and in vivo experimental techniques ranging from telomerase assays through to laser-capture micro dissection and experimental models of antibody targeting. A number of angiogenesis assays and murine animal models are described. Each of these techniques is described in laboratory manual detail with precise description of experimental strategies.

There is a proportion of the book focussed on immuno- therapeutic and monoclonal antibody approaches to this type of cancer which again describe in detail the laboratory basis for such work rather than the clinical trial results themselves.

There is little to interest the clinician, and I suspect most laboratory researchers have their own protocols and this book will be of passing interest to those wishing to compare their strategies with those of the selected techniques.

This book would have very limited interests to investigators both in the clinic and the laboratory and I cannot see it being a worthwhile acquisition.

M Rosenthal
Private Medical Centre
Royal Melbourne Hospital
Melbourne, Vic

SKIN CANCER

Sober and Haluska (Eds)
Published by Sober and Haluska (2001)
339 pages plus index.
RRP: $255.55

This American Cancer Society Atlas of Skin Cancer is one of a series of 23 volumes, each covering cancer of an organ system. The contributors to the skin cancer volume are very much from the Harvard Medical School/Massachusetts General Hospital with the eminent Arthur Sobers and Frank Haluska as editors. It is pleasing to see that there is an Australian contribution in the shape of the important section on prevention of skin cancer by Robin Marks, Professor of Dermatology at Melbourne University, and David Hill from the Centre for Behavioural Research in Cancer at Melbourne University.

According to the publisher, the readership is “undergraduate, postgraduate, research and professional”. Inevitably such a broad target audience will leave everyone a little dissatisfied.

Although promoted as an “atlas”, this volume is really more a profusely illustrated monograph with full text and bibliography. Anyone hoping to see a host of illustrations of the different ways skin cancer can present will be disappointed. There are only nine clinical photographs of basal cell carcinoma (BCC) in the relevant chapter. BCC is extremely common and quite variable in presentation and a couple of dozen photographs would be in order in an “atlas”. Amelanotic melanoma gets no mention in the index and there is only one single illustration of this difficult diagnostic entity.

Tumours such as angioma and dermatofibrosarcoma protubers are seen rarely even by dermatologists and therefore an effort to collect a number of illustrations of these tumours would seem to be a major objective for a book of this type. Indeed there is no photograph of atypical fibroxanthoma or malignant fibrous histiocytoma. The latter is mentioned only in the treatment section and is never described clinically in the text. Paget’s disease of breast or extramammary sites as well as cutaneous metastases from internal organs get no mention whatsoever. Some photographs, even of common entities such as BCC, are surprisingly poor in quality as are reproductions of bar charts and diagrams.

As is now happening with a number of textbooks, the volume comes with full text and illustrations on CD-ROM, a handy facility.

T White
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Bondi Junction, NSW

SOMATOSTATIN ANALOGS IN CANCER MANAGEMENT

C Scarpignato
Published by Karger (2001)
ISBN: 3-8055-6931-9
196 pages plus index.
RRP: $597.50

This is a brief book. It is not a compilation of papers presented at an international symposium but, as the editor indicates in his preface, it is a collection of 11 commissioned monograph reviews. The authorship interestingly is predominantly European without one US contributor. Whether this represents a bias in selection of the authors or whether truly only investigators in Europe have ever contributed substantially to this field is not addressed. However the collection of papers comprehensively reviews the Somatostatin Analogs and especially octreotide.

The first chapter, which is an overview of Somatostatin Analogs, I certainly found useful. The chapter was well written and the author had obviously invested a significant effort in the writing. However other chapters were not as well constructed and the author had obviously invested a significant effort in the writing. However other chapters were not as well constructed and only addressed the questions of biology pharmacology and therapy somewhat superficially. Moreover many of the chapters which discussed the clinical use of octreotide are somewhat dated and written in a fairly perfunctory manner. Specific chapters addressing some of the newer issues in Somatostatin Analog research would have been worthwhile. A detailed discussion on the use of octreocin and the use of radiolabeled octreotide would have been fascinating.

I wonder whether specialised books such as this are becoming dated and whether the types of issues would be best addressed on a specific Internet website where they could be updated and published in a timely fashion.

Cancer Forum - Volume 25 Number 3 - November 2001
The next 12 chapters deal with radiopharmaceuticals, antibodies, contrast agents and targeted SPECT, PET and MRI applications. Biochemical mechanisms of a wide variety of tumour targeted imaging agents, including monoclonal antibodies, peptides and non-specific radiopharmaceuticals are explained. The last five chapters discuss new imaging approaches about angiogenesis, apoptosis/hypoxia, signal transduction/antisense, gene delivery and expression, and optical imaging. The book is well illustrated throughout with examples using animal models as well as imaging in humans. The book summarises the current state of application of these techniques and acknowledges the continuous evolution in this field due to technical development.

This book is of primary interest to medical oncologists who seek a book summarising the current status of imaging in the evaluation of a variety of malignancies, both in patients with disease as well as in animal models. It may also be of use in the library of nuclear medicine departments with a large oncology referral base. The book is well written and well illustrated but its target audience is not broad.

M Rosilegh
Associate Professor of Medicine
University of New South Wales
Chairman, Department of Nuclear Medicine
The Prince of Wales and Sydney Children’s Hospital

Targeted molecular imaging in oncology

E Voest & P D’Amore (Eds)

Calendrier des rendez-vous - Australie et Nouvelle-Zélande

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<tr>
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<tr>
<td>9-10 Nov</td>
<td>The Australian and New Zealand Head &amp; Neck Society</td>
<td>Melbourne VIC</td>
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<td>28th COSA Annual Scientific Meeting</td>
<td>Brisbane QLD</td>
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<td>21-22 Feb</td>
<td>“Cancer – We Care” Conference</td>
<td>Canberra ACT</td>
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<td>28 Feb-3 Mar</td>
<td>Inaugural Quality In Practice Conference</td>
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<td>21-22 May</td>
<td>5th Winter Congress of the Cancer Nurses Society of Australia</td>
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<td>5-6 Sept</td>
<td>Familial &amp; Genetic Aspects of Cancer: 2002</td>
<td>Barossa Valley SA</td>
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<td>The Australian Health &amp; Medical Research Congress</td>
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Il n’est pas certain que ce livre serait d’intérêt pour quelqu’un travaillant dans le domaine de Somatostatin Analog research but whether the cost of $US97.50 is worth the investment for somewhat dated book is questionable. I’d rather pay this amount to an updated website rather than a book of this vintage.

M Green
Department of Haematology & Clinical Oncology
Royal Melbourne Hospital
Parkville, Vic

Tumor angiogenesis & microcirculation

E Voest & P D’Amore (Eds)
## CALENDAR OF MEETINGS – INTERNATIONAL

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<td>7-10</td>
<td>40th Chemotherapy Foundation Symposium: Innovative</td>
<td>New York, USA</td>
<td>J Silverman, Medical Oncology Dept</td>
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<td>Cancer Therapy for Tomorrow</td>
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<td>Mount Sinai Medical Centre New York, New York, USA</td>
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<td>Fax: +1 212 369 5400 Email: <a href="mailto:J_Silverman@montlink.mssm.edu">J_Silverman@montlink.mssm.edu</a></td>
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<td></td>
<td>2nd Annual Institute of Learning</td>
<td>USA</td>
<td>Fax: +1 412 921 6565 Email: <a href="mailto:member@ons.org">member@ons.org</a></td>
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<td>Website: <a href="http://www.ons.org">www.ons.org</a></td>
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<tr>
<td>16-18</td>
<td>3rd International Conference on Cancer-Induced Bone</td>
<td>Awaji Island, Japan</td>
<td>T Matsumoto, MD, First Dept. of Internal Medicine University of Tokushima</td>
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<tr>
<td></td>
<td>Diseases</td>
<td></td>
<td>School of Medicine, Tokushima, Japan</td>
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<td>Fax: +81 883 7172</td>
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<tr>
<td>18-21</td>
<td>16th Asia-Pacific Cancer Conference: Cancer in the</td>
<td>Manila, Philippines</td>
<td>16th APCC, Philippine Cancer Society Manila, Philippines</td>
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<tr>
<td></td>
<td>New Millennium</td>
<td></td>
<td>Fax: +63 2 735 2707 Email: <a href="mailto:16apcc@pcsi.com.ph">16apcc@pcsi.com.ph</a></td>
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<td>Website: <a href="http://www.philcancer.org">www.philcancer.org</a></td>
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<tr>
<td>26-30</td>
<td>Data Management in Cancer Clinical Trials</td>
<td>Brussels, Belgium</td>
<td>D Zimmerman, EORTC Education Office Brussels, Belgium</td>
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<td>Fax: +32 2 772 62 33 Email: dizeortc.be</td>
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<td>Website: <a href="http://www.eortc.be">www.eortc.be</a></td>
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<tr>
<td>December</td>
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<tr>
<td>7-11</td>
<td>43rd Annual Meeting of the American Society of</td>
<td>Orlando, Florida,</td>
<td>ASH, Washington DC, USA</td>
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<tr>
<td></td>
<td>Haematology (ASH)</td>
<td>USA</td>
<td>Fax: +1 202 857 1164 Email: <a href="mailto:ASH@haematology.org">ASH@haematology.org</a></td>
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<tr>
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<tr>
<td>10-13</td>
<td>24th Annual San Antonio Breast Cancer Symposium</td>
<td>San Antonio, Texas,</td>
<td>L Dunington, San Antonio Cancer Therapy and Research Center San Antonio,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>USA</td>
<td>Texas, USA Fax: +1 210 949 5009 Email: <a href="mailto:ldnunngton@saci.org">ldnunngton@saci.org</a></td>
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<td>Website: <a href="http://www.sabcs.saci.org">www.sabcs.saci.org</a></td>
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<td>2002</td>
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<tr>
<td>January</td>
<td>Molecular Imaging in Cancer: Linking Biology, Function,</td>
<td>Lake Buena Vista, FL,</td>
<td>American Association for Cancer Research</td>
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<tr>
<td></td>
<td>and Clinical Applications In Vivo</td>
<td>USA</td>
<td>Phone: 215 440 9300 Email: 215 351 9165 Email: <a href="mailto:meetings@saci.org">meetings@saci.org</a></td>
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<tr>
<td>February</td>
<td>Apoptosis and Cancer: Basic Mechanisms and</td>
<td>Waltham, MA, USA</td>
<td>American Association for Cancer Research</td>
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<tr>
<td></td>
<td>Therapeutic Opportunities in the Post-Genomic Era</td>
<td></td>
<td>Phone: 215 440 9300 Email: 215 351 9165 Email: <a href="mailto:meetings@saci.org">meetings@saci.org</a></td>
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<td>Website: <a href="http://www.sabcs.saci.org">www.sabcs.saci.org</a></td>
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<tr>
<td>March</td>
<td>The Molecular Genetics of Colon Cancer</td>
<td>Philadelphia, PA,</td>
<td>American Association for Cancer Research</td>
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<td></td>
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<td>Phone: 215 440 9300 Email: 215 351 9165 Email: <a href="mailto:meetings@saci.org">meetings@saci.org</a></td>
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<tr>
<td>7-10</td>
<td>55th Annual Cancer Symposium of the Society of</td>
<td>Denver, Colorado,</td>
<td>D Rubin, Society of Surgical Oncology Arlington Heights, Illinois, USA</td>
</tr>
<tr>
<td></td>
<td>Surgical Oncology</td>
<td>USA</td>
<td>Fax: +1 847 427 9656 Email: <a href="mailto:d17rumba@acs.org">d17rumba@acs.org</a></td>
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<td></td>
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<td>Website: <a href="http://www.surgonc.org">www.surgonc.org</a></td>
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### April

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<tr>
<th>Date</th>
<th>Name of Meeting</th>
<th>Place</th>
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<tbody>
<tr>
<td>6-10</td>
<td>93rd Annual Meeting of the American Association for</td>
<td>San Francisco,</td>
<td>American Association for Cancer Research</td>
</tr>
<tr>
<td></td>
<td>Cancer Research</td>
<td>California, USA</td>
<td>Phone: 215 351 9165 Email: <a href="mailto:meetings@saci.org">meetings@saci.org</a></td>
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<tr>
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<td>Website: <a href="http://www.aacr.org">www.aacr.org</a></td>
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<tr>
<td>12-13</td>
<td>3rd European Oncology Nursing Society Spring</td>
<td>Venice, Italy</td>
<td>K Vantongelen, FECS Conference Unit</td>
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<tr>
<td></td>
<td>Convention</td>
<td></td>
<td>Brussels, Belgium Fax: +32 2 775 92 43 Email: <a href="mailto:EBCB@feecs.be">EBCB@feecs.be</a></td>
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<tr>
<td></td>
<td></td>
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<td>Website: <a href="http://www.fecs.be/conferences/esa2002/">www.fecs.be/conferences/esa2002/</a></td>
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<tr>
<td>17-20</td>
<td>11th Congress of the European Society of Surgical</td>
<td>Lille, France</td>
<td>ESSO 2002 – FECS Conference Unit</td>
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<tr>
<td></td>
<td>Oncology (ESSO)</td>
<td></td>
<td>Brussels, Belgium Fax: +32 2 775 92 43 Email: <a href="mailto:ESSO2002@feecs.be">ESSO2002@feecs.be</a></td>
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<tr>
<td>18-21</td>
<td>Oncology Nursing Society</td>
<td>Washington, DC, USA</td>
<td>Oncology Nursing Society</td>
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<tr>
<td></td>
<td>27th Annual Congress</td>
<td></td>
<td>Pittsburgh, Pennsylvania, USA Fax: +1 412 921 6595 Email: <a href="mailto:member@ons.org">member@ons.org</a></td>
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<td>Website: <a href="http://www.ons.org">www.ons.org</a></td>
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<tr>
<td>May</td>
<td>Oncogenomics 2002: Dissecting Cancer through Genome</td>
<td>Dublin, Ireland</td>
<td>American Association for Cancer Research</td>
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<tr>
<td></td>
<td>Research</td>
<td></td>
<td>Phone: 215 440 9300 Email: 215 351 9165 Email: <a href="mailto:meetings@saci.org">meetings@saci.org</a></td>
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<td>Website: <a href="http://www.aacr.org">www.aacr.org</a></td>
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<tr>
<td>18-21</td>
<td>2002 Annual Meeting of the American Society of</td>
<td>Orlando, Florida,</td>
<td>American Society of Clinical Oncology</td>
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<td></td>
<td>Clinical Oncology (ASCO)</td>
<td>USA</td>
<td>Phone: 713 729 1044 Email: <a href="mailto:info@asco.org">info@asco.org</a></td>
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<td>Website: <a href="http://www.asco.org">www.asco.org</a></td>
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<td>June</td>
<td>7th Congress of the European Haematology Association</td>
<td>Florence, Italy</td>
<td>Eurocongress Conference Management</td>
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<td>(EHA)</td>
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<td>Phone: +31 20 767 3411 Email: 215 440 9300 Email: <a href="mailto:meetings@saci.org">meetings@saci.org</a></td>
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<td>8-11</td>
<td>EACR XVII European Association for Cancer Research</td>
<td>Granada, Spain</td>
<td>L Hendricks, FECS Conference Unit</td>
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<td></td>
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<td>Brussels, Belgium Fax: +32 2 775 92 43 Email: <a href="mailto:info@feecs.be">info@feecs.be</a></td>
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<td>30 June</td>
<td>18th UICC International Cancer Congress</td>
<td>Oslo, Norway</td>
<td>Cancer Research Society</td>
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<td>Phone: +46 8 661 91 25 Email: <a href="mailto:cancersono2002@uiccongress.se">cancersono2002@uiccongress.se</a></td>
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<td>Date</td>
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<td>Email: <a href="mailto:healthcareconference@emap.com">healthcareconference@emap.com</a></td>
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<td>Website: <a href="http://www.isncc.org">www.isncc.org</a></td>
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<tr>
<td>September</td>
<td>1-4</td>
<td>Vienna, Austria</td>
<td>Mondial Congress</td>
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<td>9th Central European Lung Cancer Conference</td>
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<td>Vienna, Austria Fax: +43 1 586 91 85 Email:</td>
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<td><a href="mailto:congress@mondial.at">congress@mondial.at</a></td>
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<td></td>
<td>17-21</td>
<td>Prague, Czech Republic</td>
<td>ESTRO Office, Brussels, Belgium</td>
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<td></td>
<td>21st Annual Meeting of the European Society for Therapeutic Radiology and Oncology (ESTRO)</td>
<td></td>
<td>Fax: +32 2 799 54 94 Email: <a href="mailto:info@estro.be">info@estro.be</a> Website: <a href="http://www.estro.be">www.estro.be</a></td>
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<tr>
<td></td>
<td>18-21</td>
<td>Porto, Portugal</td>
<td>Congress Secretariat</td>
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<tr>
<td></td>
<td>SIOP 2002: The 34th Meeting of the International Society of Paediatric Oncology: Brain Tumours</td>
<td>Amsterdam, The Netherlands Fax: +31 20 50 40 225 Email: <a href="mailto:siop2000@congress.nl">siop2000@congress.nl</a></td>
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<tr>
<td></td>
<td>29 Sep – 4 Oct</td>
<td>New Delhi, India</td>
<td>Fax: +91 11 694 4472 Email: <a href="mailto:cancerak@ncl.ncl.ac.uk">cancerak@ncl.ncl.ac.uk</a> Website: <a href="http://www.watch-2000.org/">www.watch-2000.org/</a></td>
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<td>October</td>
<td>6-9</td>
<td>New Orleans, Louisiana USA</td>
<td>G Smith, ASTRO</td>
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<tr>
<td></td>
<td>44th Annual Meeting of the American Society for Therapeutic Radiology and Oncology (ASTRO)</td>
<td></td>
<td>Fairfax, Virginia, USA Fax: +1 703 502 7862 Email: <a href="mailto:gsmith@astro.org">gsmith@astro.org</a> Website: <a href="http://www.estro.org">www.estro.org</a></td>
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<tr>
<td></td>
<td>13-17</td>
<td>Boston, MA, USA</td>
<td>American Association for Cancer Research Fax: +1 703 502 7862 Email: <a href="mailto:gsmith@astro.org">gsmith@astro.org</a> Website: <a href="http://www.astro.org">www.astro.org</a></td>
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<tr>
<td></td>
<td>Frontiers of Cancer Prevention Research: Genetics, Risk Modeling, and Molecular Targets</td>
<td></td>
<td>Fax: +1 703 502 7862 Email: <a href="mailto:gsmith@astro.org">gsmith@astro.org</a> Website: <a href="http://www.astro.org">www.astro.org</a></td>
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<tr>
<td></td>
<td>18-22</td>
<td>Nice, France</td>
<td>ESMO Congress Secretariat</td>
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<tr>
<td></td>
<td>27th European Society for Medical Oncology (ESMO) Congress</td>
<td>Lugano, Switzerland</td>
<td>Fax: +41 91 950 27 07 Email: <a href="mailto:16apcc@pcsi.com.ph">16apcc@pcsi.com.ph</a></td>
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<tr>
<td>November</td>
<td>1-3</td>
<td>Seattle, Washington</td>
<td>Oncology Nursing Society</td>
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<td></td>
<td>Oncology Nursing Society 3rd Annual Institute of Learning</td>
<td>Pittsburgh, Pennsylvania, USA</td>
<td>Fax: +1 412 921 6565 Email: <a href="mailto:member@ons.org">member@ons.org</a> Website: <a href="http://www.ons.org">www.ons.org</a></td>
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<td>10-16</td>
<td>Hong Kong, China</td>
<td>9th HKICC Secretariat</td>
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<td></td>
<td>9th Hong Kong International Cancer Conference</td>
<td></td>
<td>Fax: +852 2818 1186 Email: <a href="mailto:meetings@hkc.org.hk">meetings@hkc.org.hk</a> Website: <a href="http://www.hkc.org.hk/">www.hkc.org.hk/</a></td>
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<td>19-22</td>
<td>Frankfurt, Germany</td>
<td>L Hendricks, FECS Conference Unit</td>
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<td></td>
<td>2002 Meeting of the European Organisation for Research and Treatment of Cancer (EORTC), the American Association for Cancer Research (AARC) and the National Cancer Institute (NCI): Molecular Targets and Cancer Therapeutics</td>
<td>Brussel, Belgium Fax: +32 2 775 62 00 Email: <a href="mailto:info@febs.be">info@febs.be</a> Website: <a href="http://www.febs.be">www.febs.be</a></td>
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<tr>
<td>2003</td>
<td>3-8</td>
<td>Helsinki, Finland</td>
<td>12th World Conference on Tobacco or Health: Global Action for a Tobacco Free Future</td>
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</table>
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
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The Cancer Council Northern Territory
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Anti-Cancer Council of Victoria
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Ms L Rogan
Dr R Walters RFD BmedSc, MBBS, RACGP
Professor J Zalcberg MB BS, PhD, FRACP

THE CLINICAL ONCOLOGICAL SOCIETY OF AUSTRALIA INC
The Clinical Oncological Society of Australia (COSA) is a multi-disciplinary 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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GPO Box 4708, Sydney, NSW 2001.
Membership fees for 2001
Ordinary Members: $110
Associate Members: $60
(includes GST)

INTEREST GROUPS
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Cancer Research
Data Managers
Epidemiological
Gastrointestinal Oncology
Gynaecological Oncology
Head and Neck 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 & Rural Oncology
Social Workers
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