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Progress in cancer control: the Alan Coates effect

ALAN COATES: an appreciation

William McCarthy AM · Email: billmcca@bigpond.net.au

The last 50 years have seen major changes in cancer management. There have been great advances in prevention, early diagnosis and cost effective management with much emphasis on “holistic” care involving multidisciplinary teams with a commitment to the best possible care for all phases of cancer management including terminal care. Underpinning these developments has been a major emphasis on understanding community and social causes of cancer, based on epidemiology and psycho-sociology. These advances have led to the current mantra that the best possible cancer care is evidence-based medicine, built on sound clinical trials and good quality statistical evaluation. Many talented and dedicated clinicians have had major roles in these developments. High on this list is Alan Coates. Medical oncologist, statistician and clinical researcher, Alan has played leading roles in clinical management, clinical trials and administrative excellence in two major cancer fields, melanoma and breast cancer. In 2002, Alan was awarded membership to the Order of Australia for “services to medicine in the field of oncology, and particularly through breast cancer research”.

In 1978 Alan came to the Sydney Melanoma Unit (SMU) from the Ludwig Institute for Cancer Research and the Walter and Eliza Hall Institute, at age 36, already with an enviable reputation for diligence, competence and commitment, both as a clinician and a clinical researcher. He immediately impressed his colleagues, especially Gerry Milton and myself, with his emphasis on properly designed clinical trials, rather than the more ‘ad hoc’ approach current in those days. There is no doubt that Alan, who subsequently became research director of the SMU, played a major role in the worldwide reputation gained by the SMU research program during his years with the unit. Woe betide the clinician or researcher who made a ‘seat of the pants’ assessment of a clinical or research problem in Alan’s presence.

During his years with SMU, Alan found time to make major contributions to cancer research and clinical care generally as president of Clinical Oncological Society of Australia, director and deputy chairman of the Australia New Zealand Breast Cancer Trials Group and internationally, as the first elected non-US oncologist member of the American Society of Clinical Oncology. Of course, there were numerous memberships of Health Department committees, oncology groups and the National Health and Medical Research Council. More than 200 papers published in peer-reviewed journals attest to Alan’s research and clinical trial productivity.

No record of Alan’s contributions would be complete without acknowledgment of his excellence as a cancer clinician. His patients and nurses are effusive about his clinical care and commitment to management of the difficult problems facing oncologists dealing with advanced cancer. “Calm”, “reasoned”, “unflappable” with a fine sense of humour are some of the comments of his patients. Alan’s retirement from The Cancer Council Australia marks the end of yet another chapter in a brilliant career. His achievements in furthering the cause of cancer control as head of the nation’s peak independent cancer organisation are too extensive to list here. I have no doubt Alan will continue to make a significant impact on cancer control through his ongoing contribution to research and academia.
Upon Alan Coates’ retirement after eight years as Chief Executive Officer (CEO) of The Cancer Council Australia we have taken the opportunity to acknowledge the achievements and contributions of one of Australia’s foremost figures in cancer research, management and care.

In this Forum, a number of Australia’s leading oncologists and researchers discuss important advances in the prevention, early detection and management of cancer. Many highlight the role Alan Coates has played; others focus on developments that Alan helped facilitate or championed. It is evident that he has directly or indirectly influenced people, perceptions and progress across the whole spectrum of cancer control in Australia and overseas.

Through a mixture of history, clinical practice and science, these articles provide a context and description of Alan’s life and work. They highlight the breadth and diversity of his knowledge, clinical experience and interests, as well as the personal qualities, which combined to great benefit in his role as CEO of The Cancer Council Australia. As Ray Lowenthal attests, in addition to his apparent knowledge and skills, Alan brought to this role a previously unheralded capacity for leadership, skillful advocacy, networking and organisational management.

While the subjects of these articles vary widely, a number of themes emerge. In references to Alan’s contribution to cancer control, key words and phrases are often repeated: evidence, multidisciplinary care, collaboration, quality of life. Lowenthal describes The Cancer Council’s many achievements under the stewardship of a CEO who was “collaborative rather than antagonistic”. Andrew Coates acknowledges Alan’s “visionary cross-disciplinary” approach. Sue Pendlebury notes his insistence on “evidence of efficacy” and formation of multidisciplinary teams before the term was used in the cancer care context. John Forbes praises his colleague’s “remarkable breadth of scientific knowledge, his humanity and his wise counsel”.

Ian Tannock questions whether the increasing commonness of PSA testing is in fact “progress” in cancer management, apart from effectively curing “rare and already very advanced metastatic cancer”. Despite claims of the opposite, Alan has in fact done many Australian men a great service by his unwavering espousal of this evidence-based discipline. He has taken great efforts to explain the value of a patient-centred informed decision-making approach to PSA testing in place of mass screening that could, as Tannock argues, be more harmful than beneficial.

In the next three articles, John Thompson, Andrew Coates and Rick Kefford discuss advances in the management of melanoma. Thompson provides a historical perspective of progress in surgical management; Coates explains how cross-disciplinary collaboration has enhanced “mapping” of melanoma metastases; and Kefford provides an update on developments in the field of experimental therapies. As these authors and others have noted, Alan Coates contributed greatly to improving treatment of melanoma, largely through his long service with the Sydney Melanoma Unit, involvement in clinical trials and commitment as a clinician, researcher and CEO of The Cancer Council to the development of evidence-based management guidelines. Kefford cites some of the pioneering contributions made by Alan in investigating systemic treatment of melanoma. What lay beneath the published literature was a gifted and highly principled unwavering commitment to clinical science and to multidisciplinary care that continues to inspire all those with whom he works and has made him the deeply respected member of the local and international oncology community. In a tribute to his father’s “cross-disciplinary vision”, Andrew Coates illustrates the potential benefits to be gained from collaboration of disciplines – in this case, the combination of radiography and geography to challenge commonly held perceptions about draining node fields and consequently improve the information available to surgeons. As Coates notes, the primary lesson is to “step back from the minutiae and look about for others pursuing similar goals”, an ability Alan has demonstrated in his dedication to multidisciplinary care (before the term had entered common parlance) and in increasing alliances and collaboration while at the helm of The Cancer Council.

The articles by Coates et al that highlighted Alan’s commitment and provide insight into Alan’s career-long focus on the cancer burden. Cervical cancer is a particular problem in Aboriginal communities within Australia and in many of our near neighbour countries, where prevention through screening is not currently feasible. Alan has demonstrated, through his work with The Cancer Council Australia and internationally with the International Union Against Cancer, a consistent interest in improving cancer control within Australian Indigenous communities and has helped over the last few years to develop strategies whereby The Cancer Council can assist with cancer control policies for those countries within the region who seek assistance.

Alan’s emphasis on properly designed clinical trials is renowned. In his article describing the Australia New Zealand Breast Cancer Trials Group’s (ANZ BCTG) contributions to reducing breast cancer mortality John Forbes acknowledges Alan’s leadership in the ANZ BCTG and in the development of “evidence-based medicine” for management of breast cancer. Alan was a member of the group of researchers who formed the Ludwig Breast Cancer Study Group, based in Melbourne. This group evolved into the ANZ BCTG, heralding what Forbes describes as a “new era of clinical trials”. Alan was then, and has remained, one of the profession’s most vocal advocates for clinical trials.

While CEO of The Cancer Council, Alan and former President Ray Lowenthal initiated efforts to increase clinical trial participation (by professionals and patients) and lobbied for increased government funding for infrastructure support for independent trials groups. He has been instrumental in bringing all of the existing cancer cooperative groups together, through the Clinical Oncological Society of Australia (COSA) and The Cancer Council, in response to the Federal Government’s commitment to supporting clinical trials and the successful COSA enabling grant.

Sue Pendlebury discusses Alan’s career in the context of the resurgence of adjuvant radiotherapy for breast cancer. Pendlebury notes that the challenge in managing breast cancer – and the fundamental objective of multidisciplinary care – is to “optimally integrate” all the disciplines that acknowledges Alan’s leadership in supporting truly multidisciplinary clinics, developing guidelines and fostering discussion and collaboration.

Forbes also acknowledges Alan’s global leadership with respect to quality of life studies – high on the ANZ Group’s agenda from the beginning – and development of quality of life measurements “as the norm rather than an add-on for many trials”. Alan’s commitment to focusing on patients’ quality of life is also the subject of the final triptych of articles, by three of Australia’s leading oncologists, researchers and advocates for the improvement of cancer management and care: Ian Olver, Martin Tattersall and Martin Stockler.

While Olver details developments in antiemetic therapy regimens intended to reduce distressing side effects of chemotherapy for many cancer patients, Tattersall examines a series of published papers about cancer patients’ perceptions of the burden of chemotherapy. But both note the continuing resonance of a 1983 study by Coates et al that highlighted Alan’s commitment and drew others’ attention to the needs and perceptions of patients with respect to quality of life. As Tattersall notes, this and subsequent papers in the series co-authored by Alan, “illustrate [his] skills in measurement and analysis” and provide insight into Alan’s career-long focus on the needs and concerns of patients.

Martin Stockler also highlights Alan’s quality of life research and published articles that have ‘had enduring influences on how we think about cancer and manage it’. His article highlights three areas of practice in which Alan’s commitment to thoughtful and well-designed studies have produced counterintuitive conclusions that have shaped oncology practice. Key to each was the notion of incorporating patients’ attitudes and opinions into judgements about treatment, which has proved to be of great benefit to patients in terms of both their treatment outcomes and involvement in decision making.

In summary, this Forum lauds Alan’s major contributions to cancer research, particularly the management and support of clinical trials; the treatment, care and support of people with cancer – both as a clinician and an advocate; public awareness and understanding of cancer; and enhancing Government funding and commitment to improving cancer control in this country. As Stockler concludes, it is Alan’s contribution to “thinking” as well as practice in oncology that will be his legacy.

We suspect there is more to come.
ALAN COATES AND THE CANCER COUNCIL OF AUSTRALIA

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Abstract

Alan Coates was appointed the inaugural Chief Executive Officer of The Cancer Council Australia (then the Australian Cancer Society) in 1998 and has since amassed achievements in the areas of advocacy, alliances and member services. Under his leadership, Cancer Council Australia has become recognised as Australia’s peak national cancer control organisation, influencing and guiding national cancer control policy and action. His rare combination of intellect, clinical knowledge, leadership, skilful advocacy and diplomacy has greatly contributed to reducing the burden of cancer in Australia.

When in 1998 Professor Alan Coates accepted appointment as the first full-time CEO of the Australian Cancer Society (ACS) – soon to be renamed The Cancer Council Australia – it was a gamble on both parts. The appointment followed a strategic review carried out by the ACS which desired to strengthen the role of the national organisation. Alan came from a background in a research setting and it was by no means self-evident that his scientific knowledge clearly was going to be only one requirement of a job that would demand skills of many orders. He was untested, for example, in high politics and financial management. Although he had an impressive track record of publication in peer-reviewed technical journals, this was not unduly a handicap given the impact of science on cancer management rather than prevention, whereas the latter is what the role would be a major task of a national cancer organisation. And from Alan’s perspective, there must have been concern that the demands of the position would require him to suppress completely, the opportunity to continue to contribute to oncological knowledge through scientific publication.

Fortunately any reservations the appointments committee may have had were quickly quelled. Under Alan’s leadership, Cancer Council Australia has become the national cancer organisation. What had been an efficient and largely well-secretariat soon became noticed by the Federal Government and the public, as much more. Successive Ministers for Health, who were soon turning to Alan for authoritative advice. Indeed, the respect accorded him is exemplified by a quote from current minister Tony Abbott, who in 2005 stated that he had made policy decisions in the hope of getting “a better report card from Professor Coates”. By astutely making appointments of staff with the appropriate skills, Alan presided over an organisation that cooperated with its member bodies (the state and territory Cancer Councils) to generate increase income from donations, sales and foundation grants; largely unifies the organisations by creating a common logo and (mostly) common nomenclature; and effectively addressed or disputed to ensure clear and consistent public communications.

For Alan too this was a ‘win-win’ situation. Despite the demands of the new job, Alan was able to carry on and indeed extend his work with global cancer organisations, including his involvement in international breast cancer trials groups. During the period of his appointment Alan continued to publish prodigiously. In fact, he has been a key author on a number of important recent papers that have advanced the treatment of breast cancer.1 None of this came easily. Let’s not pretend otherwise. As in the political sphere, real state disagreements sometimes were stark, especially in the early days. There were times when wrangling between Alan’s upstart federal organisation and some of its larger, longer-established state counterparts threatened to break the new entity. But Alan had a vision for the role of a national cancer body and held his ground; in the end all recognised that the greater good would come from collaboration rather than conflict.

The defined mission of the ACS/The Cancer Council was and is “to lead in the development and promotion of national cancer control policy”. This was to be achieved through advocacy, alliances and member services, and these were headings Alan used to report his activities to the Cancer Council Board. In this context ‘members’ are the state and territory cancer organisations. One of Alan’s regular party tricks was to produce a slide purporting to demonstrate the relationship between these organisations. Even after having seen the presentation several times I cannot say that I am much the wiser. That was Alan able to effectively steer his way through this maze and use this knowledge to further the cancer control cause is a triumph of his intellect.

Iulustrative of the way in which policy development within The Cancer Council has had a major influence on government has been the area of tobacco control, Australia now leads the OECD in tobacco control, in part through Federal Government reforms over the past eight years initiated through liaison with The Cancer Council. The introduction in March 2006 of stark pictures on tobacco packs illustrating the adverse medical consequences of tobacco use, albeit not as poignantly as in Australia, The Cancer Council of Australia proposed, came about through representations over many years. Of course Alan and The Cancer Council Australia did not achieve this alone, however he spearheaded a grand coalition and was unrelenting in his efforts. As in everything he does, his advocacy was backed by an all-inclusive knowledge of the facts. Constantly he repeated to politicians the unequivocal evidence that if one aims to reduce the impact of cancer, the biggest ‘bang for the buck’ comes from tobacco control. These advocacy efforts are now well and truly bearing fruit.

Arguably the single most influential policy document produced by The Cancer Council of Australia and allies is the 2003 publication Optimising Cancer Care in Australia.1 This is a carefully crafted, evidence-based work that has had, and continues to have an impact on the nation’s approach to the development of government policies at both state and federal levels. There is no other work like it and it provides a template for The Cancer Council to go on with its efforts to convince governments of the need for reform to enhance the treatment and care of people affected by cancer in this country. Another publication that has greatly influenced public policy for the better is Cancer in Australia.11 This was addressed as the Cancer Council’s initiative. It highlighted the inequities suffered by cancer patients residing in Australia’s rural and remote communities and their need for special assistance was made pointedly self-evident. The specific cancer control needs of Australia’s Indigenous people were brought into the spotlight too, following a 2004 workshop convened by The Cancer Council. Publication of two revisions (2001-2003 and 2004-2006) of The Cancer Council of Australia’s National Cancer Prevention Policy, the only comprehensive guide to cancer prevention has shown an understanding of the need to think beyond the scientific - successful advocacy means also facing up to the financial, political and social aspects of achieving what are in many instances incremental but crucial policy interventions. This was backed by an influential submission made to numerous government forums and by influential submissions made to numerous government forums and by influential submissions made to numerous government forums. 

The Cancer Council’s efforts, which included the development of the Australian Cancer Network, an organisation supported by The Cancer Council Australia – which was and continues to was and continues to be steadily steered by Emeritus Professor Tom Dwyer – has produced a number of highly influential Clinical Practice Guidelines.12 The aim is to guide clinical behaviour to minimise unjustified variability, better treatment recommendations arising from different specialists or different geographical locations. Although initially some clinicians were fearful of being put under pressure to make decisions in the best interests of their individual patients, in fact the opposite has proved to be the case. Guideline writing is an essential component of clinical decision-making. Overall there is little doubt they have contributed significantly to improving the survival status of cancer patients, which are amongst the best in the world. Alan, through his work in this sphere, has shown how a clinician can influence more widespread treatment outcomes for oneself and one’s immediate colleagues, to the benefit of thousands of cancer patients.

During his term Alan met a succession of federal Ministers for Health and their opposition counterparts, as well as the health spokespersons for the minor parties, most of them on several occasions. Through Alan’s efforts, this direct contact was consolidated by representation on many government forums and by influential submissions made to numerous government forums. In particular, the Cancer Council of Australia did not achieve this alone, however he spearheaded a grand coalition and was unrelenting in his efforts. As in everything he does, his advocacy was backed by an all-inclusive knowledge of the facts. Constantly he repeated to politicians the unequivocal evidence that if one aims to reduce the impact of cancer, the biggest ‘bang for the buck’ comes from tobacco control. These advocacy efforts are now well and truly bearing fruit.

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Pharmaceutical Benefits Advisory Committee to add a special category of Pharmaceutical Benefits Service listing to palliative care medications that enabled people with cancer to remain at home.

Alliances

Any advocacy organisation is more effective if it is able to forge alliances with bodies of like mind. Internal contradictions must be avoided at all costs. Thus the first hurdle faced by the new CEO was to gain the confidence of the ACS’s members, the state and territory Councils, and that of the Clinical Oncological Society of Australia (COSA). With COSA there was never any serious disagreement. As a new player in the state and territory bodies, it was certainly initial jostling for position in the relationship with some of the state and territory bodies, but ultimately unity of purpose was achieved within the organisation.

Collaboration with government occurred at many levels. Probably the most significant was that which resulted in the National Cancer Control Initiative, ably headed by Professor Mark Elwood. Alan was an adviser for its establishment and management. He has also chaired the National Cancer Strategies Group, Australia’s only multi-jurisdictional government cancer advisory body, and has contributed significantly to its work. In influencing government policy, alliances with other non-government bodies are vital. Among many, one could perhaps single out the setting up of the Australian Chronic Disease Alliance as a particularly important step.

Alan has strongly fostered The Cancer Council Australia’s international collaborations including support for the International Union Against Cancer (UICC). He was invited to be among the first signatories to the Charter of Paris Against Cancer, an international charter of cancer control signed in Paris in 1997 with the American Society of Clinical Oncology, the world’s premier clinical cancer organisation, was strengthened when Alan was elected as the International member of its Board of Directors, a tribute to his international reputation.

All this was done in a way that enhanced rather than submerged the standing and independence of The Cancer Council. Indeed, the leadership role of The Cancer Council was greatly reinforced by these activities.

Member services

In Australia, community cancer organisations commenced separately in each state and federal collaboration came later. This history resulted in each state initially developing its own methods of fundraising. However the state and territory organisations (each being a multi-jurisdictional organisation coordinating these activities) have been greatly strengthened, with measurable success. There has been reduction of duplication and conflict, coordination of effort and production of uniform supporting materials for events such as Australia’s Biggest Morning Tea, Daffodil Day, Pink Ribbon Day, and so on. There have been annual increases in fundraising event income, with almost quadrupling of national revenue since 1998, from $7.3 million to $27.3 million in 2005. These funds underwrite cancer research projects and sustain state and territory prevention, patient support and information services – the vital local face of the Cancer Councils.

A small triumph has been the near uniform national adoption of The Cancer Council brand. In 1998 each state and territory had its own fundraising identity. However, consistent with the federal body, the Australian Cancer Society, was distinct again. Now there is a national logo – the daffodil – and, with the exception in 2006 of only one state, uniformity in identity. Some organisations with long-established local recognition had understandable reservations about change, but ultimately the greater value of a single Australia-wide outer shell became apparent. Along with this came the evolution of the national organisation from a secretariat to an umbrella body through which interchange of staff and ideas encouraged best national practice. Cohesive, national coordination of The Cancer Council brand has provided growth far in excess of any of its individual parts. Among other benefits is an enhanced capacity to engage national corporate partners, due to a preference to deal with a single national agency, resulting in much increased sponsorship revenue.

Summary

In a short article one can select only a few of Alan’s many activities and successes from a very long list. Those who have worked closely with him, as I have, are in awe of his intellect, stamina, perspicacity, determination and resilience (both mental and physical). As the inaugural CEO, he has set the stage for the Council to continue his contribution to reducing the burden, and impact of cancer in this country will be felt for many years to come.

References

6. Australian Cancer Network Colorectal Cancer Guidelines Revision Committee. Guidelines for the Prevention, Early Detection and

\[ Know\ Your\ PSA\ ]:\ Not\ Always\ Good\ Advice

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Abstract

Men over the age of 50 are often cautioned to ‘know your PSA’, with the implicit assumption that screening for prostate cancer is effective in reducing morbidity and/or mortality. Likewise, men who have received local therapy for prostate cancer routinely undergo repeated evaluation of their serum prostate specific antigen (PSA) in order to detect recurrence of disease. But does PSA improve the amount of disease that will be found when using screening of older men or to detect recurrence of disease. In contrast, there is substantial evidence that knowledge of a raised serum PSA causes substantial anxiety (PSAitis), that it identifies disease in many men that does not cause any problems, that knowledge of a raised serum PSA does not cause any problems, and that knowledge of a raised serum PSA does not cause any problems.

“Know your PSA” is a slogan used by prostate cancer advocates whose laudable goal is to decrease the mortality and morbidity due to prostate cancer. The statement implies benefit from PSA screening and many prostate cancer support groups, and the American Cancer Society, recommend that all men older than 50 with reasonable life expectancy, should have their serum PSA screened. PSA raised from PSA would then lead to further investigation to rule out prostate cancer and to treat prostate cancer if it is if it is found. Many would argue that anyone who has been treated for localised prostate cancer by prostatectomy or radiotherapy, so that recurrence can be detected easily and to do who have advanced disease.

Is this good advice? Alan Coates and I share not a long-time friendship, but are also men of a certain age who have made a conscious decision not to know their PSA. Here I will outline arguments to suggest that for many men knowledge of their PSA may be harmful rather than beneficial.

I will not examine in detail the arguments for and against PSA screening, which have been widely discussed elsewhere.1-5 I know from the experience of giving talks to prostate cancer groups that screening produces a diagnosis of prostate cancer, the result is permanent sexual, urinary or bowel dysfunction much more often than a cancer death averted; and extending screening to younger patients or lowering the threshold for biopsy will tilt the balance even more steeply toward harm.6

Large trials of PSA screening are underway, although they are threatened by contamination whereby men in the control arm obtain screening outside of the study. However, even if these very expensive studies can be completed, I don’t think they will provide convincing information about the value or not of PSA screening. This is because for practical limits on sample size, their primary endpoint is death due to prostate cancer – whereas what is more important is death due to any cause. Screening is not a totally benign procedure. While an ultrasound-directed needle biopsy of the prostate has a low chance of complications, if you biopsy a large number of men, and those who are diagnosed and treated have only a small gain in long-term survival, those complications can easily outweigh benefit. Black et al6 have reported no trends to improve all-cause mortality in cancer screening trials, although the power of studies to detect significant changes in all-cause mortality is limited. They defined some biases that might account for this – including slipperiness-bias, where the cause of death is reported as unrelated to screening. However, if you stick enough needles into the prostate, you will provide convincing data that PSA screening produces complications that overcome any benefits.7

I am equally unconvinced of the value of PSA testing in men who have completed local treatment for prostate cancer routinely undergo repeated evaluation of their serum prostate specific antigen (PSA) in order to detect recurrence of disease. prostatectomy or radiotherapy, so that recurrence can be detected easily and to do who have advanced disease.8

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References

6. Australian Cancer Network Colorectal Cancer Guidelines Revision Committee. Guidelines for the Prevention, Early Detection and PSA Screening, which have been widely discussed elsewhere.1-5 I know from the experience of giving talks to prostate cancer groups that screening produces a diagnosis of prostate cancer, the result is permanent sexual, urinary or bowel dysfunction much more often than a cancer death averted; and extending screening to younger patients or lowering the threshold for biopsy will tilt the balance even more steeply toward harm.6

Large trials of PSA screening are underway, although they are threatened by contamination whereby men in the control arm obtain screening outside of the study. However, even if these very expensive studies can be completed, I don’t think they will provide convincing information about the value or not of PSA screening. This is because for practical limits on sample size, their primary endpoint is death due to prostate cancer – whereas what is more important is death due to any cause. Screening is not a totally benign procedure. While an ultrasound-directed needle biopsy of the prostate has a low chance of complications, if you biopsy a large number of men, and those who are diagnosed and treated have only a small gain in long-term survival, those complications can easily outweigh benefit. Black et al6 have reported no trends to improve all-cause mortality in cancer screening trials, although the power of studies to detect significant changes in all-cause mortality is limited. They defined some biases that might account for this – including slipperiness-bias, where the cause of death is reported as unrelated to screening. However, if you stick enough needles into the prostate, you will provide convincing data that PSA screening produces complications that overcome any benefits.7

I am equally unconvinced of the value of PSA testing in men who have completed local treatment for prostate cancer routinely undergo repeated evaluation of their serum prostate specific antigen (PSA) in order to detect recurrence of disease. prostatectomy or radiotherapy, so that recurrence can be detected easily and to do who have advanced disease.8

I am equally unconvinced of the value of PSA testing in men who have completed local treatment for prostate cancer.
prostate cancer. Certainly men who have undergone prostatectomy or radiotherapy show a substantial rate of relapse of prostate cancer and PSA testing can announce the failure of that prior treatment long before such men develop symptoms due to the disease. Most series the mean interval from rise in PSA to first symptom of disease (other than anxiety due to the PSA itself) is in the range of 5-10 years and in one large series median survival had not reached at 15 years following the first detectable PSA after radical prostatectomy. Serum PSA is measured routinely after local treatment but the problem is what to do if it is rising. There is no randomised evidence to indicate that treatment of such men improves their survival – and long-term hormonal treatment conveys substantial morbidity including loss of bone and muscle, anaemia and cognitive change. There is a reason that athletes are tempted to take androgens! It has been argued that radiotherapy given to men with detectable PSA after prostatectomy represents the only chance of cure. While that may be true, retrospective studies have shown that those most likely to benefit had a low Gleason score and a long PSA doubling time – properties which also identify those who may never develop symptoms due to disease.1

Then there are the asymptomatic men whose prostate cancer was treated conservatively, with observation or hormones, as well as those with metastatic disease that was either silent or became so after androgen ablation therapy. If these men are well and without symptoms, are they really helped by knowing that their PSA is rising? It has been argued that radiotherapy given to men with detectable PSA after prostatectomy represents the only chance of cure. While that may be true, retrospective studies have shown that those most likely to benefit had a low Gleason score and a long PSA doubling time – properties which also identify those who may never develop symptoms due to disease.1

References
node dissection (ELND) for all patients with higher-risk tumours. Some earlier randomised but poorly stratified trials undertaken by the World Health Organization (WHO) Melanoma Program14 and North American groups15 failed to demonstrate an overall survival benefit for all patients with higher-risk tumours. These and several early non-randomised studies were widely criticised, mainly because of the failure to stratify by thickness, disproportions in gender and primary tumour site and failure to accurately identify the correct regional node field for dissection. Sappey in 187412 had categorically stated that lymphatic drainage never crossed the midline. He later modified this to exclude sites within 5 cm of the trunk, drainage was quite diverse and unpredictable. It was shown that up to 30% of patients may have had inappropriate node field dissections when clinical prediction of the path of lymphatic spread was used to select the dissection field.13 Later, more carefully stratified randomised trials, the Intergroup Melanoma Surgical Trial14 and the WHO Melanoma Program Trial15 in which either blue dye or radio-colloid tracer were used – a preoperative lymphoscintigram, blue dye mapping and the use of a hand-held gamma probe intraoperatively. The Sydney Melanoma Unit (SMU) has made important contributions in improving our understanding of cutaneous lymphatic drainage pathways. This has been based on preoperative lymphoscintigraphy performed in large numbers of patients.20, 21

Lymphatic mapping and selective "sentinel" lymph node biopsy

At a meeting of the Society of Surgical Oncology in 1990, Dr Donald Morton of the John Wayne Cancer Institute in Santa Monica suggested that it was possible to determine the status of regional lymph nodes in patients with melanoma by performing a minimally invasive procedure that has subsequently become known as SN biopsy.16 Morton proposed that lymph draining from a primary tumour site, and potentially containing melanoma cells, drains first to a "sentinel" node before passing on to other nodes in the regional node field. He stated that it was possible to identify a SN with confidence by injecting vital blue dye at the primary melanoma site and tracing blue-stained lymphatics to the regional node field. Here, the SN (or SNs) would be blue-stained and therefore able to be identified. According to this proposal, the SN is the node most likely to contain tumour cells. If no tumour cells are present in this node, none should be present in other nodes in the node field. The publication outlining this proposal by Morton, his pathology colleague Dr Alistair Cochran and others was eventually published in 1992.17 The paper is now a citation classic, having previously been rejected by several major surgical journals. In this report it was emphasised that the minimally invasive SN biopsy procedure would allow full regional node dissection to be avoided in approximately 80% of patients with intermediate thickness melanomas because they had negative SNs.

Sn-positive patients (n=355)

Fig. 2

Figure 2

Confirmation of the accuracy of SN biopsy in identifying patients with metastatic disease in regional lymph nodes was quickly provided by studies undertaken in the United States18 and Australia.19 Both these studies involved SN biopsy with immediate complete lymph node dissection, so that all the remaining nodes in the node field could be examined. The results were remarkably similar to those that had been obtained by Morton and his colleagues. Although there had initially been great scepticism, the technique was soon taken up around the world and is now a routine procedure in most major melanoma treatment centres internationally.

As already indicated, the initial studies reported by Morton’s group involved only intradermal vital blue dye injection at the primary melanoma site. It was soon found however, that preoperative lymphoscintigraphy, involving injection of a radio-labelled colloid at the primary melanoma site, provided valuable information preoperatively. It also made the SN biopsy procedure easier, quicker and more accurate when a hand-held gamma probe was used intraoperatively to assist in location of the SNs. It has since become clear that SN identification is most accurate if all three methods are used – a preoperative lymphoscintigram, blue dye mapping and the use of a hand-held gamma probe intraoperatively. The Sydney Melanoma Unit (SMU) has made important contributions in improving our understanding of cutaneous lymphatic drainage pathways. This has been based on preoperative lymphoscintigraphy performed in large numbers of patients.20, 21

Several major studies have now shown that SN status provides the most accurate prognostic information currently available.20, 21 There is a large difference in five year disease-specific survival for patients who are SN-positive and those who are SN-negative. A recent update of an earlier SMU experience has shown that in 1815 patients who were SN-negative the five-year survival rate was 89%, while in 356 patients who were SN-positive the five-year survival rate was 58% (Figure 2). The unanswered question however, has been whether early complete regional lymphadenectomy, performed in patients who are SN-positive, improves survival outcome. Results of a large international study, the first Multicenter Selective Lymphadenectomy Trial (MSLT-I),20, 21 have recently been reported at an international meeting and a paper documenting the outcome of this trial was submitted for publication in mid-February 2006. The MSLT-I results indicate...
that there is no significant overall survival advantage for those with intermediate thickness melanomas randomised to receive wide excision of their primary melanoma together with SN biopsy and those having wide excision alone. However, patients who have a positive SN are at a significantly better survival outcome if they have an immediate completion lymphadenectomy, than patients who are observed and who have a full regional lymphadenectomy when metastatic disease becomes clinically apparent. This result is consistent with the previous WHO Melanoma Program elective node dissection study mentioned earlier (see Figure 1). Publication of the full MSLT-I results is awaited with great interest. The morbidity of the SN biopsy procedure is low and the suggestion that performing an SN biopsy may increase the rate of intraabdominal metastasis has been convincingly disproved by four large retrospective studies from the MD Anderson Cancer Center, the John Wayne Cancer Institute and the SML,20,21 and most recently by the MSLT-II results.22

The present question is next to be answered as to which patients are found to be SN-positive require a complete regional node field clearance. It is likely that only 15-20% of patients could possibly benefit, since this is the proportion who have additional (ie. non-SN) metastases in their regional nodes. A second international multicentre trial (MSLT-II), designed to answer this question, commenced patient accrual in late 2004. In this trial patients who are found to be SN-positive are randomised to have an immediate complete node dissection (currently the standard treatment recommendation), or to be observed with regular ultrasound examination of the remaining nodes in the SN field. The results of this study are not expected before the end of 2006.23

Minimally invasive and non-invasive SN assessment

Although the morbidity of SN biopsy is low, it involves a surgical procedure with an associated inconvenience and cost. Efforts are therefore being made to assess SNs in minimally invasive or non-invasive ways. It has already been shown that examination of fine needle aspirates from SNs using magnetic resonance spectroscopy (MRS) can provide a reliable indication of SN status.24,25 SNs containing metastatic melanoma produce spectra with characteristic peaks of taurine, choline and other metabolites that are not present in nodes not containing melanoma. The ultimate objective is to perform completely non-invasive in-vivo assessment of SNs using MRS with surface coils.26

The role of surgery for apparently isolated metastatic disease

It has been known for many decades that local melanoma recurrences and in-transit metastases are best treated by surgical excision. Some patients treated in this way are apparently cured by the procedure. It is also believed that surgery is the most effective form of treatment for macroscopic disease in lymph nodes. Long-term survival in excess of 50% can be achieved in some such patients.27 More controversial is the role of surgery in the treatment of patients with metastases in internal organs. Five-year survival rates of up to 40% have been reported after complete resection of gastrointestinal metastases28,29 and five-year survival rates exceeding 20% after complete resection of lung metastases.30 The difficulty with these studies is that they report the results obtained in highly selected groups of patients and it would be very difficult to undertake large scale randomised trials. Nevertheless, there does appear to be the possibility of cure for some patients with systemic melanoma metastases when complete surgical resection of those metastases can be achieved.

Summary and conclusions

Substantial progress has been made over the last 100 years in defining appropriate surgical management protocols for patients with melanoma. Desirable excision margins have been determined on the basis of randomised clinical trials and progress is being made towards defining rational management of regional lymph nodes, also on the basis of well-designed clinical trials. In the absence of reliable effective non-surgical therapies for melanoma however, continuing efforts to find ways of further improving surgical outcomes are required.31

References

7. Khayat D, River G, Martin G. Surgical margins in cutaneous melanoma (2 cm versus 5 cm) for lesions measuring less than 2·1 mm thin. Cancer. 2003; 97:1941-6.

Abstract

The history of scientific thought is marked by spikes of revolutionary thinking, followed by periods of evolutionary consolidation. Both are essential components in the continued development of our understanding. Generally, the revolutionary spikes are instigated by a few (or often one) maverick thinkers who are willing to reassess the conventional wisdom and set out in a new direction. These revolutionary spikes are temporally well spaced, but even during the evolutionary periods, there is a requirement for continual reassessment of the relevancy of other disciplines to one’s own. This paper examines one such example of the combination of disciplines (radiology and geology) that might otherwise be considered disparate and goes on to make some general observations about the importance of such
Mapping has been part of the discipline of epidemiology for many years. The genesis of the modern discipline of Geographic Information Systems (GIS) can be traced back to the work done in London in 1854 by John Snow, where the location of cholera cases was marked on a map with pins and the proximity to various drinking water wells calculated. This led to the identification of one of the wells as being contaminated and the removal of the handle of that pump so that the epidemic was contained. More recently, the spread of diseases has been modelled using sophisticated mathematical algorithms and visualised with advanced computational and graphical techniques. Both of these examples show work on a scale beyond that of the single human. Applications of the technical techniques used by geographers to the human body have been limited.

Geographic information systems

Rhind (2005) defines Geographic information systems as follows: “Geographic information systems (GIS) are a means of storing, integrating, analysing and presenting geographic data. A GIS is a GIS of a combination of computers, databases and software capable of processing and presenting different thematic data with reference to a geographic framework. Each theme is a layer of data that is linked geographically to other data layers using common characteristics. A GIS can be used to project combinations of geographical interrelationships of the various data layers onto a single map. Conversely, information from the map can be used to create the overall matrix and considered individually. GIS can provide insights into complex relationships not easily studied or observed by other means.”

The key point here is that the data are geographic, that is they have a location in relation to some coordinate system and can be compared with other data located in the same coordinate system. The term geographic can sometimes be confusing in that it implies that the coordinate system is terrestrial (or, occasionally, extraterrestrial, such as the GIS showing the surface of the moon and data about the various missions there). This is not the case. The data merely need to have some coordinate system in common. This system can be a common system, for example latitude and longitude or a local coordinate system like Universal Transverse Mercator. But it may also be an arbitrary system for locating data that only makes sense in the context of that data. A generalised schematic representation of the body is an example of this and as long as the same schematic representation of the body is used for all layers of data, relationships between the data can be studied, analysed and presented.

Lymphoscintigraphy

Lymphoscintigraphy is a technique whereby the path from the site of the primary lesion of a melanoma through the lymphatic system to the draining node fields can be recorded. This is achieved by injection of the radiopharmaceutical Technetium-99m-antimony sulphide colloid ($^{99m}$Tc-Sb$_2$S$_5$) around the biopsy excision site or primary lesion. Images of the tracer moving through the lymphatic system are captured using a digital gamma camera and enhanced to ensure that even the faintest channels are detected.

Once the channels have been defined, they are marked on the skin of the patient by the physician for use by the surgeon. In addition to the Technetium, interval nodes (nodes along the channel but not in the lymph node fields) and sentinel nodes (the nodes to which the lesion directly drains) are also detected and marked.

This technique allows draining node fields to be accurately sampled for the presence of metastases with the minimum of surgery. It also ensures that all relevant material is removed, even if the paths taken through the system or the draining node fields themselves are different from those predicted by traditional methods.

Traditional medical concepts of lymph node drainage paths date back to 1843 when Sappey injected cadavers with mercury to trace the paths taken through the lymphatic system from various points on the body (Sappey (1843) cited in Uren et al. (1993)2). Lymphoscintigraphy has shown these concepts to be incorrect in a large proportion of patients.

Mapping the primary lesions and their draining node fields allows the researcher to quantify the divergence of paths actually followed compared to those predicted by Sappey and analysis of the factors influencing such divergence. Plots of all primary lesions draining to a particular node field can be used to establish the general pattern of distribution. With the above in mind, it can be shown that the rather arbitrary lines traditionally used to delineate watershed boundaries in the lymphatic system are much less precise than was formerly thought.

Mapping the human body – an example of cross-disciplinary science

The results of this technique, which was performed on over 1000 patients, were recorded in a spreadsheet and then transferred on to schematic maps of the body using a GIS (ArcView). The maps were used to examine some of the commonly held perceptions about the node fields to which lesions on various parts of the body drain. We have found using lymphoscintigraphy that the traditional concepts of lymphatic drainage in the skin proved to be incorrect in a large proportion of the patients. Displaying the information using the images produced by the GIS was a simple and effective way of illustrating this.

As a by-product of this research, a software application was developed which allows the physician performing the lymphoscintigraphy to enter the data for a particular patient and produce a formatted schematic for subsequent use by the surgeon. The schematic displays the primary lesion sites and depths and location of sentinel nodes in each node field. This schematic can be kept as a permanent record of the lymphatic drainage pattern for each patient.

Day-to-day application – schematic visualisation

An application was developed which allows the physician carrying out the lymphoscintigraphy to record the details of the patient and the results of the investigation. The location of the primary lesion is recorded as a map number and x and y coordinates on that map. The draining node fields are recorded as codes showing the depth and number of sentinel nodes. For example 1.S1.2 indicates that the left axilla field contains two sentinel nodes at a depth of 1.5cm. The name and sex of the patient, as well as the number of draining channels and the maximum separation between the channels are also recorded. There is provision for noting details of surgery performed immediately or as follow-up.

The primary storage of the data is currently in an Excel spreadsheet. This communicates with the GIS via DDE (in Windows) or Appletalk (on the final target system) and passes a script a list of the data for display in a report. The script processes the data and prints out a report based on it. This report can be sent to the surgeon and is also stored on the patient’s file.

Research – challenging Sappey’s lines

Over 1000 patients have undergone lymphoscintigraphy in this study. In each case, the draining node fields and the number and location of the sentinel enhanced and interval nodes were recorded in an Excel spreadsheet. The challenge inherent in using a GIS to map the data was that the locations were descriptive. Only a small sketch of the location had been recorded and the images produced by the lymphoscintigraphy did not have any common reference points marked to allow normalisation and automatic geocoding of locations.

Six schematic diagrams representing the surface of the body were drawn and a grid marked on them. Each case was manually reviewed and a map number, X and Y coordinate recorded for each primary lesion site. These coordinates were then randomised within the level of precision of the grid used to avoid clustering at grid points.

The consequence of having both the site of the primary lesion and the location(s) of the sentinel nodes was that a picture of the lymphatic drainage system was able to be produced with points at the locations of the lesion colour-coded based on their draining node fields. It was evident from the initial data that the sharp watershed lines predicted by Sappey were, in fact, merely fuzzy approximations and that patients would be much better served by advanced imaging techniques prior to surgery than by guesses based on Sappey’s predictions.

Crossing disciplinary boundaries

While this is an apparently simple and perhaps unsurpassed example of inter-disciplinary science, it serves to illustrate some important principles in the identification of opportunities for collaboration and cross-pollination. The primary principle is to be able to step back from the minutiae and look for others pursuing similar goals. In this case, there were common words used in both fields. Geographic words such as “draining”, “watershed” and “channel”, when used in a medical context, are an excellent indication that there is potential for some intersection between the disciplines. Similarly, both fields have a heavy emphasis on “imaging” and while they often use different techniques for collection and formats for storage of the data (medical imaging being heavily based on proprietary formats and geographic imaging being largely standards-based), these are merely technologically differences rather than conceptual.

Moving outside an established field of expertise and engaging with specialists from disparate fields is often seen as potentially uneconomic in terms of the limited amount of time available to researchers. It is important however, for at least some of a scientist’s time to be focused on expanding the boundaries of a speciality in a non-linear fashion. Attending seminars in fields that appear to be completely unrelated, perhaps as a part of a university’s post-graduate seminar program, is one technique as is an activity by Sappey’s was, in fact, one of the key words from one’s own field into a web-based search engine to see what other fields may also use similar terminology.

Once a piece of cross-disciplinary collaboration is underway, it is important to publicise the work in fora frequently practiced by practitioners of both (or all) of the disciplines involved. Often this will mean presenting papers at disparate conferences, or publishing in multiple journals. The emphasis may change for each audience, but the essential value of the cross-disciplinary approach should encourage additional work between the fields.

Finally, it is incumbent on all scientists to remain open to the possibility of cross-disciplinary opportunities. No field of science is an island and while each seems to become more specialised and more insular, history has shown new and revolutionary breakthroughs made have very often come with the introduction of ideas from outside the field.

Acknowledgements

The author gratefully acknowledges the work of Dr Roger Uren and the cross-disciplinary vision of Professor Alan Coates.

References

Constitutive activating mutations in Nras and Braf are the most common somatic oncogene mutations in melanoma, indicating the importance of the Ras-Raf pathway in the deregulation of melanocyte growth. Downstream targets of the signalling pathway include the cell cycle regulator cyclin D1 and the melanocyte-specific transcription factor, Mitf. Newly tested inhibitors of the Raf pathways, like sorafenib, may sensitize melanoma cells to cytotoxic attack.

Inhibitors of apoptosis, like Bcl-2 and Mcl-1 are frequently over-expressed in established melanomas. Apoptosis in the Bcl-2 family of proteins offer exciting potential for synergism with cytotoxic drugs. Other pathways highly relevant to melanoma tumour progression and its targeted therapy include the PI3K-Pten-Akt-mTOR pathway and pathways of angiogenesis, which may be inhibited by molecules like bevacizumab and bosentan. Considerable hope is also provided by recent Phase II trials with monoclonal antibodies such as tremelimumab and ipilimumab, which inhibit immunosuppressive cell signalling.

Metastatic melanoma

Melanoma is remarkable for variability in its pattern of spread. In selected patients the disease remains confined to loco-regional lymphatics for extended periods and some such patients have achieved long-term remissions even after hind-quarter amputation. In others, haematogenous metastases occur early and widely. Certain patients may have many years between the primary presentation and the development of metastases. Others may have serial presentations, each with relatively isolated metastases, remaining in clinical remission for many years between serial metastasectomy. Some patients present with fulminant melanoma in many organs simultaneously with a very rapid demise. The disease may have particular affinity for a specific organ or organs. Thus, certain individuals may develop extensive pulmonary involvement without ever developing liver metastases. Others will succumb to cerebral metastases without any extra-cranial disease. This wide spectrum of variability confounds the ability to make accurate prognosis. However, some broad guidelines may be drawn from statistical analyses of large numbers of patients who have died from metastatic melanoma.

The most common initial sites of metastasis are skin, subcutis, distant lymph nodes, lung, liver, bone, small intestine and brain. Approximately 4% of patients present with widespread metastases as the initial manifestation of metastatic disease. About 15% of patients presenting with metastatic melanoma in Australia have no identifiable primary site (occult primary melanoma). These patients show no discernible differences in pattern or prognosis from those with known primary sites. Psycho-social factors that show independent correlation with longer survival from metastatic melanoma include a positive perceived outcome from treatment, minimisation of perceived threat, anger and presence of a stable partner.

In a recent revision of the American Joint Committee on Cancer (AJCC) Staging System for Melanoma, Stage IV melanoma has been subdivided into three prognostic groups. The M1 category includes those patients with lymph node and/or subcutaneous metastases and has a median survival of >12 months and a two-year survival of 15-20%. The M2 category has pulmonary metastases +/- subcutaneous or lymph node involvement, and has a median survival of 9-12 months and a two-year survival of 10%. The M3 category has other visceral involvement, or any site with an elevated serum lactate dehydrogenase (LDH). Although non-specific, the LDH is an independent prognostic factor for patients with metastatic disease and is frequently used in stratifying patients in clinical trials. M3 patients have a median survival of four to six months and a two-year survival of 5%.

Current status of drug treatment for metastatic melanoma

Metastatic melanoma is relatively resistant to treatment with cytotoxic drugs. No form of systemic therapy prolongs overall survival. Single agent treatment with dacarbazine (dimethyl triazeno imidazole carboxamide, DTIC) discovered in 1961, has been standard best systemic therapy for metastatic melanoma since the early 1970s and its use in Australia was pioneered by Gerald Milton and William McCarthy at Sydney Melanoma Unit. Partial responses to dacarbazine and two other commonly used single-agent cytotoxic drugs, temozolomide and fotemustine, occur in less than 25% of treated patients and complete responses in less than 5%. However, in recent Phase III prospective randomised trials, in which dacarbazine has been standard therapy, response rates were 6.8-13%. The use of combinations of cytotoxic drugs, such as the widely used ‘Darstomth’ regimen – consisting of cisplatin, dacarbazine, carmustine and tamoxifen, show no advantage over dacarbazine alone. The addition of potent cytokines like interleukin-2 and interferon-alpha to cytotoxic drugs (‘biochemotherapy’) produces slightly higher transient response rates, but at considerable cost in toxicity and with no overall survival benefit. Predictors of response to dacarbazine include good performance status and disease confined to the skin, subcutis, lymph nodes and lungs. The median duration of response is five to six months. Only 1-2% of patients treated with dacarbazine sustain long-term complete responses, but those in complete remission more than two years after treatment tend not to relapse.

A major advantage of dacarbazine is that it is simple, ambulatory treatment, being administered intravenously on a three week schedule. It is associated with minimal toxicity when given with serotonin receptor antagonist anti-emetics. Alopecia does not occur with dacarbazine toxicity when given with serotonin receptor antagonist anti-emetics. Alopea does not occur with dacarbazine.
Constitutive activating mutations in NRas, BRAF and gene products. PI3K is inhibited by PTEN. Transcription of a suite of genes involved in regulation then the RAF kinases BRAF and c-RAF and subsequently and amplified via the kinase signalling pathways NRas, growth factor (FGF) and transforming growth factor-alpha. The Ras/RAF pathway.

Growth factors, such as stem cell factor (SCF), fibroblast growth factor (FGF) and transforming growth factor-alpha (TGF-α) are produced by the action of solar radiation on melanocytes and surrounding keratinocytes and fibroblasts (Figure 1). Resulting signals are transduced and amplified via the kinase signalling pathways Nras, then the RAF kinases BRAF and c-RAF and subsequently MEK-ERK-Mtf, or PI3K-Akt-mTOR. Mtf triggers the transcription of a suite of genes involved in regulation of cellular proliferation, apoptosis and migration. Mtor promotes the translational efficiency of growth regulatory gene products. P13k is inhibited by PTEN. Constitutive activating mutations in Nras, BRAF and PTEN are among the most common somatic oncogenic mutations in established melanomas, indicating the importance of these pathways in the deregulation of melanocyte growth.2,11 The pan-RAF inhibitor sorafenib (BAY 43-9006) has minimal activity in metastic melanoma as a single agent,12 but in a Phase II trial in combination with the cytotoxic drugs carboplatin and paclitaxel in patients with metastatic melanoma, 60% of whom had received prior therapy, 14 of 35 patients achieved partial responses.13 Response did not depend upon the presence of an activating RAF mutation,14 as sorafenib is “promiscuous” in its effects against RAF family members. The combination of carboplatin/paclitaxel + sorafenib is now in Phase III clinical trial in many centres in Australia. Cutaneous reactions constitute the major toxicity of sorafenib.

Apoptosis regulators.
The genetic locus CDKN2A is a melanoma susceptibility gene20 and it is also altered in a large number of established melanomas. It produces two protein products, p1611 (p16) and p16ARF (p14) (Figure 2). When defective, p16 is unable to inactivate CDK4 and 6, which phosphorylate Rb, releasing the transcription factor E2F leading to cell cycle progression.21 The molecule usually central to the DNA damage response, p53, is rarely altered in melanoma. However, alterations and gene deletions affecting ARF permit degradation of p53 by releasing its binding partner mdm2.22 This probably contributes to the natural resistance of melanoma cells to apoptosis (programmed cell death) in response to cytotoxic, radiation and immunological attack. As a further defence, melanoma cells frequently express high levels of the anti-apoptotic Bcl-2 family of proteins which include Bcl-XL and Mcl-1.23 These are important molecular vulnerabilities in melanoma. Oblimersen is an antisense oligonucleotide to Bcl-2, which is over-expressed in many melanomas. It was the first of this class of drugs to enter clinical trial in melanoma. In the largest Phase III trial in the treatment of metastatic melanoma (771 patients), incremental benefits in progression-free survival and response rate were demonstrated for the combination of dacarbazine plus oblimersen versus dacarbazine alone. Overall survival benefit was similar for the two arms, but a pre-stratified subgroup of 500 patients with normal LDH showed a statistically significant survival benefit in the combination arm and seven of 11 patients with complete remission on the combination arm remained disease free at >24 months.24 However, this study was marred by failure to select patients with Bcl-2 over-expressing tumours. Furthermore, much better inhibitors of the Bcl-2 family of proteins are now in advanced development. Many of these specifically target the Bcl3 domain of the Bcl-2 family of proteins, releasing bound pro-apoptotic proteins, like Bax, and thereby sensitising cells to cytotoxic attack. Native inhibitors of Bcl-2, like Bim and Noxa, may also be inducible with proteosome inhibitors like bortezomib.25 It is likely that a multi-pronged attack on the redundant anti-apoptotic pathways in melanoma cells will be necessary to achieve significant tumour remissions.26 Anti-angiogenic agents.

Thalidomide has a variety of anti-tumour effects, which include immuno-modulation and anti-angiogenesis. It has been tested in small cohorts of pre-treated patients with metastatic melanoma, but failed to show convincing evidence of activity.27 A large Phase III trial of a potent thalidomide analogue, lenalidomide, showed no benefit over placebo.28 Thalidomide has been tested in combination with a number of agents, including interferon-alpha29 and dacarbazine.30 Only a small trial in combination with temozolomide showed some trend towards improved response rates and survival in a preliminary report.31 Bevacizumab is a monoclonal antibody against Vascular Endothelial Growth Factor (VEGF), a mediator of tumour angiogenesis. It has shown significant benefit when combined with chemotherapy in colorectal cancer. Phase II trials in metastatic melanoma showed good tolerability and some responses.32,33 The monoclonal antibody MEDI-522 targets integrin alphaVbeta3, which plays a critical role in angiogenesis, tumour growth and metastasis and is highly expressed in melanoma. Preliminary results of a randomised Phase II trial of MEDI-522 with or without dacarbazine in previously untreated patients suggest potential clinical activity of MEDI-522.34 Bosentan, an endothelin receptor antagonist used in the treatment of primary pulmonary hypertension, may modulate anti-proliferative and anti-angiogenic activities in melanoma.35 A Phase II trial of bosentan in patients with metastatic melanoma suggested some clinical activity36 and Phase III Trials are now underway testing the combination of dacarbazine with or without bosentan.

Immunomodulators

Immunotherapy continues to be investigated intensively in metastatic melanoma and attempts are being made to target the major deficiencies that melanoma mounts against an effective immune response. These deficiencies include development of host tolerance to melanoma antigens, production of immunosuppressive factors by melanoma cells and clonal selection of melanoma cells that are resistant to apoptosis.37 Despite the presence of detectable immune responses in 30-60% of patients, tumours regress in only a few vaccine-treated patients.

**Figure 3: Anti-CTLA4 monoclonal antibody therapy**

Panel A: T cell activation involves presentation of melanoma-associated antigens by antigen presenting cells (APCs) such as dendritic cells, in the context of molecules of the major histocompatibility complex (MHC). Co-stimulatory signalling occurs via B7 on APCs which binds to CD28 cell surface molecules on T cells. Activation of T cells is normally dampened by a feedback route involving B7 interaction with an inhibitory molecule, CTLA4.

Panel B: Monoclonal antibodies tacrolimus and ipilimumab bind CTLA4 and inhibit its interaction with B7. T cell activation is thereby sustained and the threshold for T cell activation is also lowered.
with metastatic disease. The cytokine interleukin 2 has FDA approval for high-dose intravenous use in treating metastatic melanoma, on the basis of durable responses in some patients. However, the overall response rate is low (16%) and systemic toxicity is high and includes hypotension, capillary leak syndrome, sepsis and renal failure. Innovative immunotherapy approaches include the use of monoclonal antibodies such as ticilimab (CP-675206) and ipilimumab (MDX-010) to inhibit immunosuppressive cell signalling (Figure 3). Both these monoclonal antibodies have been associated with durable remissions in patients with metastatic melanoma and are in Phase II and III trials in many European centres. The major toxicity involves autoimmune-type reactions in skin, colon and endocrine organs.

**Conclusion**

The field of experimental therapies for melanoma has never been richer. Melanoma medical oncologists face increasingly difficult decisions about the choice of agents for clinical trials. The traditional endpoints of Phase II and Phase III trials (tumour response and survival) are stringent in the context of highly advanced tumours with an extensive repertoire of defences against cytotoxic attack. This is particularly so for biological agents, like anti-angiogenic drugs, that are likely to induce stable disease rather than the usual tumour regressions. New trial platforms are urgently required. One such design is ‘Treat, Resect, Analyse for Melanoma’ (TRAM), which proposes the use of relatively short-term biological therapy with metastatic melanoma: what have we learned in 30 years? Eur J Cancer 2004; 40: 1245-1250.


subject of intense study; studies in mice transgenic for types (HPV16 and HPV18) accounting for more than responsible for ~100% of cervical cancer, with two papillomaviruses, termed high risk genital HPVs, are associated with genital cancer. Detailed epidemiological abnormalities results in a greater than 95% reduction in E6 and E7. Physical destruction of high grade cervical and overexpression of the viral non-structural proteins such changes are generally associated with integration premalignant changes (HSIL) in squamous cervical cells; screening programs which are designed to detect cancer

The natural history of infection with high risk human papillomavirus
Infection of the genital tract with high risk HPVs is extremely common, with up to 50% of women becoming infected during the first five years after commencing sexual intercourse.1 Up to 98% of these infections, which are associated with cellular abnormalities in the cervix generally termed low grade squamous intraepithelial lesion (LSIL) or cervical intraepithelial neoplasia 1 (CIN1), regress without intervention in humans with a competent immune system, though humans immunocompromised by immunosuppressive drugs or viral infection are much less likely to clear infection. Persistent infection with a high risk HPV genotype conveys substantial risk of cervical cancer,7 which can develop as early as five years after infection but more commonly takes 15-30 years to develop.

Screening as a method to prevent cervical cancer
Prevention of cervical cancer at present relies on screening programs which are designed to detect premalignant changes in squamous cervical cells; such changes are generally associated with integration of the papillomavirus genome into host genetic material and overexpression of the viral non-structural proteins E6 and E7, which induce cervical abnormalities results in a greater than 95% reduction in lifet ime risk of cervical cancer and is the current basis of prevention of cervical cancer through screening. Vaccines to prevent cervical HPV infection and cervical cancer
Future programs to prevent cervical cancer will likely incorporate use of vaccines designed to prevent infection with the papillomaviruses (PVs) responsible for cancer. Initial studies in cattle and dogs showed that PV vaccines based on inactivated viral derived PVs could protect against challenge with live bovine PV.4 However, human PVs cannot be grown in the laboratory and vaccines for human PVs are therefore based on virus like particles (VLPs).14-16 The current vaccines are constructed using recombinant DNA technology from the L1 major capsid protein of the PV. The human papillomavirus expressed in recombinant yeast, or in insect cells using baculovirus vectors. Such VLPs resemble the viral capsid physically and immunologically. Early animal studies showed that virus like particles could induce humoral immune responses cross reactive with the natural virus and that neutralising antibody raised by VLP based vaccines could protect animals against challenge with the same animal papillomavirus.17-19

Clinical trials of HPV vaccines:
Initial studies in humans demonstrated that VLPs from either L1 or AS04 adjuvant induce HPV type specific antibody20 and protect against infection with the corresponding HPV type.21,22 Two Phase III trials of quadrivalent vaccines based on HPV virus like particles are currently underway. Vaccine administered on three occasions over six months has proven in an interim analysis to be 100% effective at preventing not only persistent infection with high risk HPVs, also HSIL/CIN2, 3 and anogenital warts in young sexually active women.23,24 Clinical trials of HPV vaccines, which are generally performed in young women, are considered as a part of a broad strategy to prevent cervical cancer. Therapeutic vaccines have no precedent in human immunotherapy and HPV therapeutic vaccines are at an earlier stage of development than HPV prophylactic vaccines. These products are generally targeted at viral non-structural proteins and are expected to induce killer T-cells which can eliminate virus infected cells in the cervix. Although several possible vaccine products based on HPV16 E6 and E7 protein have been subjected to early phase clinical trials,25 there are significant scientific and technical challenges to meet before such vaccines become available for routine clinical use. No surrogate markers of effective immunotherapy have been identified, though helper T-cell responses particularly to viral non-structural proteins E2 and E6 may correlate with clearance of HPV infection. Animal models of HPV infection suggest that a major problem with HPV infection may not be a lack of vaccine immunity, but rather a problem with targeting effector T-cells to the HPV infected cells.26

Conclusions
Cervical cancer is a preventable disease. Future strategies to reduce the cervical cancer burden, particularly in the developing world where screening is not available, are likely to focus on HPV prophylactic vaccines based on VLPs. Deployment will depend on development of a strategy for delivering vaccines to young women and, in the developing world, on the availability of adequate funding for the vaccines.27

References
The Australian New Zealand Breast Cancer Trials Group: Some Contributions to Breast Cancer Trials

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Abstract

The Australian New Zealand Breast Cancer Trials Group was formed in 1978 after the first adjuvant therapy trials were published. This commenced a new era of clinical trials and the commencement of substantial global collaboration, particularly with the International Breast Cancer Study Group. The Australian New Zealand Group is currently conducting 46 trials encompassing prevention and early and advanced disease. In the Australian New Zealand Breast Cancer Trials Group model the elected Board of Directors is responsible for legal and financial affairs, the Scientific Advisory Committee sets the research agenda and the Operations Office is responsible for conduct of the research program. The Australian New Zealand Breast Cancer Trials Group Statistical Centre is contracted out to the National Health and Medical Research Centre Clinical Trials Centre. The Australian New Zealand Group has had peer reviewed research funding (National Health and Medical Research Council) since 1979 and has contributed to more than 400 peer reviewed publications. The research program has always been based on quality science and multidisciplinary collaboration. The Breast Cancer Institute of Australia was established to foster education and involvement of consumers in research. Important contributions have already been made by Australia New Zealand Breast Cancer Trials Group researchers to

The Australian New Zealand Breast Cancer Trials Group (ANZ BCTG) was established in 1978. At that time new advanced breast cancer trials in Cardiff were comparing first line treatment with tamoxifen or chemotherapy and initiating quality of life measurements in the former patients. Results from the initial trials of adjuvant chemotherapy compared to no adjuvant chemotherapy were published, the L-PAM trial of the National Surgical Adjuvant Breast and Bowel Project (NSABP), the M.D. Anderson, University of Wisconsin, and the booklet of the European Breast Cancer Group (EBCTG) invited a small group of researchers to a meeting in Lausanne (LICR) and the EBCTG trial from the Istituto Nazionale dei Tumori Milan, Italy, by Gianni Bonadonna and colleagues.1 The EBCTG trial comparing 12 months of adjuvant CMF versus no adjuvant chemotherapy for women with positive lymph nodes showed that CMF versus chemotherapy had a higher complete response rate (78% vs. 69%) and a lower relapse rate (7.5% vs. 15.6%).2 Twenty-months was very much a short follow-up time for analysis by today’s standards, but the EBCTG early trials were sufficient to show that CMF versus no adjuvant chemotherapy was a valuable adjuvant therapy for postmenopausal women.

From the outset, the new LBCSG was substantially influenced by Australian and New Zealand researchers who actively pursued collaboration and rigorous science. Because the advantage for CMF in the Milan trial seemed less in postmenopausal women (and was not separately significant for this group), LBCSG trials III and IV retained a control arm – subsequently confirmed as a wise decision. The DFS and CMF results were published in 1995 and by this time it had become apparent that CMF had less effect in postmenopausal women.

Overall, there was a 34% reduction in relative risk of relapse and a 26% reduction in the relative risk of death. In premenopausal women, DFS was 37% and 26% and OS 47% and 24% for the CMF and control groups respectively. In contrast, in postmenopausal women, DFS was 26% and 24% for CMF and control and OS was 22% in both groups. We have subsequently relied on the Early Breast Cancer Trials’ Collaborative Group (EBCTCG) Overviews for evidence that chemotherapy does indeed provide advantages for postmenopausal women.

Concurrent with Jan Stjernswärd’s initiative, a group of oncologists at the Welsh National Medical School in Cardiff showed in randomised controlled trials (RCTs) that chemotherapy and endocrine therapy produced similar outcomes for women with advanced breast cancer.1 This pioneering studies of quality of life (QoL), using

LASA (Linear Analogue Self Assessment) scales for the first time in oncology, established that endocrine therapy was associated with a better QoL despite a smaller response rate.3

Formation of the ANZ BCTG

The ANZ Group was initially established in the Department of Surgery, University of Melbourne at the Royal Melbourne Hospital in 1978 (with one data manager, one computer, one National Health and Medical Research Council grant and 14 collaborating institutions) and relocated to the Department of Surgical Oncology, University of Newcastle, at the Newcastle Mater Hospital in 1987.

In 1977 a young and enthusiastic group of oncologists returned to New Zealand and from centres in North America and Europe and brought experience and ideas from Cardiff, the Eastern Co-operative Oncology Group and the MD Anderson Hospital in particular. A similar meeting to that held in Lausanne led to the establishment of the new ANZ Group. The first ANZ BCTG trial, ANZ 7801/2, commenced in 1978. It compared first line treatment of advanced breast cancer with cytotoxic therapy (AC), endocrine therapy (tamoxifen in postmenopausal women and oophorectomy in premenopausal women) and also combined therapy with both modalities.4 These trials were the forerunners of the LBCSG small premenopausal trial from the Mayo Clinic and were successful.

From the outset it was recognised that sufficient accrual in Australia and New Zealand to complete adjuvant trials in a reasonable time frame was a plausible, so adjuvant trials were supported through collaboration with the new LBCSG. In 1975, there was no mammography screening and women with breast cancer presented because of clinical symptoms; patients were treated with a radical mastectomy (usually a Halsted mastectomy); lymph glands were not counted, steroid receptors were not measured, there was no adjuvant systemic therapy and breast cancer mortality had probably not changed for some 2000 years. The largest of the initial LBCSG adjuvant trials had just 491 patients. It soon became apparent that clinical trials introduced new standards of care – in LBCSG I-IV, lymph node had to be counted and examined, pathology protocols were standardised, follow-up was according to an agreed protocol and an international quality review facilitated reliable measurement of steroid receptors for the first time. This was the beginning of “evidence-based medicine” for management of breast cancer.

Lessons from the initial trials

After a median follow up of 20 years, women in LBCSG trials I, II and III were supported with first line treatment with tamoxifen or chemotherapy and additional tamoxifen (even with 1-3 positive nodes), had an OS of 54% and a DFS of 40%, clearly better than what might have been expected before adjuvant chemotherapy. LBCSG Trial II produced the first evidence that in premenopausal women with an endocrine sensitive tumour, the combination of endocrine therapy (oophorectomy) and chemotherapy might be superior to chemotherapy alone. This was followed by a wave of current trials for premenopausal women investigating combinations of chemotherapy and endocrine therapy. In LBCSG III, the first evidence was obtained that, in postmenopausal women with endocrine sensitive tumours, there may be no difference in efficacy between chemotherapy and additional tamoxifen (even with just 12 months therapy - current tamoxifen is five years), but in women with endocrine insensitive tumours, tamoxifen is no better than control and chemotherapy is indeed superior to both tamoxifen and control. These analyses by steroid receptors status were retrospective. They identified new questions and hypotheses which led to International Breast Cancer Study Group (IBCSG) trials 8 and 9, with prospective stratification by steroid receptor categories, and now in 2006, to new trials for chemotherapy and endocrine therapy for young premenopausal women with endocrine sensitive tumours. Progress may seem slow, however the importance of quality data, sufficient accrual, prospective stratification, prospectively planned substudies and broad cooperation were important in the beginning and remain so today. And new hypotheses based on Trials I-IV have been largely proven. Today endocrine therapy is confined to endocrine sensitive tumours.

After LBCSG trial V accrual was completed in 1985 the LICR decided to focus on laboratory research and confined its LBCSG trials support to follow-up of trial V. The LBCSG continued, with a strong focus on endocrine therapy, the IBCSG, which has since built on the substantial contributions of the LBCSG. The ANZ BCTG continued its strong focus on advanced breast cancer. New hypotheses which led to International Breast Cancer Study Group (IBCSG) trials 8 and 9, with prospective stratification by steroid receptor categories, and now in 2006, to new trials for chemotherapy and endocrine therapy for young premenopausal women with endocrine sensitive tumours.

In 1978 advanced breast cancer was increasingly being treated with cytotoxic chemotherapy, particularly in the USA. In 1980, the ANZ BCTG and the IBCSG produced a trial done at that time with accrual of 408 patients. First line treatment with chemotherapy or combined modality therapy produced no apparent advantage in terms of survival and QoL was compromised. There was almost no receptor data, as tissue biopsies were not often done for the relapsed patient and very few women had receptors measured at the time of their primary treatment. Despite this, it was clear that patients treated with endocrine therapy had a similar survival and a superior initial QoL. Today the availability of tissue from women with advanced breast cancer is becoming very important because it is required to reliably select patients for clinical trials based on biological assays; increasingly we are able to identify
the many patients who do benefit from chemotherapy and targeted therapies. In 2006, we now have active targeted therapies to treat advanced breast cancer and can approach it as a potentially curable disease.

**Wider international collaboration**

The EBCTCG Overviews have been vitally important in answering major questions and consolidating evidence-based treatments. They have been strongly supported by the ANZ BCTG and the IBCSG. The Overviews have added a new dimension to RCTs and have provided the most reliable evidence to support the use of many current treatment strategies, including ovarian ablation, tamoxifen in premenopausal women and for longer duration, for chemotherapy for tumours combinations rather than single agent chemotherapy and anthracycline containing chemotherapy regimens. The EBCTCG Overviews have been used in the overview of reduced rates of contralateral breast cancer for women taking adjuvant tamoxifen, was a sound basis for IBIS I and other tamoxifen prevention trials. However some adjuvant trials today test a specific treatment modality and involve defined patient subsets for “targeted” therapy evaluation. These trials are very large and future overviews may be simpler and more defined. The 2005 EBCTG overview involved much broader patient groups. The first CMF trial involved 386 pre and post-menopausal women. The second CMF trial involved 465 metastatic inhibitor trials, evaluating anastrozole, exemestane and letrozole, collectively involved more than 22,000 patients; the tamoxifen duodenal recurrence trials both involved more than 20,000 women. The importance of coordination has never been more apparent.

The Breast International Group (BIG) was established to increase accrual for the large trials needed to address important questions in patient subgroups including use of taxotere, trastuzumab (Herceptin), aromatase inhibitors and new targeted therapies directed against cellular molecular targets. The ANZ BCTG is a founding member of BIG and has a strong collaboration with other groups to contribute to other trials. This collaboration has involved trials for ductal carcinoma in situ, as well as prevention with Cancer Research UK and the International Breast Cancer Intervention Group (IBIS), the Clinical Trials Service Unit at Oxford (ATLAS), the North American Intergroup (menstrual cycle and surgery trials) and the new endocrine trials in younger women, trials of the Breast Cancer International Research Group (BCIRG, now CIRC) and groups established to conduct the ATAC (Arimidex Tamoxifen Alone or Combined) and IES (International Exemestane Study). This collaboration has been valuable and has provided early access to new agents and quality research for researchers and patients.

**Growth of the ANZ BCTG**

The ANZ Group has continued to conduct its own advanced breast cancer trials. Accrual has generally been adequate for this however wider collaboration is required for trials with treatments targeted to smaller patient subgroups. The ANZ Group has built an international reputation for its work with advanced breast cancer, from ANZ 7801/02 through trials of intermittent versus continuous therapy, hormone, combination chemotherapy, high dose CT and new agents. From the beginning, the ANZ Group has explored QoL studies and helped establish QoL measurements as the norm rather than an add on for many trials – led globally by Alan Coates. The ANZ BCTG is a breast cancer clinical trials research group which uniquely encompasses trials for prevention and both early and advanced breast cancer. The ANZ BCTG model includes a small number of CTectors, responsible for legal and financial affairs; the Scientific Advisory Committee (SAC) responsible for setting the scientific agenda; the Operations Office which is responsible for all aspects of conduct of the research program; and the ANZ BCTG Statistical Centre currently contracted to the National Health and Medical Research Council (NHMRC) Clinical Trials Centre. The Group Coordinator and SAC Chair are appointed by the Board. The SAC is not representative – it simply requires individuals with the knowledge and ability to contribute to the scientific agenda of the group. The ANZ BCTG established the Breast Cancer Institute of Australia (BCIA) as an operating division for education, consumer affairs and the Operations Office EBCCTG overseeing involved many broader patient groups. The first CMF trial involved 386 pre and post-menopausal women. The second CMF trial involved 475 metastatic inhibitor trials, evaluating anastrozole, exemestane and letrozole, collectively involved more than 22,000 patients; the tamoxifen duodenal recurrence trials both involved more than 20,000 women. The importance of coordination has never been more apparent.

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**Local therapy in a systemic world: the evolution and cartography of adjuvant radiotherapy for breast cancer**

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**Abstract**

Alan Coates’ career has seen the evolution of radiotherapy in the adjuvant treatment of breast cancer move from the only modality available, through a period of little utilisation, to its current resurgence amid technology that can provide treatment to regions at risk with little dose delivery to sensitive normal tissues. The results of the early randomised trials reflected poor trial entry procedures, poor dose delivery of the radiotherapy and little accurate targeting of the region of interest. It was a leader in the era of evidence: if a treatment modality was to be used there must be evidence as to its efficacy. With the development over the last 15 years of high quality machinery and clinical practice...
In farewelling Professor Alan Coates it is easy to consider multdisciplinary care. How far back must we go to reach an era in which he has not dominated the breast cancer literature?

Halsted described his mastectomy in a paper in 1894.1 The term radiotherapy came into use in 1906. The discovery of the properties of radiation a small number of years later led to its rapid inclusion in the treatment of breast cancer. It was an era in which there was no systemic therapeutic modality for breast cancer. Radiotherapy, however, remained for over 70 years, the sole modality for reducing the risk of recurrence after surgery for breast cancer. It clearly worked. The role for radiation therapy in improving the outcome of local recurrence has not been disputed.2 During the 1980s as clinical trials confirming the benefits of adjuvant chemotherapy on survival became widespread, the benefits of radiotherapy on survival and even its role in reducing local recurrences once chemotherapy was employed, was seriously questioned.

Postmastectomy radiation therapy: historical data

The early randomised trials of radiotherapy after mastectomy did little to enhance the value of the modality.3,4 We can look at them now and all were seriously flawed. One in particular was statistically invalid terms of the dosing for the radiation,5,6 or in terms of the volume of the patients treated.7,8,9 Usually an unacceptable amount of cardiac inclusion. The best of the trials was the Stockholm I Trial. It was started in 1971 and included 960 patients with operable disease. The study compared adjuvant radiotherapy with modified radical mastectomy alone. There was a clear improvement in the recurrence-free survival with radiotherapy (p<0.001) and in the higher risk group with node-positivity as well as improvement in both loco-regional recurrence (p<0.001) and distant metastases (p<0.01). With follow-up there was a non-significant trend to improved survival.10 This was set against an emerging literature of a decreased survival for those patients undergoing adjuvant radiotherapy.11,12

The publications of Cuzick highlighted this and pointed specifically at an excess of cardiac deaths in those early trials reviewed.13 Chemotherapy alone however, did not adequately address local control.14,15 While there was a small reduction in the rates of local relapse, patients at medium to high risk continued to accrue local recurrences, with the rates increasing over time. Even the introduction of high dose chemotherapies did not reduce the rate of local chest wall recurrence. This era however, where many patients received adjuvant systemic therapy without radiotherapy, has allowed us to identify those groups of patients at highest risk of local recurrence. The largest of these data series is from the International Breast Cancer Study Group,16 an analysis of 5342 patients with breast cancer. They identified that for node negative patients, factors associated with increased risk of loco-regional relapse were vascular invasion and tumour size greater than 2cm for premenopausal women and vascular invasion for postmenopausal women. The 10-year cumulative incidence of locoregional failure was 16% for premenopausal and 19% for postmenopausal women. For the node positive group, the number of nodes and tumour grade were important for pre and postmenopausal groups, the additional predictors of vascular invasion for premenopausal women and tumour size for postmenopausal women. The 10-year risk of local relapse was 35% for the high-risk premenopausal group and 34% for the postmenopausal group. Clearly for such a group of patients the delivery of postmastectomy radiotherapy is important. The challenge is to deliver the treatment without the late principally cardiac morbidity. Postmastectomy radiotherapy: the modern era

In the past 15 years, the development of new equipment and techniques, coupled with an expansion of radiobiological understanding of dose-response relationships for breast cancer, has revolutionised the delivery of radiotherapy for this disease. Modern radiotherapy avoids direct irradiation of the heart and delivers a more effective dose to the regions most at risk of recurrence. Evidence is emerging that this is now converting the advantage of adjuvant breast cancer deaths to improvements in overall survival.

The publication of two randomised trials in 1997 by Razag and Overgaard were the first suggestions of such improvements. Both trials showed significant improvements in overall survival, in addition to the benefits of their chemotherapy. The Overgaard trial (9% at 10 years) and the Razag trial (10% at 20 years),4 showed improvements in overall survival from the addition of radiotherapy. A separate cardiac substudy with the Overgaard study showed no excess cardiac morbidity.4 Such single institution data needs confirmation however, and that has been achieved with the publication of a meta-analysis.17 The most compelling evidence that the delivery of improved radiotherapy and targeting of the radiotherapy, as opposed to confounders in surgery and chemotherapy, came earlier this year. Gebksi et al published a sophisticated analysis of all postmastectomy radiotherapy studies according to the biologically equivalent dose delivered, the region and volume included in the target volume and whether the radiotherapy was delivered in a truly adjuvant situation or to compensate for inadequate surgery. They demonstrated in a meta-analysis of trials using optimal radiation therapy dose, delivered to appropriate target volumes, that there was an improved overall survival benefit. Furthermore, the relative risk reductions in all-cause death were calculated to be greatest for those at greatest risk of death, with a 16% reduction in the risk of death for this group. A 13% relative risk reduction was seen for premenopausal and 7.8% for the low risk group. This is consistent with the clinical benefits seen in the Ragaz and Overgaard studies.

Breast conservation

Meta-analysis of the 15 randomised breast conservation studies has shown a similar survival benefit of 8% relative reduction in all-cause death (hazard ratio = 0.92,95% CI = 0.85 to 0.98).18 The decision to advocate for radiotherapy in the breast conservation setting however, has always been more compelling, as the risks of local relapse carry with them increased rates of metastasis in a group of women who have chosen to keep their breast.

Multidisciplinary care

Clearly the clinical challenge is to optimally integrate all modalities of treatment. This is the fundamental outcome of multidisciplinary care. The multidisciplinary clinic in which Alan Coates practised his clinical oncology was a great forum for that, providing guidelines for the delivery of systemic therapy for patients not on clinical trials as early as 1996. At the same time we had guidelines for the indications for radiotherapy and both were freely discussed, as were the patients being seen. The radiotherapy and chemotherapy clinics ran side by side in the environment of great intellectual flair. As national bodies and governments endeavor to establish criteria by which such clinics can be optimised,19 a clinic in which systemic and local therapy decisions are optimally integrated must remain an ideal.20

References

A study reported by Coates et al in 1983 is often quoted in support of the rationale for the research effort to prevent chemotherapy induced emesis.1 In this study, 99 patients who had received a range of cytotoxic drugs within the previous week were shown a set of 45 cards with physical side-effects and 28 cards with non-physical side-effects, from which they were asked to select the side-effects they had experienced and subsequently to rank their severity. When all the results were combined for this group of patients, vomiting and nausea were ranked first and second.

Not only are nausea and vomiting distressing side-effects in their own right, but they also adversely impact on the quality of life of patients. A group of 832 chemotherapy naive patients who received chemotherapy of high or moderate emetogenic potential completed both the European Organization for Research and Cancer Care Quality of Life Questionnaire (QLQ-C30) before and after chemotherapy, as well as a self report nausea and vomiting diary. Those patients who reported both nausea and vomiting in comparison with a group who reported neither, had significantly worse physical, cognitive and social functioning, global quality of life, fatigue, anorexia, insomnia and dyspnea. Those patients who experienced nausea only had less worsening of symptoms. The health related quality of life scores returned to baseline, or better, within two to four weeks.

Patient versus observer assessments

A strength of these studies is that patients are being asked to assess their own symptoms. In the design of many antiemetic studies both the patient and an observer record the nausea and vomiting. Intuitively one might expect objective clinical data to be recorded by observers, particularly if the patients are feeling unwell or their drugs have sedative side-effects. In testing this, Kris and colleagues in a study of nausea and vomiting following high-dose cisplatin, found that the directly observed and patient recalled number of emetic episodes correlated very well (r = 0.989, p < 0.002).5 Subjective sensations such as nausea can really only be assessed by patients. Observers would need to question the patient to record their severity. Fetting and colleagues reported a significant relationship between patients self reporting of nausea and that of observers in a study of emesis after high dose cyclophosphamide.

We examined three of our randomised antiemetic studies to investigate the relationship between patient and observer assessments.1 In one parallel subjects study there was no significant difference between the patients and nurses assessments of the number of vomiting episodes, but the duration of vomiting, the severity and duration of nausea and the side-effects of the antiemetic were given higher scores by the nurses. The high scoring for emesis by the nurses however, the antiemetic were given higher scores by the nurses. Severity and duration of nausea and the side-effects of chemotherapy correlated very well (r = +0.98, p < 0.025).3 In this study on 100 patients the shift from physical to psychosocial concerns and ranked fatigue as the most severe physical symptom.1 A trial in the Netherlands reported a significant correlation in patients who had received either cisplatin or paclitaxel chemotherapy.10 Shifting concerns from physical to mental side-effects of chemotherapy was repeated.10 There was not surprising when the SHT, literature is analysed. As a result of these studies, they may have recorded the number of vomiting episodes each hour as occurred in the parallel design study. Therefore there are differences between patient and observer assessments of nausea and vomiting which may be related to the time of the collection, but highlight the hazards of comparing data between studies and suggest the limits to the accuracy of relying only on patient reporting.

The 5 hydroxytryptamine, antagonists

Emesis following chemotherapy became particularly problematic with the introduction of cisplatin in the mid 1970s. It was recognised that anticholinergics should be given prophylactically to prevent emesis, but the available drugs were ineffective. The main antimetics tried were the dopamine antagonists, particularly metoclopramide which blocked the D2 receptor, thought to mediate emesis. Subsequently, based on animal studies, high doses of metoclopramide, up to 3mg/kg, were more effective for preventing cisplatin induced emesis, but caused more side-effects including spastic extrapyramidal reactions. It is now known that patients rated nausea and vomiting so high in the list of the worst side-effects of chemotherapy.

A breakthrough in the control of acute chemotherapy induced emesis occurred with the recognition that the 5 hydroxytryptamine, (5HT) receptors in the small intestine were involved in triggering the acute emetic response to cytotoxins. The first of the 5HT, receptor antagonists, ondansetron, dramatically reduced the acute phase of emesis in the first 24 hours after the administration of chemotherapy. Ondansetron was shown to be superior to high dose metoclopramide regimens for preventing chemotherapy-induced emesis with the mild reversible side-effects of headache, constipation and mild elevations in liver transaminases being the most common side-effects.1 A SHT, receptor antagonist combined with dexamethasone became the gold standard given prophylactically to prevent acute post chemotherapy induced emesis.4 This resulted in complete protection from cisplatin-induced acute emesis ranging from 70-90%.6

Patients' perceptions

Ten years after the initial study reported by Coates et al, and following the introduction of the SHT, receptor antagonists, the study on patient perceptions of the side-effects of chemotherapy was repeated.9 There was a change in the ranking of side-effects by severity, but nausea was still ranked first. Vomiting was now ranked fifth and related tiredness and hair loss and from concern about physical to psychosocial issues. In exploring the predictors of whether nausea and vomiting were selected as one of the top five symptoms, nausea within 24 hours was the strongest predictor of the nausea ranking, followed by delayed nausea, that is nausea after 24 hours. Delayed vomiting was the most powerful predictor of the ranking of vomiting.

These results were confirmed by others. A French study in 100 patients noted the shift from physical to psychosocial concerns and ranked fatigue as the most severe physical symptom.11 A trial in a randomised controlled trial of patients who had received either cisplatin or paclitaxel chemotherapy.10 There was not surprising when the SHT, literature is analysed. As a result of these studies, they may have recorded the number of vomiting episodes each hour as occurred in the parallel design study. Therefore there are differences between patient and observer assessments of nausea and vomiting which may be related to the time of the collection, but highlight the hazards of comparing data between studies and suggest the limits to the accuracy of relying only on patient reporting.
Abstract
During the 1970s cancer chemotherapy began to emerge from the research environment of leukaemia and paediatric cancer units to become a part of the management of common cancers occurring in adults. Expectations were high that the successes of chemotherapy in leukaemia and lymphoma would be mirrored in treatment of adult solid tumours. This first paper provides a historical account of the Royal Prince Alfred Hospital in 1977, reported in 1980 that approximately half the chemotherapy given to adults was palliative cure.

In August 1980, Alan Coates was recruited to join the staff of the Sydney Branch of the Ludwig Institute for Cancer Research. He was to remain at Royal Prince Alfred Hospital (RPAH) until he took up his current position as Chief Executive Officer of The Cancer Council Australia (then the Australian Cancer Society) in 1998. His extensive and distinguished clinical and research contributions over these years are reviewed in this issue of Cancer Forum. I am reviewing a series of papers presented with the title On the receiving end from 1983 to 1996. These papers span time during which cancer chemotherapy expanded rapidly, along with developments in supportive care. The papers illustrate Alan Coates’ skills in measurement and analysis and also document changes over a 10-year timeframe in patient perception of the relative importance of different side-effects of chemotherapy. These changes mirror changes in cancer chemotherapy and supportive care and the evolution of patient-centred care. Moreover, the co-authorship of these six papers indicates the collaboration with Alan Coates has been a passport to distinction in clinical cancer research.

The first paper in the series reported a survey of 99 English-speaking outpatients who attended medical oncology outpatients at RPAH who had received chemotherapy within the four-week period before study entry. Patients had received a median of three cycles of their current therapy. Two sets of cards were prepared. On each card was the name of one potential side-effect of chemotherapy. Group A cards (45 cards) listed physical side-effects and Group B (28 cards) non-physical side-effects. Patients selected cards from each group which described a side-effect they attributed to their chemotherapy and then they ranked the top five cards in each group. The top five cards in each group were combined and the patient selected the five most severe symptoms regardless of group putting them in order from most to least severe. The median number of non-physical symptom cards selected was seven and of physical symptoms 12, giving a total number of symptoms selected of 19. The relative severity of side-effects for the entire group ranked the top five side-effects as vomiting, nausea, loss of hair, thought of coming for treatment and length of time treatment takes at clinic. The abstract concludes: “Evaluation of patient perception of the severity of side-effects is an aid to striking the cost-benefit balance when deciding whether to use cancer chemotherapy.”

The second paper describes the application of linear analogue self-assessment (LASA) scales to evaluate general well-being and the severity of certain specific problems (mood, pain, nausea and vomiting, appetite, breathlessness, physical activity) perceived by 110 patients receiving therapy for malignant melanoma, small cell lung cancer and ovarian cancer. A number of correlations were observed and it was concluded that LASA technique provides a convenient method for the assessment of quality of life (QoL) in patients receiving cancer therapy and potentially allows comparison of patient perception of treatment-related morbidities. The third paper extended the use of LASA scales for eight groups of symptoms identified as important in the earlier studies. These items formed a new instrument (GLO-B) for measuring aspects of QoL. One hundred and sixty-six patients completed both the GLO-B and five previously validated LAA scales, together with the visual analogue version of the Spitzer QL Index. The new scales showed high reliability, with test–retest correlation coefficients exceeding 0.8 for most items. Correlations were in general higher for the GLO-B items than for the five older LAA items. It was concluded that the GLO-B and GLO QL indices were convenient and reliable instruments measuring aspects of patient’s QoL in patients receiving cancer chemotherapy. The fourth paper in the series extended cross validation of the GLO-B against three established measures of QoL, mood and psychological adjustment to cancer. Correlations were high and it was concluded that the relative inclusion of practical indicators of aspects of QoL in clinical trials would allow improved assessment of the cost-benefit ratio of treatment to outcome in cancer patients.

The fifth paper replicated the first paper in patients receiving chemotherapy at RPAH 10 years after the initial report. Patients reported experiencing an average of 20 symptoms (13 physical and seven psychological). Nausea was the most severe symptom followed by tiredness and loss of hair. Vomiting was now ranked fifth, compared to first in 1983. Differences were detected in the symptoms experienced and reported as most severe between chemotherapy regimens, between older and younger patients, and between males and females. It was concluded that there had been a reduction in the severity of some symptoms experienced while receiving chemotherapy and a shift from concerns about physical to psychosocial issues.

The final paper explored which dimensions of QoL scores carry prognostic information, a theme discussed further by others in this issue of Cancer Forum.

Conclusions
This sequence of papers under the title On the receiving end provides insight into Alan Coates’ attention to the needs of patients, the detailed and creative analysis of results and the need to compare new instruments to determine their worth over earlier measures.

References

On the receiving end: cancer patients’ perceptions of the burden of chemotherapy
Martin NH Tattersall University of Sydney and Royal Prince Alfred Hospital Email: mtn@med.usyd.edu.au
Chemotherapy can improve QoL by shrinking tumours and improving cancer-related symptoms, but it can impair QoL by damaging normal tissues and causing treatment related side-effects. A major practical question for patients and doctors was whether responding to chemotherapy is worthwhile, is it better to continue it until disease progression, or to stop after some number of cycles, reserving further cycles for subsequent progression.

The seminal trial addressing this question was designed by Alan Coates and reported in the New England Journal of Medicine in 1988. This Australia New Zealand Breast Cancer Trials Group study compared two strategies of cyclical treatment in the management of operable breast cancer: continuing it until disease progression (continuous) versus stopping it after three cycles and restarting chemotherapy for patients who responded to chemotherapy with evidence of disease progression.

The study showed that the women who had adjuvant chemotherapy to determine remission of breast cancer before starting further chemotherapy, had improved survival and reduced relapse. These findings suggested that the association between QoL and survival was related to cancer-related symptoms, and they were compatible with a simple explanation that patients who were able to successfully control or delay disease progression before it was evident and also with a more complex causal relationship where QoL influenced survival duration.

Observations for other countries, treatments and eras showed that QoL scores were highly significant predictors of survival, regardless of whether they were assessed by patients or their doctors. The prognostic significance of QoL scores was corroborated in a trial of adjuvant chemotherapy for metastatic melanoma, and subsequently, in women with a range of metastatic cancers being treated in routine clinical practice in several countries. Observations for women in early breast cancer trials showed that ratings of QoL after relapse were associated with overall survival, but ratings before relapse were not associated with outcome.

These findings suggested that the association between QoL and survival was related to cancer-related symptoms. They were compatible with a simple explanation that patients perceived disease progression before it was evident and also with a more complex causal relationship where QoL influenced survival duration. Subsequent observational studies showed that differences in coping styles and adjustment strategies were associated with differences in overall survival and in QoL over time in patients with melanoma that was localised or metastatic. Styles of coping and adjustment were also associated with survival in women with metastatic breast cancer.

These studies suggested that the use of minimisation and avoidance were associated with longer survival and led to a randomised trial to test the benefits of encouraging patients to use these coping styles and adjustment strategies.

Small benefits are judged sufficient to make adjuvant chemotherapy worthwhile.

International randomised trials in the 1970s and 1980s established that adjuvant chemotherapy could improve relapse-free and overall survival in early breast cancer, but that it also had measurable adverse effects on QoL. These adverse effects on QoL were transient and seemed minor compared with patients’ adaptation and coping after diagnosis and surgery. Investigators concluded that this finding should encourage patients and doctors to choose appropriate adjuvant therapy with less concern for initial toxicity.

Continuing chemotherapy gives better length and quality of life (QoL) than giving it intermittently.

Quality of life research that shaped oncologists’ thinking and practice
The Clinical Oncological Society of Australia (COSA) and The Cancer Council Australia recently provided a joint submission to a Department of Education, Science and Training (DEST) study aimed at determining how Australian medical schools can ensure undergraduates have the right skills, knowledge and professional attitudes to become successful interns and continue their professional development after graduation.

The submission, prepared by The Cancer Council’s advocacy hub with expert advice from the Joint Oncology Education Committee and COSA Council, drew heavily on the Ideal Oncology Curriculum to make a number of recommendations designed to ensure cancer management skills in undergraduate and postgraduate medical students reflected the disease’s impact on the community.

It was the latest in a series of joint submissions to public consultations focusing on reform of the medical sector in preparation for population ageing. Other recent inquiries include the Productivity Commission’s review of the medical workforce, which looked at systemic barriers to effective practice from workforce planning and service delivery, and a study into the economic impact of changes in medical technology. Copies of the joint submissions to these consultations are available at www.cancer.org.au/policy_submissions.

Background

Key stakeholders across Australia have been engaged in widespread debate about medical training in universities, prompting the former Minister for Education, Science and Training, Dr Brendan Nelson, to commission a study that essentially asked the question: “What makes for successful medical education?”

The study looked into graduate learning outcomes, including expected skills and knowledge, and the transition to internship and postgraduate specialist training. It was first proposed by Minister Nelson in an address to the Australian Doctors’ Fund in February 2005.

A roundtable discussion with peak medical bodies was held in May 2005 to discuss the scope and focus of the study, which led to the establishment of a steering committee tasked with clarifying the scope of the study and identifying the relevant strands of research required. The steering committee endorsed several complementary research methodologies for three separate but related strands of research, to investigate the educational outcomes required and how well those requirements are being met.

The research will be completed through a combination of contracted consultancies and DEST activities, which included the public consultation to which COSA and The Cancer Council responded.

Strands 1 and 2 are examining the knowledge, skills and professional and cultural attitudes required to prepare graduates for internship and future specialist training, while Strand 3 is examining models of clinical education and the use of clinical teachers in medical education.

The findings will be analysed and consolidated in a final report to inform the future development of undergraduate medical education in Australia, which is expected to be presented to the new minister, Julie Bishop, early in 2007.

COSA/The Cancer Council Australia response

The study’s terms of reference examined undergraduate and postgraduate competencies, ‘readiness’ and attitudes, and undergraduate clinical education models that addressed the need for greater efficiency at the intern level and as preparation for postgraduate training.

A centrepiece of the response by COSA and The Cancer Council was our concern about the decline in cancer management skills observed in medical students and graduates over the past 10-15 years, at a time when the burden of cancer is increasing in step with population ageing.

Much of the evidence to support our recommendations was based on a comparative study published in the Medical Journal of Australia in 2003, indicating that recent medical graduates had less exposure to cancer patients than those who had been trained 11 years earlier.

The submission also drew upon two previous studies that demonstrated that the comparative reduction in skill levels was part of an alarming, longer-term trend.

As a more general point, COSA and The Cancer Council emphasised that much-needed improvements in cancer management training can be applied to all clinical disciplines and are particularly relevant to communications skills, medical ethics and the principles of life-long learning – all essential to continual improvement in the healthcare system and among individual professionals.

COSA and The Cancer Council’s key recommendations in the context of the terms of reference are that:

- DEST identifies the improvement of cancer management competency as a core medical education priority.
- Minimum standards in cancer management competency for graduates be established nationally, along with a mechanism to monitor continual improvement in postgraduate cancer skills and knowledge.
- DEST scopes ways in which COSA and The Cancer Council Australia’s Ideal Oncology Curriculum can be adopted throughout Australian medical schools.
- Undergraduates and interns perform minimum clinical cancer management practice and that a cancer exit exam, based on the outline developed by COSA and The Cancer Council, be incorporated into relevant medical curricula.
- DEST explores options to ensure students in rural locations have adequate access to clinical experience in all elements of multidisciplinary cancer care, including modalities such as radiation therapy for which there is limited local infrastructure.
- DEST notes the decline in interns’ cancer management competency observed in recent studies and identifies reversing this trend as a priority for graduates and in prevocational and postgraduate training.
- DEST supports the introduction of a national system of credentialing for cancer professionals, to ensure that postgraduate training in major clinical discipline translates to ongoing adherence to best practice.
- DEST explores opportunities to translate the increase in Australian Government support for independent cancer clinical trials into improvements in medical education.

An increased understanding of the role of complementary medicines and patient interest in them be incorporated into medical curricula where appropriate.

The increased role general practitioners play in cancer prevention and early detection, particularly in the diagnosis and treatment of skin cancer, be factored into prevocational and postgraduate training.

Training modules in the prevention and treatment of chronic disease be developed nationally, according to current epidemiological evidence and projections.

The role of practising clinicians as on-the-job trainers of medical undergraduates and interns be formally recognised and supported through national train-the-trainer and incentives schemes.

COSA and The Cancer Council Australia, through The Cancer Council’s advocacy hub, will continue to monitor developments. Cancer Forum readers who would like to express their interest in the process should contact their COSA Council representative to be informed about this and any other advocacy/policy activity.

References


18th LORNE CANCER CONFERENCE

9 – 11 FEBRUARY 2006

After visiting Phillip Island last year, the Lorne Cancer Conference returned to its spiritual, and now refurbished, home at Lorne. Grey skies kept the lure of the surf at bay and everyone inside the seminar room for three days of presentations, covering an exciting program with a focus on oncology and targeted drug therapies.

The first day featured sessions on apoptosis, tumour suppressors and molecular therapeutics. Highlights included Doug Green’s surprising story of the glycolytic enzyme glyceraldehyde-3-phosphate dehydrogenase (GAPDH) and its role in protecting cells from caspase independent death. Numerous reports have now shown that cells with inactivated caspase cascades can still die in response to mitochondrial apoptotic signalling. A genetic screen was used to identify GAPDH as the major gene that promoted mitochondrial recovery and cell survival in cells lacking a functional caspase-dependent death mechanism. GAPDH is often over-expressed in cancer, but previously it was assumed to be important only for glycolytic metabolism and was not associated with cell survival. Saul Rosenberg (Abbot Laboratories) presented the development of a new drug, ABT-737, that inhibits members of the anti-apoptotic Bcl-2 family. Along with Jerry Adams (Walter and Eliza Hall Institute), who presented in a later session, Rosenberg described how ABT-737 antagonised Bcl-2 proteins to render tumours more sensitive to chemotherapeutic agents, while exhibiting very low toxicity in normal and cancerous
cells. Interestingly, B-cell lymphomas and other tumours associated with transllocations involving IκB-α, undergo apoptosis when treated with the compound alone.

Friday delivered an action-packed program, beginning with a session on cancer epigenetics sponsored by The Cancer Council Australia. One of the main themes of the conference was the genetic regulation of senescence and ageing. David Sinclair (Department of Pathology, Harvard University) gave the first presentation in this session, showing his recent work on SIRT-1, the mammalian homologue of a family of histone deacetylases (HDACs) called sirtuins. Sirtuins are known to prolong the lifespan of simple organisms such as yeast and Drosophila. He presented data showing that mammalian sirtuins, like those in simpler organisms, delay aging by associating and stabilising highly repetitive DNA, but that this association decreases with stress – likely due to links between epigenetic silencing by this family of HDACs, genomic instability, and ageing. Robyn Ward (St Vincent’s Hospital, Sydney) presented her findings on the role of epigenetic mutations in hereditary non-polyposis colorectal cancer (HNPCC). HNPCC is a cancer predisposition caused by heterozygous germ-line mutations of the DNA mismatch repair genes MLH1 or MSH2. Individuals who do not carry mutations in these genes, but instead carried soma-wide monoallelic silencing of MLH1. The clinical outcomes of these individuals demonstrated the monoallelic silencing epimutation is functionally equivalent to the homozygous mutation, but examination of family members demonstrated that the inheritance of the mutation result in complex family histories. Victoria Richer (Mitchel Research Laboratories, Boston) described a model for studying the effects of ageing on tumour progression using long lived C. elegans mutants, which spontaneously form germ line tumours.

The Ashley Dunn oration was delivered by Elizabeth Blackburn (University of California San Francisco), who was the first to characterise the telomerase enzyme. Results from her laboratory have shown that downregulating telomerase by RNA interference rapidly induced growth arrest in cancer cells, without requiring uncapping or substantial shortening of the telomeres. In addition, microarray analysis showed that the knockdown of telomerase changed the expression of many genes – including downregulation of genes implicated in metastasis and angiogenesis. Curiously, expression of a dominant-negative mutant telomerase template RNA produced a very different outcome, uncapping telomeres and rapidly inducing apoptosis in cancerous and pre-cancerous human cells. Her work promotes telomerase as a potential target for anti-cancer therapies.

Many thanks and congratulations must be extended to the organisers for assembling such an excellent array of speakers and to the speakers themselves for the high quality of their research and presentation. Thanks must also go to The Cancer Council Australia, the principal sponsor of the Lorne Cancer Conference and for generously sponsoring the first plenary session and the cancer epigenetics session.

Stephen Loughran and Rohan Steel
Walter and Eliza Hall Institute, Victoria

AUSTRALIAN BEHAVIOURAL RESEARCH IN CANCER

News
n Centre for Behavioural Research in Cancer (CBCRC) WA
Dr Owen Carter has received five-years’ funding to be the Heartway Tobacco Control Research Fellow at CBRC until 2011.

n Centre for Health Research and Psycho-oncology (ChRP) NSW
After four years with ChRP, Deborah Bowman is leaving us to pursue a career in primary school teaching. Deb’s most recent work at ChRP has included managing the trial of communication skills training with Australian nurses and the development of palliative care referral guidelines. Deb has been a valuable member of our team and we wish her well in her new vocation.

n Cancer Research Prevention Centre (CPRC) Queensland
The CPRC has appointed four new research fellows: Dr Sheelagh Lawler (Sun Protection) and Dr Katrina Hausdorff (Tobacco Control) joined the Centre in October 2005 and November 2005 respectively; and Dr Marina Reeves (Physical Activity and Nutrition) and Dr Takemi Suyguma (Physical Activity and the Environment) will take up their positions with CPRC in April 2006. Paul Gardner and Alesha Smith joined CPRC in March after being awarded PhD scholarships in Behavioural and Population Health Studies for Cancer Prevention by CPRC, funded by Queensland Health. In December 2005, Adele Spencer (Logan Project Manager) and Fiona Porter (Logan Intervention Trial Telephone Counsellor) joined the Centre. Research Fellow, Dr Estee Cern, left CPRC to move to The University of Hong Kong in January 2006 but will maintain collaborative links with the Centre. Research Assistant Phoebe Kearey accepted a position with The Queensland University of Technology in December 2005. Logan Project Manager Kirsty Pickering accepted a job offer from Queensland Health in December 2005. Logan Project Telephone Counsellor Melissa Harvey has taken time out to oversee home renovations.

n Tobacco Control Research Evaluation (TCRE) SA
TCRE had a number of oral and poster presentations accepted for the UICC World Cancer Congress and the 13th World Conference on Tobacco or Health.

Research in the pipeline
n Impact of graphic health warnings and mass media campaign on adolescent smoking behaviours
Victoria White and Melanie Wakefield, along with Edith Szabo, are investigating the impact of the new graphic health warnings on cigarette packs on: 1) adolescents’ awareness of health warnings; 2) perceptions of cigarette brand image; 3) thoughts about smoking; and 4) smoking behaviour. A further aim is to determine the impact of a media campaign about the new graphic health warnings on adolescents’ responses. In March 2006, Australia introduced new graphic health warnings on cigarette packs. The introduction of these new warnings was accompanied by a national advertising campaign. An additional advertising campaign promoting the new health warnings will be run in Victoria as well as several other states in May 2006. Currently there is little information on the impact of graphic health warning labels on the smoking behaviours of adolescents. This study builds upon data collected as part of the 2005 Victorian component of the Australian Secondary Students Alcohol and Drug (ASSAD) survey. A sample of schools that took part in the Victorian component of the ASSAD survey in 2005 will be randomly allocated to one of two follow-up conditions. Half of the sample will complete surveys on smoking behaviours and issues relating to the new warning labels approximately four to six weeks after their introduction (April 2006), while the second half will complete the same survey approximately four to six weeks after the launch of the media campaign promoting the new warning labels (June–July 2006). The design will allow us to investigate the impact of the new warning labels on adolescents’ attitudes and behaviours regarding smoking before and after the May media campaign.

How does Quit advertising influence calls to the Victorian Quitline?
The aim of this project, being led by Sarah Durkin, is to better understand the relationship between calls to the Victorian Quitline and various aspects of Quit Victoria’s advertising, in the first instance utilising historical records of advertising on television and radio and calls...
n CHeRP

be adopted around Australia at outdoor recreational venues. In this way, the usefulness of providing information about the optimum level of advertising to drive Quitline calls. The development of this project also has the potential to enable pre-qualification of Quitline calls for future campaigns. n CBCCC

reaching national consensus on cancer-related practice, knowledge and attitude items.

The Cancer Council Australia, through its Public Health Committee, has commissioned Afaf Girgis and Chris Paul to undertake a small project to reach national consensus on cancer-related practice, knowledge and attitude items. The aim is to agree a small core set of items that can be included in state-based surveys as they arise, allowing us to gain a national picture of common items of interest, which can be monitored over time. Representatives from the state-based behavioural research groups are all participating in this consensus process.

Prospective study of non-participants to a smoking cessation intervention trial

Of all risk factors for disease, tobacco smoking is responsible for the greatest burden on the health of Australians and is estimated to kill approximately half of its long-term users. Estimates from the 2004 National Drug Strategy Household Survey indicate that around 2.8 million Australians (17.4% of people aged 14 years and over) smoke tobacco on a daily basis. Cigarette smoking in Australia causes around 40% of male deaths and 20% of female deaths before the age of 65 years and is responsible for 143,000 hospital separations annually. Evidence from randomised controlled trials (RCTs) provide the strongest test of the efficacy of smoking cessation interventions. RCTs establish the size of effect of an intervention in a particular context in a sample who are eligible and willing to receive the intervention. In many smoking cessation studies, a substantial proportion of eligible subjects choose not to participate. Not only are data on this non-participating group necessary to assess the proper context and generalisability of smoking cessation, but other smoking-related attitudes, intentions and behaviours of non-participants also represent an important research priority in their own right. CHeRP, in collaboration with Hunter. New South Wales Population Health, is currently undertaking an RCT that examines the effectiveness of proactive telephone counselling for smoking cessation in a non-smoker population. Households selected randomly from the NSW Electronic White Pages are contacted to establish if there are any adult smokers in the household. One daily smoker per household is randomly selected and invited to participate in the RCT. If the smoker refuses to participate in the RCT, the interviewer invites them to participate in a short baseline interview to assess their quitting-related attitudes, intentions and behaviours. During this baseline interview RCT non-participants are also invited to participate in seven and 13-month post-baseline interviews. The project aims to establish an effective and sustainable set of interventions to reduce the harm caused by smoking among pregnant women in South Australia. It incorporated several phases. One of these phases involved the training of antenatal staff and attitudes and can be assessed longitudinally as well as compared to their RCT participant counterparts.

PASS is funded by a Targeted Cancer Prevention Grant from the National Health and Medical Research Council. It focuses on sun exposure, protective behaviours, social norms and the environmental attributes of sporting settings for young adults who compete in soccer, hockey, tennis and surf sports. The study methods (quantitative, qualitative and observational) and aims to:

- examine the interrelationships between physical activity and sport participation and sun exposure in young adults;
- identify relevant attributes of the settings in which sun exposure takes place, for physically active and sedentary young adults;
- make recommendations on setting-based approaches that can most appropriately address sun exposure in young adults; and
- identify relevant attributes and norms of the social networks (particularly sporting clubs and less formal groups), through which sun protection behaviours may be influenced.

Data collection was completed in December 2005 and a report on the study will be presented to Queensland Health at the end of April. Results of the study will be reported in the next issue of Cancer Forum.

n TCRE

Pilot study to evaluate The Cancer Council South Australia's support and information pack

Approximately 250 recently diagnosed cancer patients will be recruited through their oncologist, to review the newly developed support and information pack. A postal survey will be sent to all consenting participants four to six weeks after they received the pack from their oncologist. This questionnaire has been adapted from the survey instrument used by The Cancer Council NSW to evaluate their state’s pack. One follow-up call will be made to non-respondents offering them the opportunity to complete the survey by telephone. Results of this pilot study will help shape the design and contents of the final version of the pack for distribution in South Australia.

The smoke-free pregnancy project

The smoke-free pregnancy project by Quit SA is underway in four South Australian hospitals including the Lyell McEwin Health Service and the Women's and Children's Hospital. The project aims to establish an effective and sustainable set of interventions to reduce the harm caused by smoking among pregnant women in South Australia. It incorporated several phases. One of these phases involved the training of antenatal staff and attitudes and can be assessed longitudinally as well as compared to their RCT participant counterparts.

n CBCCC

Physical Activity, Sun and Sport (PASS)
New results  

Can home smoking restrictions influence adolescents’ smoking behaviours if their parents and friends smoke?  

Edith Szabo, Victoria White and Jane Hayman examined the effects of home smoking restrictions and the smoking behaviour of parents and friends on adolescents’ smoking behaviours. This analysis was based on data from the Victorian component of the 2002 Australian Secondary Students Alcohol and Drug (ASSAD) survey. Research suggests that the presence of a total ban on smoking in the home is associated with a reduced likelihood of tobacco experimentation among adolescents. While past research has examined the influence of smoking behaviours on this association, no study has investigated the influence of friends’ smoking behaviour. Analyses showed that students living in homes with a total ban on smoking were less likely to be susceptible to smoking or to have experimented with smoking. While the effect of home smoking restrictions on adolescent smoking was strongest when neither parent smoked, the effect was not influenced by the smoking behaviour of an adolescent’s coterie. The results suggest that home smoking bans reduce the likelihood of an adolescent trying tobacco regardless of their friends’ smoking behaviours. It was concluded that if parents adopt strong home smoking bans they will reduce some of the influence of friends’ smoking behaviour on the smoking behaviour of their adolescent children. The paper is in press in the journal Addictive Behaviors.

Observed use of sunglasses in public outdoor settings around Melbourne, Australia: 1993–2002  

Suzanne Dobbinson examined trends in the use of sunglasses in outdoor settings around Melbourne, Australia: 1993–2002. Eye Research Australia, University of Melbourne) and Victoria), Matthew Spittal, Hugh Taylor (Centre for Cancer Research Australia, Centre for Eye Research Australia, University of Melbourne) and Suzanne Dobbinson examined trends in the use of sunglasses in outdoor settings around Melbourne. The study was based on a serial cross-sectional observational survey that assessed sun protection behaviours, including use of sunglasses, from 1993–2002, and other variables hypothesised to predict sun-related behaviour. Predictors of the use of sunglasses (sex, age, socio-economic status (SES), activity level and setting, size of social group, and friends’ smoking behaviour) were assessed using multivariate logistic regression. Overall, 36% of people observed were sunglasses and there was only a slight increase over the years. Sunglasses use was most common among those observed on sunny days, in no shade or partial shade, in parks/gardens and at pools/beaches. Sunglasses use was most common among those observed on sunny days, in no shade or partial shade, in parks/gardens and at pools/beaches. The study investigated the influence of friends’ sunglasses behaviour. Analyses showed that students living in homes with a total ban on smoking were less likely to be susceptible to smoking or to have experimented with smoking. While the effect of home smoking restrictions on adolescent smoking was strongest when neither parent smoked, the effect was not influenced by the smoking behaviour of an adolescent’s coterie. The results suggest that home smoking bans reduce the likelihood of an adolescent trying tobacco regardless of their friends’ smoking behaviours. It was concluded that if parents adopt strong home smoking bans they will reduce some of the influence of friends’ smoking behaviour on the smoking behaviour of their adolescent children. The paper is in press in the journal Addictive Behaviors.

CBRCC Impact of smoking imagery in youth-oriented magazines  

CBRCC assembled a mock youth lifestyle magazine from various pages of other youth magazines that incorporated five photographs of smokers associated with positive attributes such as fun, glamorous, sex, social success, rebellion and power. An identical second version of the magazine was also produced but with the tobacco paraphernalia digitally erased. A total of 357 young people aged 14–17 were recruited, with equal numbers of smokers and non-smokers. Half the smokers and non-smokers were asked to look through the smoking version of the magazine and the other half through the non-smoking version. They were then asked their impressions of various aspects of the magazine, such as the people in photographs, the kind of people who might purchase the magazine and what images they could recall. This was followed by questions encompassing attitudes towards smoking and future intentions to smoke. Smokers were significantly more likely than non-smokers to associate smoking with being cool, sexy, fashionable, glamorous, fun, attractive, popular, tough and independent, but not rebellious. A comparison of smokers and non-smokers who viewed the smoking magazine suggested that the smoking depictions made a greater impression upon the smokers than non-smokers; more smokers were found of the smoking imagery impacting on: the impressions teenagers formed of any aspects of the magazine; their rated urge to smoke; their intentions to initiate or continue smoking in the future; or their magazine purchase intentions. The exception was that smokers who viewed the smoking magazine had significantly higher associations between smoking and ‘sexiness’ in comparison to their counterparts who viewed the non-smoking magazine, while the reverse was true for non-smokers. Smoking imagery appears to have merely reinforced pre-existing notions towards smoking in the present study, but does not preclude a cumulative effect of such imagery over time, nor potential impacts of similar imagery portrayed on higher impact media such as movies. The results are currently being prepared for submission to a scientific journal.

Training in communication skills from a distance: an oxymoron or reality?  

A national team initially led by the late Professor Jill Cockburn has collaborated on a National Health and Medical Research Council funded research grant to examine the effectiveness of consultation skills training with oncologists at improving outcomes for people with cancer. The team comprises Air Grgus and Deborah Bowman from ChErP; collaborators from the universities of Newcastle, Sydney and Queensland; the Peter MacCallum Cancer Centre and the Pam McLean Cancer Communications Centre, along with clinical colleagues from a number of major Australian oncology. We have developed an innovative consultation-skills training program for oncologists, with a particular focus on recognising emotional and psychological cues that indicate possible dysfunction and initiating appropriate management for these. The program is delivered over a six-month period, beginning with a two-day interactive face-to-face workshop facilitated by both an oncologist and a psychologist or psychiatrist with experience in consultation skills training. Based on an evidence-based model, clinicians rehearse aspects of the consultations with actors as simulated patients and self-assess the way that they dealt with psychological issues. The remaining sessions are conducted by video-conference, with the facilitators working from a central location and the doctors and actors participating from one of the four remote, convenient locations. Nineteen oncologists from major cancer centres across Australia and 375 of their patients participated in a randomised controlled trial to assess the program’s effectiveness. The intervention was assessed in terms of patient outcomes – improving patients’ quality of life and preventing patients’ psychological morbidity; and doctor outcomes – improving doctors’ detection of psychological issues in a simulated consultation and reducing risk of burnout among doctors. Results suggest the intervention is highly acceptable to doctors. Furthermore, there were significant differences in the intervention group in both patient and doctor outcomes. Compared to patients of the control doctors, patients of the trained doctors showed significantly reduced levels of anxiety at one week from baseline. There were also trends to improved anxiety levels, reduced psychological and patient care and support needs reported by patients at three months from baseline and reduced depression levels at one week from baseline. Trained doctors’ patients also felt significantly more involved in the consultation. Improvements in doctor outcomes in the trained versus the control doctors included better detection of anxiety in simulated patients at six months post-intervention, higher levels of expression of basic empathy, and detection of distress at 12 months.
The Cancer Council welcomes new CEO

The Cancer Council Australia welcomes new Chief Executive Officer, Professor Ian Olver, who is looking forward to the challenge of leading Australia’s peak national non-government cancer control agency from this month.

The Cancer Council Australia’s President, Mrs Judith Roberts AO, said the role of CEO was one of the nation’s most important community sector positions and Professor Olver was well-placed to take on the role.

“For many years Professor Olver has shown an extraordinary personal commitment to the fight against cancer, through his work in clinical research, publication across a range of cancer-related areas and his involvement in delivering services at the frontline of cancer care, including in remote Indigenous communities,” Mrs Roberts said.

Professor Olver takes on the role of CEO of Australia’s largest federated health charity following his involvement in delivering services at the frontline of cancer care, including in remote Indigenous communities.

“Professor Olver points to several key issues currently facing the cancer community, including the implementation of a national bowel cancer screening program.

“An effective bowel cancer screening program is essential in reducing the death rate from Australia’s second biggest cancer killer,” he said. “The announcement last year of the Commonwealth Government’s bowel cancer screening program is welcome news and we look forward to the roll-out of the program.

“Another key consideration moving forward is how we fund high-cost drugs that can have significant impacts on survival and quality of life of cancer patients and also reduce the risk of cancer recurrence. Herceptin is currently receiving significant media attention, but there are more drugs to come that will fall into the same category.”

Professor Olver said prevention would continue to be a key Cancer Council goal and the challenge for those working in the prevention arena would be to communicate effectively with the Australian public, ensuring the messages about quitting smoking, being SunSmart, maintaining a healthy diet and engaging in physical activity are taken on board and translated into behaviour changes – for themselves and their families.

“The Cancer Council has been a vocal advocate for effective cancer prevention programs, implementing successful SunSmart campaigns and being involved in Quit campaigns,” he said. “We need to continue to communicate effectively with the Australian public, ensuring the messages about quitting smoking, being SunSmart, maintaining a healthy diet and engaging in physical activity are taken on board and translated into behaviour changes – for themselves and their families.”

Here’s hoping

With a target of more than $8 million, Daffodil Day is hoping for a big response to the launch of its 2006 creative campaign.

Based around the theme of hope in defeating cancer and hope for those living with or in some way affected by cancer, the campaign aims to inspire people to participate in Daffodil Day on Friday 25 August.

Once again the ever popular Dougal Bear (dressed by mambo this year) heads the list of merchandise, which includes funky yellow ‘hope’ wristbands and more than two million daffodils.

Chief Executive Officer of The Cancer Council Australia, Professor Ian Olver, said significant advances had been achieved through cancer research, prevention and early detection programs. “Over the past decade, we have seen a significant reduction in the cancer mortality rate in Australia of 17%. Continuing your support for Daffodil Day will help ensure this figure continues to fall,” Professor Olver said.

Funds raised during Daffodil Day activities will contribute directly to Cancer Council initiatives in cancer
Cancer professional development study underway

Cancer professionals, GPs and counsellors are being asked to contribute to a study designed to improve cancer professional development in Australia, as part of the Australian Government’s Strengthening Cancer Care package.

The scoping exercise is being undertaken by a consortium comprising Clinical Oncological Society of Australia, The Cancer Council Australia, the National Breast Cancer Centre, the Royal Australian College of General Practitioners and the University of Sydney’s Centre for Innovation in Professional Health Education (CIPHE). The consortium applied successfully for the Commonwealth contract late last year. CIPHE, which specialises in professional health education, is managing the project under the guidance of the other consortium members.

Phase 1 of the project is a scoping exercise, including a literature review, audit of currently available tools for cancer professional development and widespread consultation to determine the needs and views of the three professional target groups.

As part of the consultation, cancer professionals, GPs and counsellors are being asked to complete an online survey which, along with general information about the project, is available at http://www.cancercpd.org.au/.

Phase 2 of the project, which is not part of the current contract and will be dependent on the results of Phase 1, will look at devising professional development packages in response to identified needs.

Position statements

New position statements

The Cancer Council Australia has issued a new position statement on cervical cancer screening.

The statement provides recommendations relating to cervical cancer screening including:

- Under the provisions of the current National Cervical Screening Policy, women aged 18 to 70 who have ever been sexually active are recommended to have a Pap smear every two years as part of the National Cervical Screening Program.
- In the absence of sufficient evidence to suggest that alternative screening technologies are more effective than the conventional Pap test, a patient-centred approach for individual decisions about screening methodologies is recommended.
- In line with emerging evidence, The Cancer Council Australia supports the move towards the introduction of a three-yearly cervical screening interval in Australian women in conjunction with long-term evaluation in terms of invasive cervical cancer incidence and mortality.

All position statements can be viewed on The Cancer Council Australia’s website at www.cancer.org.au/positionstatements.

Medical and Scientific Committee news

Following his appointment as Chief Executive Officer of The Cancer Council Australia, Professor Ian Olver has stepped down as Chair of The Cancer Council’s Medical and Scientific Committee.

Dr Stephen Ackland, immediate past President of COSA will take on the role of committee chair.

The Committee is the principal advisory committee on medical and scientific matters for both The Cancer Council Australia and COSA.

Advances in Cancer Research

(Vol 91)

GF Vande Woude and G Klein (eds)
Elsevier Academic Press
ISBN: 0-12-006691-2 200 pages plus index
RRP: A$256.30

This book forms part of a valuable series covering a variety of aspects of biomedically-oriented cancer research. The series generally provides state-of-the art summaries on topical areas. In this edition, the editors have included five papers on diverse topics authored by leading experts in their field. At least two of these chapters provide a particularly topical update on two areas that are of great clinical interest, namely the BRC-ABL tyrosine kinase inhibitor, Imatinib and Histone Deacetylase Inhibitors, which are increasingly finding their way into clinical trials. The other three papers cover prostate cancer and the Met Hepatocyte Growth Factor Receptor, Keratinocyte Growth Factor/FGF7 (KGF) and its potential role in epithelial protection and repair and the Raf-1 Kinase Inhibitor Protein (RKIP).

The paper by Brian Drucker provides an informative overview of the molecular biology underpinning chronic myeloid leukemia, development of the BCR-ABL inhibitor Imatinib and pertinent clinical trial information. Important observations on mechanisms of drug resistance and relapse are presented, as well as its increasing role in other diseases, such as gastrointestinal stromal tumours. A personal perspective is provided on “lessons learned from clinical trials” on patient and dose selection, as well as translating the success of Imatinib to other cancers.

Paul Marks, Victoria Richon

An Introduction to the Use of Anticancer Drugs

Imran Rafi
ISBN: 0-7506-8830-0 194 pages plus index
RRP: $75.00

As suggested by the title, this book will provide healthcare workers who come into contact with cancer patients with an overview of the principles of drug treatments in this rapidly evolving field. The author, a senior lecturer
Bowel cancer: foundations for practice
B Borwell (ed)
Whurr Publishers 2005
ISBN: 1-86156-452-X 244 pages plus index
RRP: $23.99

Barbara Borwell describes the book as being “designed and written to assist the reader in embarking on a bowel cancer journey from its evolution and treatment to patient and family centred care”. She continues to state that the purpose of this book is to provide a comprehensive introduction to bowel cancer for all health professionals involved in the care of patients and families and to these ends she fulfils a need. Her background in the field of specialist nursing, with the majority being in cancer nursing, has given her a commitment to patient focused care and multidisciplinary team working.

A particularly helpful feature of this book is the precis provided on issues in the treatment of each of the specific tumours discussed, providing a neat summary of the biology, treatment options, common protocols and treatment for some cancers. An accompanying reference list suggests important studies worth review for each tumour type. These will be helpful to readers who are looking to rapidly review the state of knowledge in regards to therapy for particular cancers. However, despite (or perhaps because of) its brevity, this readily portable text will provide a useful and easy-to-navigate introductory reference to drug therapy in cancer.

In the final chapters, emerging treatment options are addressed, both in general terms and by major tumour type and issues involving drug interactions in the cancer patient are flagged. Several of these chapters conclude with a short list of suggestions for further reading. A somewhat useful list of abbreviations and limited glossaries of cancer chemotherapy terms and regimes are included at the front of the book and an appendix provides a list of websites for both general cancer and tumour-specific information.

with bowel cancer. This section looks at the psychological aspects of care, promoting a patient-centred approach, community care, nutrition, professional issues, then complimentary therapies and help and support for cancer patients and their families. Each chapter is easy to read and understand and at the conclusion of each there is a concise dot-point summary of the key points and an extensive list of references. Some chapters have the added advantage of further readings and useful websites that allow the reader to explore the topic in greater detail.

The inclusion of the “Promoting a patient-centred approach to care” chapter highlights how when care is organised, it potentates and improves the outcome of the treatment and further how patient education and psychosocial support improvements also increase the chances of survival from the disease. “Continuity and community care” emphasises communication, collaboration and coordination as some of the key points in caring for patients, which is useful and relevant information for all health professionals and personnel from other agencies to practice in the care of these patients.

In summary, book is beneficial to nurses, who are the target audience, to help develop skills both theoretically and practically in order to further enhance the quality and effectiveness of patient care.

Michele Carey
Concord Community Nursing Service, NSW

Breast Cancer Answers
Dr Bruce A. Feinberg
Jones and Bartlett (2005)
ISBN: 0-7637-3465-9 111 pages plus index
RRP: $33.00

This book has been written for women newly diagnosed with breast cancer. Its author, Dr Feinberg, describes Breast Cancer Answers as “an outgrowth of my consultations with patients” designed to help reinforce and clarify information on breast cancer and its treatment.

The book aims to answer many of the questions that a newly diagnosed woman may have about her cancer and its subsequent treatment, from diagnosis through to the completion of treatment and ongoing surveillance. Each chapter builds on the information given in the previous chapter and the book has been designed to be easily read from cover to cover in one evening. Illustrations are used to accompany the narrative and to reinforce and clarify the content.

The book begins with a short introduction by the author on how to use it most effectively. It is then divided into three sections and uses a case study format to describe the breast cancer journey to the reader. Section one examines the time before surgery and starts with a comprehensive explanation of the basic science of breast cancer. It ends with an overview of the surgical options including breast reconstruction. It explains some quite complex concepts using simple analogies and illustrations effectively.

Important key words and terms are highlighted in red and can be found in the glossary. Section two examines the planning of systemic treatment and the current systemic treatment for breast cancer. All of the information is current and the author also explains in some detail how standards of care are developed and integrated into clinical practice. Section three touches on issues such as alternative therapies, prevention, advanced cancer and effective follow-up.

The main limitation of this book is that it has been written predominately for American women. Some of the analogies used are specific to the US. The book was also written to fill a gap identified by the author in the American market for quality information on breast cancer. Australian women have access to the National Breast Cancer Centre resources, which are comprehensive, evidence-based and free.

This book is a concise and comprehensive source of information for women newly diagnosed with breast cancer. It is very easy-to-read and the illustrations are extremely helpful in explaining some quite difficult and complex concepts. It is a good starting point for women wanting more information ($33 is not prohibitive) and an excellent resource for specialist breast care nurses and doctors to have at hand for their patients.

Elisabeth Black
NSW Breast Cancer Institute, Westmead Hospital, NSW
Cancer of the Skin

DR Rigel, LM Dzubow, DS Reintgen, JC Bystryn, R Marks (eds)
Elsevier Saunders (2005)
ISBN: 0-7216-0544-3  684 pages plus index
RRP: $327.80
This book is targeted mostly at the practising clinician who diagnoses and treats skin cancer. It has a distinctly North American orientation, from its editorship and authorship, to its content. This will limit its relevance to many practitioners in Australia experienced in dealing with skin cancers on an almost daily basis. While the stated emphasis is on diagnosis and management of skin cancers, the two largest sections are devoted to generic therapeutic considerations and ‘other’ skin cancers ie. other than basal cell carcinoma (BCC), squamous cell carcinoma (SCC) and melanoma. The opening 90 pages address various issues relating to biology, epidemiology and prevention, while the closing pages deal with indoor tanning, photodocumentation of skin cancer and “medical and legal aspects of skin cancer patients.” There is also an accompanying CD of photo images used in the text.

Strong points of the book include: the chapters on the molecular genetics of skin cancer/tumour development and some of the more unusual cancers; the range of photographs of (early) melanomas and of BCCs; and the comprehensive coverage of operative and other management techniques, especially of advanced skin cancer.

Limitations are: the curious order of topics (for example the book opens with a chapter explaining the cellular processes of metastasis of skin cancer, mostly melanoma); the uncoordinated and in some cases conflicting repetition of the same topics by different authors across contiguous chapters; and lack of, or parochial, evidence bases for some topics of fundamental importance to the treating clinician (particularly parts of the opening 100 pages where in some chapters there are whole tracts of facts and figures without a single reference cited).

Overall, despite its idiosyncratic ordering, the book is well presented. Formatting highlights include the ‘key points’ in boxed text at the beginning of each chapter, high quality photographs and diagrams and clear tables, even of complex data. The real downside for an Australian audience at least, is the book’s lack of global perspective, leading to an unusual balance favouring the exotic rather than the common in seeking to cover the development and management of cancers of the skin.

Adèle Green
Queensland Institute of Medical Research

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Dx/Rx Lung Cancer

CG Azzoli
Jones and Bartlett Publishers (2006)
ISBN: 0-7637-2641-9 123 pages plus index
RRP: $55.00
This book on lung cancer is one of the Dx/Rx Oncology series. Dx/Rx Lung Cancer is divided into 12 chapters ranging from epidemiology of lung cancer through to diagnosis and staging, the various treatment options available for small cell lung cancer/non small cell lung cancer, the treatment of common complications of lung cancer, separate chapters for malignant mesothelioma and malignant thymoma and the last chapter, ‘What the Future Holds’ makes for interesting reading.

Dx/Rx: Lung Cancer is not a difficult book to read. Each chapter is concisely written and well organised into an outlined bulleted format and highlights the importance of thorough staging in current lung cancer management. The list of references at the end of most chapters is quite short, though current. I wonder whether this may frustrate those who seek more information. References to recently completed clinical trials is consistent throughout the book. Current chemotherapy and radiotherapy regimes are very well documented as are side-effects and current treatments.

My one criticism of this book is that it does not include the importance of the multidisciplinary team in any of its directions for care regarding patients with a lung cancer diagnosis.

In conclusion, I found that Dx/Rx Lung Cancer to be a valuable and handy resource and I have no hesitation in recommending it. This slim book would sit perfectly in a busy resident’s pocket, in an oncology ward library and would be a useful resource for most healthcare practitioners as a very reliable and up to date tool for those involved in the treatment of lung cancer.

Beth Ivimey
Prince of Wales Hospital, NSW

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Dx/Rx: Upper Gastrointestinal Malignancies: Cancers of the Stomach and Esophagus

M Shah
Jones and Bartlett (2006)
ISBN: 0-7637-4743-2  160 pages plus index
RRP $56.10
This book is one from a series titled Dx/Rx Oncology. This is an American publication with the author and series editor coming from the Division of Gastrointestinal Oncology at Memorial Sloan Kettering Cancer Centre in New York.

This handbook focuses on the practical management of stomach and oesophageal malignancies. As the title suggests, it reviews the diagnosis and treatment of these cancers with an emphasis on current practice standards and also highlighting points of contention. The layout is very easy to read and has a logical sequence, but at the same time is comprehensive. It is well organised, with a dot point format being used throughout the book.

In the introduction Shah gives statistics on the worldwide scope of these cancers. Together these two malignancies are second only to lung cancer in global cancer deaths. In western countries the incidence of both gastric cardia and oesophageal adenocarcinoma are increasing more rapidly than for any other type of cancer. The prevalence and mortality statistics underscore the relevance of gastrointestinal malignancies to all healthcare professionals in oncology.

The book is divided into three sections, the first being gastric cancer. Within this section are individual chapters on: epidemiology and pathology; staging; surgery; locally advanced gastric cancer; and treatment of metastatic disease and common non-adenocarcinoma gastric cancers. Section two is titled oesophageal cancer. The chapter topics covered are: epidemiology; staging;
management of locally advanced disease; treatment of metastatic oesophagus cancer. Section three covers both the cancers and contains two chapters, the first is common and unusual complications and the final chapter is a look into the future discussing stem cells and chemotherapy. In the epilogue the author summarises areas where questions still remain unanswered regarding disease management.

This book summarises the diagnostic and treatment issues for oesophageal and gastric cancers in a succinct and well organised manner and would be a useful addition to the library of any health professional dealing with people with these types of cancers.

Meg Rogers
Peter McCallum Cancer Centre, Victoria

**Dx/Rx: Leukemia**

**J.M Burke**

Published by Jones and Bartlett (2006)

ISBN: 0-7637-2738-5  208 pages including index

RRP: US$65.00

Part of the Dx/Rx Oncology series this pocket-size handbook is a ‘current, quick and concise’ reference for wards and clinics as stated by the editor. However, the editor does not clarify who will find this a useful reference. Judging by the medically technical terminology and the clear and concise emphasis on diagnosis and treatment this is not a book for junior staff, nursing or medical. Written by a physician who is board certified in haematology, oncology and internal medicine, this reference book is a handy guide for those who diagnose and prescribe for patients with leukaemia, as in fact the title suggests.

The book is well set out and moves logically from one leukaemia to another, including related myeloproliferative disorders, less common leukaemias and aplastic anaemia. However the last chapter of this book deals with plasma cell neoplasms and the question has to be asked whether perhaps this is slightly incongruous? In a series of clear and concise reference handbooks does this not warrant its own book?

The information in this book is thorough. Each chapter outlines the disease process in detail under headings such as epidemiology, classification, pathology and treatment. Headings vary slightly from chapter to chapter but all topics use a bulleted format and incorporate tables and pathology slides for ease of information. This succinct format allows the entire discussion of leukaemia and related disorders to be covered comprehensively in nine chapters and 206 pages.

Diagnostic factors and treatment options for each subtype or stage within each category of leukaemia make this a very valuable reference tool. The author states that the treatment protocols he describes are current professional recommendations and acknowledges that different treatment centres may differ in their use of these protocols. This is emphasised by the use of such terms as ‘common practice’ or ‘the most commonly used induction regime’. Recommendations are based on current research and the reader is directed to these references at the end of each chapter.

Overall Dx/Rx: Leukemia appears to be a comprehensive and valuable reference for qualified physicians who want a quick and easy guide for current diagnostic factors and recommended treatments of all categories of leukaemia.

Clare Backhouse
Leukaemia Foundation of NSW

**European Society for Medical Oncology: Handbook for Advanced Cancer Care**

R. Catane, NI Cherny, M Klokke, S Tanneberger, D Schrijvers (eds)

Taylor and Francis (2006)

ISBN: 0-415-37530-4  266 pages plus index

RRP: $22.50

This useful handbook provides, with a distinctly European flavour, a valuable small textbook covering the aspects of palliative medicine necessary for the practice of medical oncology. In the introductory four chapters the distinctive goals of palliative medicine and its relationship with oncology are explored. These chapters contain many familiar definitions and concepts, but they are anchored simply and persuasively within a discussion of the limits of oncology practice. The focus is on the different goals of care in relation to different phases of cancer, however it does not underestimate how difficult the transition from curative to palliative goals can often be.

The second part focuses on the main modalities of active treatment for patients with advanced cancer – surgery, radiotherapy and anti-cancer drug treatments. In each of these succinct chapters, the focus is on the rationale for decision making. Discussion of these principles is both sensible and wise and unpacks the thinking processes underlying the best advice we are likely to receive from colleagues in these various disciplines. I found the chapter on radiation oncology particularly helpful. Despite their brevity, each of these chapters provides a good summary of the major clinical problems and highlights the key evidence supporting good practice.

The core of the book is made up of the chapters on symptom management. These cover the many physical sources of distress for patients with advanced cancer, but also locate these within their broader context – that treatment options may vary with the stage of disease and the goals of care and that symptoms which relate to psychological or spiritual distress will very rarely be alleviated by pharmacological strategies alone. The chapter on pain is particularly good in this regard and includes the important concept of pain with risk factors for inadequate pain control, as initially developed by Bruera – an important syndrome that must be recognised and responded to appropriately. The content of all of these chapters is generally very useful and evidence based and where controversy or inadequate evidence is a problem, this is mostly flagged.

The remainder of the book includes valuable content on psychiatric and psycho-oncology topics, bereavement, communication, geriatric patients with cancer and some starting points for responding to the existential and spiritual issues which are such an intense aspect of caring for patients with advanced cancer. One of the most intriguing and enjoyable chapters was that on self-care, which presents a very culturally appropriate screening tool for clinician distress – the ‘emotional dosimeter’. This I commend to readers as a novel but effective approach to monitoring one’s own well-being. Unfortunately, as is common with much self-care advice in the literature, the diagnosis is easy, but the solutions are sparser.

In general this small book contains a wealth of wise and succinct advice, a good index and is judiciously rather than generously referenced, with many useful summaries and some clear tables. Occasional oddities of phrasing hint at the extremely multilingual origins of the many authors, but the chapters are generally extremely readable and conceptually well organised.

Christine Sanderson
Southern Adelaide Palliative Services, South Australia

**Fast Facts: Skin Cancer**

K Agnew, B Gilchrest, C Bunker

Health Press (2005)

ISBN: 1-903734-63-0  103 pages plus index

RRP: $44.00

Fast Facts: Skin Cancer is suitable for a wide readership from medical students and general practitioners through to the general population.

The text is divided into seven chapters, examining topics such as epidemiology, pathogenesis, clinical features, management, prognosis, prevention and also future trends in the treatment of skin cancer. The chapters flow logically giving a broad understanding of the incidence and risk factors, before going on to describe the basis of malignancy and its treatments. All chapters are colour coded which makes finding the topic of choice simple.

Each chapter concludes with key points, which pull together the topic discussed and key references, which act as useful pointers to further source information.

Useful tables in an easily readable format are contained
throughout the text, covering subjects such as risk factors, scoring method for the dermatoscopic diagnosis of invasive melanoma and the American Joint Committee on Cancer Staging System for melanoma.

There are detailed photographs with accompanying explanations, which make essential visual aids and highlight the subtlety in presentation and diagnosis of skin lesions. These photographs bring significant clarity which would have been lost on description alone.

The management section discusses differing types of treatments such as surgery, biopsy, photo dynamic therapy, radiation and topical preparations, as well as the instances in which these treatment modalities would be recommended. It was also reassuring to read that patients should be referred on to multidisciplinary centres in cases where the treating practitioner was not familiar with current treatment regimes.

Discussion of inherited disorders such as Gorlin’s syndrome and genetic predisposition were interesting and could prove helpful when assessing familial and skin cancer risk.

I found the glossary at the beginning of the book helpful, however inclusion of some of the genetic terminology may have been beneficial.

This text is written from a US and UK perspective and while the basic principles remain the same, there is variation within the Australian setting. The incidence of skin cancer is higher in the Australian population and this may be due to climatic factors and ancestry of the population. Other treatments such as lymphoscintigraphy for stage two melanoma are standard practice in Australia and are not only used in clinical trial setting.

The chapter on prevention is applicable to all populations and is useful information to be aware of when educating on sun avoidance and types of preventive garments that should be worn to reduce risk.

Overall this is a useful factual short text that could be used to supplement and assist health professionals globally in the diagnosis and prevention of skin cancer.

Monica Tucker
Sydney Melanoma Unit, NSW

Loss, change and bereavement in palliative care
P Firth, G Luft, D Olivere (eds)
Open University press (2005)
ISBN: 0-335-21323-5
RBP: $54.96

Loss, change and bereavement in palliative care is a book of some 200 pages in easy to understand language with contributions from many authors. Each author presents their topic in a manner that either allows application to clinical practice or makes clinicians stop and assess the practice currently in place.

This book, while reporting largely on the experience of research within the UK, is applicable to the Australian culture and healthcare system citing references from Australian research data.

The book is divided into the initial areas of the need for evidence-based research through to the application of research within the clinical setting. There is an acknowledgement throughout regarding a flawed methodology in previous work, coupled with previous studies being based on very small numbers. There is also the notion that bereaved people do not want to be bothered by engaging within the research process. To date, the research conducted with bereaved clients does not provide an evidence-base to support this notion.

Palliative care is identified as a late comer to 'user involvement'. This is seen to be due to the fact that as a service provider palliative care already provides a strong culture of listening and thus advocating on a client’s behalf. “However, offering a voice is not the same as accessing people’s own voice.” (p.120)

The opportunity afforded to grieving individuals to contribute to research enables an account from first hand experience and thus is a sound source of expertise. This in turn can be of benefit to those enmeshed in grief to move on with their lives.

There are practical examples that can be readily applied to clinical practice. This book looks at pre and post-death bereavement issues. It highlights areas that require special attention as well as identifying social groups that are at risk of exclusion from support.

It challenges all of us who are in the area of service provision to identify those at risk of unmet needs, to assess coping styles that will be sold predictors of poor bereavement outcomes and to review and critically appraise intervention models. To date research findings demonstrate that not all commonly held ways of supporting bereaved people are supported by evidence.

Finally the challenge is mounted for service providers to look at models of bereavement care that focus on identifying strengths and promoting resilience. This is a move away from models that focus on identifying risk and vulnerability factors.

Ensuring that users of bereavement services are seen as fundamental to policy development and service provision will enable the resilience required for individuals to overcome adversity.

Kate Swetenham
Southern Adelaide Palliative Services, South Australia

Mosby’s Dictionary of Medicine, Nursing & Health Professions
P Harris, S Nagy, N Vardaxis
Elsevier Australia (2005)
ISBN: 0-7295-3754-4 2134 pages
RBP:$82.50

This dictionary had immediate appeal as it has been specifically written for an Australian and New Zealand audience, with the editors using the US published Mosby dictionary as a guide to writing a reference relevant to our region of the world. It is a very user friendly and comprehensive dictionary and would be of use to students, nurses, medical practitioners, allied health professionals and medical secretaries.

The dictionary begins with a colour atlas of human anatomy with each system covered by well-labelled diagrams. The dictionary itself contains extensive information. Alphabetical entries are well identified with each word highlighted in bold text. The description following each word is indented which, again, makes it easy to read the meaning. There are many full colour photographs and diagrams within the text, which enhance and clarify definitions that may not be adequately described by words alone.

As the dictionary targets an Australian and New Zealand audience, it contains spelling familiar to us, but it is also cross-referenced to the US spelling that some of us have adapted to over the years. It contains abbreviations of common terms which are also cross-referenced. Other inclusions are tumour markers and their indications, word roots and local pronunciation, useful tips and some historical information.

Common diseases are listed and not only describe the disease, but contain subheadings that include incubation period, observations, interventions and care considerations. Commonly prescribed and over the counter medications are listed generically and include indications, contraindications and adverse effects.

There are 19 appendices and among the inclusions are units of measurement, assessment guides, medical terminology, normal reference values, nutrition, health promotion and immunisation and many more topics. A section on the use of herbs and alternative medicine includes common herbs and supplements, traditional and popular uses, precautions and contraindications, as well as herb-drug interactions. A CD-ROM which includes a complete collection of all the images within the book and a printable version of the colour atlas of human anatomy accompanies the dictionary. The CD-ROM also contains the full text to accompany the appendix on nursing diagnosis as this only appears as a
New Technologies in Radiation Oncology

W Schlegel, T Bortfeld, AL Grosu (eds)
ISBN 3-540-00321-5 447 pages plus index
RRP $US269.00

The editors of New Technologies in Radiation Oncology intend this as a textual reference for those entering radiation oncology from a health professional background or from a physics background. The text is an excellent, comprehensive introduction to the developing areas of radiation oncology, but I feel that one would need a strong understanding of basic radiotherapy principles before attempting to make sense of this text.

The text in my opinion would appeal to those transferring from a medical physics degree into specialising in radiation oncology, but I feel that one would need a strong understanding of basic radiotherapy concepts and imaging techniques.

The text covers many aspects of radiation therapy: imaging, planning, treatment and questions and answers, ensuring the target audience remains informed of all aspects of the radiotherapy technology developments. Included are well researched topics such as cone beam CT, brachytherapy and image fusion/production, as well as case studies to demonstrate the specific usefulness of new technologies. The authors present a very practical, pragmatic approach to the technological advances from experts who are in touch with the information required to understand their technologies thoroughly.

The use of case studies would also appeal considerably to radiation therapists and registrars, as it is easy to see how the technology can be easily applied and what would be indications/contraindications of the use of these new technologies. The relevance of the texts to the clinical environment is further enhanced with an impressive list of leading European contributors, many of whom were directly involved in developing these new technologies and have some years of experience as test sites prior to the technology being released.

The topics are arranged in a very logical fashion leading the reader to an increasingly deeper understanding of the technologies that are currently in use and how the future technologies relate to these. The text is also supported by a very well integrated use of diagrams. The use of formulas may be a little hard for non-physicists to comprehend, but the formulas are also be useful for radiation oncology registrars to further consolidate their understanding of radiotherapy concepts and imaging techniques.

The editors of New Technologies in Radiation Oncology have produced a quality dictionary and I would highly recommend it as a valuable resource for all health professionals.

Jaye Maidens
Royal North Shore Hospital, NSW

BOOK REVIEWS

AUSTRALIA AND NEW ZEALAND

CancerForum Volume 30 Number 2 May 2006

CALENDAR OF MEETINGS

Australasian College of Dermatologists
39th Annual Scientific Meeting
Melbourne VIC
Australasian College of Dermatologists
PO Box 2065
Boronia Park NSW 2111
Tel: +61 2 9879 6177
Fax: +61 2 9816 1174
Email: admin@dermcoll.asn.au
Web: www.dermcoll.asn.au

Royal College of Nursing Australia
National Conference
Cairns QLD
Royal College of Nursing Australia
PO Box 219
Deakin West ACT 2600
Tel: +61 2 6283 3400
Fax: +61 2 6283 3565
Email: rcn@rcn.org.au
Web: www.rcn.org.au

Cancer Nurses Society Of Australia
9th Winter Congress
Adelaide SA
Pharma Events
Tel: +61 2 9280 0577
Fax: +61 2 9280 0533
Email: conferences@pharmaevents.com.au
Web: www.cnsa.org.au

Medical Oncology Group Australia Annual Scientific Meeting
Sanctuary Cove QLD
Pharma Events
Tel: +61 2 9280 0577
Fax: +61 2 9280 0533
Email: info@pharmaevents.com.au

ACCORD Workshop – A Workshop in Effective Clinical Trials Design
Sunshine Coast QLD
The Australia and Asia Pacific Clinical Oncology Research Development (ACCORD) Workshop
Level 6, 52 Phillip Street
Sydney NSW 2000
Tel: +61 2 9247 6207
Fax: +61 2 9247 3022
Email: accordworkshop@narec.com.au

8th Biennial Behavioural Research in Cancer Control Conference
Brisbane QLD
Queensland Cancer Fund
Email: bcrccc@qccancer.com.au
psychoncology.research.unit.html

RANZCR 57th Annual Scientific Meeting
Christchurch NZ
Royal Australian and New Zealand College of Radiologists (RANZCR)
Tel: +61 2 9268 9777
Fax: +61 2 9268 9799
Web: www.ranzcr.edu.au

33rd Clinical Oncological Society of Australia Annual Scientific Meeting
Melbourne VIC
ASR Events
Tel: +61 3 9863 7867
Web: www.asr.org.au
Email: congress@asr.events.net.au
## CALENDAR OF MEETINGS

### INTERNATIONAL

<table>
<thead>
<tr>
<th>Date</th>
<th>Name of Meeting</th>
<th>Place</th>
<th>Secretariat</th>
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<tr>
<td>April</td>
<td>European Association for Cancer</td>
<td>Budapest, Hungary</td>
<td>Federation of European Cancer Societies</td>
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<td></td>
<td>Research 19th Annual Meeting</td>
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<td>Avenue E. Mover 83 1200 Brussels</td>
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<td>E-mail: <a href="mailto:EACR9@fecs.be">EACR9@fecs.be</a></td>
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<tr>
<td>1-5</td>
<td>American Association for Cancer</td>
<td>Washington DC, United States</td>
<td>American Association for Cancer Research (AACR)</td>
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<td></td>
<td>Research (AACR) 97th Annual Meeting</td>
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<td>Philadelphia, US</td>
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<td>Tel: +1 215 440 9300 Fax: +1 215 351 9165</td>
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<tr>
<td>6-9</td>
<td>The American Society of Breast Surgeons 7th Annual Meeting</td>
<td>Baltimore, United States</td>
<td>The American Society of Breast Surgeons</td>
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<td>Marti Boyer</td>
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<tr>
<td>8-11</td>
<td>40th International Society of Paediatric Oncology (SIOP) Asia Conference</td>
<td>Shanghai, China</td>
<td>Shanghai Children’s Medical Center – Dept of Pediatric Hematology-Oncology</td>
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<td>Tel: +86 021 5873 2020 Fax: +86 021 5839 3915</td>
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<td>20-22</td>
<td>5th European Oncology Nursing Society (EONS) Spring Convention</td>
<td>Innsbruck, Austria</td>
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<td>28-29</td>
<td>6th Annual New Strategies in the Breast Cancer Conference</td>
<td>Philadelphia, United States</td>
<td>The Center for Biomedical Continuing Education</td>
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<td>Tel: +1 972 929 1900 Fax: +1 972 929 1901</td>
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<tr>
<td>28-30</td>
<td>1st Scientific Conference of Baltic Society for Pediatric Oncology and Hematology</td>
<td>Vēluša, Lithuania</td>
<td>UAB COMBALTAS  LT-011 Vilnius</td>
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<td>Tel: +370 5 2120003 Fax: +370 5 2120013</td>
</tr>
<tr>
<td></td>
<td>Oncology Nursing Society (ONS) 2006 Congress</td>
<td>New Orleans, United States</td>
<td>Oncology Nursing Society (ONS)  Pittsburgh, Pennsylvania, US</td>
</tr>
<tr>
<td></td>
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<td>Tel: +1 866 257 4667/1 412 859 6100 Fax: +1 877 369 5497/1 412 859 6162</td>
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### CALENDAR OF MEETINGS

<table>
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<tr>
<th>Date</th>
<th>Name of Meeting</th>
<th>Place</th>
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<tr>
<td>6-8</td>
<td>Reasons for Hope Scientific conference</td>
<td>Montreal, Canada</td>
<td>Canadian Breast Cancer Research Alliance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Susan Wall</td>
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<td></td>
<td></td>
<td></td>
<td>1000 - 700 Bay Street MIG 1N8 Toronto</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tel: +1 416 596 6598 Fax: +1 416 596 1714</td>
</tr>
<tr>
<td>6-9</td>
<td>NOPHO/NOBOS 2006 Nordic Conference of Paediatric Haematology and Oncology</td>
<td>Tampere, Finland</td>
<td>NOPHO/NOBOS 2006 Nordic Conference Secretariat</td>
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<td>c/o Tampere Conference Service Ltd</td>
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<td></td>
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<td></td>
<td>Tampere, Finland</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Tel: +358 3 366 4400/311 6557</td>
</tr>
<tr>
<td>6-12</td>
<td>14th Scientific Meeting and Exhibition for Magnetic Resonance in Medicine</td>
<td>Washington, United States</td>
<td>International Society for Magnetic Resonance in Medicine, Berkeley, USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tel: +1 510 841 1899 Fax: +1 510 841 2340</td>
</tr>
<tr>
<td>14-17</td>
<td>11TH International Congress on Oral Cancer (ICOOC)</td>
<td>Grado, Italy</td>
<td>ORL Dept. – Ospedale Civile Udine</td>
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<tr>
<td></td>
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<td>Udine, Italy</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Tel: +39 432 552 801 Fax: +39 432 554 062</td>
</tr>
<tr>
<td>16-17</td>
<td>Diagnostic &amp; Interventional Radiology in Clinical Oncology</td>
<td>Moscow, Russia</td>
<td>N.N. BLOKHIN RUSSIAN CANCER RESEARCH CENTER (NIBRRC) – Office of International Affairs</td>
</tr>
<tr>
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<td>Dr. Somasundaram SUBRAMANIAM M.D.</td>
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<td>24, Kashihnaya Shoise</td>
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<td></td>
<td>115478 Moscow</td>
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<td></td>
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<td>Tel: +7 095 324 1504 Fax: +7 095 323 535</td>
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<tr>
<td>18-20</td>
<td>Ethics in Oncology</td>
<td>Bled, Slovenia</td>
<td>European School of Oncology</td>
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<td>Rita De Martini</td>
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<td>20123 Milan</td>
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<td>Tel: +39 02 8464527 Fax: +39 02 8464545</td>
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<tr>
<td>18-20</td>
<td>6th Nordic Mammography Screening Symposium</td>
<td>Copenhagen, Denmark</td>
<td>Dept. of Epidemiology Institute of Public Health</td>
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<td>University of Copenhagen</td>
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<td>c/o International Symposium Services hill Copenhagen, Copenhagen, Denmark</td>
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<td>Tel: +4 570 237 823 Fax: +4 570 237 888</td>
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<tr>
<td>24-26</td>
<td>10X Annual Meeting of European Musculo-Skeletal Oncology Society (EMSOS)</td>
<td>Moscow, Russia</td>
<td>N.N Blokhin Russian Cancer Research Centre</td>
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<td>Office of International affairs</td>
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<td>Moscow, Russia</td>
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<td>Email: <a href="mailto:info@eso.ru">info@eso.ru</a></td>
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## CALENDAR OF MEETINGS

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<th>Date</th>
<th>Name of Meeting</th>
<th>Place</th>
<th>Secretariat</th>
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<tbody>
<tr>
<td>1-2</td>
<td>Head and Neck Course</td>
<td>Hong Kong</td>
<td>Department of Surgery, University of Hong Kong Medical Centre, Queen Mary Hospital, Sassoon Road, Pokfulam Tel: 85 22 818 0232 Fax: 85 22 918 118 Email: <a href="mailto:HKICC05@hku.hk">HKICC05@hku.hk</a> Web: <a href="http://www.hku.hk/surgery">www.hku.hk/surgery</a></td>
</tr>
<tr>
<td>2-6</td>
<td>2006 Annual Meeting – American Society of Clinical Oncology</td>
<td>Atlanta United States</td>
<td>American Society of Clinical Oncology Annie Callender 1900 Duke St Ste 200, 22234 Denver Tel: 1 703 299 0158 Fax: 1 703 299 0255 Email: <a href="mailto:meetings@asco.org">meetings@asco.org</a> Web: <a href="http://www.asco.org">www.asco.org</a></td>
</tr>
<tr>
<td>7-9</td>
<td>European Association for Cancer Education (EACE) - 19th Annual Scientific Meeting</td>
<td>Enschede Netherlands</td>
<td>Saxon Hogechool Inge Geenink Handelstule 75 Postbus 501, 7400AM Deventer Tel: 31 570 663 683 Fax: 31 570 663 611 Email: <a href="mailto:j.g.m.geenink@ecace.nl">j.g.m.geenink@ecace.nl</a> Web: <a href="http://www.eaceonline.com">www.eaceonline.com</a></td>
</tr>
<tr>
<td>11-13</td>
<td>2006 Komen Foundation Mission Conference: Many Faces- One Voice (breast cancer)</td>
<td>Washington DC United States</td>
<td>Susan G. Komen Breast Cancer Foundation Dallas, Texas, US Tel: +1 972 701 2127 Fax: +1 972 853 4301 Email: <a href="mailto:dreskellen@komen.org">dreskellen@komen.org</a> Web: <a href="http://www.komen.org">www.komen.org</a></td>
</tr>
<tr>
<td>15-16</td>
<td>Familial Cancer - Inside Track Conference</td>
<td>Madrid Spain</td>
<td>European School of Oncology Daniela Mangano - Francesca Marangoni Viale Beato di Este, 37, 20122 Milano Tel: 39 02 8546 451 Fax: 39 02 8546 4545 Email: <a href="mailto:professore@oncologico.org">professore@oncologico.org</a> Web: <a href="http://www.cancerworld.org">www.cancerworld.org</a></td>
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<tr>
<td>15-17</td>
<td>6th International Conference on the Adjunct Therapy of Malignant Melanoma</td>
<td>Stockholm Sweden</td>
<td>Congrex AB Britt-Marie Bohm P.O. Box 5619, Karlivagen 108, 114 85 Stockholm Tel: 0046 8 459 6600 Fax: 0046 8 661 9125 Email: <a href="mailto:britt-marie.bohm@congress.se">britt-marie.bohm@congress.se</a> Web: <a href="http://www.congress.com/melanoma">www.congress.com/melanoma</a></td>
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<tr>
<td>15-18</td>
<td>11th Congress of the European Haematology Association (EHA-11)</td>
<td>Amsterdam Netherlands</td>
<td>Eurocongress Management Amsterdam, Netherlands Tel: +31 20 679 3411 Fax: +31 20 673 7306 Email: <a href="mailto:abh@eurocongress.com">abh@eurocongress.com</a> Web: <a href="http://www.ehaeb.org">www.ehaeb.org</a></td>
</tr>
<tr>
<td>18-21</td>
<td>9th Cancer Research UK Beatson International Cancer Conference</td>
<td>Glasgow Scotland</td>
<td>Beatson Institute for Cancer Research, United Kingdom Tel: +44 141 242 0855 Fax: +44 141 248 0426 Email: <a href="mailto:wheeler@beatson.gla.ac.uk">wheeler@beatson.gla.ac.uk</a> Web: <a href="http://www.beatson.gla.ac.uk/seminars/conference">www.beatson.gla.ac.uk/seminars/conference</a></td>
</tr>
<tr>
<td>25-28</td>
<td>Tumour Vascularisation New Targets and Therapies</td>
<td>Cirencester United Kingdom</td>
<td>British Association for Cancer Research Barbara Cavill c/o The Institute of Cancer Research, McLellan Laboratories, Cotswold Road SM2 5NG Sutton Tel: +44 20 8772 420 Fax: +44 20 8770 1195 Email: baxterer.ac.uk Web: <a href="http://www.baxterer.ac.uk">www.baxterer.ac.uk</a></td>
</tr>
<tr>
<td>28-1 Jul</td>
<td>3rd World Congress of the International Federation of Head &amp; Neck Oncologic Societies (IFHNOs)</td>
<td>Prague Czech Republic</td>
<td>International Federation of Head &amp; Neck Oncologic Societies (IFHNOs) c/o Guaran International spoil.cz o Prague, Czech Republic Tel: +420 284 001 484 Fax: +420 284 001 448 Email: <a href="mailto:jan.klimaszewski@fihono.com">jan.klimaszewski@fihono.com</a> Web: <a href="http://www.fihono2006.cz">www.fihono2006.cz</a></td>
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## CALENDAR OF MEETINGS

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<tr>
<th>Date</th>
<th>Name of Meeting</th>
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<tr>
<td>28-1 Jul</td>
<td>CAR 2006 - Computer Assisted Radiology and Surgery</td>
<td>Osaka Japan</td>
<td>Computer Assisted Radiology and Surgery CAR 2006 Conference Office Kueselberg, Germany Tel: +497 742 922 414 Fax: +497 742 922 438 Email: <a href="mailto:office@an.org">office@an.org</a> Web: <a href="http://www.an.org">www.an.org</a></td>
</tr>
<tr>
<td>28-1 Jul</td>
<td>8th World Congress on Gastrointestinal Cancer</td>
<td>Barcelona Spain</td>
<td>European Society for Medical Oncology (ESMA) Alapharita, Georgia, United States Tel: +1 770 751 7332 Fax: +1 770 751 7334 Email: <a href="mailto:lkmimos@medex.com">lkmimos@medex.com</a> Web: <a href="http://www.medex.com/calendars/gastroenterology">www.medex.com/calendars/gastroenterology</a></td>
</tr>
</tbody>
</table>

### CancerForum Volume 30 Number 2 May 2006

**CALENDAR OF MEETINGS**

- **European Congress for Cancer Education (EACE) - 19th Annual Scientific Meeting**
  - **Place:** Enschede, Netherlands
  - **Contact Person:** Saxon Hogechool Inge Geenink
  - **Website:** [www.eaceonline.com](http://www.eaceonline.com)

- **6th International Conference on the Adjunct Therapy of Malignant Melanoma**
  - **Place:** Stockholm, Sweden
  - **Contact Person:** Congrex AB Britt-Marie Bohm
  - **Website:** [www.congress.com/melanoma](http://www.congress.com/melanoma)

- **9th Cancer Research UK Beatson International Cancer Conference**
  - **Place:** Glasgow, Scotland
  - **Contact Person:** Beatson Institute for Cancer Research
  - **Website:** [www.beatson.gla.ac.uk/seminars/conference](http://www.beatson.gla.ac.uk/seminars/conference)

- **3rd World Congress of the International Federation of Head & Neck Oncologic Societies (IFHNOs)**
  - **Place:** Prague, Czech Republic
  - **Contact Person:** International Federation of Head & Neck Oncologic Societies (IFHNOs) c/o Guaran International spoil.cz o Prague, Czech Republic
  - **Website:** [www.fihono2006.cz](http://www.fihono2006.cz)
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<tr>
<th>Date</th>
<th>Name of Meeting</th>
<th>Place</th>
<th>Secretariat</th>
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<tr>
<td>17-20</td>
<td>American Head &amp; Neck Society Annual Meeting and Research Workshop on the Biology, Prevention and Treatment of Head and Neck Cancer</td>
<td>Chicago, United States</td>
<td>American Head &amp; Neck Society Joyce Haiper 11300 West Olympic Boulevard Suite 600 90064 Los Angeles Tel: 310 437 0559 ext. 114 Fax: 310 437 0585 E-mail: <a href="mailto:Joyce@ahns.info">Joyce@ahns.info</a> Web: <a href="http://www.ahns.info/meetings/index.php">www.ahns.info/meetings/index.php</a></td>
</tr>
<tr>
<td>24-26</td>
<td>4th International Conference on Gastroenteronenterological Carcinogenesis</td>
<td>Honolulu, Hawaii</td>
<td>The University of Texas M.D. Anderson Cancer Centre Houston, United States Tel: +1 713 792 2222 Fax: +1 713 794 1724 Email: <a href="mailto:register@mdanderson.org">register@mdanderson.org</a> Web: <a href="http://www.mdanderson.org">www.mdanderson.org</a></td>
</tr>
<tr>
<td>7-9</td>
<td>International Dermoscopy Course and Conference</td>
<td>Warsaw, Poland</td>
<td>Dept. Dermatology CSK MSWA Dr Lidia Rudnicka, MD, PhD Wolska 137, 02-507 Warszawa Tel: +48 22 624 22 90 Fax: +48 22 508 14 92 Email: <a href="mailto:LidiaRudnicka@poczta.onet.com">LidiaRudnicka@poczta.onet.com</a> Web: <a href="http://www.derm.pl/index.html">www.derm.pl/index.html</a></td>
</tr>
<tr>
<td>13-16</td>
<td>Perspectives in Melanoma X</td>
<td>Amsterdam, Netherlands</td>
<td>Imedex 70 Technology Drive, 30005 Alpharetta Tel: +1 770 751 7332 Fax: +1 770 751 7334 E-mail: <a href="mailto:sl.clemmens@imedex.com">sl.clemmens@imedex.com</a> Web: <a href="http://www.imedex.com">www.imedex.com</a></td>
</tr>
<tr>
<td>13-17</td>
<td>International Congress on Hormonal Steroids/Hormones and Cancer</td>
<td>Athens, Greece</td>
<td>Erasmus Medical Center Dr. F.C. de Vries Kruisplein 3, 3584 CH Utrecht Tel: +31 30 210 7700 Fax: +31 30 210 7753 Email: <a href="mailto:info@erasmusmc.nl">info@erasmusmc.nl</a> Web: <a href="http://www.erasmusmc.nl">www.erasmusmc.nl</a></td>
</tr>
<tr>
<td>21-23</td>
<td>2006 Gastrointestinal Oncology Conference</td>
<td>Arlington, United States</td>
<td>International Society of Gastrointestinal Oncology (ISGO) Mr. Robert Ross 200 Broad Hollow Rd, 11747 Melville Tel: +1 631 390 8390 Fax: +631 393 5091 Email: <a href="mailto:emergencyrequests@isgs.org">emergencyrequests@isgs.org</a> Web: <a href="http://www.isgs.org">www.isgs.org</a></td>
</tr>
<tr>
<td>27-28</td>
<td>European School of Oncology Course (ESO): Skin Melanoma</td>
<td>Istanbul, Turkey</td>
<td>European School of Oncology (ESO) Milano Italy Ph. +39 2 8546 451 Fax: +39 2 8546 4545 Email: <a href="mailto:conferences@esogastro.com">conferences@esogastro.com</a> Web: <a href="http://www.cancerworld.org/esogastro">www.cancerworld.org/esogastro</a></td>
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<tr>
<td>27-Oct</td>
<td>14th International Conference on Cancer Nursing</td>
<td>Toronto, Canada</td>
<td>International Society of Nurses in Cancer Care (ISNCC) Cheshire, UK Tel: +44 116 270 3309 Fax: +44 116 270 3873 Email: <a href="mailto:conference@isncc.org">conference@isncc.org</a> Web: <a href="http://www.isncc.org">www.isncc.org</a></td>
</tr>
<tr>
<td>29-Oct</td>
<td>31st European Society for Medical Oncology (ESMO) Congress</td>
<td>Istanbul, Turkey</td>
<td>ESMO Congress Via anno-Luigino, Switzerland Tel: +41 91 973 1919 Fax: +41 91 973 1918 Email: <a href="mailto:congress@esmo.org">congress@esmo.org</a> Web: <a href="http://www.esmo.org">www.esmo.org</a></td>
</tr>
<tr>
<td>19-21</td>
<td>European School of Psycho-Oncology</td>
<td>Leipzig, Germany</td>
<td>European Society for Psycho-Oncology (ESPO) Leipzig, Germany Tel: +49 34 68 350 Fax: +49 34 68 350 Email: <a href="mailto:info@espo.org">info@espo.org</a> Web: <a href="http://www.espo.org">www.espo.org</a></td>
</tr>
<tr>
<td>8-11</td>
<td>NCI Cancer Conference</td>
<td>Birmingham, United Kingdom</td>
<td>NCI Conference Secretariat Ms Sharon Vanloo P.O. Box 49709 61 Lincoln’s Inn Fields W2CA 3 London Tel: +44 (0) 20 7269 3420 Fax: +44 (0) 20 7691 6004 Email: <a href="mailto:nccconference@nci.org.uk">nccconference@nci.org.uk</a> Web: <a href="http://www.nci.org.uk/conference/">www.nci.org.uk/conference/</a></td>
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### CALENDAR OF MEETINGS

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<th>Date</th>
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<tr>
<td>November</td>
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<tr>
<td>2-4</td>
<td>70th Meeting of the International Society of Gynecologic</td>
<td>The Hague, Netherlands</td>
<td>SIOG - International Society of Gynecologic Oncology - by T. Romanyk</td>
</tr>
<tr>
<td></td>
<td>Oncology (SIOG)</td>
<td></td>
<td>Gevers Deynootweg 62 25868N THE Hague</td>
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<td></td>
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<td></td>
<td>Tel: +31 70 3318444 Fax: +31 70 3318442</td>
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<tr>
<td>5-8</td>
<td>3rd Asian Pacific Organization for Cancer Prevention</td>
<td>Bangkok, Thailand</td>
<td>3rd Asian Pacific Organization for Cancer Prevention (APCOP)</td>
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<tr>
<td></td>
<td>(APCOP) General Assembly Conference “Empowering Cancer</td>
<td></td>
<td>Nagoya, Japan Tel: +66 1 809 7664 Fax: +66 2 955 9986</td>
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<tr>
<td></td>
<td>Prevention in the Asia Pacific”</td>
<td></td>
<td>Email: <a href="mailto:tmsapanvich.cc@gmail.com">tmsapanvich.cc@gmail.com</a> Web: <a href="http://www.apcopp.org">www.apcopp.org</a></td>
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<tr>
<td>5-9</td>
<td>48th American Society for Therapeutic Radiology and</td>
<td>Philadelphia, United States</td>
<td>American Society for Therapeutic Radiology and Oncology (ASTRO)</td>
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<tr>
<td></td>
<td>Oncology (ASTRO) Annual Meeting</td>
<td></td>
<td>Fairfax, Virginia, United States Tel: +1 703 227 0170/502 1550 Fax: +1 703 502 7852</td>
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<td>Email: <a href="mailto:meetings@astro.org">meetings@astro.org</a> Web: <a href="http://www.astro.org">www.astro.org</a></td>
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<tr>
<td>5-10</td>
<td>XVII FIGO World Congress of Gynecology and Obstetrics</td>
<td>Kuala Lumpur, Malaysia</td>
<td>AOS Conventions and Events Sdn Bhd Kuala Lumpur, Malaysia Tel: +60 3 4252 9100</td>
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<td>Fax: +60 3 4257 1133 Email: <a href="mailto:congress@figo2006.com">congress@figo2006.com</a> Web: <a href="http://www.figo2006kl.com">www.figo2006kl.com</a></td>
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<tr>
<td>7-10</td>
<td>18th EORTC-NCI-AARC Symposium on Molecular Targets and</td>
<td>Prague, Czech Republic</td>
<td>Federation of European Cancer Societies (FECS)</td>
</tr>
<tr>
<td></td>
<td>Cancer Therapeutics</td>
<td></td>
<td>Brussels, Belgium Tel: +32 2 775 0201 Fax: +32 2 775 0200</td>
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<td>Email: <a href="mailto:fecs2006@feecs.be">fecs2006@feecs.be</a> Web: <a href="http://www.fecs.be">www.fecs.be</a></td>
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<td>9</td>
<td>American Society for Therapeutic Radiology and Oncology</td>
<td>Philadelphia, United States</td>
<td>American Society for Therapeutic Radiology and Oncology (ASTRO)</td>
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<tr>
<td></td>
<td>(ASTRO) Annual Meeting</td>
<td></td>
<td>12500 Fair Lakes Circle Suite 375 22033 Fairfax</td>
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<td></td>
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<td>Tel: +1 703 227 0170/502 1550 Fax: +1 703 502 7852</td>
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<td>Email: <a href="mailto:meetings@astro.org">meetings@astro.org</a> Web: <a href="http://www.astro.org">www.astro.org</a></td>
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<td>9-10</td>
<td>Satellite Meeting “Modeling for Detection of</td>
<td>Chiang Mai, Thailand</td>
<td>Asia Pacific Organization for Cancer Prevention (APCOP)</td>
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<td>Environmental Carcinogens and Modifying Agents in the</td>
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<td>Division of Epidemiology and Prevention, Aichi Cancer Center, Research</td>
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<td>Asian Pacific”</td>
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<td>Institute 1-1 Kanokoden, Chikusa ku, 467-86 Nagoya</td>
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<td>Tel: +66 1 809 7664 Fax: +66 1 955 9986 Email: <a href="mailto:tmsapanvich.cc@gmail.com">tmsapanvich.cc@gmail.com</a></td>
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<td>Web: <a href="http://www.apcopp.org">www.apcopp.org</a></td>
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<td>9-11</td>
<td>2006 ONS Nurse Practitioner Conference</td>
<td>Pittsburgh, United States</td>
<td>Oncology Nursing Society (ONS)</td>
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<td>125 Enterprise Drive 15275 Pittsburgh, Pennsylvania, USA Tel: +1 866 257 4667</td>
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<td>Fax: +1 877 369 5497 /+1 412 859 6162 Email: <a href="mailto:customer.services@ons.org">customer.services@ons.org</a></td>
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<td>Web: <a href="http://www.ons.org">www.ons.org</a></td>
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<td>10-12</td>
<td>ONS 2006 Institutes of Learning</td>
<td>Pittsburgh, United States</td>
<td>Oncology Nursing Society (ONS)</td>
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<td>Web: <a href="http://www.ons.org">www.ons.org</a></td>
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<tr>
<td>21-22</td>
<td>Cancer World Conference on Improving Cancer Services</td>
<td>Brussels, Belgium</td>
<td>European School of Oncology</td>
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<td>Marianna Cassese Viale Beatrice d’Este 37</td>
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<td>20122 Milan Tel: +0039 02 8546 4522 Fax: +0039 02 8546 4545 Email: mcsass@es oncology.org Web: <a href="http://www.cancerworld.org">www.cancerworld.org</a></td>
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<tr>
<td>29-Dec</td>
<td>13th Congress of the European Society of Surgical Oncology</td>
<td>Venice, Italy</td>
<td>ESSO 2006 Conference secretariat – Federation of European Cancer Societies (FECS)</td>
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<td>(ESSO 2006)</td>
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<td>Brussels, Belgium Tel: +32 2 775 0205 Fax: +32 2 775 0200 Email: <a href="mailto:esso2006@feecs.be">esso2006@feecs.be</a> Web: <a href="http://www.fecs.be">www.fecs.be</a></td>
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<tr>
<td>December</td>
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<td>10-14</td>
<td>V International Meeting on Cancer Induced Bone Disease</td>
<td>Cleveland, United States</td>
<td>The Cancer and Bone Society Conference Secretariat</td>
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<td>20525 M Street, NW, Suite 800 20006 Washington</td>
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<td></td>
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<td></td>
<td>Tel: +1 202 367 1138 Fax: +1 202 367 2138 Email: abstract@cancerbone society.org Web: <a href="http://www.cancerandbonesociety.org">www.cancerandbonesociety.org</a></td>
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<tr>
<td>12</td>
<td>The American Society of Hematology 48th Annual Meeting and Exposition</td>
<td>Florida, United States</td>
<td>American Society of Hematology - ASH 1900 M Street, NW Suite 200 20036- Washington DC Tel: +1 202 877 1118 Fax: +1 202 877 1164 Email: <a href="mailto:ash@hematology.org">ash@hematology.org</a> Web: <a href="http://www.hematology.org/meetings/2005/index">www.hematology.org/meetings/2005/index</a></td>
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THE CANCER COUNCIL AUSTRALIA

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

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

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

CEO
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Dr A Penman
Assoc Professor S Smiles RN, RM, ICC, BHA, GradDipPSEM
Dr K White PhD

THE CANCER COUNCIL AUSTRALIA

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

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

EXECUTIVE COMMITTEE
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Professor D Currow BMed, MPH, FRACP

President Elect
Assoc Professor D Goldstein MBBS, FRACP

Executive Officer
Ms M McJannett

Council Nominees
Ms K Cameron RN, OncCert, GrDipN, MNSc
Professor L Kristjanson RN, BN, MN, PhD
Professor B Stewart MSc, PhD, FRACI, Dip Law

MEMBERSHIP
Further information about COSA and membership applications are available from:
www.cosa.org.au or cosa@cancer.org.au

Membership fees for 2006
Ordinary Members: $160
Associate Members: $100
(includes GST)

INTEREST GROUPS
ANZ Children’s Haematology and Oncology
Breast Oncology
Cancer Nurses Society of Australia
Cancer Research
Clinical Research Professionals
Epidemiological
Gastrointestinal Oncology
Gynaecological Oncology
Lung Oncology
Medical Oncology
Melanoma and Skin
Neuro-oncology
Palliative Care
Pharmacy
Psycho-Oncology
Radiation Oncology
Regional and Rural Oncology
Social Workers
Surgical Oncology