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OVERVIEW

REGIONAL CANCER SERVICES IN AUSTRALIA: SOME EVIDENCE OF IMPROVEMENT BUT A LONG WAY TO GO

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It is six years since the Clinical Oncological Society of Australia (COSA) held the first Cancer in the Bush summit in Canberra. This meeting brought together a multidisciplinary group of oncology health professionals and government representatives to discuss rural oncology services. It seemed timely to us to take stock of what has happened since then, by examining some of the key issues that were identified for cancer patients and their carers in regional and rural Australia.

In the Cancer in the Bush report eight issues were identified that needed to be addressed as priorities.[1] These were:

- Transport and the need to remove inequities in the current Isolated Patient Travel and Accommodation Assistance Scheme arrangements.
- Improved patient support, including the provision of breast cancer nurses nationally and a cancer nurse demonstration project.
- Training to be nationally coordinated and funded.
- Workforce planning, including implementation of Australian Health Workforce Advisory Committee recommendations and development workforce planning for disciplines covering the special needs of rural areas.
- Networks and the development of national accreditation, commencing with chemotherapy services and trialling these standards in all disciplines; and the development of a regional cancer demonstration project.
- Epidemiology, in particular study comparative outcomes in survival, access, psychological support and quality of life in rural and urban Australia.
- Reimbursement for item numbers for rural services and tele-oncology.
- Issues of national priority, such as rapidly making specific cancer drugs available on the Pharmaceutical Benefits Scheme and action to be taken on the Radiation Oncology Strategic Plan and the National Cancer Control Initiative utilisation strategy.

We have invited a number of authors who have been involved in aspects of rural cancer service delivery to share their understanding. There are many issues common to both metropolitan and regional areas, centred on management of the various malignancies, the ageing population and special interest groups such as adolescent and young adults and rare cancers. These issues, while not unique to rural Australia, are often exacerbated by the tyranny of distance and small patient numbers, as well as limited resources.

Transport, to date, has not been reviewed or addressed in any systematic way. We are therefore very pleased to note that a Senate inquiry will investigate this issue in 2007 and we look forward to a strong government response to what many regard as a chronic, unresolved problem.

Enhancing educational opportunities is also an area not covered in this forum, however several initiatives have been undertaken or are in development. The National Breast Cancer Centre (NBCC) and the Medical Oncology Group of Australia (MOGA) ran a series of workshops in 15 regional centres around Australia, covering issues around adjuvant therapy of breast[2] and bowel cancer.[3] Materials from these workshops are available on CD-ROM for use by any centre wishing to hold such workshops from either the NBCC or MOGA. The Federal Government has funded several national projects, currently in late stages of development, that are aimed at up-skilling oncology professionals. The National Education Framework Cancer Nursing project will develop a national framework for cancer nursing, curricula for undergraduate and specialist cancer nursing practice and enhance access to education with online resource materials provided through a consortium of university and hospital partners.[4] A web-based project in development by MOGA on palliative cancer treatments underscores additional ways that information technology can overcome issues of access to educational opportunities (Personal communication, K Francis, MOGA).

Cancer Australia is funding the development of continuing professional education modules for cancer professionals, counsellors and general practitioners, managed by the University of Sydney's Centre for Innovation in Professional Health Education and Research, together with The Cancer Council Australia, COSA, National Breast Cancer Centre and The Royal Australian College of General Practitioners. This initiative will provide a national framework for the delivery of cancer care continuing professional development including: workplace-based, multi-professional packages, targeting skills in a variety of practice environments (including general practice) and; targeted educational resources for practitioner groups in priority areas such as psychosocial assessment and appropriate referral for psychosocial care.[5]

Epidemiological issues have been examined in more detail since the Cancer in the Bush report. In this issue, Katharine Heathcote and Bruce Armstrong review the evidence for differences in outcomes between rural and metropolitan areas. They review data, some of which they have generated, which shows significant disparities between regional and rural Australia compared to metropolitan areas. They investigated what data there was that might explain this and came up with some important possible answers relating to both service delivery differences and the different levels of service received by minority groups, in particular Indigenous Australians.

Their findings, previously published but overviewed and updated here, make a strong case for more attention on improving services in order to improve outcomes. They also support a call for more health services research, specifically targeted at overcoming regional/rural disparities. Internationally there is paucity of data in this field[6] and Heathcote and Armstrong make the practical suggestion of gathering much more specific data, which would require an investment in hospital-based data registries and epidemiologists, as well as researchers, who examine heath service delivery. Lack of investment in clinical data systems and health services research may be putting the national oncology reform agenda at risk. How can we travel the road to reform if we are driving in the dark without headlights?

David Roder provides an in-depth analysis of outcomes data for Indigenous Australians, including a relative increase in the rate of less curable malignancies, more advanced stage at presentation, less treatment and higher co-morbidities. This data adds to reports in other chronic diseases suggesting that a large challenge lies ahead and Roder offers some pathways to follow.

Indeed, both articles point to the importance of enhancing awareness of differences in cultural values and approaches to heath and illness. These need to be recognised and incorporated into health management, with ownership given to the communities. Nationally, while governments are making efforts to improve cancer services, there is a lack of specific programs for regional/rural services and other areas of demonstrated need. In particular, the most deserving group in terms of lack of progress are Indigenous Australians.[7]

Training, workforce planning and networks are issues that are better understood as a result of a recently completed COSA survey of cancer services in regional and rural Australia. Stephen Begbie and Craig Underhill review the data from the COSA survey showing significant deficiencies in services and training and propose a number of ways of overcoming the problem. In the area of training, they recommend ensuring that rural rotations are a part of oncology training and providing a critical mass of senior staff in each regional centre to allow new graduates to feel encouraged to move. The most successful way of implementing such a strategy would involve establishing regional comprehensive cancer centres, requiring the support of health service management to encourage development of local services. Establishing networks with metropolitan centres could include the enhanced use of novel information technology, such as telemedicine for provision of subspecialties and inclusion in clinical trials and academic activities which can all ensure high quality and peer support.

In addition to recognising these problems, it is important to acknowledge that progress has been made towards solutions. At least three of the priority areas identified at the Cancer in the Bush summit (telehealth initiatives, improved patient support and radiation oncology) are starting to be addressed.

Ian Olver, Louise Shepherd and Sid Selva-Nayagam review the value of telehealth for diagnosis, including both radiology and pathology, and management of patients, especially promoting access to multidisciplinary care. The difficult problem of insufficient psychosocial support is often as much due to lack of personnel as it is a lack of recognition of the need for it. The ability of remote technology to allow patients access to counselling and to enhance the skills of local staff are improvements that local research has demonstrated can work.

Overcoming barriers is the theme of another highly successful project in cancer coordination to address patient needs in perhaps the most difficult exercise – managing a cancer service crossing two state boundaries and through public and private partnership. The Border Cancer Care Coordination Project demonstrated that a willingness to ignore perceived barriers by individual health area management led to improvements in care coordination.[8-9] The review by Nicola Melville describes the collaborative approach of a project that delivered seamless cancer care coordination through the support of patients on the one hand and busy clinicians on the other, leading to more multidisciplinary care as well as speedier access to care. It suggests a model that can be used to overcome the systemic issues in rural cancer service delivery, which often is a victim of the overlap and disconnect between state and federal cancer service jurisdictions, and the separation of care between public and private heath systems.

By planning services across all public/private and community/acute facilities, both state and federally funded, the project developed probably the first truly integrated cancer service in Australia. No single facility can solve service delivery problems on its own and adopting a collaborative approach led to efficiency gains for all facilities, improved care for patients and carers and better support for oncology professionals. If we are to continue to have health services delivered by both state and federal governments, improved planning at a local level may help overcome some of the jurisdictional tensions.

Another example of novel approaches to improved service delivery is demonstrated in the report on the Single Machine Radiotherapy Trial by Adam Chapman, Tom Shakespeare and Mary Turner. By ensuring adequate linkages with central service providers, the trial was able to demonstrate dramatic increases in local delivery of radiation services; a staggering 63% increase in numbers of patients receiving radiation in one area. This was not at the expense of adequate quality, as a clinical audit showed the single units exceeding hubs in meeting clinical criteria of quality.

These last two projects, the Border Care Coordination Project and the Single Machine Unit Trial, demonstrate the value in investment in regional cancer services. Not only have they addressed gaps in services and improving access, but in doing so have developed innovative systems that lead the nation in quality clinical service and support service delivery. There are lessons learnt for services everywhere, not just those in the bush.

While some progress has been made, not all of the recommendations of the Cancer in the Bush report have been adequately addressed and much remains to be done. The articles in this issue demonstrate some pathways to follow for solutions. There is a need for political will and leadership from both state and federal authorities to work in partnership to further improve regional and rural cancer services.

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DISPARITIES IN CANCER OUTCOMES IN REGIONAL AND RURAL AUSTRALIA

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Abstract

Cancer in Australia is largely a positive story. Despite increased incidence rates, which reflect an ageing population, the corresponding falling age-adjusted death rates and better survival suggest a health system well-equipped for early detection and treatment of cancer. However, there are inequalities in cancer survival among people in rural, regional and remote areas of Australia and disparities in cancer treatment, particularly in respect to colorectal, lung and breast cancer, are probably partly responsible. Other factors closely aligned with cancer risk and poorer survival in regional and remote Australia include: greater levels of socio-economic disadvantage, limited access to specialist cancer treatment services and a greater proportion of Indigenous people who have their cancers diagnosed at more advanced stages and may receive poorer treatment. In the absence of more complete data, the survival pattern we see in remote parts of Australia probably represents the cancer experience of Indigenous Australians. Questions about the ways in which all of these factors collectively explain the survival picture in Australia will remain unanswered, unless we enrich our

Disparities in cancer survival

The current cancer landscape in Australia is one of increasing crude incidence, falling age-adjusted death rates and better survival,[1-3] reflecting an ageing population and the likelihood that our health system is performing well for early detection and treatment of cancer.[3] However, inequalities in cancer survival among Australians may still persist.

Earlier work assessing cancer survival by categories of remoteness[4] in NSW, showed that people living in the most remote parts of NSW were 35% more likely to die as a result of their cancer within five years of diagnosis in 1992-96, than people living in areas with the greatest access to services.[5] More up-to-date data from NSW for the period 1994-2000, shows a relative excess risk of death higher than the NSW average, for over half of all rural Area Health Services (AHS),[6] compared to about one-quarter of metropolitan and other urban AHS (Table 1).

Table 1. Five-year relative risk of excess all cancer death due to cancer with 95% confidence intervals Area Health Services in NSW 1994–2000[+ #]

Area Health Service category	Relative excess risk of death	95% CI	Higher than the state average
Metropolitan	0.96	(0.93-1.00)	
	0.88	(0.86-0.91)	
	1.06	(1.02-1.09)	*
	1.11	(1.06-1.16)	*
	1.01	(0.98-1.04)	
	0.91	(0.89-0.94)	
Other urban	0.99	(0.95-1.03)	
	0.98	(0.95-1.01)	
	1.00	(0.97-1.04)	
Rural	0.95	(0.91-0.99)	
	1.00	(0.97-1.04)	
	1.07	(1.02-1.13)	*
	1.09	(1.02-1.16)	*
	1.12	(1.06-1.18)	*
	1.04	(0.95-1.12)	
	1.01	(0.97-1.06)	

Source Yu XQ, O'Connell DL, Gibberd RW, Smith DP, Armstrong BK. Cancer survival, incidence and mortality by Area Health Service in NSW 1994 to 2000. Sydney: The Cancer Council NSW, 2003.

+ Relative risk of excess death compares observed relative survival with that expected from a Poisson model including terms for age, sex, follow-up year, site and spread of disease at diagnosis, and site and spread of disease by follow-up year interaction terms, with the

Regardless of the way in which 'rurality' is assessed; cancer survival seems to be worse in areas with moderately to very remote access to services. Stage at diagnosis, apparently more advanced in the less accessible areas,[7] does not appear to fully explain the poorer survival pattern for lung, colon, cervix and prostate cancer and cancer in general (Table 2).

Table 2. Five-year relative excess risk* (95% CI) of death, for all cancers by ARIA category of remoteness# in NSW people from 1992 to 1996

ARIA category of remoteness	Without stage as a covariate	With stage as a covariate
Accessible	0.99 (0.96-1.02)	1.02 (0.99-1.04)
Moderately accessible	1.04 (0.98-1.11)	1.02 (0.96-1.09)
Remote and very remote	1.35 (1.20-1.51)	1.25 (1.11-1.41)
	P<0.0001	P<0003

Source Jong KE, Smith DP, Yu XQ, et al. Remoteness of residence and survival from cancer in New South Wales. Med J Aust 2004; 180: 618-622

* Reference is the highly accessible group where the relative excess risk =1. All models include age, sex, years since diagnosis and ARIA category.

Department of Health and Aged Care. Accessibility/Remoteness Index of Australia (ARIA). Canberra:The Department, March 1999. (Occasional Papers Series No. 6.)

Disparities in cancer treatment

Apart from stage, many other factors, such as socio-economic disadvantage and Indigenous identification, are thought to underlie these results. Poorer survival seems to persist after these are accounted for[7,8] suggesting other factors, most likely treatment related, may also be at play. In NSW and elsewhere, there is now emerging evidence of treatment variations that could adversely affect people living in regional, rural and remote areas, which in turn might affect their survival prospects.

The best evidence comes from patterns of care studies, such as for colorectal cancer[9] and data linkage studies, that can account for the many clinical and non-clinical factors influencing care and survival. Patterns of care studies for colorectal cancer patients diagnosed in NSW 2000-01,[10] show small surgical caseloads in rural areas and a greater likelihood that patients residing outside highly accessible areas would have their surgery in rural hospitals. This was not as apparent for chemotherapy, though rural patients were more likely to be treated in public, rather than private facilities.

Patients in remote to very remote areas, who were referred to radiotherapy for high-risk rectal cancer, were less likely to have treatment compared to those from more accessible areas (Table 3). This was apparently not the case for chemotherapy for this cancer, but may have been so for node positive colon cancer (Table 4). Treating specialists were less likely themselves to follow up patients who lived in areas with limited access to services.[10]

Table 3. Chemotherapy and radiotherapy referral for patients with high risk rectal cancer* according to ARIA index of remoteness[#]

	Chemotherapy		Radiotherapy	
ARIA category of remoteness	Proportion of patients referred (n=357) %	Proportion of those referred who were treated (n=273) %	Proportion of patients referred (n=243) %	Proportion of those referred who were treated (n=184) %
Highly accessible	62	47	42	32
Accessible	74	57	46	34
Moderately accessible	67	50	67	42
Remote to very remote	60	60	60	0

Source: Armstrong K, O'Connell DL, Leong D, et al 2004. The New South Wales colorectal cancer care survey - Part 1 surgical management. Sydney. The Cancer Council NSW

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* excludes 150 patients with rectosigmoid cancer and includes 8 (1%) of patients in which chemotherapy referral was missing or unknown as well as 15 (3%) of patients in which radiotherapy referral was missing or unknown.

Table 4. Chemotherapy referral for patients with node positive colon cancer* according to ARIA index of remoteness[#]

	Chemotherapy	
ARIA category of remoteness	Proportion of patients referred (n=348)	Proportion of those referred who were treated (n=274)
Highly accessible	76	58
Accessible	71	63
Moderately accessible	60	40
Remote to very remote	50	50

Source: Armstrong K, O'Connell DL, Leong D, et al 2004. The New South Wales colorectal cancer care survey – Part 1 surgical management. Sydney. The Cancer Council NSW

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* Includes 25 (5%) of patients in which chemotherapy referral was either missing or unknown

Despite small numbers of patients available for these analyses, these findings are consistent with other data showing that rural and remote residents with colorectal cancer across the country were less likely to receive some treatments, according to the national guidelines, and were more likely to be treated by relatively inexperienced clinicians.[11] Data linkage studies from Western Australia also corroborate these findings, showing an association between survival and completion of chemotherapy and that treatment in rural hospitals, compared with teaching or private hospitals, was a strong predictor of failure to complete therapy.[12]

Considerable area variation in treatment patterns for breast cancer has also been reported. Women in rural areas of NSW were more likely to have mastectomies and less likely to have breast conserving surgery.[13,14] The latter is now an accepted part of best practice for women with early stage breast cancer. This practice pattern appeared to persist after taking into account age and spread of diagnosis.[15] Similar patterns of practice were shown earlier for Australia[16] as a whole and more recently in Western Australia[17] and Victoria.[18]

Linked data analyses in Western Australia also suggested breast cancer treatment in rural areas was sub-optimal with regard to open biopsies with frozen section, adjuvant radiotherapy and hormonal therapy.[19] Using rates of unplanned re-admissions data as an indicator, it also appears that surgical treatment for women in rural hospitals was associated with higher morbidity.[20] However, this has been disputed in other work.[21]

Patterns of care for lung cancer patients diagnosed in 2001-02 in NSW show that the proportion of people having surgery for their cancer was about twice as great for residents of metropolitan and urban health service areas, for residents of rural health service areas. Similarly the proportion of people having combined treatment (chemotherapy and radiotherapy) in the metropolitan and urban areas, was double that of rural areas. Furthermore, greater proportions of people in rural, (39%) compared to metropolitan AHS (29%), had no treatment at all. Interestingly, chemotherapy treatment alone seems to have been more common in rural areas than others, perhaps reflecting easier rural access to chemotherapy than to thoracic surgery and radiotherapy. Similar patterns were found when data was analysed using categories of remoteness (NSW Lung Cancer Patterns of Care Study, unpublished data, The Cancer Council NSW/NSW Health).

Possible explanations for the disparities in cancer survival

A number of factors associated with rural and remote place of residence might adversely influence cancer survival, such as a later tumour stage at diagnosis, limited access to treatment facilities, socio-economic disadvantage and greater proportions of Indigenous people living in geographically isolated areas, who also suffer social and economic disadvantage.

How certain are we then that poorer survival is directly related to difficulties accessing specialist cancer treatment services? If access to health services were equal to all, irrespective of socio-economic status, race and treatment patterns, would there be comparable outcomes to patients at the same stage of their disease? A review of overseas data suggests that the answer is yes,[22] but the relevance of these results to the Australian population is uncertain.

To the extent that survival in NSW is worse in the most remote part of the state, it is possible that socio-economic disadvantage and Indigenous origin play an independent role. How important then, are these and other factors to cancer survival outcomes?

Socioeconomic status

Socioeconomic disadvantage is more common in people living in rural and remote areas and is associated with advanced cancer stage at diagnosis[23] and poorer survival.[2] Exactly how it explains poorer survival is not clear, but it is probably aligned with levels of income and education that in turn, influence cancer knowledge and health behaviours, affordability of care and ability to access the full spectrum of cancer detection and treatment services.

Affordability of healthcare may be important, given the greater proportion of economically disadvantaged people in rural and remote areas who are probably less likely to have private health insurance. Patients treated in a private hospital appear to have better survival from colorectal cancer[24] and prostate cancer,[25] compared to those treated in public hospitals. Surgical treatment for breast cancer in a regional public hospital is significantly and independently associated with poorer survival outcomes.[26] However, similar results have not been found elsewhere for colorectal,[27] lung and breast cancer survival,[28] when private health insurance was assessed as a predictor of outcomes.

Indigenous origin

Given that Indigenous people are more economically disadvantaged than other Australians,[29] it is possible that what we attribute to a socio-economic effect on cancer survival in rural and remote areas, may be more an effect of race. Compared with other Australians, survival rates are worse for colorectal, breast, lung, cervix and non-Hodgkin's lymphoma in Indigenous Australians.[30] Indigenous people have cancer diagnosed at a later stage and have a lower prospect of surviving their cancer for every stage of disease.[30]

Most of our information about cancer in Indigenous people has come from the Northern Territory and Western Australia, where high proportions live in remote areas. NSW has the highest concentration of Indigenous people and most of them inhabit rural and remote areas.[31] Although NSW survival data has not been analysed according to Indigenous status, the combined findings of worse survival in the most remote areas of NSW[5] and more advanced stage of diagnosed in less accessible areas of the state,[7] suggest that Indigenous people could contribute substantially to the survival disadvantage of people in remote areas of the state.

Stage of disease

Stage of cancer at diagnosis, an important prognostic indicator, is probably influenced by socio-economic status; the more socially and economically advanced a population is, the greater the likelihood of being diagnosed with localised disease.[23] Studies of Indigenous Australians so far, have not found alternative explanations for diagnosis of their cancers at a relatively more advanced stage. The possible explanatory variables considered have included age, cancer type,[32] sex, remote residence, marital status, tobacco or alcohol use, chronic disease, access to private health care or time between onset of symptoms and diagnosis.[33]

The possibility of biological differences between the tumours of Indigenous and non-Indigenous people has also been considered. Some evidence has been found of such differences between white people and African and other Americans, at least in terms of oestrogen and progesterone receptor status.[34] Differences in histology however, were not found between Indigenous and non-Indigenous Australians.[35]

Treatment disparities

On the basis of the available evidence, it appears that there are cancer treatment differences for lung, colorectal and breast cancer that would be likely to adversely affect survival in rural, regional and remote areas.

The cancer pattern in Indigenous people suggests that they may receive poorer treatment. For reasons that are most likely related to regular screening for chronic respiratory disease and tuberculosis, Indigenous patients with lung cancer in the Northern Territory are more likely to be diagnosed with localised disease than non-Indigenous people, but they are more likely to die from it.[30] Indigenous women are less likely to get breast cancer than non-Indigenous women, but are more likely to die from it.[29] Treatment disparities however, do not appear to fully explain the poorer survival in Indigenous people, nor do factors such as stage of diagnosis, co-morbidity, remoteness or socio-economic status.[32,33] Significantly, they appear to be less likely to have treatment for cancer[32,33] and when offered curative treatment, are less likely to accept and complete it.[33] Language and cultural beliefs about cancer appear to be important to their cancer survival.[33]

If cancer survival is worse for Indigenous people and the socio-economically disadvantaged, to what extent, if any, does the health system pose a barrier to such people who need to access specialised and high-quality cancer services or high-volume surgeons? The possibility that there are systematic differences in the way healthcare institutions or professionals respond to minority groups, or indeed their doctors, has been speculated on both here[37] and overseas.[38,39] A recent review of racial and ethnic disparities provides compelling evidence of treatment disparities in cancer care for racial and ethnic groups, yet concedes that many other non-clinical factors are also implicated.[22] Assessing the health system's response to different population sub-groups is an area plagued with sensitivities and methodologically difficult to measure, but the study of self-reported discrimination might be a start.[40]

More detailed information on the many factors that influence treatment for different cancers and population subgroups is needed to complete this picture. Currently, public health data systems do not support detailed analyses of inequities in healthcare, and the infrastructure to support other data systems outside the health arena that could better inform us of the nature of clinical practice variations, is lacking.[36] Collecting a wide range of data routinely, as part of the clinical pathway, would help us answer questions about the range of treatments offered to different population sub-groups, whether these treatments were accepted and completed and reasons for non-completion.

Conclusions

In all probability, cancer survival continues to be worse in rural, regional and remote areas, largely for the Indigenous population, and poorer treatment appears to play a part. The exact nature of and reasons for these treatment disparities is not clear, nor is the relationship of other factors connected to patterns of cancer treatment and important to cancer survival, such as access to health services, race and culture, co-morbidity, stage of disease and socio-economic status.

Enhancing and better-coordinating cancer surveillance efforts would go some way in providing an answer, as well as assisting health services to further investigate areas where the greatest disparities lie. In addition, more focused research extending beyond the realms of clinical care is required, to better understand the cancer survival story for socio-economically disadvantaged and Indigenous people. How, for example, does the health system respond to an Indigenous person's needs and to what extent do language and cultural beliefs about cancer directly influence their ability to understand the full implications of a cancer diagnosis and the need to complete treatment?

Investigating the reasons for disparities in cancer treatment will require input from people in many disciplines such as epidemiology, clinical research, behavioural science, health administration and information technology. In the end, a structured and collaborative approach, addressing specific questions, will help attain the common goal of equity in cancer survival outcomes for all.

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IMPROVING ACCESS TO RADIOTHERAPY FOR REGIONAL CANCER PATIENTS – THE NATIONAL RADIOTHERAPY SINGLE MACHINE UNIT TRIAL

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Abstract

The National Radiotherapy Single Machine Unit Trial was a joint Australian and Victorian Government initiative to establish single machine radiotherapy service in regional areas. The trial arose in response to the need for decentralised radiotherapy services to improve access to treatment for rural patients. Key aims of the trial included assessing if single machine radiotherapy services could successfully be established and operated in regional areas, what impact they would have on patient access and radiotherapy utilisation and whether they could provide radiotherapy of equivalent safety and reliability to metropolitan services. An evaluation of the Single Machine Unit Trial was undertaken by the Victorian Department of Human Services to assess how well the trial aims were met. The Single Machine Unit Trial successfully

Planning of radiotherapy services has typically focused on the need for centralised services to optimise the utility of expensive equipment and achieve a critical mass of staff.[1] These services have traditionally been co-located within hospitals that provide a full range of higher level diagnostic and cancer treatment services in order to facilitate continuity of care, ensure high standards of maintenance[2] and offer patients and staff access to clinical trials. Supporting this perception was a report on the American Patterns of Care studies of the 1970s and 1980s, showing poorer outcomes and higher complication rates for patients receiving treatment at small, primarily privately operated centres with single megavoltage radiotherapy units.[3]

Balanced against this has been the need to improve access to cancer services for people of regional Australia. Studies show lower survival[4] and poor utilisation of radiotherapy[5] for regional cancer patients who do not have immediate access to radiotherapy, compared to those of metropolitan areas. Access to treatment also affects patient treatment choice, with studies showing higher rates of mastectomy compared to breast conserving surgery (and adjuvant treatment) for rural patients with early stage breast cancer compared to metropolitan patients.[6,7] Being away from loved ones and family concerns and the financial burden of travel and accommodation arrangements are key issues for patients whose radiotherapy treatment necessitates travel and accommodation.[7]

In December 1996, a report was released by the Australian Health Technology Advisory Committee (AHTAC)[8] summarising the key issues in the field of radiotherapy and making several key recommendations to improve radiotherapy services in Australia. With the results of the Patterns of Care studies a couple of decades old, being more related to privately run units, and with huge advances in technology potentially making a number of their outcomes redundant, key recommendations were made around improving access to radiotherapy services through:

- radiation oncology being organised through networks of services that provided coordinated, comprehensive care in multimodal settings, and
- efforts being made to decentralise services to enhance access for consumers.

Further support for the development of decentralised radiotherapy services was provided in a 1998 report to the Victorian Government, Review of Radiotherapy Services Victoria, by the ACIL consulting group.[9] Importantly, as a means of more broadly distributing radiotherapy services, the report also recommended that single machine radiotherapy services be trialled in Victoria.

National Radiotherapy Single Machine Unit Trial

The National Radiotherapy Single Machine Unit (SMU) Trial was a joint initiative between the Australian and Victorian Governments to provide radiotherapy services in rural areas of Victoria. The trial stemmed from the ACIL report's recommendations to establish radiotherapy services in rural and regional areas, and that single machine radiotherapy services could be successfully developed given appropriate safeguards and linkages. The aims of the trial were to improve access to, and utilisation of, radiotherapy services for rural Victorian cancer patients, while maintaining standards of care which are clinically and socially acceptable.

The trial involved the establishment of SMU radiotherapy services in three rural Victorian towns – Ballarat, Bendigo (commenced in 2002) and Traralgon (2006). As recommended in the ACIL review, the SMUs were established in a hub-and-spoke model, with large metropolitan hub services responsible for managing and operating the SMU. This was to ensure adherence to appropriate clinical standards and levels of safety and quality. In addition, the model incorporates quality assurance guidelines and strong professional linkages between the hub and spoke staff, to facilitate appropriate treatment and referral practices, and includes guidelines for the types of cancers suitable for treatment at the SMUs.

As part of the SMU trial, an evaluation was undertaken by the Victorian Department of Human Services to assess how the establishment of the SMU radiotherapy services met the objectives of the trial. The trial compared radiotherapy access and utilisation pre and post the commencement of the SMUs, and also looked at the economic and quality outcomes associated with the provision of these services.

Outcomes

Access

In Victoria in 2001 there were 10,918 courses of radiotherapy provided by 16 public and seven private linear accelerators, 10,255 of which were for notifiable cancers. Of the total courses, 1% were provided to interstate or overseas patients, 26% to patients from regional Victoria and the remaining 73% to residents of metropolitan Melbourne.

In the first full year of operations of the SMUs at Bendigo and Ballarat, both services provided 374 courses. The total number of courses of radiotherapy provided to residents of regional Victoria increased 7.5% (from 2856 in 2001 to 3070 in 2002-03). Conversely, the number of courses provided to residents of metropolitan Melbourne decreased slightly and overall numbers of patients treated with radiotherapy in Victoria increased only slightly (~1%). The overall impact of the SMUs in the first year, rather than overall growth, was firstly, to redistribute regional patients from metropolitan to the new regional services, and secondly, to increase the number of regional patients receiving radiotherapy.

The second year of operations (2003-04) showed both services significantly increasing activity, with the number of regional patients receiving radiotherapy increasing to 63% compared to 2002-03. Compared to 2001, an additional 348 regional patients received radiotherapy in 2003-04.

Self-sufficiency

Self-sufficiency relates to the number of cancer patients from a particular region who received their treatment in that region. Prior to the SMUs commencing, all patients receiving radiotherapy from the SMU regions left their region to receive treatment. In contrast, in 2002-03 71% of patients from the Ballarat catchment received radiotherapy locally, increasing to 77% in 2003-04. In the Bendigo region, self-sufficiency for radiotherapy increased from 47% in 2002-03 to 57% in 2003-04. A further 5% travelled to Ballarat. The larger population of the Bendigo region accounts for some of the difference between the proportions. Another factor is that the Bendigo service reached high capacity within two years of commencement, with waiting lists increasing as a result.

Quality

While advances in technology may have rendered some of the poorer results from earlier studies of single machine radiotherapy services redundant,[10] services still face a number of potential problems. These include the absence of back up equipment (for use in the event of machine breakdown), the potential difficulty in attracting and maintaining staff at smaller facilities, and more limited opportunities for practitioners to discuss cases with colleagues.

The establishment of the SMUs in a hub and spoke arrangement with larger metropolitan radiotherapy services was designed to overcome or ameliorate these potential problems and maintain an appropriate quality of service. In addition to providing a back-up machine, the hub facility supports the SMU through providing a forum for the discussion of cases, relief staff and clinical and quality protocols to help ensure an effective high quality service.

A formal clinical audit of the quality of radio-therapeutic management was conducted as part of the SMU evaluation. Randomly selected patients from two hub and two spoke sites were audited using the validated[11] national peer review audit instrument developed and endorsed by the Royal Australian and New Zealand College of Radiologists. This instrument audits criteria that reflect documentation, quality processes and acceptability of clinical management and decision-making.

The full results of the clinical audit have been published elsewhere,[12] however in brief the results showed that the quality of care of patients treated with radiotherapy in the SMUs was equal to or greater than the care provided in the hub sites. In the hub sites, 79.6% of criteria audited were adequate, compared to 84.4% in the SMUs ($p< 0.001$). Much of the difference was related to documentation and quality processes which were better in the SMUs. It was apparent that the modern equipment and clearly defined processes in the new departments was beneficial in improving quality of care. In terms of clinical management, there were no significant differences between the SMUs and the hub sites, however the only instances of sub-optimal management occurred in the hub sites.

Broad implications

The evaluation of the National Radiotherapy SMU Trial has clearly shown that radiotherapy services can be successfully provided at single machine facilities under a hub-spoke model. Each of the broad objectives of the trial were met, with significant improvements in access and radiotherapy utilisation demonstrated for residents of regions adjacent to the SMUs, and quality outcomes being the equivalent of and in some instances bettering those of the hub services. However, there are a number of factors to consider before developing this model in other areas.

Victoria's regional population is highly dispersed, with large regional centres and smaller towns located throughout the state. This is unlike many other states, which have substantial unpopulated areas between regional centres. One reason for this is Victoria's smaller size compared to other states, with few major regional towns more than a three hour drive from Melbourne. A benefit of this is that it removes the obstacle of excessive distance for services operating as hub-spoke models, improving the direct support capacity for regional radiotherapy services from hubs and providing a back-up (albeit a difficult one) for patients in the event of SMU breakdown. This has been particularly useful for contracted services, such as some equipment maintenance, with specialist support staff located in Melbourne able to perform site visits to the SMUs within reasonable timeframes.

The commencement of the SMUs led to substantial increases in demand for other cancer services within the local regions. This included increases in allied health referrals and significant increases in demand for chemotherapy. In addition, as patients from further afield were referred for radiotherapy, suitable patient and carer accommodation services was required. In most instances, pre-existing patient accommodation will not be sufficient to meet the additional demand from a radiotherapy service. These broader impacts require consideration in the development of regional radiotherapy services, not least in terms of the workforce implications.

The quality of care provided by adequately funded SMUs is at least equivalent to that provided in larger metropolitan centres in Victoria. Indeed, the appropriateness of care also compares favourably to audits of Australian-staffed radiotherapy departments outside Victoria.[11,12,14] This was not a surprising finding, as the levels of staffing, quality of staff training and quality of equipment and processes were the same as in larger centres (and in certain instances better). With modern radiotherapy equipment and appropriate funding, the applicability of the findings of the old American Patterns of Care studies has been superseded. Indeed, older established centres may learn some lessons from the newer SMUs, particularly in terms of applying modern processes and equipment in order to improve patient care.

The outcomes of the National SMU Trial demonstrate the degree of unmet demand for radiotherapy services in regional areas. Prior to commencement of the SMUs, uptake of radiotherapy for regional cancer patients may have been low due to personal decisions based on time and costs associated with accessing treatment, or insufficient knowledge of this modality among referring clinicians in regional areas. A combination of both is likely, and the widespread regional media and community interest in the SMUs would have gone some way to meeting the AHTAC report's statement that "oncologists in general, and radiation oncologists in particular, have a role in ensuring that information is widely available, to assist referring practitioners in determining whether radiotherapy is an optimal course of treatment". Getting this message across from a distance of several hundred kilometres is challenging, although improving with video-conferencing and cancer reforms supporting practitioners in multidisciplinary care planning.

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BEYOND THE BUSH TELEGRAPH: TELEHEALTH FOR REMOTE CANCER CONTROL AND SUPPORT

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Abstract

Telehealth includes diagnoses, consultations and treatment. The ability to practise telehealth is constantly being simplified by new technology. The analogue telephone system had some useful applications, however the addition of vision with videophones increased the social dimension of the interaction. Linking centres with digital lines enhanced the transfer of data, but carried the expense of installation and limited accessibility, especially in remote areas. Now with fast broadband technology individuals can videoconference using the internet or mobile phones. This should hasten the application of videoconferencing to telehealth. One response to the increasing complexity of multimodality cancer management is the formation of multidisciplinary teams. In rural areas teams can be formed by supplementing existing rural practitioners with experts from larger centres, using telehealth. Psychological support for patients and support for rural practitioners can also be delivered by videoconferencing. Other applications of telemedicine to oncology occur with transmission of pathology images and teleradiology. Remote radiotherapy planning can be achieved by transmitting a remote CT planning image to a planning computer in a tertiary centre. Robotic cancer

Telehealth is defined by the World Health Organization as "the practice of healthcare using interactive audio, visual and data communications. This includes healthcare delivery, diagnoses, consultation and treatment, as well as education and transfer of medical data". The ability to practise telemedicine is constantly being simplified by new technology.

The analogue telephone system had some useful applications, however the addition of vision with videophones increased the social dimension of the interaction. Transmitting images clearly stressed the analogue system, as occurred when the internet was accessed using phone lines. Linking centres with digital lines enhances the transfer of data, but carries the expense of installation and there are limits to the accessibility to digital lines, especially in remote areas. Now, fast broadband technology is being used for telemedicine, providing widespread access. There are fewer problems with compatibility of equipment; cheap webcams and free provision of videoconferencing software enable individuals to videoconference cheaply over the net using their computers or small mobile phones. This should hasten the application of videoconferencing to telehealth.

Cancer management is becoming increasingly complex with multimodality treatment and supportive care. One response to this is the formation of multidisciplinary teams. They can include practitioners from each treatment modality, palliative care and allied healthcare. Team meetings are also excellent continuing education opportunities. The challenge in rural and remote areas is to assemble such teams so that there is access to specialist information where there are no specialists in residence. There is also the need to try to achieve equity of outcomes by facilitating access for diagnosis and treatment and providing supportive care for the greater than a third of Australians who live outside major cities, with 3% living in remote or very remote areas.[1,2] Some of this can be achieved using telehealth systems.

Analogue telephone system

The analogue telephone system has some useful applications. It has long been used for counselling and is particularly useful for patients who are confined to home. The Cancer Councils in each state and territory provide telephone helplines for patients, their carers and the general public and reviews of these have found that they are widely used for emotional support, however the benefits of helplines have not been fully evaluated.[4,5]

Studies overseas have shown that although patients have reported benefit from telephone counselling, it has not been easy to show statistically, significant benefits between telephone counselling and control groups.[6] This is because centres offering such counselling, usually have well developed support programs which make it difficult to evaluate the impact of new technology for delivering them.[6,7] Other trials have detected only small differences because all patients were counselled rather than those with significant levels of stress or depression.[8] It is certainly feasible to conduct psychotherapy for patients with cancer by phone.[9] Group interventions in oncology via the telephone have been less frequently reported, but one study has shown improvements in quality of life and mood, but only during the intervention.[10]

Videoconferencing

The addition of a video image improves the social interaction, as we found in a study of the use of videophones to enhance palliative care outreach nursing in remote South Australia.[11] In this trial we provided analogue videophones to palliative care nurses in Port Pirie (229km from Adelaide, population 15,200) to enable them to communicate with palliative care patients when general nurses from the more remote Peterborough (95km) and Booleroo Centre (65km) visited them in their homes and plugged a video phone into their analogue phone lines. The advantage was more contact between visits, without increased travel for the palliative care nurses and better communication for the patients, who reported better rapport when they could see who they were talking to. Some disadvantages were long set-up times if the remote nurse was technophobic and freezing or calls dropping out because of the addition of video over a standard busy phone line.

Installing digital lines enhances the transfer of data, but carries the expense of installation in fixed centres and limits the accessibility, especially in remote areas. Between fixed centres however, such as two hospitals, it can be quite effective for exporting multidisciplinary care, as we demonstrated in a project linking Darwin Hospital with the Royal Adelaide Hospital Cancer Centre, for the purpose of making the expertise of a multidisciplinary team available to the medical oncologist and surgeons in Darwin.[12] Darwin lacked radiation oncologists who were able to contribute to planning the patients' multidisciplinary care. The regular multidisciplinary meeting by videoconference better supported the isolated clinicians, decreased travel and enhanced the opportunity for education and peer review. Patients in Darwin were able to access the opinion of a full cancer treatment multidisciplinary team.

Fast broadband technology is now being used for telehealth providing wider access. There are fewer problems with compatibility of equipment, with cheap webcams and free provision of videoconferencing software, individuals can videoconference cheaply over the net using their computers or small mobile phones, making support more accessible. In cancer, for example, the internet has enabled the development of online support groups for patients. These can have advantages over face-to-face groups of anonymity when discussing sensitive issues and may allow people with rarer cancers to contact each other without the constraints of geographic location.[13]

While videoconferencing has been available for several years and has been applied to cancer treatment, few studies have yet evaluated its efficacy or cost effectiveness.[14]

Videoconferencing and counselling

Videoconferencing is well established in psychiatry.[15] Small studies have examined psychological counselling for remote patients with cancer. Certainly the technique was found to be acceptable in one study of terminally ill patients with cancer who received alternating cognitive therapy face-to-face or by videoconferencing.[16] A clinical psychologist provided cognitive behavioural therapy to 25 cancer patients in rural Australia and reported that the service was acceptable.[17] More than half of the patients involved had metastatic or advanced disease and there were improvements in terms of quality of life, particularly emotional and functional well-being. It was a very brief intervention with 80% of participants receiving only four sessions of approximately 45 minutes duration each. All but one participant agreed that they would recommend the service to other patients.

Xavier et al have investigated the use of telehealth for mentoring of remote psycho-oncology psychologists and social workers. Twenty-two of 26 staff who had been newly appointed to deliver psycho-oncological support in rural NSW participated in a trial of being professionally mentored and educated. They participated in group education and clinical discussion in groups of three to five on topics voted for by the participants, supplemented by individual phone supervision. There was a significant difference in pre and post-testing in self-reported confidence in dealing with areas such as assessing and treating pain, body image issues and talking about death and dying, which were covered by the educational component of the course. Eighty-two per cent of the participants were "very" or "extremely" satisfied with their involvement and 77% were interested in ongoing participation, if offered.[18]

A further use for videoconferencing has been demonstrated in women with breast cancer in rural areas, who in most situations do not have access to professionally led support groups. Twenty-seven such women in the Intermountain region of north-eastern California participated in an eight session support group under the leadership of an oncology social worker, who joined them by teleconference.[19] As with the other examples, this proved feasible and was acceptable to the participants. Comparing tests prior to and after the group sessions, showed significant decreases in depression ($p<0.02$) and post-traumatic stress disorder symptoms ($p<0.05$) as a result of the group support. Teleconferencing allowed these women to avail themselves of a useful service despite the leadership expertise not being available in their community.

Telemedicine in diagnosis and treatment

When we first conducted multidisciplinary meetings by telemedicine between Adelaide and Darwin, they incorporated a demonstration of the pathology and radiology to the team.[12] This provided a second opinion to the remote team who had provided the information. One lesson learned was that videoconferencing would be more easily embraced if it did not try to alter the practices of the participants. If pathologists, for example, did not wish to give instant opinions then the pathological information could be sent in advance of the consultation. Initially we had the slides mailed down, but with improved technology the image was considered sufficient to be able to provide an opinion and the slides could be transferred electronically. Telecytology and teledermatopathology trials have been reported as successful[20,21] and telepathology has been used between major specialists hospitals and rural hospitals.[22]

Sending pathology images by the internet is being used for diagnosis, expert consultation and education at Cornell University.[23] This can be done in real time with remote control of the microscope stage. Likewise, radiology images can be transmitted digitally and used in a multidisciplinary conference.[24] There is also the potential for remote reporting of scans and X-rays such has been trialled with screening mammography.[25] An extension of this in treatment is remote radiotherapy planning, which can be achieved by transmitting a remote CT planning image to a planning computer in a tertiary centre, thereby making the best use of the planning expertise.

We have employed remote planning as part of the interaction between Adelaide and Darwin (which does not have a radiotherapy unit) and although patients are still required to travel to receive radiotherapy, the time and expense of being away from home is reduced if planning can be done in advance. In a further extension of the concept, a Norwegian study linking two remote planning systems, explored the feasibility of remote planning supervision and second opinions. Remote simulation was limited by software capabilities, although remote supervision was possible and the investigators were able to calculate the patient load per annum which would make such a system economically viable.[26]

Furthermore, even in cancer surgery, robotic surgical equipment such as the Da Vinci equipment for prostate surgery, linked by telemedicine, could feasibly make remote surgery possible. A project exploring telementoring of remote surgeons in neurosurgery for brain tumours in Canada has been reported between a large academic center (Halifax, Nova Scotia) and a community-based centre (Saint John, New Brunswick) located 400km away.[27] The initial experience found it feasible, reliable and safe, with the potential to extend neurosurgical expertise to more rural and remote centres. Also in Canada in 2003, the world's first telerobotic surgical service was established between St Joseph's Healthcare Hamilton, a teaching hospital affiliated with McMaster University and North Bay community Hospital 400km away.[28] Procedures included laparoscopic colonic resections, again demonstrating the potential that exists for exporting surgical expertise from major centres.

Medicolegal issues

The medicolegal issues are not unique, but shared by other medical consultations and distant communications.[29] Studies have reported, however, that the increase in technological developments has led to community concerns about the security of health information.[30,31] There are issues of patients needing to be informed about their case being discussed in a multidisciplinary meeting and the need for privacy. Telemedicine adds the difficulty that there may be individuals off camera unknown to the patient at one end of the link. The consultation should be secure and any record kept of it should be private. The whole of the multidisciplinary team may be held responsible for the opinion of the team. There may also be additional jurisdictional issues if a telemedicine consultation crosses state or national boundaries.

In the Adelaide to Darwin link, these considerations were minimised by the consultation occurring between doctors who were registered in both states and the patient's own remote doctor, who passed the information from the clinic to the patient. In our evaluation, several patients would like to have seen a recording of the videoconference.[12] A further potential issue is that if there is a link available to remote experts to improve patient care, could the local practitioner be liable for not using it?

Evaluation

There is no standard evaluation of teleoncology or globally agreed parameters for evaluation. Often patient numbers are relatively small because of the small populations in remote centres which preclude randomised comparisons. Most studies have focused on patient and clinician satisfaction with the consultation. As recorded above, where interventions have measurable health outcomes, these have been measured. There has been little prospective evaluation of the economic impact of a telemedicine consultation.[32] Most retrospective evaluations compare the costs of the telemedicine, with the costs of travel for a face-to-face consultation and offset the cost of the equipment and its operation against that. Health outcomes should be evaluated unless it is assumed they will be the same for telemedicine as for a face-to-face consultation. Certainly the equipment is becoming much cheaper as the technology evolves. Patient preferences will be important since remote patients may be prepared to pay more for the convenience of telemedicine, despite equal health outcomes.

Conclusions

Telehealth is one of the solutions to the problems of equity of access to specialist cancer consultations for rural and remote patients. With rapid advances in communication technology, which has seen us progress from analogue telephone lines to broadband internet, videoconferencing is now more accessible to the whole population.

Increasingly, cancer treatment is multimodal and requires management decisions to be made by multidisciplinary teams. These can be created for rural and remote patients by supplementing the clinicians who are geographically available, with experts from distant urban centres using videoconferencing. Moreover, counselling and psychological support can be provided using this technology. In turn, remote psycho-oncology staff can be supported by their urban peers.

Extrapolating from what is already possible, remote diagnosis, treatment planning for radiotherapy and even surgery will extend the reach of expert specialty care to include rural areas.

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CANCER CARE ACROSS BORDERS: THE POTENTIAL FOR EXCELLENCE WHEN COLLABORATION IS GENUINE

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Abstract

The Border Cancer Collaboration is a coordination of care model developed from the documented success of the Border Cancer Care Coordination project.[1] The collaboration is designed to overcome the difficulties of providing equitable services for cancer patients, their carers and families when federal, state, public and private, acute and community health borders exist. It provides a model of potential excellence in cancer care for regional Australia.

Cancer care in north-east Victoria and south-west NSW is complicated by the jurisdictional issues of borders in healthcare: two state health services requiring compliance with respective cancer frameworks,[2,3] and cancer specialists who are for the most part private practitioners providing services in two public hospitals and two private hospitals. General Practice is Commonwealth, supported through the Border Division of General Practitioners, which services both Albury (NSW) and Wodonga (Victoria) practices.

The difficulties of these jurisdictional issues has led to inequities in the delivery of cancer and cancer support services to residents based on where they lived, rather than their needs.

Profile of cancer services in the region

The twin cities of Albury and Wodonga support a municipal population of 83,000[4] people within a regional population of 150,000. Provision of chemotherapy and radiation oncology services is to an even larger catchment, estimated at 200,000. Up until 1998 the area had been serviced by cancer outreach services from Melbourne, but now has five resident oncologists, a clinical trials unit and a two machine radiotherapy service, treating some 750 local patients per year.[5] While the clinical services are impressive and substantial, what had been lacking was the coordination of care for cancer patients, their carers and families, despite our understanding that this was essential to best outcomes[6] and an acknowledged dearth of psychosocial support for these people.

From 1999-2002 Albury and Wodonga health providers participated in the Victorian Breast Services Enhancement Program (BSEP), which demonstrated that coordination of care and multidisciplinary care could work across state, public and private, acute and community health boundaries.[7] The local BSEP stakeholders had a vision of the 'best of breast' being available to all cancer patients – that the principles underpinning breast cancer support were applicable to other cancers.[8] Between 2003-06 these principles were built on locally through the Commonwealth-funded Border Cancer Care Coordination Project (BCCCP). This project demonstrated the value of cancer care coordination positions, the benefits of multidisciplinary team meetings and psychosocial supports, the importance of accurate local data and the capacity of building the cancer service sector through a coordinated, planned approach to service delivery and support.[1]

The BCCCP had been overseen by a national external advisory group of cancer specialists, which had given it credence and ensured congruity with the national, NSW and Victorian frameworks for cancer services improvement.

The external group had provided input and advice to the local steering committee, which initially comprised the key stakeholder organisations from the BSEP. The project was externally reviewed by Professor Michael Barton[9] and was found to have successfully improved patient care and experience, established care coordination in a regional centre, successfully trialled non-nursing cancer care coordinators and modelled cancer care across borders.

The action research nature of the BCCCP had allowed the steering committee to deliver services, while at the same time evaluating their efficacy and refining their processes. At the end of the project phase, the level of cancer services in Albury and Wodonga had increased substantially and sustainably through the investment of resources (staff positions) in the region by both the NSW and Victorian governments, under the principles of their respective cancer frameworks. From NSW, the positions are funded by the Cancer Institute NSW and implemented through the Greater Southern Area Health Service (GSAHS). In Victoria, the positions are funded through the Department of Human Services (DHS) Victoria via the Hume Regional Improvement for Cancer Services (RICS). Locally, additional resources are contributed by Wodonga Regional Health Service and Upper Hume Community Health Services. A very important contribution is through the unpaid participation in multidisciplinary care and multidisciplinary team meetings by surgeons and cancer specialists. The private hospital sector contributes infrastructure support for meetings and multidisciplinary

Findings of external review of the Border Cancer Care Coordination Project[9]

The BCCCP has:

- overwhelmingly improved the range and efficiency of multidisciplinary clinics;
- improved the operation of multidisciplinary clinics in all areas and assisted clinicians to make a more efficient use of their time;
- improved access to services, particularly to general support services available in the community. This was a particular asset of a cancer care coordinator with social work background;
- developed a viable model of care coordination outside a major city. BCCCP's model should influence role design and function of cancer care coordinators rather than be subject to dictates from afar;
- identified and supported patients before and after they travel out of the region for treatment;
- made active attempts to involve general practitioners (GPs) in multidisciplinary clinics in a way that was innovative and leads the field;
- direct applicability to other regions in Australia that have similar geographic and jurisdictional circumstances.

"BCCCP appears to have been an excellent implementation of cancer care coordination in a regional setting. The final draft report accurately portrays the project aims, methods and results. It may take several years to measure the full benefits and to assess sustainability."

team meetings.

A key issue for all parties is the need to be able to provide local solutions, while still complying with funding body principles and policies. For example, the NSW Cancer Framework mandates that cancer care coordinators must be nursing positions with direct patient contact, while the Victorian direction does not mandate nursing, but views the cancer care coordinator as a position working to develop system capacity, rather than having direct patient contact. Locally, the BCCCP had demonstrated that care coordination could be effective as a non-nursing position, as long as nursing support was available and had also shown that direct patient contact was essential for the role, while still working on systemic development. The success of local work in the context of broader conflicting models, depends on the adoption of evidence-based principles and practice of successful partnerships.

Why is Albury Wodonga cross border cancer care working?

Once the project funding ceased, the steering committee reviewed terms of references and membership in order to facilitate sustainable collaboration.

Working in a regional cross-border setting, all health professionals had a shared understanding of the barriers that borders bring to effective healthcare, and had a true desire to see "good things" resulting from working together for the benefit of cancer patients. We had demonstrated that this could be achieved through our BSEP and BCCCP projects. What was now required was to ensure mainstream, long-term delivery under the models we knew worked for our region.

Characteristics of effective collaboration

The steering committee members are the decision makers of their respective organisations – CEOs, chairpersons or regional managers – each able to bring resources to the table and to make decisions. They bring individual excellence, defined by Kanter[10] as having individual strength and something to contribute to the partnership.

The steering committee, through terms of reference and its formal status, has clear responsibilities and decision making processes. This extends beyond the particular people who formed it and cannot be broken on a whim.[10]

The committee has created a shared understanding of the aims of the alliance[11] – to provide patient-centred, multidisciplinary coordinated cancer care to our local communities. The literature shows that tailoring the mission and goals to fit the goals of individual member organisations, has been found to increase the chance that members will support the partnership, contribute resources and remain active participants over time.[12] In the Border collaboration, all members have to acknowledge the constraints and reporting demand made of the respective members by their funding or political masters. Internal memorandums of understandings and contracts have been developed that allow each partner to be able to fulfil their own individual organisational requirements, while still focusing on the larger picture.

The steering committee has an established history of trust and success (through the BSEP and BCCCP projects) and this has made it easier to coordinate work and divide responsibility.[12] The partners have invested in each other with long-term commitments of financial and other resources to the relationship.[10]

Synergy and transformational leadership

From the inception of the BSEP project the steering committee has achieved synergy – the power to combine the perspectives, resources and skills of a group of people and organisations resulting in creativity, comprehensive thinking, practical thinking and 'transformatic' thinking.[13]

All of the steering committee has had to embrace the mantle of transformational leadership.[14] Transformational leadership produces change through its emphasis on new values and a vision of the future which transcends the status quo. Such leadership inspires all to put aside their own interests for a collective team; this is what the Border leaders do.

The collaboration now has the opportunity to contribute to market forces through public policy, playing a critical role in fostering competition.[15] For example, it is possible that clinicians who do not participate in the multidisciplinary team decisions regarding patient care are missing market leverage and promotional opportunities and could be assessed over time as less attractive to patients. The Border group has attained a high level of domain consensus – the degree to which members agree and accept each others claims regarding products, services and clientele.[16]

Where to now?

Locally, the collaboration had been able to promote their 'quick wins'[17] and this, coupled with recurrent position funding by the NSW and Victorian governments, has resulted in a service platform which has been able to attract philanthropic and private investment. The collaboration now employs a considerable mixed workforce of professionals supporting cancer care coordination for the region (Table 1).

The collaboration now oversees monthly Albury Wodonga multidisciplinary team meetings for breast, colorectal, haematology and urology cancers, and a general tumour stream meeting in the city of Wangaratta. Through the Commonwealth research projects, the collaboration is also developing mentoring links toward multidisciplinary care in head and neck and paediatric cancers.

However, the differing politico-administrative culture of Victoria and NSW in the face of central policy dictates, creates barriers in mounting strategies relevant to local communities.[18]

The only components of the Border model that are not now recurrently funded are the management and infrastructure costs of keeping the collaborative model intact. This is the real risk of the collaboration. Without the management component to manage staff as an integrated team, to negotiate and manage the complex contracts and memorandums of understanding necessary in complying with various state and Commonwealth demands, the collaboration will have no future.

The Border Cancer Collaboration has overcome the classically renowned and long standing view that healthcare is 'a strife of interests'.[19] The steering committee and staff have achieved this by changing organisational culture in positive ways. The collaboration has built relationships, cooperated over the care of cancer patients and negotiated constructively when difficulties arise.[20] The evidence seems to be saying that changing the structure of the financial and delivery aspects of a health system may be a precondition to viable change, but of far more importance is the need to find, promote and nurture shared values and practices. It involves building relationships, working collaboratively, cooperating over the care of patients and negotiating constructively when differences arise.

The Border Cancer Collaboration has been able to develop horizontal and vertical integration, terms derived from economic theory, in patient care.[21] Horizontal integration is defined as the integration of activities which occur at the same level in the production process.

Table 1. Professionals supporting cancer care coordination

Position	Full-time equivalent	Funding source
Cancer care coordinator - general	1	Cancer Institute NSW GSAHS
Continuity of care coordinator	0.8	DHS Victoria – Hume RICS
Cancer care coordinator	0.8	Wodonga Regional Health Service
Oncology social worker	0.6	Cancer Institute NSW GSAHS
Oncology dietetic support	0.2	Cancer Institute NSW GSAHS
Loss and grief counsellor	0.4	Upper Hume Community Health
Multidisciplinary team meetings administrator	0.6	Cancer Institute NSW GSAHS
Multidisciplinary team meetings administrator	0.6	Hume RICS
Website development and management	0.4	Cancer Institute NSW GSAHS
McGrath breast care nurse	1.0	McGrath Foundation
Leukaemia support services coordinator	1.0	Leukaemia Foundation
Manager mentoring research projects	1.8	Department of Health and Ageing

In the border collaboration, the community health centre for example, employs the nurse cancer coordinator integrating a new product (cancer nurse coordination) into its more traditional social services product suite. The collaboration has also achieved integration vertically whereby the acute sector – inpatient, surgical and oncology treatments – integrate with the community sector – psychosocial supports, general practice and primary care – to provide seamless continuity of care.

Towards a centre of excellence

Despite the governance arrangements of Australia, many people would agree it is high time we resolved the politico-structural impediments to providing healthcare in an integrated way.[22] The multi-tiered nature of the Australian health system, particularly the discrepancies in state-to-state, state-to-federal and public-to-private systems, can create artificial and often frustrating and inefficient ways of working in cancer care. These can be overcome by health services seeking new, more cost effective configurations of services across speciality and organisational structures.[22] As the report says: "We should move away from the mantra that country care should be the same as city care – we need innovative models of care that suit residents of rural Australia and deliver for them, equitable services".[23]

The evidence, considering rural inequalities in cancer care and outcomes, strongly suggests that we need to develop well-defined patient pathways that each person with cancer can follow to receive timely expert care. Such pathways necessitate effective interaction between the many services involved in cancer care, innovative information systems and cooperation between governments.[24]

The Border Cancer Collaboration is an innovative and flexible model that is integrating cancer services for our rural communities. It has demonstrated efficient navigable pathways for patients, their families and carers, and effective interaction between providers in multidisciplinary care.

It is now time for policy makers at all levels to acknowledge the success of the model and allow the collaboration to develop its full potential as a regional centre of excellence in cancer care. This will involve allowing the assessment of the risk of doing things differently and the resources to allow those risks to be managed.

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EPIDEMIOLOGY OF CANCER IN INDIGENOUS AUSTRALIANS: IMPLICATIONS FOR SERVICE DELIVERY

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South Australian Department of Health Aboriginal Health Division
Aboriginal Health Council of South Australia
The Cancer Council South Australia

Abstract

Registry data indicates that although Indigenous Australians have an age-standardised incidence of cancer for all cancer types combined that is no higher than the incidence for the non-Indigenous population, their age-standardised cancer death rates are about 45% higher.

This higher mortality is partly due to an elevated incidence in many Indigenous populations of cancer types with a high case fatality. Examples include cancers of the lung, oesophagus/pharynx/mouth (intra-oral), pancreas, stomach, liver and gallbladder, and cancers of unknown organ origin. By comparison, a lower incidence is often observed in Indigenous than non-Indigenous Australians, of cancer types with a low case fatality. Examples include cancers of the female breast, bowel, prostate, skin (melanoma) and lip.

The elevation in cancer mortality in Indigenous populations is not entirely explained by differences in cancer type, in that Indigenous populations generally have more advanced cancers at diagnosis. Moreover, even after adjusting for cancer type and stage of progression of cancer at diagnosis, higher case fatalities still present in Indigenous than non-Indigenous populations, suggesting poorer outcomes of treatment. In particular, poorer outcomes are generally seen in Indigenous populations living in remote and rural settings.

In this report, cancer data is presented for Indigenous and non-Indigenous Australians, to provide an overview of differences in incidence and outcomes. Although there is an emphasis on South Australian data, to which there was more ready access, reference is also made to data from other states and territories. Possible reasons for differences

Indigenous people comprise about 2.4% of the Australian population and 29% of the population of the Northern Territory (NT).[1] Many experience significant socio-economic deprivation and cultural marginalisation, which impacts negatively on their health. Commonly encountered health risk factors include tobacco smoking, excess body weight, misuse of alcohol and exposure to violence.[1] For many Indigenous people, barriers to good health include poor access to culturally acceptable health services.[1]

Health conditions more common in Indigenous than non-Indigenous people include diabetes, renal disease, injuries, diseases of respiratory organs and the cardiovascular system, and infectious diseases.[1] While these health problems have been reported widely, the risk of cancer in Indigenous Australians has been less well documented.

The cancer incidence data described in this report comes predominantly from a collaborative project undertaken to estimate cancer incidence in Indigenous and non-Indigenous South Australians during 1977-2001.[2] Collaborating partners included members of the South Australian Department of Health Epidemiology Branch and Aboriginal Health Division, the Aboriginal Health Council of South Australia and The Cancer Council South Australia. The purpose of the project was to estimate the incidence of all cancers combined, and of individual cancer types, as a basis for broader consultation with Indigenous groups and for the planning of cancer services.

Reference also is made to incidence data published for the NT and Queensland,[3-4] and to mortality data from Queensland, South Australia (SA), Western Australia (WA), the NT and New South Wales (NSW).[1,5]

Cancer incidence has been poorly defined in Indigenous Australians due to difficulties faced by cancer registries in identifying Indigenous status. The South Australian Department of Health Epidemiology Branch implemented a special project for the diagnostic period from 1988 to 1994, in which extensive attempts were made to validate the Indigenous status of cancer patients.[6] The State Cancer Registry collaborated in that study with the (then) Aboriginal Health Organisation, local hospital staff, regional medical record administrators and local Aboriginal health agencies to check the accuracy and completeness of recording of Indigenous status. As a result, a more accurate definition of incidence was achieved by Indigenous status than otherwise would have been possible.

Similar projects conducted in the NT and Queensland have greatly increased the quality of data available on cancer in Indigenous Australians. Reference is also made in this report to the data from these jurisdictions.[3,7]

Epidemiological methods

Relativities of incidence (all cancer types combined) between Indigenous and non-Indigenous South Australians, as determined in the 1988-1994 project, were generalised to the broader 1977-2001 period, with apportioning by cancer type according to the distribution of cancer types by age and sex for that broader period.

The data were standardised by age and sex to the world population, as employed by the International Agency for Research on Cancer, to facilitate international comparison.[8] The direct method of standardisation was used for the international data and for all cancer types combined in SA, whereas the indirect method was substituted for individual cancer types in SA, due to small numbers of these cancers in the Indigenous population, in order to gain greater statistical precision.[9] It was assumed in this context that incidence differences by Indigenous status were consistent by age.

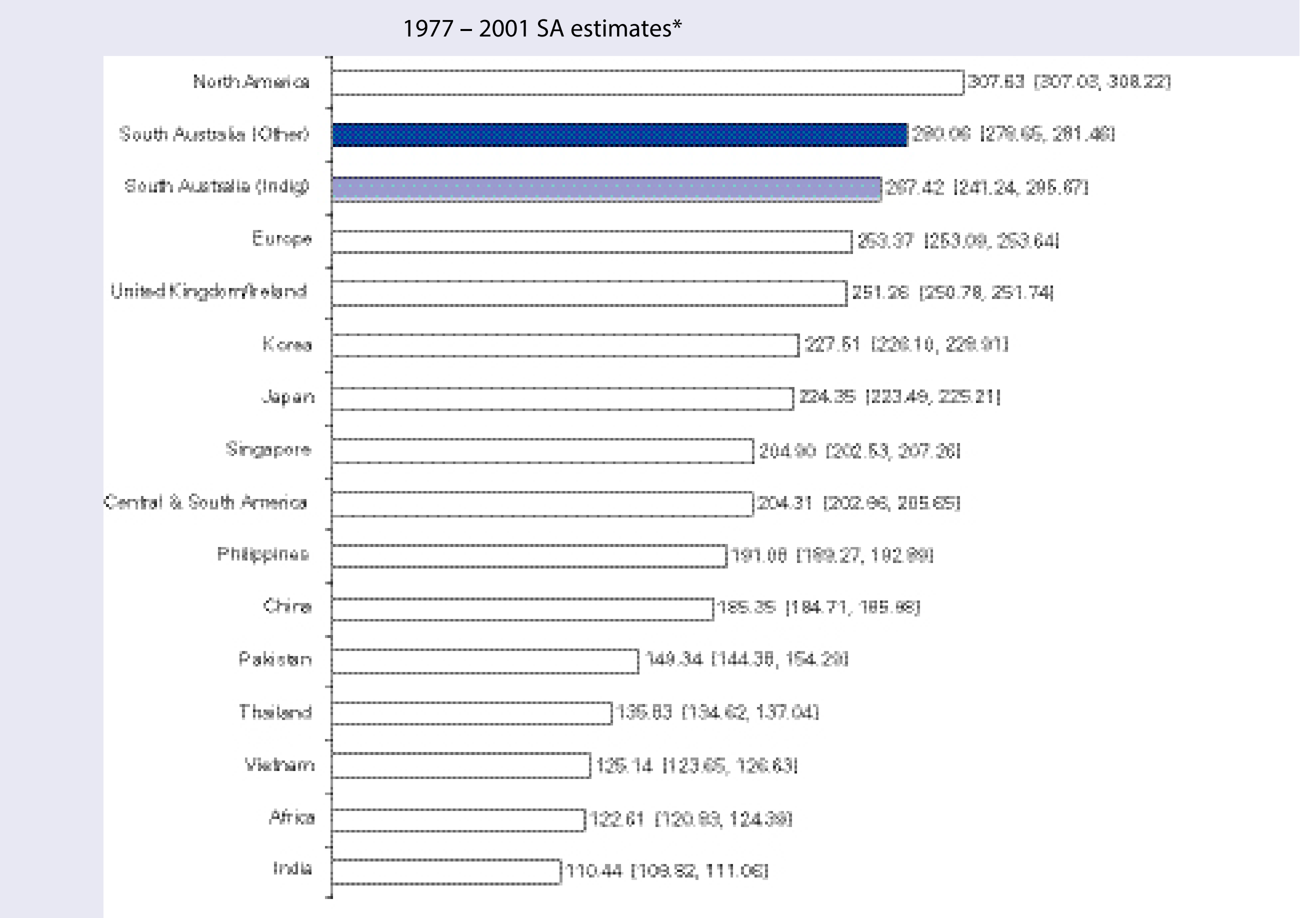
Use was made of 95% confidence limits when identifying likely non-random differences between incidence rates for Indigenous and non-Indigenous populations. Where differences were indicated, risk factors were investigated using the international literature.[10-17] Members of the Department of Health Aboriginal Health Division and the Aboriginal Health Council of South Australia then considered these risk factors to determine the ones potentially most applicable to Indigenous Australians.

Cancer incidence

All cancer types

Indigenous Australians presented a 45% higher cancer death rate than other Australians of equivalent age, with elevations of a similar magnitude applying to males and females, at least in SA, WA, NT and Queensland.[1] The age standardised ratio of Indigenous to non-Indigenous cancer deaths (95% confidence limits) for males was 1.45 (1.34, 1.57), females 1.46 (1.33, 1.58) and for both 1.45 (1.37, 1.54).1 More recently, published NSW data has pointed to a larger 69% elevation.[5]

Figure 1: Estimated annual age-standardised (world population) cancer incidence per 100,000 (95% confidence limits) in South Australia by race, and in comparison regions of the world


1977 – 2001 SA estimates*

*Data sources: SA Cancer Registry, 1977-2001; and International Agency of Research on Cancer, circa 1993-97.

While cancer death rates are elevated in Indigenous Australians, incidence data from the NT, SA and Queensland do not show an elevation.[2-4] While the SA incidence was relatively high in an international context, both for Indigenous and non-Indigenous people (Figure 1), a 5% lower incidence was suggested for Indigenous residents. Since confidence intervals overlapped, it seems that this difference could well have occurred by chance.

The question arises as to why the Indigenous population has a higher cancer death rate when incidence rates are not elevated. Is it due to differences in type of cancer? Do Indigenous people get more lethal types or are their cancers found later, with reduced prospects for cure? Or are other factors involved?

In fact, the present data show that Indigenous people get more lung, oral-pharyngeal-oesophageal, pancreatic, stomach, liver and gallbladder cancers, and cancers of unspecified organ origin, where prospects for survival are relatively low.[18] In addition, Indigenous Australians have an elevated risk of cervical cancer.

By comparison, the present data show that Indigenous people get fewer cancers of the skin (melanoma), lip, prostate, female breast and bowel, where prospects for survival are relatively high.[18] In addition, Indigenous Australians appear to be at lower risk of some haematological cancers.

Cancers more common in Indigenous people

Lung cancer

A 48% higher incidence was found for Indigenous than other South Australians (Figure 2). Higher elevations were observed in Indigenous populations of the NT and Queensland.[3,4] As most lung cancers are attributed to tobacco smoking, the opportunity exists to decrease the incidence of this disease through reducing smoking.[10-12]

Intra-oral, pharyngeal and oesophageal cancers

The incidence of these cancers was about three-and-a-half times as high in Indigenous as other South Australians (Figure 2). A corresponding elevation was also seen in the Indigenous population of the NT.[3] Again, this underscores the importance of tobacco control.[13] Excess alcohol consumption is another risk factor for these cancers, plus diets low in fruit and vegetables.[10,11,13]

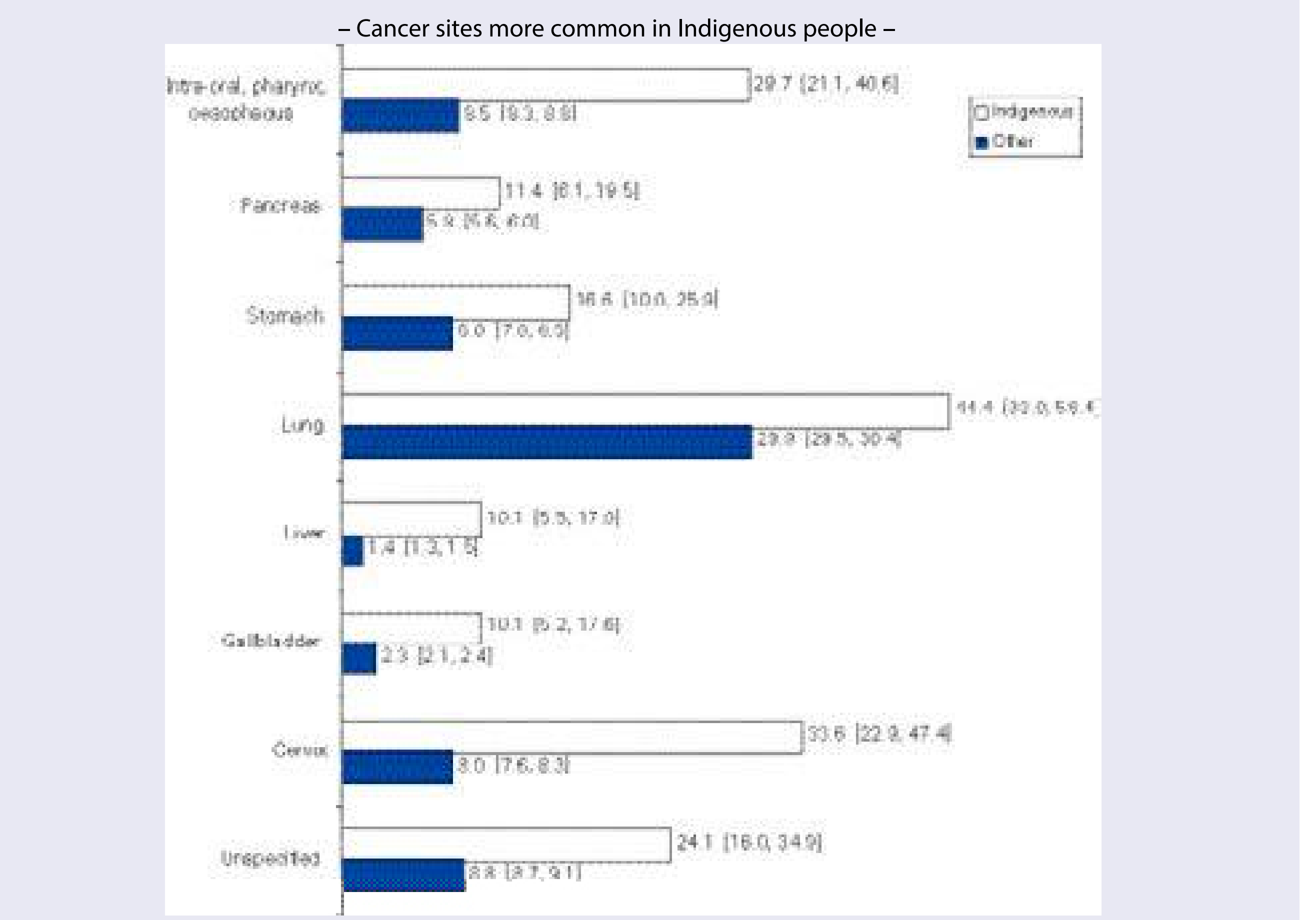
Pancreatic cancer

The incidence was approximately twice as high in Indigenous as other South Australians (Figure 2), with corresponding elevations presenting in NT incidence and NSW mortality data.[3,5] Again, tobacco smoking is associated with this cancer, and possibly poor diet.[10,11,13] In addition, diabetes has been cited as a risk factor.[13]

Stomach cancer

This cancer had an incidence about twice as high

Figure 2: Age-standardised (world population) cancer incidence per 100,000 (95% confidence limits) by race in South Australia: 1977-2001 estimated annual rates*


– Cancer sites more common in Indigenous people –

*Data source: SA Cancer Registry

in Indigenous as other South Australians (Figure 2). Diets high in salt and low in fruit and vegetables may predispose to these cancers.[10,11,13] Incidence figures for Indigenous people are variable around Australia,[3,4] which may reflect variations in Helicobacter pylori infection.

Liver cancer

A marked elevation in incidence was evident in the Indigenous population of SA, at about seven times that of other South Australians (Figure 2). A greater excess was suggested in the NT.[3] Apart from excess alcohol intake, risk factors include hepatitis B and C infection, and tobacco smoking.[10,11,13] Hepatitis B vaccination has been used to combat this cancer in some populations.[10,11]

Gallbladder cancer

The incidence of this cancer was about four times as high in Indigenous as other South Australians (Figure 2). The reasons are not clear, although there may have been a contribution from obesity and an elevated prevalence of gallstones and chronic inflammation.[10,11,13] Multiple pregnancies have also been raised as a possible risk factor in some studies.[13]

Cervical cancer

A four-fold elevation in incidence applied to Indigenous compared with non-Indigenous South Australians (Figure 2). Corresponding elevations were evident from the NT and Queensland data.[3,4] These elevations have implications for screening programs and for priority setting when delivering human papillomavirus vaccination.[14]

Unspecified cancers

Cancers of unknown organ origin had an incidence about three times as high in Indigenous as non-Indigenous South Australians (Figure 2). NT data also show an elevation for the Indigenous population.[3] These cancers are often found when already well advanced and are often fatal. Lack of access to diagnostic facilities for regional and remote Indigenous communities would be a likely contributor.

Cancers less common in Indigenous people

Skin cancer (melanoma)/lip cancer

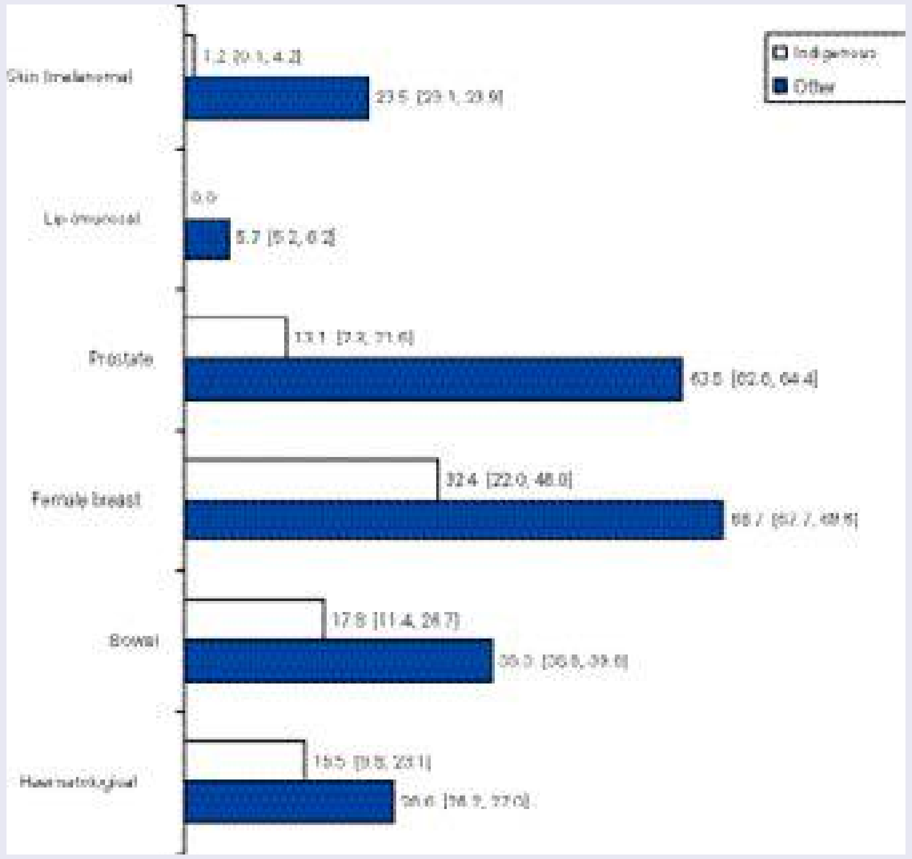
The incidence of melanoma was 95% lower in Indigenous than non-Indigenous South Australians (Figure 3). This would reflect the protective effects of skin colouring for these sun-related cancers.[15] Probably for similar reasons, no lip cancers were observed in the Indigenous population (Figure 3).

Prostate cancer

Indigenous South Australians had an incidence almost 80% lower than the non-Indigenous population (Figure 3). Insofar as these cancers have an upper socio-economic gradient, it would be expected that incidence rates would be lower in Indigenous people.[10,11,16] Numbers of diagnosed prostate cancers are strongly influenced by prostate specific antigen (PSA) testing,[10,11,16] which may be less common in Indigenous Australians.

Figure 3: Age-standardised (world population) cancer incidence per 100,000 (95% confidence limits) by race in South Australia: 1977-2001 estimated annual rates*

– Cancer sites less common in Indigenous people –



*Data source: SA Cancer Registry

Female breast cancer

The incidence in Indigenous women was about half that in non-Indigenous women (Figure 3). Corresponding findings also applied for the NT and Queensland.[3,4] There are probably a number of explanations whereby Indigenous women tend to have their first full-term pregnancy at a younger age, and to have a higher parity, which is likely to be protective against breast cancer.[10,11,14] In addition, their participation in breast screening programs is less common,[19] such that breast cancer detection rates are likely to be lower.

Bowel cancer

An incidence in Indigenous people about 55% lower than for the non-Indigenous population was evident (Figure 3). Lower rates were also seen for Indigenous residents of the NT and Queensland.[3,4] Again, insofar as these cancers have an upper socio-economic gradient, this finding would be expected.[10,11,13] In addition, faecal occult blood testing (FOBT), which can increase the detection rate for these cancers, may be less common in the Indigenous population.[13]

Haematological cancers

The incidence of these cancers was about 42% lower in Indigenous than non-Indigenous South Australians (Figure 3). Confirmatory evidence has been found for the NT, in that lymphoma risk tended to be lower in the Indigenous population.[3] These cancers have been linked to immune system disorders.[17] Further research is warranted to explore differences and reasons for differences in incidence between Indigenous and non-Indigenous Australians.

Differences in survival

The results so far presented indicate that cancers in Indigenous Australians include a higher proportion of the more lethal types and a lower proportion of the less lethal types. However, this appears not to account fully for differences in survival.

In SA, the five-year survival from cancer of Indigenous patients was 37% in 1988-1994, as compared with about 56% for other South Australians.[6] Had non-Indigenous patients had the same distribution of cancer types as Indigenous patients, and the same age profile, their five-year survival still would have been 49%, which greatly exceeds the 37% for Indigenous patients.[6]

Cancers are found at a more advanced stage of progression in Indigenous than non-Indigenous patients, as indicated by SA, Queensland and NT data.[6,7,20] However, further adjustment of survivals for Indigenous and non-Indigenous patients in SA, by stage of progression of cancer at diagnosis, still left a survival deficit for Indigenous patients (p=0.058).[6]

More recent survival data from the NT and Queensland are confirmatory, in that survival differences were not fully explained by type of cancer or stage of progression of cancer at diagnosis.[7,20] In the NT, the deficit in survival in Indigenous patients after stage adjustment was observed in those who primarily spoke an Indigenous language.[20] There is also evidence from the NT and Queensland that Indigenous patients obtain less comprehensive treatment,[7,20] which would be less conducive to cure. In addition, higher levels of co-morbidity are likely to complicate the treatment of many Indigenous patients.[7,20]

Future direction

Steps that could be taken to reduce cancer incidence in Indigenous Australians have been specified already. They include addressing specific risk factors, such as smoking, poor diet, excess alcohol consumption and obesity, and undertaking vaccination programs. In addition, earlier detection should be pursued through screening and related early detection initiatives.[19] These control measures are the same as those required by the non-Indigenous population. However, additional challenges present in many Indigenous communities due to socio-economic deprivation, cultural marginalisation and geographic isolation.

Cancer control initiatives for Indigenous people are likely to be most effective when there is a devolution of decision-making to local communities to define their health needs and priorities.[21] Mainstream health services should include Indigenous people in their governance structures and partner with the Indigenous health sector to promote culturally acceptable services, as advocated by the Australian Health Ministers' Advisory Council.[21] Service providers should be educated about Indigenous culture and about culturally safe and respectful care, as built into the action plans of a number of Australian Health agencies.[22] Outreach health services should be introduced, wherever practicable, for remote Indigenous populations, and appropriate transport and accommodation should be available when remote residents need to travel to metropolitan centres for care.

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CANCER SERVICES TO BE PROUD OF IN RURAL AUSTRALIA: LESSONS LEARNT FROM THE CLINICAL ONCOLOGICAL SOCIETY OF AUSTRALIA CANCER SERVICE AUDIT

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Abstract

Recent evidence suggests that there are differences in cancer outcomes between metropolitan and rural/regional services in Australia and internationally. Reasons for these differences are not entirely clear, but as a consequence rural and regional cancer services are on the political agenda in Australia. The report by the Clinical Oncological Society of Australia, Mapping Regional and Rural Oncology Services in Australia, March 2006, explored issues of access and quality of care and made a number of recommendations for improvement. Governments across Australia have initiated cancer service improvement programs, but not always specifically targeting regional disparities. The way forward

When Martin Luther King quoted the words "we hold these truths to be self evident, that all men are created equal," he had in mind a very different disparity than that which faces rural Australians as they look to access the health services that their metropolitan equivalents take for granted. The general principle of the Medicare system, firmly entrenched, is that Australia boasts a "universal healthcare system for all Australians".[1] But how universal is our healthcare system and most particularly, how equitable is the nation's access to cancer services?

The rural healthcare issue is firmly set on the political landscape, with federal and state governments endeavoring to address health issues which have been highlighted in many parts of the country by the deepening drought. For those passionate about healthcare reform in rural Australia, it has been pleasing to see evidence that government bodies like the Australian Health Minister's Advisory Council and cancer societies such as the Clinical Oncology Society of Australia (COSA) have placed improvement in rural cancer care firmly on their list of priorities.[2,3]

It is in this context that COSA produced Mapping Rural and Regional Oncology Services in Australia (March 2006).[3] By surveying regional hospitals administering chemotherapy and benchmarking against three larger metropolitan and larger urban centres, the study demonstrated that access to services may explain some of the differences in cancer treatment outcomes between metropolitan and regional and rural areas.

The COSA report was met with much fanfare, but what lessons have those of us in rural cancer practice to learn from it and how should we be moving forward in practical terms, to produce cancer centres to be proud of in rural Australia.

The first step in solving any problem is to clearly analyse and document the extent of the problem. In this regard, COSA's effort to analyse existing services in rural Australia and to compare them with identified metropolitan centres, provided some interesting and useful background. In NSW, the recently formed Cancer Institute NSW performed a Rural Access Review 2005,[4] an analysis of which is to be further refined under the terms of the NSW Cancer Plan 2007–2010.[5]

What we have learned from these reviews is perhaps well known to many of us who work outside metropolitan Australia. Findings show that compared to metropolitan sites there is: inadequate coverage of rural health areas with medical and surgical specialties; significant safety questions around the ordering and administration of chemotherapy; and significant gaps in the provision of allied health services and accepted levels of multidisciplinary care and psychosocial support. Services are not universally bad, but in general, the more remote the site, the more difficult access to quality care becomes.

There is other evidence of disparities in cancer outcomes between metropolitan and regional areas in Australia and internationally.[6-13] Late stage of presentation as is commonly believed does not adequately explain differences,[7] so access to care may be a factor. The issue of poor health outcomes in general in Indigenous Australians is well known and a recent study highlighted poor cancer outcomes.[14]

Socioeconomic factors may also be an explanation[6] and recent data from the Victorian Cancer Registry may support this hypothesis. Five-year survival rates for all cancers were marginally worse in regional Victoria in 2004, compared to metropolitan Melbourne.[15] However, comparisons within Melbourne showed that some areas, generally those with lower socioeconomic status, had lower survival rates. In some cases, these metropolitan areas fared worse than regional areas.

Interpretation of the cancer registry data is hampered by adequate clinical data systems that can better inform us and allow us to move forward. We are hampered also by a relative paucity of health services research specifically aimed at rural issues.[16] What is the way forward for rural cancer care and how can we get there efficiently and cost effectively?

Identifying regional oncology centres of excellence

The COSA report advocates developing regional cancer centres of excellence, where an adequate regional population exists and such centres could serve as a focus to recruit and retain regional oncology health professionals and provide better multidisciplinary care. They could improve capacity across a region by providing training and support for smaller centres and by improving access to clinical trials. These regional centres could be linked with metropolitan sites for mentoring, continuing professional development (CPD) and improved access and coordination for the management of complex cases. In the US, a system of comprehensive cancer centres is established to improve outcomes and access to high quality care.[17] We could argue that there is a need for the same in Australia, both metropolitan and regional. While regional centres are not likely to have a "high end" surgical oncology focus, they are likely to lead to significant improvements in patient care, by giving better access at a regional level to state-of-the-art cancer care.

The COSA report predicates oncology centres of excellence on existing radiotherapy facilities. While this may provide part of the solution, it is also crucial in the analysis of rural cancer care that government bodies determine where it is that populations are adequate to justify new radiation therapy centres. These assessments should be partly based on regional cancer incidence, however there may also need to be recognition of regional isolation, which justifies multidisciplinary regional oncology centres at sites where cancer patient numbers fall marginally short of benchmarks.

Manpower crisis

It is one thing to identify sites that warrant a regional oncology centre and it is quite another thing to staff these centres. It is well-documented that at all levels of the cancer workforce[18] there are short falls and it goes without saying that some parts of Australia will find it easier to recruit among the limited workforce than others. It is therefore up to governments, universities and professional bodies, to continue the recent momentum towards training cancer professionals. At the same time, this training must include a component of rural experience to broaden the horizons of cancer professionals, so that they can look beyond metropolitan Australia as their eventual destination.

Once the workforce is trained, it would seem logical to encourage clinicians out of their comfort zone to regional oncology centres, with contracts and conditions that recognise a degree of risk and challenge associated with rural cancer practice. A recent survey of advanced trainees in medical oncology in Australia identified a number of barriers to working in regional Australia. Firstly, there were social issues, such as distance from family and access to educational facilities, which are difficult to overcome. But secondly, trainees identified that they wanted to work in a centre with more than one cancer specialist and wanted protected time for CPD and access to clinical trials (Personal communication, H Francis, Border Medical Oncology). Overcoming this last set of factors is more easily solved and may be enabled by developing regional cancer centres.

Education of rural area health services

Many rural area health services have a high turnover of management positions and often lack both experience and passion in the area of cancer management. Bodies such as the Cancer Institute NSW have a valuable role in educating health bureaucrats about the optimal use of their resources and to build regional oncology centres that they and their communities can be proud of.

Change is often challenging for bureaucracy, however established patterns of management need to be analysed and altered where they are producing inferior clinical outcomes. One example of this is the widespread reliance on medical outreach clinics from metropolitan centres. These services provide crucial medical input in centres too small for a regional oncology centre, but in themselves can delay the move to a regional oncology centre model due to perceived cost savings.

Good quality cancer care does cost money, however a full-time medical presence in a regional centre provides significant cost savings as well as quality improvements, which need to be articulated to area health services.

Can the quality of regional oncology centres be maintained?

It is sometimes argued that the isolation of regional practice will necessarily lead to gradual erosion in quality. This could be true in an under-resourced and under-staffed regional oncology centre, where the pressures of patient care and administration squeeze out access to peer review and continuing education.

It is contingent upon health planners and professional bodies to provide mechanisms to support regional oncology centres, which may be staffed by one to two cancer specialists in each sub specialty, as well as smaller numbers of cancer nurses and allied health professionals. These facilities will need funding and programs which enable attendance at national and international conferences through provision of locums, travel grants and other forms of professional support.

While there are significant advantages to being in a large metropolitan department, there are many joys to be had as a clinician in a regional community, where one's involvement and contribution to a community can be powerful and extremely satisfying. Cancer clinicians also need adequate support from diagnostic services, such as radiology and pathology services. Any review of oncology centres needs to guarantee the quality and consistency of these vital inputs to cancer decision making.

In this information technology age, it seems crucial for issues of quality and safety that we make use of technological advances to improve our provision of cancer care. The Cancer Institute NSW has recognised the importance of this with the development of the CI-SCAT protocol website,[19] and with moves to consider how information technology tools can be used more effectively, in both metropolitan and regional Australia.

Mapping rural and regional oncology services – key findings

- Twenty one per cent of all rural hospitals administering chemotherapy (RHAC) had a resident medical oncology service; 41% had access to a visiting service, with access ranging from weekly to as little as once in six months. An additional 38% of RHAC had neither a resident nor visiting medical oncology service. This was more likely to occur as remoteness increased.
- Medical oncologists write the majority of chemotherapy orders in 100% of benchmarked metropolitan centres, but only 58% of RHAC reported the majority of orders written by a medical oncologist. The degree of supervision and involvement by medical oncologists or haematologists is not always clear.
- Chemotherapy-trained nurses administered chemotherapy in 61% of RHAC Australia-wide. As rural hospitals administering chemotherapy remoteness increased, chemotherapy was increasingly administered by people other than a chemotherapy-trained nurse, such as other trained nurses and GPs.
- Twenty two per cent of RHAC had a dedicated palliative care doctor and 59% had dedicated palliative care nurses.
- Seven per cent of hospitals that reported administering chemotherapy had access to a radiation unit – a total of 11 radiation units for all 157 RHAC.
- Of the 26 available radiotherapy machines nationwide, fewer than half (46%) were reported as fully staffed.
- Most RHAC provided access to allied healthcare services. However, many reported long waiting times, out-of-pocket expenses or services restricted to inpatients.
- In RHAC nationally, 43% of hospitals held multidisciplinary clinics.
- Dedicated oncology counselling services were available at 39% of RHAC.
- Sixty one per cent of all RHAC requested urgent access to psychological services and support; 65% indicated travel support was a problem for rural patients. Patient transport refunds were criticised in many returned

Research and education

Two of the great pillars of cancer practice in the 21st century are clinical research and medical/nursing education. As part of the endeavor to select, build and staff regional oncology centres, there must be a will to promote and resource high quality clinical cancer research and the education of students and undergraduates.

The benefits of clinical research are well understood for both patients and clinicians. Funding to seed research programs, as well as sustain them, is of crucial importance. Clinical research is one of the first things to go when patient load increases and efforts to provide protected time for regional clinicians to conduct research should be encouraged. Investment in rural medical and nursing schools in Australia should be commended as an initiative that is likely to bear fruit in terms of rural cancer clinicians in the long term. However, to consolidate this undergraduate exposure to regional Australia, it is of vital importance that cancer planners and professional bodies include exposure to regional oncology centres in postgraduate training schemes.

To persuade a clinician who has grown up in metropolitan Australia and done all of their training there, to move to regional Australia at the completion of their training, is a near impossibility. However, to encourage individuals who have had a breadth of exposure to all types of career options is likely to encourage them to choose a regional/rural pathway.

Conclusions

The COSA report has provided a sobering snapshot into the state of rural and regional cancer services. Its recommendations divide rural cancer services into regional oncology centres and those without the current size and infrastructure to justify such a development.

It is vital that we not only work at identifying and developing the regional oncology centres, but adequately resource those centres in smaller, more remote communities, with the basic facilities that they require to provide adequate cancer care for their populations. In centres where this cannot be justified, we need to look more carefully at the travel and accommodation needs of patients, so that they can equitably access regional oncology centres.

As a society we need to decide whether cancer care for Australians is a right or a privilege. If we believe that it is a right, then we need to work out how best to provide adequate levels of service for even the most remote and disadvantaged. It is pleasing to see the focus on rural and regional Australia, however it is crucial that we rapidly turn our good intentions into practical suggestions, concrete plans and rural oncology centres that we can all be justifiably proud of. We need all levels of government to recognise the problem and work together to put solutions in place.

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HEALTH WORKERS' PERCEPTIONS OF PSYCHOSOCIAL SUPPORT SERVICES FOR CANCER PATIENTS IN RURAL VICTORIA*

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Abstract

Literature attests to the fact that psychosocial needs for cancer patients are not being adequately addressed. The tools, frameworks and guidelines developed, reflect differing professional perspectives and models of disease. Most studies have usually looked at what is happening from the patient and family's viewpoint in terms of medical and other needs. New national initiatives in psychosocial care include the organisation of nationwide practitioner workshops to encourage the implementation of the Clinical Practice Guidelines for the Psychosocial Care of Adults with Cancer. These guidelines focus mainly on the emotional and existential areas of need.

The aim of this study was to: understand how a diversity of approaches and professional perspectives play out in everyday practice within a rural context; see how issues of distance and access affect this process; and highlight the deficiencies in the delivery of psychosocial services for cancer patients in rural Victoria. The study involved 59 questionnaire respondents (a 71% response rate), from which two interviews and six focus group discussions were drawn.

Key findings were: regional and metropolitan hospitals and specialists not referring for support services; private

Literature attests to the fact that psychosocial needs for cancer patients are not being adequately addressed[1-3] and that professional intervention should occur early in the cancer patient's journey. McGrath[4] suggests that this should occur at the time of diagnosis. Hill et al,[5] Pascoe et al[6] and Marlow et al[7] acknowledge that the initial steps in the professional intervention, the process of need identification and the elicitation of patient concerns are specialised skills. By discussing the need for assessment skill training, Hill[5] reinforces this viewpoint. Furthermore, over the course of cancer, the diagnostic, pre-treatment, treatment and post-treatment phases, patients and their families needs do not remain static.[8] That is, their experience of illness changes.

Researchers from a range of health disciplines have studied cancer patient and family needs and concerns. The tools, frameworks and guidelines that they have developed reflect the authors' differing professional perspectives and models of disease, including reductionist biomedical and biopsychosocial models.[9] Some have developed tools to measure patient need such as the Supportive Care Needs Survey[2] and the Breast Cancer Patients' Needs Questionnaire.[10] Many of the tools incorporate patient or family, medical and non-medical needs.

Differing psychosocial frameworks and conceptions have been developed. Coates et al,[11] Sanson-Fisher et al,[2] Bloom et al[12] and Bonevski et al[13] categorise needs using concepts relating to the individual such as, emotional, physical, psychological, instrumental or tangible, and spiritual. The Clinical Practice Guidelines for the Psychosocial Care of Adults with Cancer[14] focuses mainly on the emotional and existential areas of need, however also acknowledges the importance of the practical needs. The overarching schema of practical, emotional and existential needs is another useful typology.[15] Wright et al1[6] break down the areas of need spatially into the domains of home, workplace and recreation and Marlow et al[7] also come from the patients' subjective experience using constructs such as "sense of control". Patient needs are multidimensional.[7,12] Furthermore, there is a presumption in some studies that psychosocial problems require an action, resolution or answer,[2] however sometimes validation[7] is all that is warranted. Overall, patient psychosocial needs can be perceived and constructed from worker/outsider perspectives or patient/family perspectives.[7]

Most studies have usually looked at what is happening from the patient and family's viewpoint in terms of medical and other needs and have focused on the support received. Often the studies have presented findings that represent population types (for example rural, a particular cancer stream), rather than identifiable communities and specific healthcare organisations.

The current focus on improving cancer patient care has seen the production of guidelines at a national level for psychosocial care of adults with cancer.[14] New initiatives include the organisation of nationwide practitioner workshops to encourage the implementation of these guidelines[17] and the development of a tiered model of psychosocial care in oncology by The Cancer Council Queensland.[18] In the UK, guidelines have been developed to critique existing services and implement improved service delivery.[19]

Problems of delivery of health services in rural areas in Australia centre around shortages of specialised skilled workers, difficulties of services accessing resources[20] and the incorporation of new approaches in health care.[21] We know of the difficulties of costs, accommodation and separation of seriously ill patients travelling to access services.[22]

Often the tools, measures and frameworks discussed above reflect the diversity of approaches and professional perspectives involved in contemporary healthcare. The aim of this paper is to: understand how this diversity of approaches and professional perspectives play out in everyday practice within a rural context; see how issues of distance and access affect this process; and highlight the deficiencies in the delivery of psychosocial services for cancer patients in rural Victoria.

Procedure

This study was carried out in the Grampians region, Victoria, in 2005. The region has 11 health services, including 23 public hospitals with acute beds, one private hospital and one private cancer treatment centre. From 2000-2002 there were 2992 new cancer cases diagnosed in the region.[23]

The overarching framework of practical, emotional and existential domains[15] was adopted because it covered the diversity of patient needs at a range of levels and was accessible from health professionals' perspectives, whether or not they were working within a biomedical model.

Participants targeted were nurses, occupational therapists, psychologists, social welfare workers and a lymphoedema physiotherapist. These workers saw most cancer patients, usually had most interactions with these patients and addressed most psychosocial needs either themselves or took the responsibility to refer on. Key organisations involved were hospitals, community health centres, treatment centres (chemotherapy and radiotherapy), carer services, district nursing and palliative care services. Eighty-two letters of introduction and accompanying questionnaires were mailed to all relevant known practitioners, in organisations delivering services to cancer patients in the Grampians region. The study involved 59 questionnaire respondents (a 71% response rate), from which two interviews and six focus group discussions were drawn.

The breakdown of the 59 respondents to the questionnaire was:

Questionnaire content included postcodes receiving services, number of consumers, a checklist of psychosocial services, referral pathways and worker assessment of cancer services strengths and gaps. Focus groups were semi-structured and elicited information on: local services; strengths and gaps in the continuum of cancer care; current local psychosocial assessment; the validity of questionnaire findings; and prioritisation of themes. The same focus group structure and content was used for the two interviews when only one focus group member was able to attend.

By profession:	
Nurses	37
Occupational therapists	5
Social workers	8
Psychologists	1
Managers	8
By organisation:	
Hospitals	34
District nursing	4
Palliative care	4
Community health	10*
Carers	3
Radiotherapy/chemotherapy treatment	3

The qualitative data from questionnaires was analysed according to themes and geographic locations and then questionnaire respondent comments were checked with focus groups during discussions. Recordings of focus group discussions were analysed according to themes, then categorised according to whether they were common across the region or specific to a particular town. Themes for analysis were extracted in an evolving process, building first from questionnaire responses and then developed in interview and focus groups, where two more themes were added. An item had to be reiterated at least three times to be considered a theme. Findings were prioritised according to the rank ordering of themes by focus groups.

Findings

The following six themes were deemed of highest significance by all focus groups:

- regional and metropolitan hospitals and specialists not referring for support services;

- private patients missing out;
- general practitioners (GPs) not referring to support services;
- late referrals to palliative care and district nursing;
- haphazard continuity of care for support needs of patients; and
- disputed responsibility for initial assessment.

Regional and metropolitan hospitals and specialists not referring to support services

Workers across the region saw this as a problem. They described how patients would attend hospitals and specialists away from home (Geelong, Bendigo, Ballarat and Melbourne) and then would not be linked back into services when they returned. Unless patients presented to local hospitals or were referred by a family member who was aware of services, they would “struggle on” in the community unassisted. “Patients are diagnosed locally and sent off, mainly to Melbourne to get brain surgery, and then sent back to the community. We could have provided earlier support in terms of the management and education of the family regarding the changes that would come.”

When describing surgeons not referring, one worker stated: “There’s no case conferencing or anything like that. This is a really common problem… unfortunately. You don’t know whether they’ve [patients] had news about chemo or radiotherapy…you don’t know when to put your face in [to speak to the patient]. We often get the response, ‘if only I’d seen you before surgery’.”

Private patients missing out

Many workers stated that if the patient was being treated in a private Melbourne hospital and followed up by a specialist privately, they were unlikely to be referred back to support services in their local community. “You can almost guarantee that if a patient from a major Melbourne hospital is a public patient they get great service. If they’re a private patient, going to the private hospital, seen by a private practitioner in his [/her] rooms, they’re the ones that slip through the net. The only way we pick those up is if the family knows our service and ring us, or if the GP sees them quickly after their return and refers, or if a friend will ring up.”

GPs not referring to support services

Except for workers in Ballarat, GPs not referring patients to local support services was seen as a major concern. “There’s no clear pathway from the medical centre to services. They’ve [GPs] known the person all their lives and they don’t want to admit, even to themselves, that this person’s in trouble. Sometimes GPs don’t know what services are available.”

Late referrals to palliative care and district nursing

Workers across professions talked about a reticence in the community to accept help. Thus patients try to manage on their own even though they could have benefited greatly from the district nurse. “We know there are oncology patients out there and know we’ll probably get dragged into it later down the track…why not step into it earlier so we can assist with symptom control, rather than [patients] tripping up and down to Ballarat all the time.”

Haphazard continuity of care for support needs of patients

Some district nurses and palliative care workers identified their initial assessment interview of newly referred patients as including psychosocial issues. Another worker said he/she depended on the day oncology nurses to identify services needed by patients. Workers on several sites said they depended on the social workers and nurses at radiotherapy and chemotherapy centres for assessments. All workers agreed that there was no comprehensive psychosocial assessment of all cancer patients and no one taking overall responsibility to help people address their psychosocial needs. That is, there was no psychosocial linking person. “There’s no seamlessness…it’s often a jerky journey [for the patient]. It’s the luck of the draw.”

According to workers, the longer the patient is in hospital, or the higher the number of patient/acute doctor or patient/acute nurse contacts, the greater the possibility of psychosocial assessment and consequent referral occurring.

Disputed responsibility for initial assessment

Workers talked about what they saw as the “frontline” (the initial contact and ongoing contact person) and who should manage it. There was common agreement that the first contact has to occur at the time of diagnosis. Some suggestions about how this role should be undertaken included the introduction of new case managers or sharing the role of a case manager/guide amongst existing workers. Others saw that GPs with extra support and assistance could take on the role of the key contact person for the patient.

The following findings were common across all focus groups, but not consistently seen as the most pressing issues:

- increased funding needed for palliative care services;
- issues with transport and accommodation assistance; and
- limited service provision because of limited staff availability.

The following findings are the result of the researcher’s observations of focus groups and analysis of questionnaires:

Differing professional perspectives

During discussions with workers, in groups and individually, it was apparent that workers had differing professional models of practice, world views and priorities. These differences impacted on their understanding of patient psychosocial needs, how they were identified and how they were addressed. So in discussions workers’ ways of eliciting, prioritising and addressing commonly agreed gaps were often extremely different. Comments by three workers – a nurse, a psychologist and a social worker in a focus group discussion about supporting patients clearly demonstrate this – in the phrasing they used. The psychologist talked about “meeting people where they’re at”, the social worker about “leaving them [patients] in control” and the nurse applauded the fact that “everything was done for them straight away”.

Quantifying difficulties - lack of cancer specific data

When trying to quantify how many cancer patients they were helping, workers either found it difficult to access records, or had no statistics recording how many cancer patients they saw, or what percentage of their client group were cancer patients.

Discussion

This study suggests that the delivery of psychosocial care for cancer patients in rural Victoria is haphazard. There is an overlap of some services and gaps in other services and apparently a diminution of services the more rural the setting.

There is a lack of clarity about the kinds of tasks undertaken by the different professions and health workers themselves have diverse perceptions about their roles. For example, one occupational therapist saw her/his role as providing grief counselling and another did not see he/she offered any psychosocial support at all. In another town, nurses and social workers were both providing assistance with financial needs of patients. In many cases these professionals were working from quite different models of disease, as formerly discussed by Sprenger,[9] sometimes because they represented different professions and sometimes just because of the kind of person they were and the world views they held. That is, just because they were all nurses for example, it didn’t necessarily follow that they shared the same disease model. These factors, of themselves, are not necessarily a problem. However, for patients and doctors wanting to access services, the pathways can be extremely unclear.

With the challenge of distance, lack of services and shortage of specialised workers, healthcare workers are of necessity being creative and flexible in order to meet the needs of patients, as described by Wilkes et al[22] and Murray et al.[24] They are practising psychosocial care at varying levels. Some of the workers demonstrated a lack of understanding about the range and complexity of psychosocial needs. They were unfamiliar with existing frameworks and guidelines and unaware that validation was just as legitimate as an action or resolution, as Marlow et al[7] have argued. Furthermore, depending on a town’s health worker networking and communication patterns, patients can be serviced appropriately, inadequately, ineffectively or not at all.

Phrases like “that’s the way it’s always been done here” were common when looking at referral patterns and patient pathways. Patterns that have evolved over time have been determined by the lack of a range of specialised staff and existing professionals having to take on extra roles. This was particularly the case in more rural towns, where historically there was only the bush nurse or a GP. So in some rural cultures “sharing patients” with other workers is still difficult for some doctors and nurses. In these towns and larger towns, the division of tasks has also been influenced by the skills, knowledge, power and practitioner or agency status. Murphy[25] identified that the introduction of models developed in urban communities does not succeed because local practices and values are not incorporated into proposed changes.

Statistical tracking and documentation of psychosocial services delivered to cancer patients is poor. Generalist services like hospitals, and community health centres, do not have clear or readily accessible information about how many cancer patients access their service and what kind of psychosocial services they are receiving.

Whatever their journey, patients and their families have complex needs that change over the trajectory of the illness, and patient and family needs can differ as well.[8] Workers need high level skills when working with the patient and/or family in the initial eliciting and identifying of need,[5-7] especially if the first contact occurs around the time of diagnosis when the patient is often numb with shock. A skilled worker will also have the capacity to tailor and time interventions so that patient or family trust and confidence are maintained.

Conclusion

In a climate when internationally and nationally there are pushes to try to improve the delivery of psychosocial support services for cancer patients, this across-discipline and across-settings rural study identifies some of the complex realities of on-the-ground practice. The introduction of measures such as the development of doctors’ communication skills, the creation of psychosocial support case managers or the development of checklists, will not in themselves succeed.

The terrain of across discipline perspectives and the culture of the local community and its professional networks are vital when considering the delivery of support services for cancer patients. There needs to be: clearer documentation of what support practices are occurring at the local level; increased understanding and acknowledgment of the complexities of the actual delivery of support services at the regional level; and greater appreciation of what is happening in day-to-day practice in rural Victoria at the state and national levels.

The immediate implication for cancer care at the national level is that there should be further specification of the practice guidelines and their implementation by services. However, before we are in a position to consider the desirability of such developments as a national standard of care for all patients and families, national standards for the education of cancer professionals and the best way to facilitate psychosocial care, further research is warranted into the complexity of need and how this plays out in practitioner/patient interactions.

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PROVIDING ACCOMMODATION SERVICES FOR RURAL CANCER PATIENTS: THE EXPERIENCE IN SOUTH AUSTRALIA

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Abstract

People from rural and remote areas face additional psychological and financial burdens associated with the need to travel for cancer treatment and follow-up. To reduce these burdens, The Cancer Council South Australia has established an affordable accommodation service that provides a friendly, homely, supportive environment, where people from non-metropolitan areas can stay while accessing treatment services in the city. The model adopted is very similar to the concept of 'hope lodges' advocated by the International Union Against Cancer, in that it focuses on the needs of guests.

A key aspect of the service is the provision of practical and psychosocial support. Support is provided through a variety of avenues; a qualified social worker on site, trained volunteer visitors, social and recreation programs to encourage informal peer support and transport to major treatment centres. These services are available to people with cancer, their carers and any family or friends staying with them.

In many countries around the world, people with cancer often face difficulties accessing effective care because of long distances to treatment centres.[1] This is true for Australia where it is estimated that approximately 30% of all people with cancer live outside a major population centre.[2] Rural and remote residents experience more problems and concerns associated with travel for treatment and follow-up care, than their peers who reside in urban or regional cities.

A person's sense of isolation is compounded by significant economic and social costs, relating to transport, accommodation and being physically separated from family and friends for considerable periods of time.[3-5] Time spent away from home for cancer care is also disruptive of family life, work and daily routines and can lead to feeling burdensome to other people.[6]

The concept of 'hope lodges' is emerging as a highly effective community-based solution to many of these identified needs.[7] Originally developed by the American Cancer Society, hope lodges are designed to provide low-cost or free accommodation to cancer patients and carers, and where resources permit, integrate psychosocial support such as access to counselling and social work. Lodges of this kind offer a friendly, convivial environment, where people with cancer, carers and families can share experiences and support one another through what is often described as a life changing experience. Lodges are usually run by not-for-profit associations with links to hospitals or other health networks. Recently, the International Union Against Cancer (UICC) has promoted the establishment of hope lodges globally, with lodges now established or being developed in the US, Canada, France, Tunisia and Turkey. The UICC has developed a publication to assist interested organisations to set up hope lodges in their local area.[8]

The Cancer Council South Australia has owned and operated an accommodation service for rural cancer patients for over 10 years, along much the same model as the hope lodges. This paper describes the South Australian experience of providing accommodation services to people living outside the metropolitan area who need to access cancer care in Adelaide.

Historical perspective

In 1995, The Cancer Council South Australia purchased the Parkway Motel (a 55-roomed complex), adjacent to The Cancer Council office in the inner suburbs, now known as Greenhill Lodge, to provide accommodation for rural and remote South Australians.

During the first five years of operation, accommodation requests increased to the point where Greenhill Lodge was unable to meet the demand. In June 2001, the service was expanded with the purchase of Seaview Lodge. This facility consists of nine self-contained units, three kilometres from the main office on Greenhill Road. These units are self-catering and best suit families, long-term patients and those who may need isolation due to suppressed immune function. While Seaview Lodge guests can access all the services available at Greenhill Lodge, they are required to have their own transport and be more independent as there are no staff located on site.

Following the purchase of Seaview Lodge, priority was placed on improving services for guests at both lodges. The most significant development was the appointment of a social worker to work across both sites. The support coordinator position was established in response to both the research literature and community feedback. Evidence from the literature indicates that psychosocial interventions are associated with improved physical and psychological outcomes for people affected by cancer.[9] Consultations conducted by The Cancer Council in 2000 with rural cancer patients identified a need for better liaison between metropolitan services and rural communities (internal report).

In 2003, the Board again reviewed future accommodation needs. Findings indicated that The Cancer Council was likely to meet the demand from rural and remote South Australians attending for radiotherapy for the next five years, but would need to increase capacity to cater for other cancer care needs (eg. investigation, assessment, chemotherapy, follow-up care), as well as clients coming from Mildura (Victoria), Northern Territory and Broken Hill (NSW). In light of this, the Board began investigating opportunities to expand the current style of accommodation and support. In July 2006, The Cancer Council South Australia purchased another 75-room motel complex adjacent to the city, which is currently being developed along the lines of Greenhill Lodge. Once this facility is fully operational the total capacity will be 130 rooms.

The facilities and services

Support services

Cancer patients who feel well supported, tend to have better health outcomes and cope better with having cancer.[9] Particular importance is placed on ensuring a supportive environment for people who are a long way from their normal support networks. A half-time social work position was introduced in 2003, whose primary objective is to provide coordinated support to individuals by assessing and identifying their needs and responding to them appropriately, through advocacy, advice, counselling or referral. In addition to responding to all individual guest's needs, the support coordinator's role includes coordinating volunteers, developing recreational programs to enhance the supportive environment at the lodges and networking with other providers to improve information and service provision.

On average, the support worker assists around 300 cancer patients and 170 carers per year. The role involves ongoing contact with allied health professionals and other relevant agencies in relation to specific guests' needs. Advocacy occurs at both an individual level and a systemic level to address issues of access and equity.

The main reason patients and carers contact the support worker include:

1. psychosocial/emotional support;
2. help with financial difficulties; and
3. practical/informational assistance.

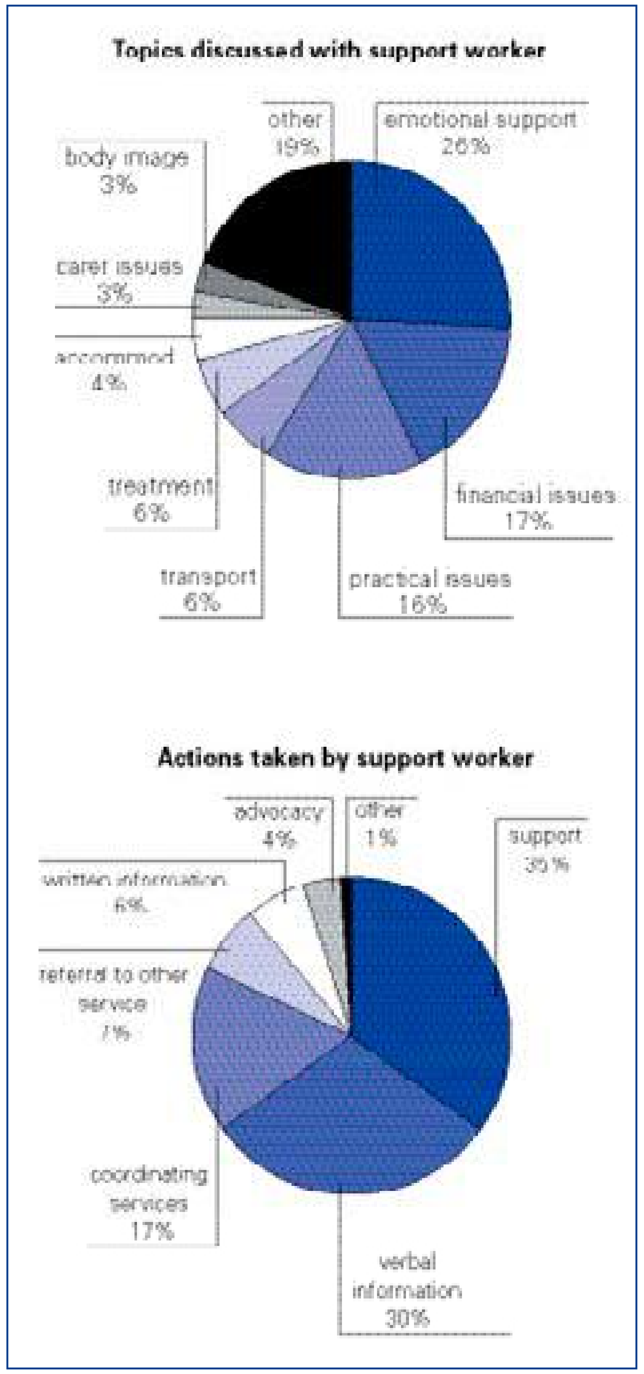
In response, the support worker assists either directly through counselling, providing verbal or written information and/or coordinating services, or indirectly through referral (Figure 1). Trends over the past three years indicate an increase in face-to-face meetings with guests in regard to emotional and financial issues.

In addition, guests also have access to the full range of information and support resources and programs offered by The Cancer Council, which is located next door or within a five minute drive.

Volunteer programs

The support worker coordinates and supervises a group of volunteers, including friendly visiting volunteers who meet with guests on a weekly basis and provide social contact and practical assistance ie. transport to other appointments or shopping. They also facilitate links with other services as needed.

Figure 1. Support worker's activity profile
Data from contact records (July 2003 – May 2006)



Volunteers are involved in providing recreational activities such as cooking classes, art classes or event-based functions such as the Melbourne Cup lunch. Activities are held in the recreation room at Greenhill Lodge and are open to patients and family members. Activities such as craft and cooking are hosted by volunteers with skills in a specific area, who are often personally affected by cancer themselves, and occur on a weekly basis. Weekend bus trips are also provided to extend support to those people who cannot travel home for the weekends or are isolated from family and friends. These are often run by a couple of volunteers who, with the assistance of The Cancer Council staff, develop a program of excursions to local attractions around Adelaide.

All volunteers undergo an induction training program when joining The Cancer Council. Skill development workshops are held at regular intervals (approximately three per year) and cover topics such as communication, aspects of treatment and dealing with loss and grief. They are open to volunteers across the organisations who have contact with people affected by cancer eg. peer support volunteers. Accommodation service volunteers also receive regular ongoing supervision and support for the support worker.

Transport service

The Volunteer Transport Service was initiated in 1995 to provide practical assistance with transport to and from the main treatment centres in the city. A bus service has operated from 8am-5pm Monday through Friday consistently since then, with three volunteers each doing a three-hour shift per day. This service was expanded in October 2002 to transport guests to a treatment facility 15km south of the city. This service offers one trip in the morning and one in the afternoon. Currently there is a contingent of 37 volunteer drivers.

Dining room service

The cost of eating out when away from home can be a considerable burden. Furthermore, it is not uncommon for people having treatment for cancer to experience side effects that may cause difficulty in eating, including loss of appetite, nausea and difficulty in swallowing, which can lead to poor nutrition and undesirable weight loss. It is therefore important that patients maintain a varied and balanced diet of high nutritional value.

To help address these issues, Greenhill Lodge provides dining facilities for guests in the evening and a communal kitchen for self-catering throughout the day. The two-week rotational menu at Greenhill Lodge ensures a balance of all the food groups, with an emphasis on vegetables and fruit at every meal. Meals are deliberately high in calories to ensure adequate nutrition for patients undergoing cancer treatments. The menu also includes a majority of 'traditional' meals such as roasts, as these dinners are found to be popular with guests from regional areas.

Another option for guests is to use the communal kitchen where food can be stored, prepared and enjoyed from 8am to 8pm, seven days a week. This facility not only allows flexibility for patients and their carers, but also provides a meeting place for guests to interact and socialise.

Smoke-free policy and quit support

Passive smoking has been a problem for guests in the past. Recent improvements have been made to ensure a smoke-free environment and quit smoking support is available at Greenhill Lodge. There is a designated outdoor smoking area in a central location. Signage has been placed outside each room and at the entrance of Greenhill Lodge, clearly identifying the designated smoking area and reminding patrons and visitors that the accommodation facilities are smoke-free.

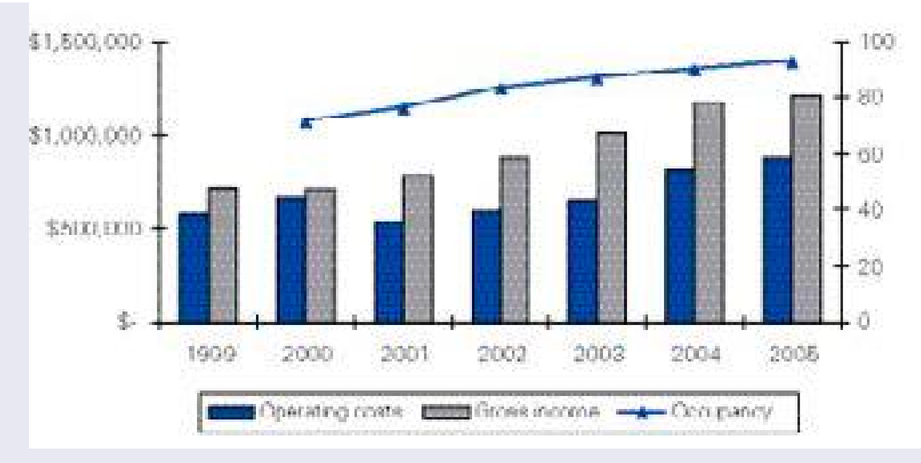
Providing quit smoking support and a smoke-free environment are key strategies of The Cancer Council to reduce the harm caused by smoking. Guests have access to the Quitline service which is available by ringing an internal extension. This service is available from 9am-8pm weekdays and 2-5pm weekends and public holidays.

Managing the service

Running a facility such as Greenhill Lodge is based on the same principles as a commercial accommodation facility, with standard operating procedures relating to reservations and services offered. The ambience of the property is purposely designed to create a homely atmosphere. The major difference between commercial facilities and the lodges is the level of understanding needed by employees in relation to guest needs. This applies to housekeepers, volunteers, catering and reception staff. To equip staff with skills to relate effectively with guests, a specialised training program was developed for accommodation services. Delivered over two sessions to staff from all sections (catering, housekeeping and reception), the program focused on developing empathetic communication styles. It also emphasised the need to recognise when guests need additional support and refer them to professional support services (ie. the social worker).

No medical services are offered or available. Guests are required to be able to care for themselves, or have a carer present at all times. Whilst staff are present at Greenhill Lodge 24 hours a day, emergency situations are handled by phoning an ambulance. The response time is approximately seven minutes.

Figure 2. Expenditure, income and percentage occupancy (1999-2005)



Occupancy at Greenhill Lodge now averages in excess of 90% per annum. A commercial hotel of this size would be closer to 65%. This places considerable stress on the resources, both human and physical (Figure 2).

Financial aspects

The operation of a facility such as Greenhill Lodge has required a careful balance between viability (a balanced budget) and the need to cater for the special needs of cancer patients and carers. In most cases, the patient and carer have no out-of-pocket costs relating to accommodation. This is covered through federal and state government funding programs such as the Patient Assistance Travel Scheme (PATS),[10] or the equivalent in other states. The South Australian scheme provides financial assistance to people residing 100km or more from the Adelaide CBD who require care at a metropolitan health service. Room rates for guests who qualify for PATS do not exceed the current level of reimbursement ($30 a single/$60 a double). Room rates are reduced for guests who require cancer-related care, but do not qualify for PATS because they live within the 100km limit. Commercial guests, including regular clients from a number of service organisations, are accepted when the facility is not fully occupied by non-commercial guests (for example on weekends when many guests return home), at standard rates comparable to similar motels. This system is carefully managed to ensure that commercial guests are aware and respectful of the needs of guests who have a cancer diagnosis.

Maintaining a high occupancy rate is an important factor in the financial viability of operating such a service. Trends over the past seven years indicate the ongoing profitability of this model of operation (Figure 2). A cash surplus allows for the provision of extra services not normally associated with a commercial operation and the ongoing upgrading of facilities.

The accommodation facilities also provide a focal point for various fundraising events undertaken by The Cancer Council South Australia branches. Sixteen of the 17 branches are located in rural areas of South Australia, hence potential donors can see direct links and benefits for their communities. Accommodation services have been a central theme in rural doorknock appeals in the past and continue to be promoted in relation to other major Cancer Council events in regional areas eg. Daffodil Day. Individual branches also run their own local events with specific fundraising objectives. For example, one rural branch held a concert to raise money to purchase an additional bus for Greenhill Lodge. A large number of donations are also received from former guests and family members, either directly or through in memoriam donations and bequests, with a request that they be directed toward further improving accommodation facilities. In-kind donations are also offered by both individuals and service clubs, for example labour/supplies to renovate several rooms. Formerly, substantial donations were acknowledged and recognised through dedication of individual rooms. More recently, donations are recognised via individualised engravings that form part of a sculpture located in the garden at Greenhill Lodge.

Evaluation and continuous improvement

Surveys of guest satisfaction at Greenhill Lodge have been undertaken annually since 2000, as part of The Cancer Council's commitment to continuous improvement. Each year, all non-commercial guests staying at Greenhill Lodge during a specific month are sent a postal survey, four to six weeks after their stay, which they could complete and return anonymously. Response rates have ranged from 65% to 78%. Due to the smaller number, only one survey of Seaview Lodge guests has been undertaken.

Trends indicate a change in the profile of Greenhill Lodge guests over the past six years, with significant decreases in both the mean length of stay (35 days in 2000, compared with 18 days in 2005) and the proportion receiving radiotherapy while at the Lodge (67% in 2000, compared with 40% in 2005). In 2005, only 30% of those surveyed were first time guests (Figure 3).

Satisfaction with the facilities and services has been consistently high. Of the 568 guests surveyed in total, 566 (99.7%) indicated they would stay at Greenhill Lodge again in the future. All guests indicated they would recommend Greenhill Lodge to others.

Feedback indicates that the provision of services to address guests' practical and emotional needs is a highly valued aspect of the service. In 2005, nearly three quarters of all guests had made use of the bus to access treatment facilities (72%). Sixty-six per cent had used the dining room and 62% had used the guest kitchen during their stay. A smaller proportion of guests had accessed the recreational facilities (40%) and recreational programs (18%) (Table 1). However, almost all of those who attended recreational programs rated them very highly (98%) (Table 2). Approximately one third of guests utilised supportive care programs, 35% had contact with the friendly visitor program and 32% had contact with the support worker. Guests who stayed for an extended period (one week or more) had made greater use of the various practical and supportive services than those staying for shorter periods.

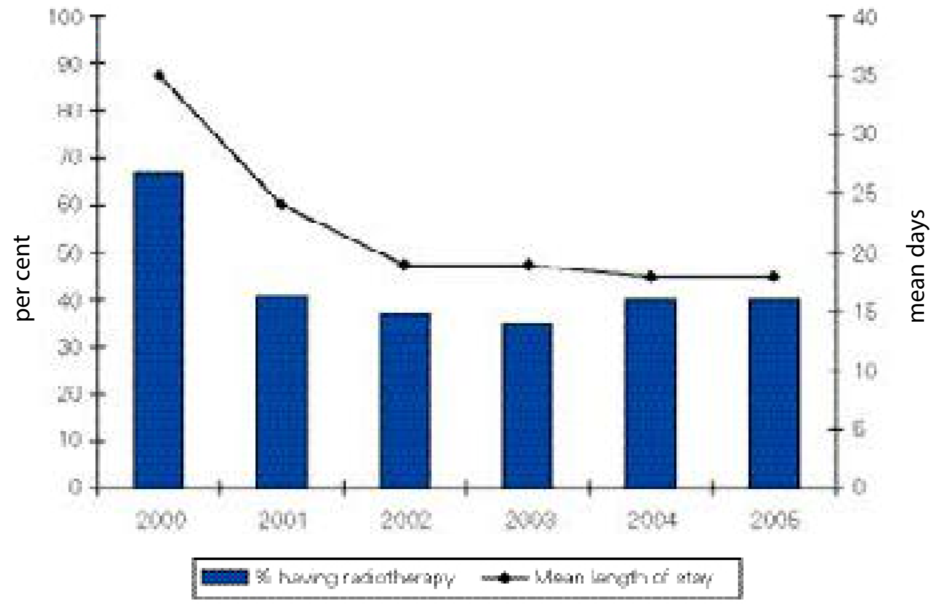
Guest feedback has led to continuous improvements in the facilities and services provided at the lodges. For example, the kitchen facilities have been upgraded and larger fridges placed in rooms, in response to guests' desire for more self-catering options. Room upgrades have incorporated guests' suggestions where possible. Additional information has been added to the information directory, reflecting guests' needs. Greater restrictions have been placed on smoking at Greenhill Lodge in light of a notable shift in attitudes and numerous negative comments about exposure to others' "second-hand" smoke (Table 3).

Seaview Lodge guests rate the facilities as highly as those at Greenhill Lodge. While the self-catering style was preferred by many, a few guests felt isolated and unsupported at Seaview Lodge. This feedback has led to a stronger commitment to ensuring Seaview Lodge guests are aware of and have access to support services at Greenhill Lodge.

Conclusion

The Cancer Council South Australia has been committed to supporting rural communities through the provision of affordable, supportive accommodation for rural patients and their families.

Figure 3. Length of stay and per cent having radiotherapy (2000-2005)



The model adopted by The Cancer Council South Australia has proved to be highly successful, both in terms of its popularity with guests and as a viable financial venture. In our experience it is possible to provide a quality accommodation service and return a profit, which can be utilised to continually improve facilities for guests. Success has been due to sound financial management, continuing growth in demand, ongoing evidence-based improvements, well-integrated support services and strong community support for such a service.

In light of our positive experience, The Cancer Council South Australia endorses the concept of hope lodges. We encourage other organisations interested in supporting people with cancer (or other medical conditions) to consider establishing similar facilities where there is an obvious need.

Table 1. Guests' use of services at Greenhill Lodge
Data from guest feedback surveys 2001-2005

Use of support services at Greenhill Lodge Per cent of Greenhill Lodge survey respondents (2001-2005)	Short stay <7days	Longer stay 7days+	All guests
	(n=218)	(n=210)	(n=451)
Used bus/transport service	45	75	59
Used dining room service	60	69	65
Used guest kitchen	44	73	57
Used recreation room	25	48	36
Used information directory	82	84	83
Had contact with friendly visitor	19	51	34
Had contact with support worker	15	43	27
Attended recreation program	8	32	20
Used Cancer Council services/resources	18	33	24

Table 2. Helpfulness of services at Greenhill Lodge
Data from guest feedback surveys 2001-2005

Helpfulness/convenience of Greenhill Lodge services Per cent of guests surveyed who used service	Very good or good
Helpfulness of the friendly visitor program (n=84)	92
Helpfulness of the support worker (n=63)	95
Rating information and recreation programs (n=84)	98
Convenience of accommodation services (n=444)	99
Convenience of guest kitchen (n=282)	99
Reliability of transport service (n=296)	100
Usefulness of the information directory (n=355)	100

Table 3. Guests views on smoking restrictions at Greenhill Lodge
Data from guest feedback surveys 2001-2005

Policy re smoking at Greenhill Lodge Per cent of guests surveyed	2003	2004	2005
	(n=85)	(n=70)	(n=91)
Smoking banned	18.8	28.6	30.8
Smoking in designated areas	56.5	52.9	57.1
Smoking allowed anywhere outdoors	24.7	18.6	12.1

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AUSTRALIAN BEHAVIOURAL RESEARCH IN CANCER

Viertel Centre for Research in Cancer Control (VCRCC), Queensland

Pilot project to investigate the supportive care needs and adjustment concerns of adults with brain tumours and their carers

A collaboration between The Cancer Council Queensland, Griffith University and BrizBrain and Spine, this pilot project was developed in response to a need for better understanding of the impact of primary brain tumours on individuals and their families and their associated supportive care needs.

The results will inform the development of a larger study to assist in providing strategic direction for the development of future resources and services, including The Cancer Council Queensland's Brain Tumour Support Service, Cancer Helpline and Cancer Counselling Service, as well as external cancer care services.

The pilot project aims to:

1. Describe the medical and allied health support provided to individuals with a brain tumour and their families;
2. Complete a supportive care needs assessment of individuals with brain tumours and their families;
3. Understand the quality of life of people with brain tumours and their families;
4. Investigate patterns and relationships between individuals' cognitive abilities, neuropsychological assessment and support needs;
5. Understand the economic impact to individuals and families associated with brain tumour diagnosis and treatment and how this relates to their quality of life.

Approximately 80 adults with brain tumours will be recruited to the study via The Cancer Council Queensland Brain Tumour Support Service and Brizbrain and Spine neurosurgical practice. Brizbrain and Spine patients will provide the point of view of recently diagnosed patients, while approximately half of the members of the Brain Tumour Support Service are five to 10 years post-diagnosis. The study will be conducted in two stages. In stage one, individuals will take part in a semi-structured interview investigating emotional well-being, psychological functioning and quality of life. In stage two, individuals will have the option of undergoing cognitive and neuropsychological testing.

The project will commence with the recruitment of participants in early 2007 and will run until the end of 2007. The results of the pilot study will inform the development of a larger study for which external funding will be sought in 2008.

Centre for Cancer Control Research (CCCR) & Tobacco Control Research and Evaluation Program (TCRE), South Australia

Solaria compliance in metropolitan Adelaide (CCCR)

A study of 30 randomly selected solaria was conducted in December 2006 to assess the level of compliance that solaria in Adelaide have with the Australia/New Zealand Standard for solaria use for cosmetic purposes. Results revealed a very low level of compliance to the standard, with most centres allowing access to under-aged people and people with fair skin. This shows the need for the regulation of solarium centres in order to reduce skin cancer risk.

Evaluation of smoking cessation education among dental hygiene students (TCRE)

TCRE is working with QuitSA to determine whether knowledge, attitudes and delivery of a clinical intervention about tobacco education for dental patients improve over time among students participating in a tobacco cessation intervention course. Results will be available in 2008.

Evaluation of three QuitSA interventions to increase interaction with Quitline advisors (TCRE)

TCRE is evaluating the effects of three separate interventions to increase the proportion of callers who discuss smoking cessation with a Quitline advisor, rather than terminate the call after requesting written materials on quitting. The interventions involve increasing access to Quitline advisors and follow-up contact with callers requesting only written information. Results will be available in late 2007.

Evaluation of smoke-free hospitality legislation in South Australia (TCRE)

TCRE is undertaking a comprehensive evaluation of the smoke-free hospitality legislation, which is due to take effect from 31 October this year. As part of this evaluation a survey will assess venue compliance with current phase-in provisions and to assess bar managers opinions of the impending laws. Results will be available in early 2008.

Centre for Behavioural Research in Cancer Control (CBRCC), Western Australia

Longitudinal investigation of pharmacological smoking cessation aids in real-life settings

CBRCC has commenced its longitudinal study from 2007 to 2009 to track the incidental use of pharmacological smoking cessation aids by smokers, as funded by the National Health and Medical Research Council. To date 1300 smokers have been successfully recruited and initial interviews have been conducted. Recurrent interviews will now take place every three months for the next two years to measure attitudes towards and reasons for use of pharmacological smoking cessation aids, tracked by advertising, previous personal experience, health professional recommendations and recommendations from friends and family.

That's disgusting! Evaluation of a youth tobacco control advertisement distributed by chain-email deemed too vulgar for television (but the kids loved it!)

Most adolescents appear unmoved by warnings about the long-term health consequences of smoking: they believe they have time to quit "before it gets to that". However they are particularly sensitive to the short-term cosmetic effects of smoking such as bad breath, smelly hair and bad skin. Indeed a common word-association adolescents provide for smoking is "disgusting".

A series of near-finished television advertisements was developed with funding from Healthway to strengthen this association by overtly associating smoking with other things disgusting, including excrement, cockroaches and maggots. In partnership with The Cancer Council WA these advertisements will be distributed using chain-emails and assessed via an online survey in 2007. The number of hits to the advertisement webpage and origin of viewers will be automatically tallied using Webalizer software.

Reducing overweight and obesity in mothers with young children (MYC)

Funded by Healthway for two years, this project will develop, implement and evaluate a community-based intervention to influence the physical activity and nutrition behaviours of mothers with young children attending playgroups in Western Australia. It is expected to reduce prevalence of overweight and obesity in this group over the long-term. As women still do the majority of childcare in Australia, an intervention that successfully improves physical activity and nutrition behaviours will also impact on behaviours of the family, making it a 'whole family' approach. Women are the primary target group, and their children and partners, secondary target groups. The project will be conducted in two stages over 24 months, consisting of formative research via a series of in-depth interviews and focus groups, and the development, implementation and evaluation of an intervention.

Centre for Behavioural Research in Cancer (CBRC), Victoria

The prostate cancer screening debate: public reaction to medical controversy in the media

This study explored older men's and their partners' reactions to a television news program on the medical debate surrounding the use of the prostate-specific antigen (PSA) test for prostate cancer screening. Both qualitative (six focus groups) and quantitative (self-completion questionnaire) methods were employed. In general, viewers seemed to appreciate from the debate that there was controversy surrounding prostate cancer screening and they recognised that PSA testing is more applicable to certain sub-groups of men.

Additionally, it appeared that exposing health consumers to medical uncertainty and expert conflict can help raise awareness of the issues and complexities involved. However, there was evidence to suggest that lay people may be better equipped to negotiate conflicting medical information if the different sides of the argument are plainly noted and a clear distinction is made between opinion and evidence.

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Encouraging the right women to attend for cervical cancer screening: results from a targeted television campaign in Victoria

This study assessed whether a mass media campaign could encourage women who were overdue for a Pap test to have one, without prompting unnecessary early re-screening. A telephone survey of a representative sample of 1000 Victorian women aged 25-65 years assessed recall of the advertisement and intention to act after seeing it.

The television advertisement was recalled by 61.5% of women. Significantly more who said they usually had a Pap test longer than two years apart indicated they would have a Pap test more often as a result of seeing the advertisement (63%), than women who had Pap tests every one (6%) or two (12%) years.

Data from the Victorian Cervical Cytology Registry from mid-2002 to the end of 2004 showed that during the four-week campaign period the number of Pap tests conducted increased by 18% (coeff=0.169, df<0.029). The rate increased most among those due or overdue for a Pap test. In a population with a high level of awareness of cervical screening, it is possible to run a mass media campaign encouraging screening specific

Lorne Cancer Conference

Record numbers of cancer researchers flocked to Erskine House in February for the 19th Annual Lorne Cancer Conference. The conference was spearheaded by two of the most influential researchers into the aetiology and biology of cancer, Doug Hanahan (University of California, San Fransisco) and Bob Weinberg (The Whitehead Institute). Their landmark review in Cell, The Hallmarks of Cancer, describes what a cell needs to become malignant and the ancillary features that aid tumour progression. As such, this year's Lorne Cancer Conference focused on the biology of cancer cells and the important supporting role of the microenvironment.

In the Ashley Dunn oration, Professor Weinberg suggested that the multi-step nature of tumour progression follows a Darwinian-like law of succession; he presented several examples of "gene acquisitions" that can transform normal cells and promote metastasis. As such, Weinberg provided evidence that loss of growth control and potential re-activation of dormant embryonic-like mechanisms that endow metastatic propensity in tumour cells can be achieved through deregulation of the Ras, NF-kB and Smad signalling pathways, leading to activation of transcription factors Twist, Slug and FoxC2. Excellent presentations by John Blenis (Harvard Medical School) and Rick Pearson (Peter MacCallum Cancer Centre) further detailed the molecular events that underpin tumour initiation and progression following aberrant activation of the PI3 kinase pathway. A selection of these presentations on signal transduction was sponsored by ASBMB. Bill Sellers, the Global Head of Oncology at Novartis, then detailed how small molecule inhibitors of the PI3 kinase pathway and other oncogenic signal transduction pathways are being developed for cancer therapeutics.

Scott Lowe from Cold Spring Harbor Laboratories gave the delegates an exciting insight into how highly sophisticated mouse models of cancer may be utilised to study cancer biology in an in vivo setting. These models highlighted a novel link between the onset of tumour cell senescence and activation of an anti-tumour response mediated by the innate immune system. Paul Hertzog (Institute for Rehabilitation Research and Development, Ottowa) extended this notion, describing how innate anti-viral and anti-tumour responses can be modulated through the type I interferon receptor. Talks by Nigel McMillan (Centre for Immunology and Cancer Research, University of Queensland) and Bedrich Eckhardt (Peter MacCallum Cancer Centre) further highlighted the potential of targeting oncogenes or metastasis suppressor genes to prevent tumour progression in preclinical models, while Richard Lock (Children's Cancer Institute, Sydney) showed how genotyping and screening human leukemic cell lines in immunodeficient mice could powerfully inform treatment regimes.

Another major theme of the meeting centred around cancer stem cells. Talks by John Dick (University of Toronto), Michael Clarke (Stanford) and Jane Visvader (Walter and Eliza Hall Institute) provided important insight into the biological characteristics of these cells and how they may be identified. This field is rapidly evolving and

Andreas Strasser from the Walter and Eliza Hall Institute provided evidence suggesting that cancer stem cells (as currently defined) may not be as rare as first thought. Significantly more work is required to differentiate between the rare cell that sustains the first series of oncogenic lesions leading to neoplastic transformation and the more prevalent amplifying cells that can sustain and propagate the growth of established tumours.

The conference clearly reflected that the progression of a tumour is dependent not only on the cell of origin, but also on its relationship with local and distant microenvironments. In his plenary speech, Doug Hanahan addressed the multi-faceted nature of the tumour microenvironment and described how despite representing 0.3% of the total cell component of a tumour, neutrophils can control tumour angiogenesis by regulating the bioavailability of VEGF. The concept of "vascular normalisation" was introduced by Ruth Ganss (Western Australian Institute for Medical Research), who showed that RGS5 deletion increased the maturity of pericytes supporting tumour blood vessels, which intriguingly potentiated T-lymphocyte infiltration and an anti-tumour immune response. The importance of VEGFR-3 and the Notch signaling pathway in the sprouting growth of tumour lymphatic and blood vessels was outlined by Tuomas Tammela (Bio-Medicum, Helsinki), while Natasha Harvey (Hanson Institute) presented a colourful investigation indicating that myeloid cells may act as a circulating pool of lymphatic endothelial progenitors. Michael Detmar (Institute of Pharmaceutical Sciences, Zurich) later described how tumours can activate lymphangiogenesis in sentinel lymph nodes prior to the arrival of metastatic cells. Importantly, the establishment of this "pre-metastatic niche" can promote spread to more distant sites.

Marc Achen (Ludwig Institute for Cancer Research) presented several different therapeutic approaches to modulate the activity of VEGFs and their effects on vessel growth and metastasis. In addition, Hanahan also described how tumours evade anti-VEGF therapy over time by upregulating expression of other pro-angiogenic factors such as FGFs in tumour and stromal cell compartments. Blockade of both VEGF and FGFs provided greater efficacy in reducing tumour angiogenesis. Christian Fischer (Centre for Transgene Technology and Genetherapy, Belgium) also demonstrated that neutralising antibodies targeting PIGF in preclinical models held great promise in addressing the shortcomings of anti-VEGF treatment. The role of cancer associated fibroblasts in the regulation of tumour growth was also presented by Gail Risbridger (Monash Institute of Medical Research) and Bob Weinberg and may provide alternative therapeutic targets.

The high quality of research presented was echoed in the poster sessions, which for the first time had to be split over two nights. A large number of students this year took the opportunity to present their own data and interact with some of the greatest researchers in the field. With Lorne turning on stellar beach weather, networking and discussions continued outside of the seminar rooms on to the sand and well into the evening. That cutting-edge research was still being discussed late into the night was a keen reflection of how inspirational the meeting had been. The organisers would like to thank the many sponsors of the conference and look forward to another beneficial partnership for next year's 20th anniversary.

The Lorne Cancer Conference is supported by
The Cancer Council Australia

NEWS & ANNOUNCEMENTS

Experts release new guidelines on sun exposure

New guidelines have been released to tell Australians how much sun they need to avoid vitamin D deficiency and stay healthy without increasing their risk of skin cancer.

The guidelines follow research from The Cancer Council's National Sun Survey, which found that 17% of teenagers and 13% of adults thought they needed to go out in the sun more without sun protection as a result of hearing media reports about vitamin D.

"We're alarmed that a small but significant number of Australians are deliberately seeking sun exposure without sun protection because they are concerned about vitamin D, and are therefore more likely to be putting themselves at risk of skin cancer," The Cancer Council Australia's CEO, Professor Olver said.

The Cancer Council has joined with other health experts from Osteoporosis Australia, the Australasian College of Dermatologists and the Australian and New Zealand Bone and Mineral Society to address the public's confusion about Vitamin D deficiency.

The new guidelines recommend:

- Fair skinned people can maintain adequate vitamin D levels in summer from a few minutes of exposure to sunlight on their face, arms and hands or the equivalent area of skin on either side of the peak UV Index periods on most days of the week.
- In winter in the southern parts of Australia, where UV radiation levels are less intense, people need about 2-3 hours of sunlight to the face, arms and hands or equivalent area of skin over a week.

Medical Director of Osteoporosis Australia, and Head of Endocrinology, University of Melbourne at Western Hospital, Professor Peter Ebeling, said it was important to stress that the majority of Australians had sufficient levels of vitamin D. "However, those likely to be at risk of vitamin D deficiency include people with very dark skin, people who are housebound or in institutionalised care, women who wear concealing clothing for cultural purposes, and breastfed babies of vitamin D deficient women," Professor Ebeling said. "Anyone who thinks they may be vitamin D deficient should seek medical advice, not seek more sun."

Secretary of the Australasian College of Dermatologists, Dr Stephen Shumack, stressed that the new advice developed by the four organisations took into account the intensity of the sun in different parts of Australia. "While those in southern states in many cases don't need sun protection in winter, sun protection is still necessary in places like the Northern Territory, Queensland and parts of Western Australia, all year round, because UV Index levels are high enough to cause significant skin damage," he said.

The new guidelines – The risks and benefits of sun exposure – can be found at www.cancer.org.au/positionVitD

One million Australians targeted in first bowel cancer screening program – Cancer Council urges eligible Australians to take the test

Ever been told you are one in a million? If you are turning either 55 or 65 between May 2006 and June 2008, you soon will be.

Phase one of the Federal Government's National Bowel Cancer Screening Program is now underway with around one million men and women being urged to screen for a disease that kills 90 Australians every week.

As part of Bowel Cancer Awareness Week in June, The Cancer Council Australia encouraged all eligible Australians to take part in the free testing program. Those eligible in the first phase will receive a simple, at-home kit in the post to test their bowel motion for early signs of bowel cancer.

The Cancer Council Australia's CEO, Professor Ian Olver, said that if detected early enough, "90 per cent of bowel cancer cases were curable".

Professor Olver said that while Pap testing and mammograms had been available to women for many years, this was the first time both men and women had been included in a national, population-based cancer screening program. "The National Bowel Cancer Screening Program has the potential to save more lives each year than breast and cervical screening combined," he said.

"Around one million people are being targeted in the first phase of the program. However, when the program is running at full capacity, we estimate more than five million people will be eligible for regular bowel cancer screening. The Cancer Council is urging all Australians targeted in this first phase to take part to ensure the ongoing success of the program."

Working with cancer

Many cancer patients continue to work during their treatment and recovery, just as many people caring for someone with cancer are also holding down jobs. Often colleagues don't know what to say or how to help.

Our Working With Cancer resource helps to make attending work or returning to work easier for patients, carers and survivors and their colleagues.

Working with cancer was developed in association with employers and with people diagnosed with cancer. It is suitable for companies large and small, and includes case studies, handouts and workshop materials on:

- Supporting patients and carers in the workplace
- Talking to workmates about cancer
- Developing supportive policies
- Employer responsibilities
- Helping everyone cope with cancer at work
- Balancing company and individual needs
- Coping with death and bereavement

Working with cancer is available at www.cancer.org.au/workingwithcancer or by phoning The Cancer Council Helpline on 13 11 20.

The Cancer Council Australia welcomes skin cancer awareness and obesity survey measures in Budget

The Cancer Council Australia has welcomed the Federal Government's Budget commitment to continue its skin cancer awareness campaign over the next two years and to put additional funding into an ongoing national nutrition and physical activity survey program.

The Cancer Council Australia's Chief Executive Officer, Professor Ian Olver, said the $11.5 million the Government had allocated to the national skin cancer campaign over the next two years would provide a significant additional return on the $7 million invested in developing the campaign over the past two years and running it last summer.

"Skin cancer is Australia's most expensive cancer in terms of overall burden on the health system and it claims more than 1600 lives each year, many of them young people with melanoma," Professor Olver said.

"The Federal Government's ongoing campaign should help to remind Australians of the dangers of excessive exposure to ultraviolet radiation and reduce the unacceptable burden skin cancer imposes on our community."

Professor Olver also commended the Government's $10.6 million commitment over four years to roll out a national nutrition and physical activity survey program, as well as a number of other initiatives aimed at reducing the impact of obesity.

"Obesity and overweight are a major cause of cancer in Australia and will cause a significant increase in future cancer incidence and mortality, on top of the increases we can expect through population ageing, if steps aren't taken now to reverse the obesity epidemic," he said.

"The Government's national survey program will be pivotal to understanding the changing dietary and physical activity habits of Australians and thereby inform better targeted programs for addressing obesity."

Professor Olver also welcomed the ongoing support for the Council of Australian Governments' Australian Better Health Initiative and the increase in medical research infrastructure funding announced in the budget.

"With a federal election likely to be called this year, we hope to see a continuation of the support for reducing the impact of cancer we have seen from across the parliament over recent years, such as measures to reduce disparities in treatment access between urban and rural patients."

Growth in solariums alarms skin cancer experts

Skin cancer experts have expressed alarm at new Cancer Council research showing an explosion in solarium numbers across Australia, with one capital city recording a 1000 per cent increase over the past decade.

The new figures, published in the Australian New Zealand Journal of Public Health, show the number of solariums advertised in the Yellow Pages™ in Australian capital cities increased four fold between 1996 and 2006.

The startling rise has prompted a call for tighter regulation of the industry, which currently operates under a voluntary code.

The Cancer Council Australia's Chief Executive Officer, Professor Ian Olver, said the figures were staggering, yet understated as the research did not cover solariums in beauty salons or fitness centres.

"This study backs existing research showing that hundreds of thousands of Australians are being needlessly exposed to excessive UV radiation and an increased risk of skin cancer," Professor Olver said. "Solariums emit ultraviolet radiation up to five times as strong as the sun and there is clear evidence of the link between solariums and skin cancer."

Professor Olver said the findings were especially worrying in light of a recently published international study, which found a 75 per cent increased risk of melanoma for people using solariums before the age of 35.[1]

According to the Chair of The Cancer Council's National Skin Cancer Committee, Craig Sinclair, more than 1600 Australians lose their lives each year to skin cancer and the revelation that solariums were increasing at such a rapid rate would be of enormous concern to skin cancer and public health experts.

"We are particularly worried about the risk to young Australians," Mr Sinclair said. "We already know the voluntary code is not working and our own studies show poor compliance in restricting solarium access to those under 18.

State 1996	Number listed in 2006	Number listed in since 1996	% increase
Melbourne	25	169	576%
Perth	5	55	1000%
Canberra	4	21	425%
Adelaide	12	39	225%
Brisbane	15	47	213%
Sydney	29	63	117%
Hobart	7	12	71%
Northern Territory	0	0	0
All capital cities	97	406	319%

Solarium/tanning centre Yellow Pages listings by Australian capital cities – 1996 to 2006

"This demonstrates the urgent need for legislation, which is already in place in many parts of Europe and the United States. Australia has the highest rates of skin cancer in the world, yet we lag behind other countries in tackling this problem."

Mr Sinclair said that anyone who thought solariums offered a "safe way of tanning" should think again.

Cancer Council releases bowel cancer screening forum report

A whole-of-government approach to bowel cancer screening built around quality assurance is the key to ensuring the Australian Government's National Bowel Cancer Screening Program reaches its potential to reduce bowel cancer mortality in Australia.

Moving forward on bowel cancer screening in Australia is a summary report of the expert presentations and panel discussion on bowel cancer screening documented at a national forum hosted by The Cancer Council Australia in Melbourne late last year, under the auspices of the Commonwealth Department of Health and Ageing.

Population-based bowel cancer screening using faecal occult blood testing has been shown to reduce bowel cancer mortality by up to 40 per cent among the screened population. But, according to the report, converting this evidence-based potential into optimal success in terms of bowel cancer mortality reduction requires a commitment by governments at all levels. It requires the application of minimum standards, quality controls, adequate follow-up, ongoing monitoring of the program, measures to maximise screening participation and improved support for the medical workforce, as explored in the report.

The report is available at www.cancer.org.au.

Palliative care community education initiative

Palliative Care Australia has launched a new National

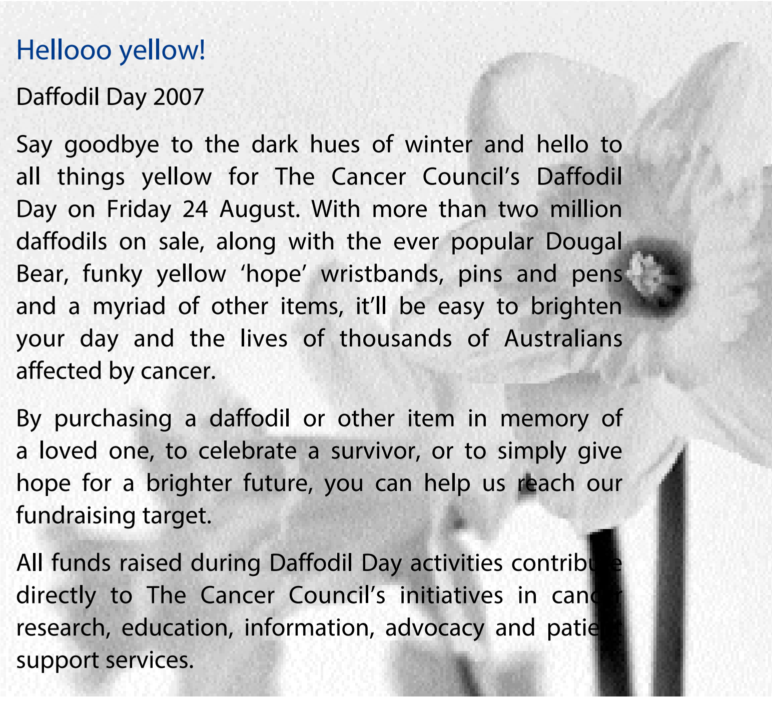
Aussies make every cup count for Australia's Biggest Morning Tea

The help of more than one million Australians from all corners of our country has ensured another successful Australia's Biggest Morning Tea in 2007.

While funds are still being counted, we are well on the way to our $8 million target thanks to the many morning teas held throughout May in schools, at home, in the workplace and in the community.

Australia's Biggest Morning Tea is one of The Cancer Council's foremost fundraising events and the largest, most successful event of its kind in Australia.

The funds raised by generous Australians will help The Cancer Council continue its fight to defeat cancer.



Hellooo yellow!

Daffodil Day 2007

Say goodbye to the dark hues of winter and hello to all things yellow for The Cancer Council's Daffodil Day on Friday 24 August. With more than two million daffodils on sale, along with the ever popular Dougal Bear, funky yellow 'hope' wristbands, pins and pens and a myriad of other items, it'll be easy to brighten your day and the lives of thousands of Australians affected by cancer.

By purchasing a daffodil or other item in memory of a loved one, to celebrate a survivor, or to simply give hope for a brighter future, you can help us reach our fundraising target.

All funds raised during Daffodil Day activities contribute directly to The Cancer Council's initiatives in cancer research, education, information, advocacy and patient support services.

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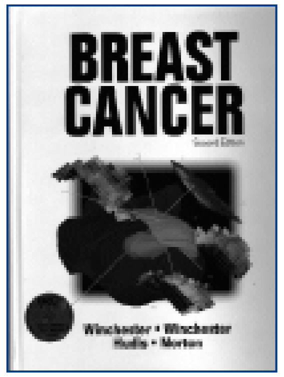
[1] International Agency for the Research on Cancer. The association of use of sunbeds with cutaneous malignant melanoma and other skin cancers: A systematic review. Int. J. Cancer: 120, 1116-1122 (2006).

Breast Cancer (2nd edition)

DJ Winchester, DP Winchester, CA Hudis, L Norton
BC Decker (2006)
ISBN: 9781550092721
607 pages
RRP: $245.00



The mission of publishing company BC Decker, according to their website, is to produce premium quality information for medical and allied health professionals in the form of text books, journals and electronic media. Their areas of medical speciality are varied and this text on breast cancer is one of many in their oncology collection.

This latest edition of Breast Cancer has a comprehensive list of distinguished contributors from various well-known cancer institutions across America. No surprise then that this has a distinctly American flavour, however this does not in any way detract from the high quality information discussed.

The textbook includes a CD-Rom with the book in PDF and with full text and images. This is a positive aspect of the package as it enables the user to access information in a convenient format. It is also ideal for printing information for patient education at the discretion of the health professional.

The stated goals of this book are clearly articulated in the preface. These goals are to identify and disseminate significant developments in the areas of breast cancer prevention, diagnosis and treatment.

My first perusal of the table of contents revealed 37 chapters beginning with the history of breast cancer and finishing with a chapter on a “patient’s perspective”, with a woman detailing her breast cancer experience. All disciplines involved in the management of breast cancer are represented.

Areas covered include epidemiology, hereditary breast cancer and the role of risk assessment and management. Diagnostic imaging is covered over three chapters with a focus on magnetic resonance imaging. Pathology and staging of breast cancer is discussed. The book also discusses various breast pathologies with chapters devoted to ductal carcinoma in situ and unusual breast histology.

Early stage disease is discussed in detail, with a chapter devoted to each treatment modality. Of note is a chapter devoted to multi-focal, multi-centric and bilateral breast cancer. Of interest was the management of breast cancer in the previously augmented breast, an issue that will only increase with the ageing population of women who have breast implants and the challenges this will pose for treatment and aesthetics.

Breast reconstruction is highlighted with a chapter detailing the evolution of these procedures; perhaps more diagrams and photos could be of use here. Special chapters are devoted to breast cancer and the pregnant woman and importantly the male with breast cancer.

The organisation and flow of the book is easy to follow and is highly systematic and comprehensive in its approach. Importantly it details areas of controversy as appropriate to the subject discussed and has summaries of all relevant clinical trials as they stand at the time of printing.

It is disappointing not to find reference to the role of breast care nurses as part of the multidisciplinary approach to breast cancer. This is discussed in passing early on in the book with a chapter devoted to a discussion on what constitutes a specialist breast centre, with a focus on the different operational models evolving in the concept of the specialised breast cancer centre.

Attention is paid to the value added dimension of allied health such as psychology, social work, patient navigation, support groups and patient education programs. It would be beneficial in future editions perhaps to have a chapter devoted to the discussion and analysis of psychosocial problems and issues faced by women and men with breast cancer, within the framework of each treatment modality.

Survivorship issues are discussed mainly in the context of medical surveillance strategies. Emerging information about the positive impact of exercise and maintaining weight within ideal range on reducing the risk of breast cancer recurrence is lacking.

Metastatic disease is discussed within the chapters of radiotherapy and endocrine therapy. The emphasis really is on early stage breast cancer, with a chapter devoted to locally advanced breast cancer.

Despite some shortcomings from a breast care nurse perspective, this textbook fulfils its stated objectives, which are medical in context. I would recommend this as an introduction to any student of breast cancer either from a medical, nursing or allied health stream for a useful medical overview. It would be a useful addition to any oncology collection in a medical/hospital library in a teaching institution.

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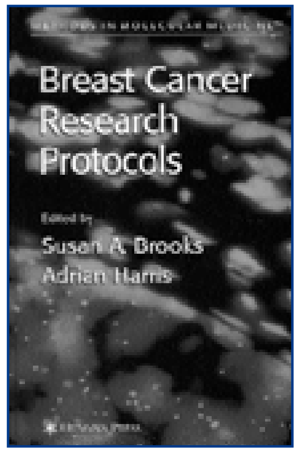
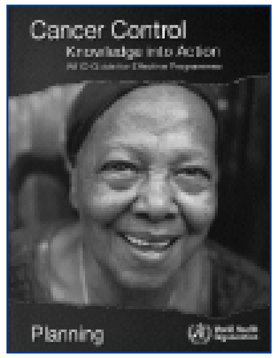
Department of Surgical Oncology, Peter MacCallum Cancer Centre, Melbourne, Victoria

Breast Cancer Research Protocols

SA Brooks, A Harris (eds)
Humana Press (2006)
ISBN: 1-58829-191-X
517 pages
RRP: $135.00



This is one of the latest books of the Methods in Molecular Medicine series. It is primarily targeted at clinicians and research scientists interested in initiating translational breast cancer research. One of the main problems in translational research is the wide variation and lack of standardisation in the methods and protocols used. This book introduces and summarises the current methods and protocols in obtaining and analysing breast cancer tissue specimens from the patient to the molecular level.



The content is divided into five parts covering important and current topics in preparation of cell and tissue samples, markers of clinical outcome and prognosis, analysis of tumour-derived proteins and antigens, analysis of gene and gene expression in tumour specimens and studying cancer cell behaviour both in vitro and in vivo.

Each part is subdivided into smaller chapters and written by experts in the related field. Each chapter has a summary, introduction, methods, notes and references. The summary and introduction at the beginning highlight major discussion points. Methods and protocols are described in a concise and easy to follow numerical sequence. The notes provide practical advice in dealing with problems encountered during the research. A list of references for the methods and protocols is conveniently available at the end of each chapter for more in-depth discussion. The black and white illustrations of molecular techniques and histopathology make interpretation difficult at times.

In an era where translational research in breast cancer is rapidly progressing and becoming an exciting reality in its clinical application, this book is a useful reference point for current methods and protocols in this area and highly recommended for those interested or initiating translational breast cancer research.

Weng Ng
Liverpool Hospital, NSW

Cancer Control Knowledge into Action: WHO Guide for Effective Programmes

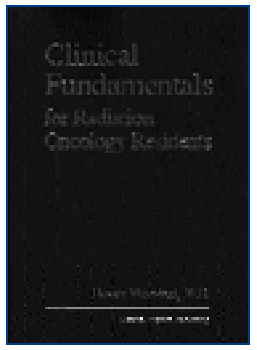
WHO Press (2006)
ISBN: 92-4-154699-9
40 pages
RRP: $US13.50

Cancer Control Knowledge into Action: WHO Guide for Effective Programmes is one of a series of six modules (booklets) that provides practical advice for program managers and policy-makers on how to advocate, plan and implement effective cancer control programs. The module is essentially an instruction manual for developing a cancer control plan targeted to low and middle income countries.

The booklet is based on several key principals: that a comprehensive cancer control strategy allows more efficient and equitable use of resources; the context and past experiences need to be considered; the plan must be goal-orientated and people-centred; and consideration must be given to affordability, cost-effectiveness and priorities (especially in low and middle income countries).

The module chapters are structured around the phases of planning, specifically: pre-planning; assessment; data collection and analysis; setting objectives and priorities; implementation; monitoring; and evaluation. Basic aspects of planning are reviewed, including how to determine whether a plan is needed, how to draw up a strategic plan, stakeholder involvement, self assessment and defining the target population. The text is also supported with definitions of key words and activities.

Acknowledgement is given to the importance of priority initiatives, particularly in countries where resources are limited and political support is weak. There is strong advocacy for a "bottom-up" approach and consideration of the social and political context in which plans and programs are developed. The booklet is interspersed with stories and examples of successful and failed cancer control plans, the reaction of policy makers, the importance of reassessment and the search for new approaches. Input for the resource was provided from a range of low and middle income countries including Cameroon, Vietnam, Hungary, China, India and Pakistan, with core content contributed by a range of experts in developed countries.



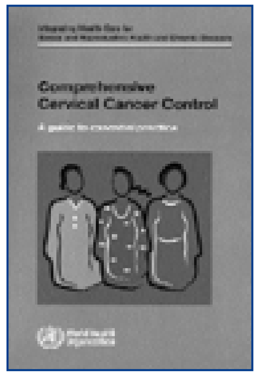
The resource is short, at just 40 pages, logically sequenced, inexpensive and written in plain English. While targeted to low and middle income countries, the booklet may also be useful for students in policy development. Other booklets in the series are: Prevention; Early Detection; Diagnosis and Treatment; Palliative Care; and Policy and Advocacy.

Anne-Marie Dewar
The Cancer Council Queensland

Clinical Fundamentals for Radiation Oncology Residents

Hasan Murshed
Medical Physics Publishing (2006)
ISBN: 978-1-930524-28-6
343 pages
RRP: $US60.00

This small textbook is written primarily for radiation oncology residents and registrars. The information covered was written by the author as part of his preparation for his final specialist exam in radiation oncology. It aims to provide a management approach and summary of all the key literature on neoplasms treated with radiotherapy.



To this end, the book achieves its aim and provides a concise, well-written summary of each topic. Information includes the relevant epidemiology, symptoms/signs, investigations, management, expected outcomes and complications of treatment. Radiation techniques are also provided in reasonable detail. Images of simulator films and digitally reconstructed radiographs are used to supplement the written information on radiation techniques.

Extremely useful is the annotated bibliography of key articles at the end of each chapter. These are summarised by the author including key discussion points, which most radiation oncology trainees would find particularly helpful.

The book is written mainly in note format, which is reasonable given its aim. Overall it is well written, but does use some US terminology. The main disadvantages are that recommendations for treatment follow US approaches which are used less often in Australia. Some approaches used in Australia are not part of the recommended treatment approaches for certain tumour sites. For example, short course pre-operative radiotherapy without chemotherapy is not included as an option for treatment of rectal adenocarcinoma.

Having said that, this book does not aim to provide a comprehensive review of the literature and so it does not significantly detract from the book's usefulness. Regretfully, topics such as melanoma and merkel cell carcinoma are not included. These have been used in the part two Royal Australian and New Zealand College of Radiologists exams indicating the importance of these areas of cancer management in Australia.

I highly recommend this book to radiation oncology trainees who wish to a have a small summary book on radiation oncology manage-ment of neoplasms. It would be of most use as a quick review reference book, especially in the lead-up to the final exit exams in radiation oncology. Trainees in other specialties may also find it useful for a small reference on the various neoplasms covered.

Mark Lee
Liverpool Hospital, NSW

Communicating with dying people and their relatives

J Lugton
Ausmed (2003)
ISBN: 0-9579876-7-6
184 pages
RRP: $49.95

Over the last decade, books on communication and how to do it better are appearing with increasing regularity on our bookshelves. Yet few exist specifically on the topic of communicating with dying people and their relatives. Jean Lugton has attempted to fill this gap.

Communicating with dying people and their relatives at 184 pages, with nine chapters, appendices, references and suggestions for further reading, offers strategies for improving our communication with this vulnerable group of patients (the dying) and their relatives. To this end, I believe the book has been successful.

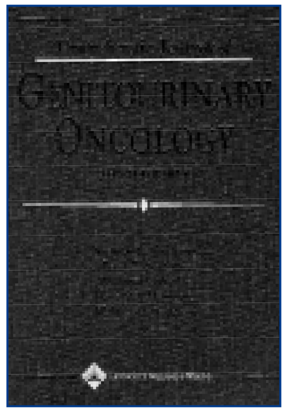
It begins by establishing the importance of good communication in palliative care. From the outset, it differentiates between terminal care and palliative care, always a necessary distinction to make. Subsequent chapters provide lists of what nurses need to possess to work in palliative care, such as educational preparation and self awareness concerning attitudes to death and dying. There is a chapter on how to break bad news which perhaps repeats what others have written about in this area, namely Robert Buckman. Yet the chapter also extends Buckman's work in that it outlines differing coping styles to the 'bad news' scenario. While I don't necessarily agree with the use of Kubler Ross' stages to explore coping in terminal illness, it does provide a vehicle from which to talk about impending loss and the implications that this loss may have on those closest to us.

The only other chapter I will specifically mention is 'Making communication more effective', which explores the controversial issue of nurse-patient friendships, the development of which has been frowned upon in recent years. Rather than actual friendships, Lugton supports the development of covenant relationships, relationships aimed at listening and befriending, without the imposition of duties on the patient or their family. She suggests that traditional barriers between nurse and patient can be broken down by the use of first names, by the use of the same nurse in daily patient care and by identifying and supporting families' areas of strength. These suggestions are not new in the palliative care arena, however have not often been seen as therapeutic.

The use of conversational extracts throughout the book to illustrate salient points are effective in grounding the discussion in the experiences of actual people living with a life-limiting illness and make the book highly readable. I found the list of questions at the end of each chapter useful as prompts for reflection.

In summary, Lugton's book provides a useful resource for all healthcare professionals. It would appeal to a larger audience, not just nurses. In an increasingly litigious world, how to communicate better with people in our care is a constant challenge.

Katrina Breaden
Department of Palliative and Supportive Services, South Australia

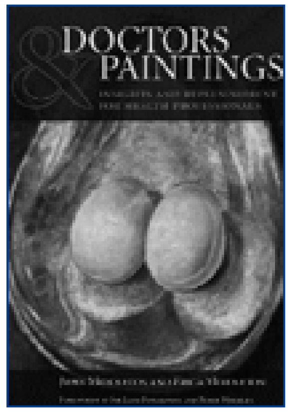


Comprehensive Cervical Cancer Control: A Guide to Essential Practice

World Health Organization (2006)
ISBN: 92-4-154700-6
272 pages
RRP: $US45.00

This guide was developed by the World Health Organization (WHO) and the International Agency for Research on Cancer (IARC) in collaboration with a number of other international agencies. The introduction states that it is "intended primarily for use by healthcare providers working in cervical cancer control programs in health centres and district hospital settings with limited resources. However, it may be of interest to community and tertiary-level providers, as well as workers in other settings where women in need of screening might be reached".

The main focus of the guide is on the knowledge and skills needed by healthcare providers, particularly those at level one and two. It has been field-tested by reviewers in China, Egypt, India, Lithuania, Trinidad and Zimbabwe. The information presented is evidence-based and broadly applicable, however of course may need to be adapted to local health systems, needs, language and culture.



There are seven chapters:

- Background
- Anatomy of the female pelvis and natural history of cervical cancer
- Health promotion, prevention, health education and counselling
- Screening for cervical cancer
- Diagnosis and management of pre-cancer
- Management of invasive cancer
- Palliative care

Each chapter includes:

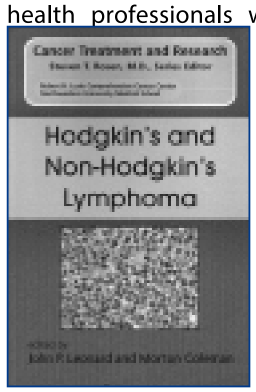
- a description of the role and responsibilities of various healthcare providers in relation to the chapter topic;
- a story illustrating or personalising the topic;
- essential background information on the subject, followed by discussion of established and evolving practices in clinical care, and recommendations for practice;
- information on service provision at each of the four levels of the healthcare system (ie. community, primary, secondary and tertiary level);
- counselling messages to help providers communicate with women about the services they have received and the follow-up they will need; and
- a list of additional resources.

Most chapters have associated practice sheets that provide step-by-step information on specific components of care (eg. obtaining informed consent, taking a history and performing a pelvic examination, taking a Pap smear, colposcopy, cone biopsy, hysterectomy, radiation therapy, pain management and management of vaginal discharge and fistulae). These sheets are intended to be used as "job aids, to remind providers of the essential steps and to help them to educate, counsel and correctly explain services to women and their families".

Nine annexes provide guidelines on specific areas of clinical practice (eg. management flowcharts and treatment protocols for screen-detected abnormalities, cervical pre-cancer and invasive cancer), as well as strategies for improving service delivery. A glossary and a list of abbreviations and acronyms are also included.

The guide is compact in size and the use of spiral binding and good quality paper make it likely to be a durable resource. There is extensive use of key points, lots of simple figures and tables throughout and good cross-referencing to practice sheets and annexes. This makes it an easy-to-use reference document.

Regardless of the resource setting, I would highly recommend this publication to general practitioners and medical students, as well as nurses and other allied health professionals working in the area of women's health and/or oncology.



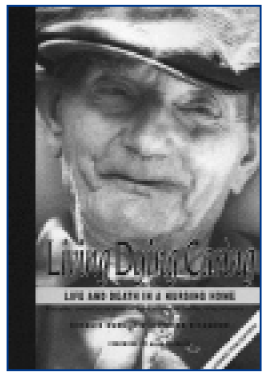
Annie Stenlake
Department of Gynaecological Oncology, Westmead Hospital, NSW

Comprehensive Textbook of Genitourinary Oncology (3rd edition)

NJ Vogelzang, PT Scardino, WU Shipely, FMJ Debruyne, WM Linehan (eds)
Lippincott Williams & Wilkins (2006)
ISBN: 07-817498-40
897 pages
RRP: $328.90

Comprehensive Textbook of Genitourinary Oncology is a large and well-researched reference book for clinicians working in this field. The third edition is designed to incorporate the latest medical and scientific advances in each clinical domain – surgery, medical and radiation oncology – from laboratory to bedside. The editors are well recognised and highly respected in their fields, and with over 200 international contributing authors, the reader is provided with a strong philosophical foundation for multidisciplinary care. Evidence in the medical literature indicates that an integrated team-based approach, including surgeons, pathologists and medical and radiation oncologists, can lead to improved survival and better quality of life for patients affected by these malignancies.

The textbook is divided into five parts – prostate, bladder, testicular, kidney and other rare genitourinary malignancies. The contents are clearly listed, ensuring the reader has quick and easy access to all relevant information. Each part of the textbook follows a logical structure covering epidemiology, genes, risk factors, screening, symptoms, diagnosis and management for the differing stages for these malignancies. There are a number of interesting and varied diagrams and illustrations, including histopathology, imaging technologies, anatomy and surgical techniques. There are also flow charts and tabulated data that are clearly labelled and easy-to-understand. For example, if you needed to find information on survival advantages for high risk prostate cancer using adjuvant hormonal treatment and radiotherapy, you can readily find the relevant table and summary of the major prospective trials using this form



of treatment.

In essence, the textbook encompasses a thorough review for each genitourinary cancer from a clinical and scientific context and aims to guide the clinician by providing answers to clinical questions that are evidence-based. The importance of research is a common theme that links each chapter and the authors identify gaps in knowledge for future study. The search to identify new molecular markers for prostate cancer that indicate faster disease progression are in progress; this will in turn enable us to more effectively target aggressive therapeutic management towards patients who will gain the most benefit.

There have been many significant advances across each genitourinary cancer and the following are a few examples that illustrate some of the changes. There are faster recovery times, less morbidity and lower rates of positive surgical margins for patients having radical prostatectomy; we have seen the development and wider availability for laparoscopic and robotic surgical techniques. The delivery and accuracy of radiotherapy for prostate cancer has also improved; knowledge from prostate motion studies has seen the introduction of prostate cancer fiducial markers that allow more effective tracking ofits movement during treatment. Other significant advances include IMRT in radiation oncology and the use of taxanes for hormone resistance in medical oncology. The future for renal and bladder cancers also looks promising with the introduction of anti-angiogenic drugs for metastatic renal cell carcinoma and new chemotherapy drug combinations for bladder cancer in the neoadjuvant setting.

I would strongly recommend this high quality textbook for clinicians, urologists, medical and radiation oncologists in training, researchers and specialist nurses working in this field. The textbook demonstrates the progress made towards the ultimate goal for the editors, which is the improved survival for patients and the eradication of these malignancies.

Diana Van der Saag

Urology Cancer Service, Royal North Shore Hospital, NSW

Doctors and Paintings

J Middleton and E Middleton

Radcliffe Publishing (2006)

ISBN: 9781846190520

102 pages

RRP: $78.00

As a physician and a painter myself, I welcomed the opportunity to review this book, sub-titled to afford “insights and replenishment for health professionals”. Although it is an easy read, I found the conversational style of the book irritating, the content too simple for a physician audience, and the tone prescriptive and somehow patronising of patients, as though doctors and patients have little common ground and the humour just didn’t work.

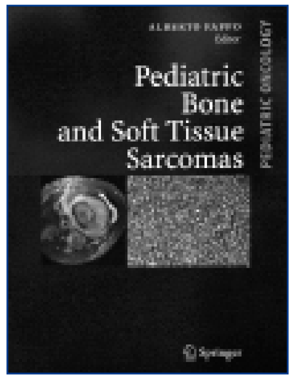
Early on, the authors seem to have a clear focus, ie. to highlight the importance of doctors’ self-knowledge/self-awareness to better understand our patients, and to do this through the medium of painting. There is a lot to explore about the impact of art for physicians, the creative process as enlightenment to this end and the parallels between this, medicine and humanity. If one goes beneath the surface, this topic has enormous relevance to how doctors perceive themselves and others, how we integrate information, how we respond to difficult situations and how we evolve as compassionate, caring clinicians who don’t burn out through the very practice of doctoring.

After the first third of the book, the authors quickly lose their own way, a problem for the self-confessed, self-aware. While some worthy points are made early on, even these seem self-evident; for example that the arts help to stimulate insights into common patterns of response, highlight individual differences and can enrich the language and thought of the practitioner, and the exploration of a doctor’s own feelings and defences – but there is nothing new about this.

The authors raise other pertinent issues, such as the value and risks of vulnerability as it relates to professional virtue, the concept of healing for the healer as well as the patient, the use of narrative and story-telling, and how, as in life, doctors may arrive in the middle of a patient’s story. In addition they discuss notions of ambiguity in painting and in life, the value of interpreting the patient’s own language and how we bring our own perceptions to the interpretation of either a painting or a patient, so that the processes can be seen to run in parallel.

The authors refer to some well-known artists: Frida Kahlo, her physical disability; Mark Rothko, his depression; Francis Bacon, his childhood sexual abuse and adult homosexuality; Vincent Van Gogh, his presumed mental illness (I always thought he had acute intermittent porphyria myself); Tracey Emin, her own-life narrative, bringing the distasteful or unspoken into full view (eg. abortions); Rembrandt van Rijn, his life tragedy; and Lucien Freud, his struggle for power and concerns about ageing. It all feels a bit flat and superficial, though.

The fact that one author chooses to use her own paintings (which aren’t particularly engaging) to highlight some concepts is a tad self-referential and narcissistic. Sadly, the book ends up feeling like an opportunity for self-promotion, billed under the guise of something nobler. In the end, the authors are saying, “first, know thyself”. We all have different routes for getting there; for some of us, the act of painting or art appreciation may help us along the way. It is patronising, though, to suggest that it will help all of us, and these authors, for one, fail to really tell us why.



Lesley Adès

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The Children’s Hospital Westmead, NSW

Hodgkin’s and Non-Hodgkin’s Lymphoma

JP Leonard, C Morton (eds)

Springer (2006)

ISBN: 978-0-387-29345-5

488 pages

RRP: €119.95

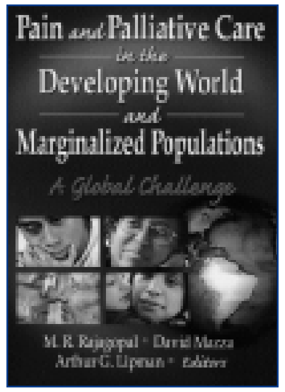
This book is a comprehensive overview of the diagnosis, treatment and future directions in the treatment of lymphomas. It is part of a Springer series on Cancer Treatment and Research and its contributors are mainly lymphoma researchers. As such, the text offers a current review of the standard diagnostic and therapeutic approaches to lymphoma, as well as covering the most promising new directions in treatments.

There are 14 chapters, each individually written and covering the entire range of lymphomas. At 450+ pages, it gives a broad overview of the disease but is easily read. There are plenty of headings in each chapter to enable a logical progression. There is an introduction at the start of each chapter which gives a notion for what the chapter will cover.

The chapters cover such topics as pathology of lymphomas and multiple myeloma, the use of monoclonal antibodies, transplantation and treatments for both Hodgkin’s and non-Hodgkin’s lymphomas and nuclear medicine techniques in diagnosis. There is also an excellent chapter on the role viral infections play in the development of lymphomas. This covers well known viruses such as Epstein-Barr, Kaposi’s sarcomas and HTLV-1.

In each chapter, there is also an in-depth mention of relevant and recent clinical trials relating to the subject matter. This is one of the best aspects of this text as it allows non-researchers to keep up-to-date with some of the latest research, as the contributors themselves are researchers. An entire chapter is devoted to new agents currently being developed and trialled in the treatment of lymphomas, including proteasome inhibitors such as Bortezomib, immunomodulatory agents such as thalidomide and mTOR inhibitors. In the treatment chapters there are discussions on conventional treatments such as CHOP and ABVD and the role the monoclonal antibodies have played in current treatment of non-Hodgkin’s lymphoma.

This is a text meant for medical clinicians. However, for nurses with considerable experience in managing lymphoma patients, there are selected chapters that are easily read and understood. The chapters are very specific in their coverage of individual lymphomas and if you were looking for a complete book on the pathology and treatment of lymphomas, then this would be a good buy.



Jaye Manning
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Living Dying Caring: Life and Death in a Nursing Home

R Hudson, J Richmond
Ausmed (2000)
299 pages
ISBN: 0-9577988-6-5
RRP: $49.95

Hudson and Richmond's earlier publication – Unique and Ordinary: reflections on living and dying in a nursing home was a remarkable book published in 1994, well in advance to the surge in interest that now surrounds the issue of death and dying in residential aged care facilities. I was delighted to see a second publication by these authors and the incorporation of implications for practice pertinent to the stories told.

These practice implications are geared toward three different audiences – the gerontic nurse, management and indirect carers (by indirect, the authors identify those workers who are non-nursing staff such as domestic services, clerical, allied health professionals and volunteers). I was surprised that there were no practice implications specifically for the nursing/personal care workers who make up such a large proportion of the workforce. A further issue with these practice implications is that they are not referenced and with the increasing trend to evidence- based practice, this may be a limitation for use. There is however, a comprehensive further reading list at the back of the book.

Notwithstanding this issue, the reader is privileged to read the intimate relationships that are often missing from the literature, which is dominated by quality issues and the functional aspects of providing care for the dying. The book is separated into nine chapters, each one with sub-headings for the main point of interest of the stories to be told. A boxed text area introduces who the story is about, a short discussion of the pertinent issue and reflections that further explore some of the issues raised in the story. Important stories that reflect the complexity of care in these settings include the death of significant residents, the issue of shared rooms, cultural sensitivity, sudden death and organisational factors that shape the dying experience.

I was particularly taken by the beautiful and touching notes written in the residents' case files following their death, much more dignified than leaving the final record as respirations ceased. This book is not all about 'good death' stories, the authors are willing to explore when deaths were not well managed and provide suggestions of what could be done better.

I would recommend this book to those who are not familiar with this setting or for those that are, but want a different perspective than that offered by journals and textbooks.

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Dementia Collaborative Research Centre,
Queensland University of Technology, Queensland

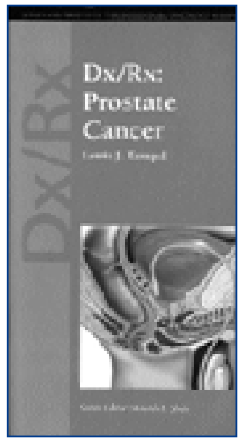
Lymphoedema

R Twycross, K Jones, J Todd (eds)
Ausmed (2003)
ISBN: 0-9579876-6-8
377 pages
RRP: $64.95

This text is a compilation of information on all aspects of lymphoedema and its management. It is an excellent resource for health professionals involved in the care of patients with lymphoedema or those interested in learning more on the subject. Primarily a UK text, it also contains contributions from Israel, Belgium and India. The 23 chapters come from a range of multidisciplinary authors, including medicine, nursing and physiotherapy. The opening chapter of a patient's perspective is an excellent inclusion.

Each chapter concentrates on a particular aspect of lymphoedema. It can be read chapter by chapter, or used as a reference to investigate certain aspects of care. The format of the text and inclusion of many photos, drawings and tables, makes it easy to understand. However, some lymphoedema sufferers and carers may find the language too technical, especially in relation to the chapters on pain and drug treatments.

The text begins by outlining the pathophysiology, classification and clinical features of lymphoedema. The psychological aspects of lymphoedema are dealt with in a brief chapter, while psychological issues relating to aspects of lymphoedema treatment are also dealt with throughout the text. The management strategies of lymphoedema are the main focus, including chapters on skin care, manual lymphatic drainage and drug treatments. Step by step exercises, massage techniques and instructions for bandaging are included, though cannot replace practical instruction. Novel treatments and surgery for lymphoedema are also discussed.



The remaining chapters of the text investigate specific instances of lymphoedema, such as in childhood, head and neck, breast, male genital and advanced cancer. The final chapter discusses an Indian perspective, highlighting the challenges in managing lymphoedema with limited resources. A thorough index allows the reader to find information easily and extensive reference lists allow for further investigation if required.

Anne Mellon
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John Hunter Hospital, Newcastle, NSW

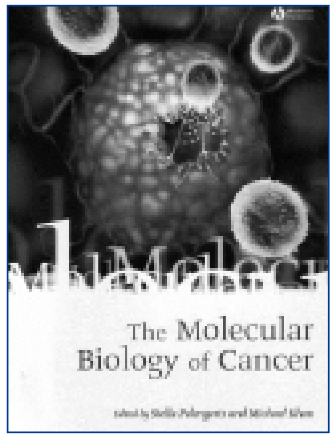
Nursing Patients with Cancer: Principles and Practice

N Kearney, A Richardson
Churchill Livingstone (2006)
ISBN: 978-0-443-07288-8
864 Pages
RRP: $159.90

This book has been expressly written for European healthcare workers. The text refers to adult cancer nursing and is aimed at providing key skills and knowledge for specialist cancer nurses.

Contributors to the book comprise nurses, doctors, allied health professionals, and therapists - overall 60 authors. The text is well formatted into a logical series of six inter-related sections. The information is easy to access and provides the practitioner with a comprehensive guide to cancer nursing practice.

Section one considers the principles of self care and deals with the social and cultural aspects of cancer nursing. This is a refreshing view of issues relating to the media, the internet, partnerships (both personal and professional) and cultural concepts. Section two explores the scientific basis of cancer, while section three deals with health promotion including cancer prevention and early detection. Section four examines treatment strategies in detail based on current practice and future trends. This is a particularly informative section relating to specific nursing interventions. Section five discusses optimal supportive care strategies with a thorough consideration of morbidities experienced by patients with cancer and section six discusses care delivery systems, including intensive care nursing of the cancer patient, rehabilitation and survivorship and palliative care.



The hard copy edition has 864 pages and is supported by well-defined and comprehensive tables throughout the text. The text is well-referenced and would be a very useful addition to any oncology ward library.

CALENDAR OF MEETINGS

Australia and New Zealand

Date	Name of Meeting	Place	Secretariat
2007			
August			
1-5	Medical Oncology Group Australia Annual Scientific Meeting	Melbourne VIC	MOGA Conference Secretariat c/o Pharmaevents PO Box 265 Annandale NSW 2038 Tel: +61 2 9280 0577 Fax + 61 2 9280 0533 Email: moga@pharmaevents.com.au Web: www.moga.org.au
28-31	9th Australian Palliative Care Conference	Melbourne VIC	APCC 07 Conference Secretariat C/- ICE Australia P/L 6 Clarendon Place South Melbourne VIC 3205 Tel: +61 3 9681 6288 Fax: +61 3 9681 6653 Email:apcc@iceaustralia.com Web:http://www.pallcare.org.au/Default.aspx?tabid=309
October			
1-7	RANZCR 58th Annual Scientific Meeting	Melbourne VIC	Royal Australian and New Zealand College of Radiologists (RANZCR) Level 9 51 Druitt Street Sydney NSW 2000 Tel: +61-2-9268 9777 Fax: +61-2-9268 9799 Web: www.ranzcr.edu.au
17-19	Australasian Gastro-Intestinal Trials Group 9th Annual Meeting	Melbourne VIC	Australasian Gastro-Intestinal Trials Group (AGITG) Tel: +61 2 9562 5072 Fax: +61 2 9562 1863 Web: http://www.gicancer.org.au/meeting/index.html
November			
14-16	34th Clinical Oncological Society of Australia Annual Scientific Meeting	Adelaide SA	Pharma Events Tel: +61 2 9280 0577 Fax: +61 2 9280 0533 Email: cosa@pharmaevents.com.au

International

Date	Name of Meeting	Place	Secretariat
2007			
July			
5 – 7	Joint European Conferences: International Symposium on State-of-the-Art Imaging	Dubrovnik Croatia	Continuing Medical Education Courses Stanford University Radiology Palo Alto, CA, United States Tel: +1 888 556 2230 Fax: +1 650 473 5062 Email: radiologycme@med.stanford.edu Web: www.radiologycme.stanford.edu
5 – 8	European Society for Medical Oncology Conference	Lugano Switzerland	European Society for Medical Oncology (ESMO) Viaganello-Lugano, Switzerland Tel: +41 91 973 1919 Fax: +41 91 973 1918 Email: congress@esmo.org Web: www.esmo.org/activities/eluconference
11 - 13	27th Sapporo International Cancer Seminar	Sapporo Japan	Sapporo Cancer Seminar Foundation Sapporo, Japan Tel: +11 222 1506 Fax: +11 222 1526 Email: scs-hk@phoenix-c.or.jp Web: www.phoenix-c.or.jp/scs-hk
24 - 27	18th WONCA World Conference	Singapore	WONCA – World Organisation for Family Doctors Secretariat 73 Bukit Timah Road Rex House, #03-01 229832 Singapore Tel: +65 6 330 6834 Fax: +65 6 336 2263 Email: enquiry@wonca2007.com Web: www.wonca2007.com/index.html
August			
9 - 10	Best of ASCO International, Brazil	Porto Alegre Brazil	Latinamerican and Carribean Society of Medical Oncology (SLACOM) Buenos Aires, Argentina Tel: +54 11 4964 0504 Fax: +54 11 4964 0504 Email: info@aaoc.org.ar Web: www.slacom.org
9 - 11	1st Kuala Lumpur International Breast and Colorectal Cancer Congress	Kuala Lumpur Malaysia	Malaysian Oncological Society Kuala Lumpur, Malaysia Tel: +6 3 2093 0100 Fax: +6 3 2093 0900 Email: klbcc@malaysiaoncology.org Web: www.malaysiaoncology.org/article.php?aid=223
13 – 16	Meeting future challenges: centres for Disease Control and Prevention Cancer Conference 2007	Atlanta US	Centres for Disease Control and Prevention c/o DTI Associates Arlington, United States Tel: +1 703 299 1619 Fax: +1 703 706 0474 Email: CancerConference@dtihp.com Web: www.cdccancerconference.net
25 - 30	25th International Congress of Paediatrics	Athens Greece	C & C International S.A. Conventions & Congresses 16, Paradisou Str. 151 25 Athens Tel: +30 210 6889100 Fax: +30 210 6844777 Email: icp2007@cnc.gr Web: www.icp2007.gr/

Date	Name of Meeting	Place	Secretariat
September			
2 - 6	12th World Conference on Lung Cancer	Seoul South Korea	International Association for the Study of Lung Cancer c/o International Conference Services Ltd. Suite 2101 117 West Hastings Street V6E 2K3 Vancouver Tel: +1 604 681 2153 Fax: +1 604 681 1049 Email: lungcancerr@meet-ics.com Web: www.2007worldlungcancer.org/
7 - 8	1st Global Insight Conference on Leukaemia	Mumbai India	European School of Oncology Bellinzona, Switzerland Tel: +41 91 811 8050 Fax: +41 91 811 8051 Email: eso2@esconcology.org Web: www.cancerworld.org/eso
7 – 8	The 2007 Breast Cancer Symposium: Integrating Emerging Science into Clinical Practice	San Fransisco US	American Society of Clinical Oncology (ASCO) Alexandria, United States Tel: + 1 703 299 0150 Fax: 1 703 299 1044 Email: meetings@asco.org Web: www.asco.org
8 – 13	9th Biennial European Society for Therapeutic Radiology and Oncology Meeting	Barcelona Spain	European Society for Therapeutic Radiology and Oncology (ESTRO) Brussels, Belgium Tel: +32 2 775 9340 Fax: +32 2 779 5494 Email: agostino.barrasso@estro.be Web: www.estro.be
10 – 11	1st Global Insight Conference on Leukaemia	Mumbia India	European School on Oncology (ESO) Bellinzona, Switzerland Tel: +41 91 811 8050 Fax: +41 91 811 8051 Email: eso2@esoncology.org Web: www.cancerworld.org/eso
13 – 15	World Cancer Conference: Latest scientific and technical achievements in cancer and new drugs research	Bejing China	IBC Conferences and Event Management Tel: +86 21 5116 5912 Fax:+86 21 5116 5913 Email: Gillian.zhou@ibcchina.com.cn Web: www.ibcchina.com.cn/worldcancer
15 – 19	European Respiratory Society Annual Congress 2007	Stockholm Sweden	European Respiratory Society (ERS) Lausanne, Switzerland Tel: +41 21 213 0101 Fax: +41 21 213 0100 Email: info@ersnet.org Web: www.ersnet.org/ers/defauly.aspx?id=3924
16 – 20	9th World Congress of Psycho-Oncology	London UK	International Psycho-Oncology Society (IPOS) Charlottesville, VA, United States Tel: +1 434 293 5350 Fax: +1 434 977 1856 Email: info@ipos-society.org Web: www.ipos-society.org
18 – 20	IACR 07: 29th Annual Meeting of the International Association of Cancer Registries	Ljubljana Slovenia	Institute of Oncology Ljubljana Ljubljana, Slovenia Tel: +386 1 5879 563 Fax: +386 1 5879 400 Email: iacr2007@onko-i.si Web: www.iacr2007.si
21 – 23	3rd ESH-EHA Conference on Focus on Paediatric Haematology and Oncology	Sestri Levante Italy	European School of Hematology (ESH) Centre Hayem, Hôpital Saint-Louis 1, av. Claude Vellefaux Cedex 10 75475 Paris Tel: +33 1 42 06 65 40 Fax: +33 1 42 06 05 87 Email: ghyslaine@chu-stlouis.fr Web: www.esh.org/
23 – 27	ECCO 14 – the European Cancer Conference	Barcelona Spain	Federation of European Cancer Societies (FECS) Brussels, Belgium Tel: +32 2 775 0201 Fax: +32 2 775 0200 Email: ECCO14@fecs.be Web: www.fecs.be/emc.asp?pageId=1228&Type=P
25 – 28	4th World Congress of the World Institute of Pain	Budapest Hungary	World Institute of Pain (WIP) c/o Kenes International Geneva, Switzerland Tel: +41 22 908 0488 Fax: +41 22 732 2850 Email: wip@kenes.com Web: www.kenes.com/wip
27 – 29	7th Asia-Pacific Hospice Conference	Manila Philippines	Philippine Cancer Society Manila, Philippines Tel: +63 2 733 3485 Fax: +63 2 735 2707 Email: secretariat@aphc2007.com Web: www.aphc2007.com
28 – 29	4th Congress of South Caucasian Oncologists and Radiologists	Tbilisi Georgia	National Cancer Centre of Georgia Tbilisi, Georgia Tel: +995 32 398 651 Fax: +995 32 397 716 Email: scorcongress@gmail.com Web: www.onc.org.ge/scor/scor.html
30 – 3 October	National Cancer Research Institute Conference	Birmingham UK	National Cancer Research Institute (NCRI) London, United Kingdom Tel: +44 20 7269 3420 Fax: +44 20 7061 6004 Email: ncriconference@ncri.org.uk Web: www.ncri.org.uk
October			
1 – 4	Global Summit on International Breast Health Care 2007	Budapest Hungary	The Breast Health Global Initiative (BHGI) c/o Fred Hutchinson Cancer Research Centre Seattle, WA, United States Tel: +1 206 667 2545 Fax: +1 206 288 1025 Email: lsulliva@fhcrc.org Web: www.fhcrc.org/science/phs/bhgi/summits/2007
3 – 6 (SRNT)	9th Annual Conference of the Society for Research on Nicotine and Tobacco Europe	Madrid Spain	Society for Research on Nicotine and Tobacco c/o Viajes & Congresos Madrid, Spain Tel: +34 91 547 3747 Fax: +34 91 559 5881 Email: vycongremad@viajesycongresos.com Web: www.srnt2007madrid.com
4 – 6	EUROGIN 2007 International Multidisciplinary Conference: New Strategies of Cervical Cancer Prevention	Monte Carlo Monaco	European Research Organisation on Genital Infection and Neoplasia (EUROGIN) Paris, France Tel: +33 1 44 40 01 20 Email: admin@eurogin.com Website: www.eurogin.com
5 – 7	1st International Liver Cancer Association Annual Conference	Barcelona Spain	International Liver Cancer Association (ILCA) Brussels, Belgium Tel: +32 2 789 2345 Fax: +32 2 743 1550

Date	Name of Meeting	Place	Secretariat
			Email: info@ilca.online.org Web: www.ilca-online.org
9 – 10	Joint Conference of the Canadian Association of Radiation Oncology and the Canadian Organisation of Medical Physicists 2007	Toronto Canada	Canadian Association of Radiation Oncology (CARO) Vancouver, Canada Tel: +1 604 877 6193 Fax: +1 604 877 0505 Email: mary.hooney@uhn.on.ca Web: www.caro-acro.ca
11 – 13	4th European Conference Tobacco or Health 2007	Basel Switzerland	Swiss Cancer League, German Cancer Society Bern, Switzerland Tel: +41 31 389 9163 Fax: +41 31 389 9160 Email: office@ectoh07.org Web: www.ectoh07.org
17 – 20	ESH-EHA Conference: Focus Paediatric Haematology and Oncology	Sitges Spain	European School of Haematology (ESH) Paris, France Tel: +33 1 4206 6540 Fax: +33 1 42 06 05 87 Email: ghyslaine_lebougault@paris7.jussieu.fr Web: www.esh.org/agenda07/paed/paedinfo.htm
17 – 20	8th Asia-Pacific Conference on Tobacco or Health (APACT)	Taipei Taiwan	John Tung Foundation Taipei, Taiwan Tel: +886 2 2776 2133 Fax: +886 2 2752 7247 Email: secretariat2007@jtf.org.tw Web: www.smokefreeasia.org/apact2007
18 – 21	4th Congress of the World Society for Breast Health	Tianjin China	Tianjin Medical University Cancer Institute and Hospital Tianjin, China Tel: +86 22 2335 9337 Fax: +86 22 2335 9337 Email: info@2007wsbh.org Website: www.2007wsbh.org
24 – 28	AORTIC 6th International Cancer Conference: Cancers in Africa	Cape Town South Africa	African Organisation for Research and Training in Cancer (AORTIC) Rodenbosch, South Africa Tel: +27 21 689 5359 Fax: +27 21 689 5350 Email: info@aortic2007.org Web: www.aortic2007.org
26 – 28	4th International Conference on Thrombosis and Haemostasis Issues in Cancer	Bergamo Italy	Associazione Italiana di Oncologia Medica Bergamo, Italy Tel: +39 035 249 899 Fax: +39 035 237 852 Email: info@bergamoconference.com Web: www.bergamoconference.com
28 – 31	TIMM 2007: 3rd Trends in Medical Mycology	Torino Italy	European Organisation for Research and Treatment of Cancer (EORTC) Ak's-Hertogenbosch, Netherlands Tel: +31 73 690 1415 Fax: +31 73 690 1417 Email: info@congresscare.com Web: www.TIMM2007.org

Date	Name of Meeting	Place	Secretariat
28 – 1 Nov	49th ASTRO Annual Meeting	Los Angeles US	American Society for Therapeutic Radiology and Oncology (ASTRO) Fairfax, United States Tel: +1 703 502 1550 Fax: +1 703 502 7852 Email: meetings@astro.org Web: www.astro.org
30 – 3 Nov	2007 International Society of Paediatric Oncology (SIOP) Annual Congress	Mumbai India	SIOP 2007 - International Society of Paediatric Oncology Local Organising Committee 37/900, Adarsh Nagar Century Bazaar, Worli 400 030 Mumbai Tel: +91 22 24 38 10 68 Email: siop2007@varriance.com Web: www.siop2007.in
November			
1 – 2	International Research Conference on Food, Nutrition and Cancer	Washington DC US	American Institute for Cancer Research (AICR) World Cancer Research Fund International Washington DC, United States Tel: +1 202 328 7744 Fax: +1 202 328 7226 Email: aicrweb@aicr.org Web: www.aicr.org
3 – 10	24th International Papillomavirus Conference and Clinical Workshop	Beijing China	Chinese Medical Association c/o International Convention Services Beijing, China Tel: +86 10 8515 8149 Fax: +86 10 6512 3754 Email: ipv2007@cma.org.cn Web: www.ipv2007.org
7 – 9	Cancer in the Developing World	Cairo Egypt	National Cancer Institute, Cairo University Cairo, Egypt Tel: +20 2 535 1424 Fax: +20 2 532 8286 Email: a.badran@link.net Web: www.nci.edu.eg
8 – 10	Geriatric Oncology: Cancer in the Elderly	Madrid Spain	Society for Geriatric Oncology (SIOG) Genolier, Switzerland Tel: +41 22 366 9106 Fax: +41 22 366 9131 Email: siog@genolier.net Web: www.cancerworld.org/siog
9 – 11	2007 Oncology Nursing Society (ONS) Institutes of Learning	Chicago US	Oncology Nursing Society (ONS) Pittsburgh, PA, United States Tel: +1 866 257 4667, +1 412 859 6100 Fax: +1 877 369 5497, +1 412 859 6162 Email: customer.service@ons.org Web: www.ons.org
10 – 14	International Conference on Clinical PET and Molecular Medicine	Bangkok Thailand	International Atomic Energy Agency (IAEA) Vienna, Austria Tel: +43 1 2600 Fax: +43 1 2600 7 Email: ipet2007@iaea.org Web: www.iaea.org

Date	Name of Meeting	Place	Secretariat
12 – 14	Cancer 2007: From Molecular Biology to Treatment	Sao Paulo Brazil	8th Sao Paulo Research Conference University of Sao Paulo Sao Paulo, Brazil Tel: +55 11 3361 3056 Fax: +55 11 3361 3089 Email: eventus@eventus.com.br Web: www.eventus.com.br/bioconferences
15 – 17	Making Connections: A Canadian Cancer Research Conference celebrating NCIC's 60th Anniversary	Toronto Canada	National Cancer Institute of Canada (NCIC) c/o DR Dunlop & Associates Ottawa, Canada Tel: +1 613 235 8879 Fax: +1 613 235 0094 Email: dunlopdr@rogers.com Web: www.ncic.cancer.ca
15 – 17	19th Asia Pacific Cancer Conference (APCC) 2007	Tehran Iran	Tehran University of Medical Sciences Department of International Relations PO Box 14155-6559 Tehran Tel: +98 21 649 1070 Fax: 98 21 641 9537 Email: office@sina.tums.ac.ir Web: http://www.tums.ac.ir/about/index.html
22 – 23	8th International Netherlands Cancer Institute Head and Neck Symposium	Amsterdam Netherlands	The Netherlands Cancer Institute Amsterdam, Netherlands Tel: + 31 20 512 2550 Fax: + 31 20 512 2554 Email: kno@nki.nl Web: www.hoofdhals.nki.nl
25 – 28	2nd International Cancer Control Congress	Rio de Janeiro Brazil	National Cancer Institute (INCA) c/o International Conference Services Vancouver, Canada Tel: +1 604 681 2153 Fax: +1 604 681 1049 Email: cancercontrol2007@meet-ics.com Web: www.cancercontrol2007.com
25 – 30	RSNA 2007: Radiological Society of North America Annual Meeting	Chicago US	Radiological Society of North America (RSNA) Oak Brook, United States Tel: +1 630 571 2670 Fax: +1 630 571 7837 Email: kchristianson@rsna.org Web: www.rsna2007.rsna.org
26 – 27	BASO-ACS and ABS at BASO Joint Scientific Conference	London UK	BASO – the Association of Cancer Surgery London, United Kingdom Tel: +44 20 7405 5612 Fax: +44 20 7404 6574 Email: admin@baso.org.uk Web: www.baso.org.uk/content/acs-Meetings.asp
29 – 30	Cell Signalling and Novel Cancer Therapeutics	London UK	British Association for Cancer Research (BACR) Sutton, United Kingdom Tel: +44 20 8722 4208 Fax: +44 20 8770 1395 Email: bacr@icr.ac.uk Web: www.bacr.org.uk/scientificmeetings/meetingdetail.asp?id=58

Date	Name of Meeting	Place	Secretariat
December			
1 – 5	47th American Society for Cell Biology Annual Meeting	Washington DC US	American Society for Cell Biology (ASCB) Bethesda, United States Tel: +1 301 347 9300 Fax: +1 301 347 9310 Email: ascbinfo@ascb.org Web: www.ascb.org/meetings/index.cfm
2008			
February			
25 – 27	International Conference on Burkitt Lymphoma and Related Lymphoproliferative Disorders	Kampala Uganda	Department of Pathology and Human Oncology University of Siena Siena, Italy Tel: +39 0577 232 000 Fax: +39 0577 232 134 Email: servcong@unisi.it Web: www.unisi.it/eventi/burkitt
26 – 28	Childhood Cancer: In Quest of a Complete Cure 5th SIOP Asia Conference	Muscat Oman	International Society of Paediatric Oncology (SIOP) c/o Informed Events Dubai, United Arab Emirates Tel: +971 4 268 9040 Fax: +971 4 269 89030 Email: ifodub@emirates.net.ae Web: www.infomedweb.com/ourevents/ SIOP2008/index.htm
27 – (SRNT) 1 March	14th Society for Research on Nicotine and Tobacco Annual Meeting	Portland US	Society for Research on Nicotine and Tobacco Madison, United States Tel: +1 608 443 2462 Fax: +1 608 443 2474 Email: meeting@srnt.org Web: www.srnt.org
28 – 2 March	5th American Psychosocial Oncology Society (APOS) Annual Conference	Irvine US	American Psychosocial Oncology Society (APOS) Charlottesville, WA, United States Tel: +1 434 293 5350 Fax: +1 434 977 0899 Email: aball@apos-society.org Web: www.apos-society.org
March			
27 – 29	6th European Oncology Nursing Society (EONS) Spring Convention	Geneva Switzerland	Federation of European Cancer Societies (FECS) Brussels, Belgium Tel: +32 2 775 0201 Fax: +32 2 775 0200 Email: EONS@fecs.be Web: www.fecs.be
April			
15 – 19	EBCC 6: 6th European Breast Cancer Conference	Berlin Germany	EORTC – EUSOMA- Europa Donna c/o Federation of European Cancer Societies (FECS) Brussels, Belgium Tel: +32 2 775 0201 Fax: +32 2 775 0245 Email: EBCC6@fecs.be Web: www.fecs.be/emc.asp?pageId=1309

CALENDAR OF MEETINGS

Date	Name of Meeting	Place	Secretariat
May			
30 – 3 June	44th ASCO Annual Meeting	Chicago US	American Society of Clinical Oncology (ACSO) Denver, VA, United States Tel: +1 703 299 0158 Fax: +1 703 299 0255 Email: meetings@asco.org Web: www.asco.org
June			
4 – 7	10th International Conference on Malignant Lymphoma	Lugano Switzerland	Instituto Oncologico della Svizzera Italiana (IOSI) Viganello-Lugano, Switzerland Tel: +41 91 922 0575 Fax: +41 91 922 2084 Email: Cristiana.brentan@lymphcon.ch Web: www.lymphcon.ch
4 – 8	5th World Conference on Breast Cancer	Winnipeg US	Canadian Breast Cancer Foundation Port Robinson, ON, Canada Tel: +1 905 384 1848 Fax: +1 905 384 1675 Email: mail@wcbcf.ca Web: www.wcbcf.ca/winnipeg08.php
9 – 13	10th World Congress of Psycho-Oncology	Madrid Spain	International Psycho-Oncology Society (IPOS) Charlottesville, United States Tel: +1 434 293 5350 Fax: +1 434 293 5350 Email: info@ipos-society.org Web: www.ipos-society.org
July			
5 – 8	EACR 20: European Association for Cancer Research Conference	Lyon France	Federation of European Cancer Societies (FECS) Brussels, Belgium Tel: +32 2 775 0246 Fax: +32 2 775 0200 Email: EACR20@fecs.be Web: www.eacr.org, www.fecs.be
August			
17 – 22 `	12th World Congress on Pain	Glasgow Scotland	International Association for the Study of Pain (IASP) Seattle, WA, United States Tel: + 206 547 6409 Fax: +1 206 547 1703 Email: iaspdesk@iasp-pain.org Web: www.iasp-pain.org/2008Congress.htm
27 – 31	UICC World Cancer Congress 2008	Geneva Switzerland	UICC Congress Secretariat 62, route de Frontenex 1207 Geneva, Switzerland Tel: +41 22 809 1811 Fax: +41 22 809 1810 Email: congress08@uicc.org Web: www.uicc.org/congress08
September			
10 – 13	ESSO 2008: 14th Congress of the European Society of Surgical Oncology	The Hague Netherlands	Federation of European Cancer Societies (FECS) Brussels, Belgium Tel: +32 2 775 0246 Fax: +32 2 775 0200 Email: ESSO2008@fecs.be Web: www.esso-surgeonline.be

CALENDAR OF MEETINGS

Date	Name of Meeting	Place	Secretariat
12 – 16	33rd European Society for Medical Oncology Congress	Stockholm Sweden	European Society for Medical Oncology (ESMO) Viganello-Lugano, Switzerland Tel: +41 91 973 1919 Fax: +41 91 973 1918 Email: congress@esmo.org Web: www.esmo.org
October			
1 – 6	SIOP 2008: 40th Congress of the International Society of Paediatric Oncology (SIOP)	Berlin Germany	SIOP Secretariat, c/o MCI Berlin Office Berlin, Germany Tel: +49 30 20 4590 Fax: +49 30 20 45 950 Email: siop2008@cpb.de Web: www.siop2008.de
19 – 23	32nd World Congress of the International Society of Haematology	Bangkok Thailand	International Society of Haematology (ISH) c/o Ramathibodi Hospital Bangkok, Thailand Tel: +66 2 201 1785 Email: webmaster@ish2008.org Web: www.ish2008.org
21 – 24	20th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics	Geneva Switzerland	Federation of European Cancer Societies (FECS) Brussels, Belgium Tel: +32 2 775 0246 Fax: +32 2 775 0200 Email: iena2008@fecs.be Web: www.fecs.be
25 – 28	12th Biennal International Gynaecologic Cancer Society Meeting	Bangkok Thailand	International Gynaecologic Cancer Society c/o Kenes International / IGCS 12 Geneva, Switzerland Tel: +41 22 908 0488 Fax: +41 22 732 2850 Email: igcs-12@kenes-com Web: www.igcs.org

THE CANCER COUNCIL AUSTRALIA

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

MEMBERS

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

AFFILIATED ORGANISATIONS

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

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Dr K White PhD

CLINICAL ONCOLOGICAL SOCIETY OF AUSTRALIA INC

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

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

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MEMBERSHIP

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

Membership fees for 2007

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
- Familial Cancer
- 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
- Urological Oncology