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Recent Developments in Cancer Nursing

OVERVIEW

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Over the past few decades, cancer nursing services have developed in response to major scientific and technological advances in the treatment and support for people with cancer. Cancer nursing services today are widely regarded as an essential component of a safe, quality cancer care system, with nurses making a vital contribution to the prevention and reduction of physical and psychological morbidity associated with a cancer diagnosis and the process of cancer treatment.

Like most health professions, the way in which nursing services contribute to improving the cancer experience and optimising the outcomes of cancer care is undergoing significant change. This change is being driven by many factors. In particular, the imperative to reform cancer services to create a system that is more person-centred is requiring that all health professions, including nurses, re-consider their practices and systems of care, as well as the nature of the relationships between the various cancer care professionals and with their patients, family members and community members. With its strong foundation in traditions of holistic person-centred care, its pivotal location in the system and the sheer size of its workforce, nursing services are set to play a critical role in the more responsive and complementary to that of other health professionals. In collaboration with other health professionals, nursing services are concerned with understanding and responding to diverse patient and family experiences of cancer, for example, distress, fear, fatigue, nausea, mucositis or neutropaenia. What is especially unique about the nursing contribution to patient support, however, is that nursing care draws from a broad knowledge base from clinical, social and psychological sciences. Moreover, compared to other health professionals, the nurse often has longer and more frequent interactions with the patient during their experience of the cancer care system, at least during much of the treatment phase.

In this edition of Cancer Forum, Piggott and colleagues emphasise how these more unique features of nursing practice enable nurses to be a focal point for assessment of support needs and a linkage with other parts of the health system. Similarly, Kristjanson’s paper highlights the scope of family caregiver needs and several important supportive interventions for addressing these needs. This pivotal role that nurses play in supportive care has been highlighted in the recent report of the National Breast Cancer Centre’s Multidisciplinary Care Demonstration Project, where the presence of a breast care nurse in a multidisciplinary team was seen to be beneficial to both women and clinicians. The scope of nursing practice and their location in the system means that nurses are integral to identifying an individual’s supportive care needs and engaging an appropriate team response to address these needs.

Furthermore, the Optimising Cancer Care report emphasised that there are many places for patients to get lost in our current healthcare system. A core feature of service models of the future will therefore be a greater emphasis on coordination of care to overcome such gaps. As such, this edition of Cancer Forum includes a timely review paper highlighting some of the issues associated with designing and implementing Cancer Care Coordinators roles. A key message to be taken from this review is that achieving continuity of care from the patient’s perspective will most likely require multifaceted system responses.

Gardner’s paper also highlights the potential contribution that may be afforded by development of advanced practice models of nursing. Using the nurse practitioner model as her example, Gardner argues that nurses working with a scope of practice that incorporates extended practice activities that can include both medical and nursing activities can be very effective when the nurse practitioner’s service fills a gap in access, efficiency or quality of service for the patient population in a specific field.
of health care. Such advanced practice roles, clearly situated within a team approach to health service delivery, present some important opportunities for cancer care. Recent UK studies of nurse-led clinics in cancer care demonstrate that such models achieve good patient outcomes.

What are the Challenges for Cancer Nursing?

While the papers in this edition of Cancer Forum highlight some important ways in which cancer nursing is responding to the pressure for system reform, Barrett’s paper reminds us of some of the challenges that exist in achieving significant gains. Barrett’s article presents quite sobering data that illustrate the workforce challenges nursing faces. Indeed, these workforce challenges are not unique to nursing. The National Health Workforce Strategic Framework published recently by the Australian Health Minister’s Council notes that in Australia today, the health workforce grows at an annual rate of around 170,000 per year. However, in the year 2020, this number is predicted to be just 12,500 per year. The health system overall is facing increasing and unprecedented pressure as a result of such workforce challenges. Barrett’s article is a timely reminder of the scope of the problem for cancer nursing in Australia and more importantly highlights the many factors contributing to the problem so that potential solutions can be identified.

What are some Potential Solutions?

The National Health Workforce Strategic Framework provides a vision for the health workforce over the next decade, and sets out a blueprint for action to achieve a sustainable health workforce. The major government reports published in the last two years are The Patient Profession and National Review of Nursing Education in Australia. The Commonwealth of Australia’s The Patient Profession: Time for Action. reports notes that many of the current problems experienced by nurses are brought about by the fragmentation of different policy and funding responsibilities. The report also concludes that considering the size of the nursing profession, it has received relatively little attention, being largely invisible in the policy detail and research priority agendas. We have a growing body of evidence about what patients need and want from our cancer system and about the models of care that might best address these needs. Such evidence continues to suggest that nurses will be integral to achieving a more patient-centred service. Realising this potential for service improvement through the contribution of nursing will, however, present some unprecedented challenges.

Developments in Supportive Care: Implications for Nursing

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Introduction

A diagnosis of cancer has a profound impact on individuals and family members and is usually accompanied by a range of psychological reactions ranging from shock and disbelief to occasionally more serious psychiatric presentations. Most cancer patients describe anxiety and fear associated with an uncomfortable, yet inevitable sense of their own mortality. Irrespective of prognosis. For example Kissane et al found in their research on breast cancer patients that 45% (135/303) had a psychiatric disorder and 42% had depression or anxiety, or both, and referrals were not made for review of these needs. Cancer has far reaching effects on individuals and families including sickness, long-term disability or functional loss, financial impacts, alterations in family relationships and existential and psychological challenges faced by individuals and families. The burden of cancer on the individual and the community is therefore high and the need for supportive care as well as biological management of disease is well documented.

Fitch defines supportive care in the context of cancer care as including the provision of physical, psychological, social, information and spiritual needs during the diagnostic, treatment and follow-up phases. Supportive care embraces the full range of issues that emerge for an individual and family as the impact of cancer and treatments are felt and they try to manage the situation. Numerous research studies have demonstrated the benefits of supportive care interventions.

Supportive care in the oncology setting is essential to improving patient outcomes. Research suggests benefits include improvements in quality of life. There is also a growing consumer demand regarding expectations and support through the cancer experience. The term supportive care is frequently used to describe various support programs, however few organisations have shown how to implement supportive care in routine clinical practice.

Method

An organisational change process was required to achieve the aim of the supportive care project, which involved a number of interrelated changes occurring concurrently. The changes involved:

(a) A change in the organisational approach that led to an increased awareness and understanding of the value of supportive care programs to the overall well-being of patients.

(b) A review of the management and provision of supportive care programs to ensure they were evidence-based and targeted effectively to efficiently meet the needs of the patients.

(c) A review of the core functions of the multidisciplinary team to promote hospital-wide understanding of disciplines and the need for effective use of appropriately skilled staff.

(d) The development and implementation of a routine systematic screening and referral process for the identification and addressing of supportive care needs of patients and carers.

Organisational changes are still in progress, as effective change requires ongoing review. The change cycle being used is assess-plan-do-review-reassess cycle, which is a mnemonic for testing changes in real work settings.

Discussion

A Change in the Organisational Approach

Organisational recognition of the integral value of supportive care in cancer care services provision is essential. Recognition was provided by the formation of a committee structure to oversee supportive care services. This committee included sponsorship and multidisciplinary representation, including nurses, in the Supportive Care Steering Committee were required to facilitate staff ‘buy-in’ of the organisational change process. An organisational statement was developed and standards of care were adopted. These were accepted by the hospital executive committee and endorsed organisation-wide recognition of supportive care services as a core function of the hospital’s cancer services.

A supportive care model (fig 1) was adopted to provide a framework for the targeting of programs to meet patient needs. The model proposes that supportive care programs should take...
The Development and Implementation of a Routine Systematic Screening and Referral Process

An important step in the provision of supportive care services is the identification of the patient and family’s needs. A needs assessment helps identify patient perceptions of needs for optimal health and quality of life outcomes. The identification of gaps through a needs assessment provides an indication of the relative magnitude of need for help in different domains, allowing for better targeting of support services.8

A system for routine identification of needs and a process for planning intervention was introduced. The review of literature suggested a self-completed tool has advantages over a clinician-completed tool in that they are inexpensive to produce, require minimal time and energy input from staff and yield quantifiable responses.9 The Supportive Care Screening Tool, a self-completed, self-completed questionnaire, was developed with input from the multidisciplinary team including nurses and medical staff.

The screening tool is a questionnaire completed by the patient, which is then followed up by a nurse who conducts a focused interview and plans appropriate interventions. Five domains of care are considered in the screening tool: physical, information, social, psychological, and spiritual needs. Between August 2003 and July 2004, 256 nurses were trained to use the tool. The screening tool is used to identify potential needs and to facilitate the process of providing evidence-based supportive care services. The screening tool can be used as a prompt for greater closeness in relationships, a time to define and know the family who is affected by an illness, as well as in leading systematic change to help routinely identify patient need and facilitate a process that enhances access to the patient to supportive care services and programs. Usage of the screening tool is ongoing, nurses can intervene more effectively and efficiently by targeting services to differing levels of need in a timely manner across the care continuum.

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CARING FOR FAMILIES OF PEOPLE WITH CANCER: EVIDENCE AND INTERVENTIONS

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Each year approximately 450,000 Australians are diagnosed with cancer.1 Of these individuals two or three are family members, the number of Australians facing the challenges of cancer is notable. Given the fact that cancer is, for the most part a disease of the older person, it is anticipated that the number of people with cancer will continue to increase as the proportion of the population in the older aged groups expands. The needs of families who support these people are therefore expected to burgeon.

When an individual is diagnosed with cancer, the impact reverberates through the family, touching all members. Family member confronts uncertainties about the meaning of the diagnosis, the prognosis of the patient and the patient’s needs for care.2,3 Support for families is required to help with coping and adjustment to illness. This sample of results indicates that the screening tool is identifying needs that require further assessment and intervention by the multidisciplinary team. The role of the nurse provides the interdisciplinary team with the required knowledge of the patient, the required intervention might not be instigated. Patients are more likely to accept an intervention if they have an understanding of what is involved and it is this critical information that the nurse can provide about the various supportive services available.

Conclusion

Research indicates that the diagnosis of cancer has an impact on all aspects of a person’s life, the physical, psychological, social and spiritual domains. The role of the most practice oncology care is to include evidence-based supportive care services as part of the core service provision.

This paper describes an organisational change to facilitate the integration of supportive care services and programs into everyday clinical practice in a tertiary oncology setting. Nurses were key players in the changes at both the organizational level, as well as in leading systematic change to help routinely identify patient need and facilitate a process that enhances access to the patient to supportive care services and programs. Usage of the screening tool is ongoing, nurses can intervene more effectively and efficiently by targeting services to differing levels of need in a timely manner across the care continuum.

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Impact on the Health of Family Members

Families of cancer patients experience a number of health changes both during the patient’s illness and in the bereavement period.4-6 Family members may experience exacerbations of chronic illnesses (e.g. hypertension). There is also evidence to indicate that chronic illness can impact on marital and parenting difficulties and as terminal illness of a family member. Kristjanson and colleagues7 revealed that family members experienced deterioration in health during the patient’s illness and in the bereavement period. The health status of these individuals was much poorer when compared to a ‘normal healthy’ population. Health deterioration was most evident in the form of mental health changes (e.g. anxiety).
The health of the family as a unit may also be affected by the cancer illness experience. Changes in family structure, roles, relationships, communication conflict and discord may be evident. Central to the health of the family as a unit is the ability of family members to communicate with each other, the patient and health professionals. It has been documented that poor communication causes more suffering to cancer patients and their families than any other problems, with the exception of unrelied pain.

Communication is essential to healthy family functioning and family members who have limited communication skills are less able to manage stressful situations. The family’s previous patterns of communication determine to a large extent the degree of communication that occurs within the family at the time of the cancer illness experience. Some family members may be more or less willing to discuss issues about their illness, treatment decisions, fears and doubts. Others may be more reserved in their expressions of feelings, holding back their concerns, regrets, and uncertainties.

Relationship strains may occur as both the patient and family members endeavor to protect each other from worries and concerns about the illness. Patients may serve as a type of gatekeeper of information, as it is usually the patient who has primary contact with the health care team. This is particularly common when parents have cancer and are cautious about sharing information about their illness with their children. Family members often rely on the patient to convey important information about the illness to help them know how to cope with the treatment or subsequent phases of the disease and may feel uncertain or frustrated if they lack information. These types of communication experience may contribute to conflict, anxiety and poor communication within the family.

Care Interventions to Support the Family

Family members provide support to the patient and have needs for support from health professionals. Family members whose own needs for support and assistance are not met are less able to maintain their supportive roles and are more likely to experience mental and physical health problems themselves.

In a review of cancer care literature specific to family interventions, Pasacreta and McCorkle reported limited evidence based interventions aimed at family caregivers. They identified a need for more research in this area and that most of the research on families’ experiences of cancer care has been descriptive. However, a number of recently reported care interventions directed toward the family have potential to be therapeutic. The results of these studies can be classified into four categories: information giving, practical assistance with physical care requirements, emotional support and help in managing the financial burdens associated with treatment and care.

Information Giving

The literature consistently documents difficulties that family members of patients with cancer experience regarding accessing information. Family members describe difficulties obtaining specific, straightforward information in a way that they can understand. Use of medical jargon is frequently mentioned as a barrier to adequate communication of the plan of care. Language barriers may also be a problem if patients and family members do not share the same language and cultural background as the health care professional. As well, misperceptions in educational levels between health professionals and patients/families can create problems with exchange of information.

Health professionals may overload family members with large amounts of information or may provide information in small amounts in a way that has too much detail. This can create difficulties as family members vary in the extent to which they may be able to assimilate and integrate the shared information.

Family members report a hesitancy to both tell busy health care professionals about cancer care because prognosis and hope. All patients in the study, regardless of ethnic/cultural background, wanted information about their illness and almost all wanted information in a way that they could understand. Family members reported that it is important that the patient be aware of the diagnosis. As the illness progressed both patients and family members reported that information needed changed and there was a common theme that family members were not as interested in the palliative phase of an illness many patients reported not wanting as much detail as they had asked for initially and some requested that the clinician speak with health care professionals on their own.

Findings from this study provide a useful framework for understanding the process of communication between health professionals and patients and families in the context of a cancer illness. The way in which messages are conveyed is extremely important and is mediated by the six attributes that patients and families identified as critical to good communication: playing a supportive role, information about prognosis and hope, detail, attention to these factors that limit effective communication exchanges between family members and health care providers may assist families to fill this information vacuum and feel more confident about communication, contribute to conflict, anxiety and poor communication within the family.

Practical Assistance with Physical Care Requirements

The physical care demands of the patient can create specific needs for the family and the practical needs of families may be underestimated. For example, Buehler undertook a longitudinal study in 1980 to 1982 to examine the impact of caring for family members with cancer in the community. This work revealed a lack of available resources for rural families caring for advanced cancer patients. This lack of support may occur in part, because family caregivers are viewed as recipients rather than as gatekeepers of information to family members.

In instances when the family caregiver is elderly and has health problems of their own, the demands of caregiving can be extremely taxing. Therefore, involvement of family members as a resource to provide care may be critical to specific individuals, which they may be stretching beyond their usual limits because of a sense of duty to care for the patient. The additive effect of these burdens and strains may be notable.

The outcome of this type of over-functioning may be caregiver fatigue. However, signs of caregiver fatigue may be missed or underdiagnosed by some health care providers who observe family members briefly and intermittently.

The assumptions of caregiving roles is usually gradual and the family member’s feelings of responsibility for care of the ill person may prevent them from exploring alternative ways of receiving help with care. Family members may require help to problem solve the demands created by the illness, which often begin with an acknowledgment that the health of family members must also be maintained. Instances of deterioration from the family caregiver’s health while caring for an ill member are not uncommon.

Caregiver fatigue may also occur because caregivers are unaware of the availability of resources that could be called upon to decrease the strain on the family caregiver. Others may experience this fatigue because there is an underlying feeling of duty or guilt that is satisfied through an endless devotion to caring.

Caregiver fatigue is not limited to small isolated families. Family caregivers are also at risk for family fatigue when they care for this fatigue as well because one person may be singled out as the primary caregiver. As well, an uncertain time trajectory for the illness may make the demands more difficult, as family members are unsure of how long they may be required to undertake the additional physical tasks, limiting their abilities to pace and meet their energy needs.

If the illness progresses to a palliative stage, most patients identify their family as critical to their well-being. As health care providers need to be carefully considered. The most important reasons were the information and support provided by family members and the role of the caregiver in providing physical care. The provision of practical information that will help families anticipate and prepare for problems and tailoring interventions to their special needs and circumstances. This work revealed a lack of available resources for rural families, but also about how to access them.

Respite services can be helpful to families in sustaining their caregiving efforts. Respite might take the form of external (home) professionals or community programs, or family members may be admitted if they have intractable symptoms, they are permanently or temporarily unable to provide care, or their health is being compromised. Respite services can be helpful to families in sustaining their caregiving efforts. Respite might take the form of external (home) professionals or community programs, or family members may be admitted if they have intractable symptoms, they are permanently or temporarily unable to provide care, or their health is being compromised. Respite services can be helpful to families in sustaining their caregiving efforts.

Braveman et al conducted a survey to assess the caregivers’ appraisal of the need for overnight respite. They found that 73% of caregivers provided care for a relative with cancer in their home for at least 50% of their waking hours, of whom 44% reported that their caregiver’s health was a result of overwork. Further, 70% of all caregivers in the sample indicated that they would use an overnight respite service if they had access to one. A review of the literature on home respite care indicates that programs may allow families time to be relieved of caregiving duties for a short period of time.
The practical, physical challenges associated with providing care levels of carer fatigue were identified as urgent candidates for night respite service. Families who indicated moderate to severe 11-month time period. Results from this study demonstrated that the assessment tool was reliable and feasible for use in practice.

Families who experienced a traumatic illness or death may be at risk of a more complicatedbereavement reaction. Therefore, caring for the family during the palliative phase of a cancer illness is a preventable stressor that may place them in a better position to cope with this crisis and integrate the loss in a way that maintains their own health. Family members who have experienced or witnessed unresolved suffering of the patient may be in particular need of help to cope with the memories and regret associated with these experiences.

Assistance with the Financial Burdens of Care

Given and colleagues have documented the financial concerns that family members experience when a family member has cancer. Children in the family, spouses and other dependent members may share these worries. Costs of care may be an issue. For example, family members may be wary of the effects of medications and treatment. Indirect costs associated with providing care, or taking time to work to attend appointments, or providing assistance to the patient may also be a source of concern. Family members may also disclose these concerns, or feel guilty about having worries about financial matters when the patient is ill and may be suffering. Family members who are preoccupied with financial concerns may be distracted and less attentive to the patient’s care needs.

The role of family carer may also include additional financial burdens. Schofield and colleagues have reported that family caregiving commitments mean that some family caregivers are unable to work or have to work fewer hours, or in a lower paid job with negative financial consequences. Children in the family, spouses and other dependent members may share these worries.

With a shift in care towards home-based community care, the home is a major component of caring for the person with cancer. Addington-Hall and colleagues studied ill 118 family carers who were providing care in the terminal phases of the patient’s cancer illness. They found that half of the caregivers they studied had reported having to take time off work to care for the patient at home. Another study revealed that the cost of family labour and family out-of-pocket expenditures for a three-month period for women with and a healthy partner’s time was significantly less for families in which the patient was still alive, compared with families of patients who had died. Total cost for families and individuals with cancer was two to three times that of families where the patient survived. These results suggest that the financial demands on families may be significant and may be a serious, additional source of family stress.

A simple question about how families might be coping with the financial costs associated with the degree of illness may elicit these fears and allow health professionals to make appropriate referrals or help family members identify resources to help them to manage. The opportunity to discuss these concerns may also ease the strain for family members who may be reluctant to discuss these matters with the patient or others.

Conclusion

Notwithstanding the demands of caregiving, family caregivers reported the stress associated with this role. These interviews also evidence that family caregivers may feel a strong sense of duty to provide good quality care to a loved one. A recent survey revealed that the most common reasons for being a family caregiver were feeling a sense of responsibility, believing that the family could provide better care than would otherwise be available, a sense of emotional obligation and an absence of other family or friends. Helping family members to assume the caregiving role in a way that is sustainable and fulfilling should be the aim.

To date, the role of health professionals in supporting families of people facing a cancer illness has been underdeveloped and poorly defined. Some family members who have experienced bereavement and/ or long-term suffering of the patient may be in particular need of help to cope with the memories and regret associated with these experiences.

Acknowledgments

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The Optimising Cancer Care in Australia report published in 2003 by the peak cancer organisations in Australia concluded that there is a need to address cancer care delivery to improve the system, causing unnecessary morbidity and undue distress. The lack of an integrated care system for people with cancer was identified as a major failing of today's health system:

- A number of states in Australia have moved to appoint cancer care coordinators as a strategy to address these problems.
- In Queensland, cancer coordination positions have been established in a number of Health Service Districts in the Southern and Central regions to improve the flow of patients to cancer care, quality of life and time spent in hospital.
- A person diagnosed with cancer can receive multiple treatments in a variety of different health care settings over extended periods of time.
- During this time, they come into contact with multiple health care providers.
- For example, one recent UK study reported that cancer patients with a diagnosis of less than one year had met 28 doctors on average since their diagnosis.
- The American College of Surgeons has identified this as a major failing of today's health system.
- The lack of an integrated care system for people with cancer was identified as a major failing of today's health system.

Cancer Care Coordinators: Realising the Potential for Improving the Patient Journey

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A person diagnosed with cancer can receive multiple treatments in a variety of different health care settings over extended periods of time. During this time, they come into contact with multiple health care providers. For example, one recent UK study reported that cancer patients with a diagnosis of less than one year had met 28 doctors on average since their diagnosis. The American College of Surgeons has identified this as a major failing of today's health system.

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While coordination of care, case management and care pathways are processes designed to promote continuity on their own, they do not necessarily ensure that a patient experiences a well-coordinated and coherent14. Studies suggest that patients and their families experience continuity, when they perceive that providers know what has happened before, that different providers agree on a management plan, and that there will be coordination of care for the future. These dimensions emphasise that the experience of a connected and coherent service is intricately linked to organisational, interpersonal and relational aspects of the health system.

What is the Evidence for Care Coordination?

Two major reviews of evidence regarding coordination of cancer care were published in 2003. The National Institute of Clinical Excellence in the UK undertook a systematic review of literature published between 1966 and March 2003 to determine the current state of evidence on interventions to improve service configurations for supportive and palliative care for those affected by cancer15. In the area of coordination, 13 individual studies were identified that had evaluated interventions intended to improve coordination of care, multidisciplinary team interventions, introduction of standardised guidelines and protocols and implementation of methods for exchange of information, such as patient-held records. The reviewers concluded that the show good coordination enables services to complement each other and provide better quality supportive care services. Of particular note, however, is that 11 of the 13 studies identified in this review involved coordination of services for patients receiving palliative care.

The Clinical Practice Guidelines for Psychosocial Care for Adults with Cancer published in Australia similarly discusses evidence around the use of nurse case managers to promote the continuity of care: identification of a care coordinator; the role of specialist oncology nurses; multidisciplinary care; and patient-held records. The level 2 evidence exists to support the following interventions:

- Specialist breast nurses improve and provide continuity of care throughout the treatment process for women with breast cancer; and
- Patient-held records improve continuity of care.

While care coordination is not the sole focus of the Specialist Breast Nurses' practice, the establishment of such positions in Australia has represented an important development in efforts to improve coordination and support for women with breast cancer. The National Breast Cancer Centre (NBCC) Specialist Breast Nurse Program was established to design and implement models of care coordination, management, integration of services and seamless care16. In the context of managing a chronic disease such as cancer, continuity of care has been defined as the delivery of services by different professionals in a coherent, consistent and continuous fashion, accessible to the patient with the medical needs and personal context. A service system that facilitates continuity of care is characterised as an effective way to provide quality care to high-risk patient groups and to improve survival outcomes17. While no agreed definition in the literature, nurse case management roles are generally seen to encompass a very broad range of responsibilities which may include assessment and screening of patients, establishing care plans, mobilising self-efficacy, enhancing self-care capabilities, coordinating care across settings, brokering and developing networks of services, advocating and providing information on care18. The development of standardised care protocols, such as care maps, pathways and guidelines have also been identified as an important mechanism for achieving coordinated and continuous care.

While coordination of care, case management and care pathways are processes designed to promote continuity, on their own, they do not necessarily ensure that a patient experiences a well-coordinated and coherent14. Studies suggest that patients and their families experience continuity when they perceive that providers know what has happened before, that different providers agree on a management plan, and that there will be coordination of care for the future. These dimensions emphasise that the experience of a connected and coherent service is intricately linked to organisational, interpersonal and relational aspects of the health system.

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The Clinical Practice Guidelines for Psychosocial Care for Adults with Cancer published in Australia similarly discusses evidence around the use of nurse case managers to promote the continuity of care: identification of a care coordinator; the role of specialist oncology nurses; multidisciplinary care; and patient-held records. The level 2 evidence exists to support the following interventions:

- Specialist breast nurses improve and provide continuity of care throughout the treatment process for women with breast cancer; and
- Patient-held records improve continuity of care.

While care coordination is not the sole focus of the Specialist Breast Nurses’ practice, the establishment of such positions in Australia has represented an important development in efforts to improve coordination and support for women with breast cancer. The National Breast Cancer Centre (NBCC) Specialist Breast Nurse Program was established to design and implement models of care coordination, management, integration of services and seamless care16. In the context of managing a chronic disease such as cancer, continuity of care has been defined as the delivery of services by different professionals in a coherent, consistent and continuous fashion, accessible to the patient with the medical needs and personal context. A service system that facilitates continuity of care is characterised as an effective way to provide quality care to high-risk patient groups and to improve survival outcomes17. While no agreed definition in the literature, nurse case management roles are generally seen to encompass a very broad range of responsibilities which may include assessment and screening of patients, establishing care plans, mobilising self-efficacy, enhancing self-care capabilities, coordinating care across settings, brokering and developing networks of services, advocating and providing information on care18. The development of standardised care protocols, such as care maps, pathways and guidelines have also been identified as an important mechanism for achieving coordinated and continuous care.

While coordination of care, case management and care pathways are processes designed to promote continuity, on their own, they do not necessarily ensure that a patient experiences a well-coordinated and coherent14. Studies suggest that patients and their families experience continuity when they perceive that providers know what has happened before, that different providers agree on a management plan, and that there will be coordination of care for the future. These dimensions emphasise that the experience of a connected and coherent service is intricately linked to organisational, interpersonal and relational aspects of the health system.

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While coordination of care, case management and care pathways are processes designed to promote continuity on their own, they do not necessarily ensure that a patient experiences a well-coordinated and coherent. Studies suggest that patients and their families experience continuity when they perceive that providers know what has happened before, that different providers agree on a management plan, and that they will be cared for in the future. These dimensions emphasise that the experience of a connected and coherent service is intricately linked to organisational, interpersonal and relational aspects of the health system.
The evidence available thus suggests that the appointment of someone to coordinate care may have many benefits for patients and those providing care, and that a range of processes of care that contribute to improved patient outcomes are, however, not always clearly described. That is, exactly what is it that nurse case managers or care coordinators do that makes a difference? Findings from a qualitative study involving women with cancer who received a nurse case management intervention identified that patients felt they had been helped through practices including managing information, helping with emotional support, providing education about procedures and self-care, and activities of daily living15. Navigating the health system was also a key part of the case management intervention, emphasizing that care coordinators can help and this included making appointments, explaining procedures, reinforcing information from other health care providers and ensuring comprehensive recording of patient information in health records16. Families of patients in this study reported the nurse case managers helped by providing advocacy, support, education and monitoring of their relative’s progress.

Similarly, findings from a qualitative study of the practices of nurse case managers in a statewide program in California for uninsured men with prostate or bladder cancer identified that nurse case manager’s scope of practice was extremely broad and required ‘skilled tailoring and execution’ of a range of tasks including:

- assessment and collection of data from a variety of sources to identify patient needs;
- use of facilitation strategies to promote successful self-action and expedite movement within the health care system;
- advocacy strategies including obtaining records or information that patients needed and representing patient needs;
- coordination strategies to link agencies, care providers and patients, such as coordinating appointments, obtaining records, completing paper work, making referrals and arranging support services;
- teaching to fill gaps in information or understanding;
- support through reassuring, listening and supporting decisions;
- collaborative problem solving through active listening, purposeful questioning, elicitation of preferences, identifying actions and reinforcing capabilities.

What Issues Should be Considered in Implementing Care Coordination Roles? Published studies concerning care coordination interventions have tended to describe a range of quite structured programs of nurse intervention, with participating nurses being well supported and educated to perform in their roles. In reality, however, coordination roles are more likely to be implemented in diverse contexts with varying levels of structure, guidance and support. As such, outcomes for patients and for the system are the potential for longer term and quality care coordination interventions is not well defined. Few studies have reported on coordination activities in post-treatment or follow-up phases of care.

A host of questions arise when considering issues regarding delivery and timing of coordination interventions. For example:

Do all patients require services provided by a care coordinator? What is an appropriate caseload and caseload for care coordination? Are there different case manager workplaces within one institution, a primary care setting, or work between several organizations? It is likely that the multitude of pathways that a person with cancer may follow, combined with the unique features of that person’s geography and population distribution, will mean that there is no one answer to these questions. Nevertheless, ensuring equity of access and appropriate use of resources is an important challenge.

Who Can Best Fulfil the Role of Cancer Care Coordinator? The majority of evidence relating to the coordination of cancer care has involved the use of nurses as care managers or in structural support roles, such as that of the specialist breast nurse. The Practice Guidelines for Oncosocial Care for people with cancer identified that specialist oncology nurses, in both inpatient and outpatient settings, play a major role in ensuring continuity of care by coordinating the patient’s pathway through different members of the team, and monitoring the person with cancer. The guidelines also suggest that GPs can be useful in ensuring continuity of care, given their role in patient and social support, especially in relation to follow up and management of co-morbid conditions. There are, however, few studies in the cancer context to assess the interest, abilities or capacity of GPs to provide coordination roles, although other health professionals may also play an important role in care coordination.

It is possible that different disciplines will have different coordination roles at different times of the patient journey and it is likely that different professionals will have some role in ensuring continuity of care. Indeed, the Psychosocial Clinical Practice Guidelines recommends that the patient should be given a choice as to whom they wish to be the coordinator of their care. The key question that should drive decisions about who is best placed to act as a care coordinator is: What are the support and coordination needs of patients in this context?

How Does the Care Coordinator’s Practice Interface with that of Other Health Professionals? Perhaps the most challenging feature of care coordination interventions is the interface between the functions of an appointed care coordinator and those of other members of the patient’s very large, complex and diverse group of activities that are suggested to be within the scope of practice for care coordinators highlights the potential for role overlap, role conflict and duplicated efforts. Despite these concerns, the NBCSS Specialist Breast Nurse Project found that while some practitioners initially expressed concern that the specialist breast nurse role might encroach other professionals’ role, and might cause confusion about who was responsible for what, concerns were unfounded and where role overlap did occur, this was resolved or used to advantage.16 For care coordination roles to be effective and efficient, high quality communication and understanding of the clinical, social and systems of support to enable collaborative practices to occur. The findings from the Victorian Breast Nurse Workforce study are an important reminder that care coordination roles may have enormous potential, careful consideration needs to be given to how such roles are designed and implemented. The brief review presented in this paper raises some important questions for further consideration.

What is the Scope of Practice and Associated Competency Requirements for a Cancer Care Coordinator? Qualitative studies describing the practices which contribute to patient’s experience of a coordinated system identify an enormous array of administering, educational, advocacy and clinical functions that may be performed by nurses in care coordination roles. It is, however, not a consistent definition of the role and responsibilities of care coordinators. As such, the capabilities and competencies required to be an effective care coordinator. For example, to what extent should such roles focus on management and coordination of the various parts of the system (eg. the patient, health care providers, health information navigator role), more direct care provision in terms of individual patient supportive care needs (eg. counselling and education, such as provided by the Specialist Breast Care Nurse), or a combination of these functions? Inherent in this is the question of how the care coordinator’s role differs or complements the other role of other cancer specialists such as that of breast care nurses. The definition of the coordination is, of course, unlikely to meet the diverse needs of people with cancer. Nevertheless, addressing key questions about role definition will be crucial for future-based models of care coordination that are appropriate for the populations being served. Such clarity will also assist consumers and other health professionals to better understand their relationship with care coordinators, as well as the perception that care coordinators can be ‘all things to all people’.

When is Care Coordination Required, To Whom and Under What Circumstances? In the cancer context, the specific patient circumstances that will benefit most from support provided by care coordinators are yet to be clearly identified. Studies that have evaluated care management interventions have tended to involve patients with complex, high-need, very heavy communicative care context, studies similarly suggest that continuity of care interventions are associated with more positive outcomes for more vulnerable patients. Furthermore, while studies demonstrate the potential benefits of care coordination interventions in both the treatment phase17 as well as palliative phase, they also note that receive care management support to achieve such improvements are multifaceted and are likely to involve developments in multidisciplinary care, improved communication systems and, as this review suggests, more effective role development and role clarification of scope of practice, competency standards and related training requirements for care coordinators also remains a priority.

References
Defining Nurse Practitioner

There is general agreement that the introduction of the nurse practitioner as a new level of care and a radical departure from the existing nomenclature relating to advanced practice practitioners about this innovative level of health care. There are three points in this definition that are central to understanding the nature of the nurse practitioner role.

i) Extended practice: The element that differentiates the nurse practitioner from other advanced practice roles is that the scope of practice of the nurse practitioner is subject to different practice privileges that are protected by legislation. Extended practice therefore is defined by those elements of nursing activity that call upon a legislative structure that is outside the scope of practice for the registered nurse. With a scope of practice that incorporates these extended practice activities, the nurse practitioner functions in that grey area that incorporates both medical and nursing activities.

ii) Autonomous practice The nurse practitioner engages in clinical practice with significant clinical autonomy and accountability, which incorporates responsibility for the complete episode of care. This means accepting the need to act autonomously in decision making and the following of the practice of the nurse practitioner. This autonomy is situated within a team approach to health service whereby the nurse practitioner works in a multidisciplinary team as a clinical partnership role to optimise patient outcomes.

iii) Nursing model: This practice is firmly located within a nursing model. That is, nurse practitioner practice is about clinical flexibility in the delivery of nursing care.

Researching Nurse Practitioner Service

There is now an extensive body of literature relating to the nurse practitioner role and practice. However, large scale quantitative research into nurse practitioner practice is not yet feasible because the number in practice remain relatively small. There is nonetheless an emerging research-based body of knowledge to inform ongoing developments in the introduction of the nurse practitioner role.

Nurse practitioners have been shown to offer a beneficial service and fill a gap in health care provision, both in the primary health care and in the acute care sectors. National and international experience demonstrates that they provide a specific service that is highly regarded and in demand. The specific service offered by nurse practitioners provides care to managing the information of a variety of patients, including cancer patients with cancer-based cancer support nurse service. Patient Education and Counseling. 2002; 42; 7-35.

In designing a nurse practitioner role there are factors that need to be considered to enhance the efficacy and sustainability of a new service. First the nurse practitioner is not a medical substitute. The nurse practitioner model needs to conform to a collaborative/team approach to health care that is complementary to other professional roles and central to better organisation of the clinical service. The team may look different depending on the service provided, but the nurse practitioner, like all other health care providers, operates most effectively in an overtly collaborative model. Second the role needs to be sustainable in that it does not replicate existing services. The nurse practitioner role of care is most effective when the service fills a gap in access, efficiency or quality of service for the patient population in a specific field of health care. Finally the candidate for the nurse practitioner role needs to have extensive experience in the specialty field and appropriate educational preparation.

Conclusion

This paper has attempted to clarify some of the issues related to the development of the nurse practitioner role and practice. The paper has discussed what a nurse practitioner is, the progress in Australia at both state/territory and national levels and has identified factors to be considered in the design of a nurse practitioner role. The nurse practitioner has been described as an advanced practice nurse who is autonomous in practice and provides innovative and flexible health care delivery that complements other health care providers. The scope of practice of the nurse practitioner builds upon the assumption of the nurse practitioner as doctor replacement or substitute. The literature is now debating the extent of the transition of the nurse practitioner role and is now a time for research to be undertaken in nurse practitioner research towards holistic health service research. This examines how the health disciplines (including the extended practice of the nurse practitioner) complement and overlap to build better organised care practices. I see this trend as an important and constructive direction as it is an important development in nursing in the past 30 years and provides innovative and flexible health care delivery.
practice nurse who bridges that grey area between nursing and medicine and is emerging as a new type of level of health care professionals. They represent a new breed of health care professionals in that they are not limited by traditional health discipline boundaries, their practice includes what has traditionally been the responsibility of medical practices within a nursing model of care and can expand clinical practice in both medical and nursing specialty areas.

References
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Patient numbers per FTE nurse have increased over the past years.

The management of workloads will, however, continue to be a challenge for clinicians and nurses. Currently, few validated models exist to determine current workloads, care planning and staffing requirements in the oncology setting, especially in ambulatory care. In the cancer care setting it is essential that any such workload models factor in the complex clinical components and the support and education roles of the nurse to ensure that these essential components of patient care are incorporated into workload calculations. Moreover, the pressures of finite resources demand efficiency in the workplace and in some cases a re-evaluation of current practices. Work redesign programs are needed to develop models of care centred on addressing the needs of the person with cancer, within the context of a flexible multidisciplinary team approach to care.

Models of Nursing Care
Flexible team approaches to care are likely to be critical to future cancer care delivery. In order to most effectively respond to complex patient needs and increasing demands on resources. Currently the predominant model used to organise nursing work is patient allocation. The patient allocation model arguably has the potential to isolate staff from one another and result in reduced communication and co-ordination of human resources. Models of care that develop a culture of teamwork that foster the sharing of knowledge and professional skills could assist in the formation of supportive professional relationships. For example, the Department of Education, Science and Training has recently released Guidelines for the Design of Workforce Plans intending to distribute the work across registered nurses, enrolled nurses and health carers and articulate arrangements between health care workers of various skill levels. While such approaches may}

A Review of Cancer Nursing Workforce Issues in Australia
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The Diminishing Nursing Workforce
The recently released assessment of national and state skill shortages identifies that Australia has a national shortage of Registered Nurses (RN), with oncology and palliative care registered personnel being listed as professional groups in shortage in all states and territories of Australia except the Northern Territory.

The current National Review of Nursing Education in Australia report entitle Medicare: The National Review of Nursing Education will guide the direction for cancer control over the coming years, support the health care needs of people diagnosed with cancer. Nursing practice, with its central focus on addressing the needs of the person with cancer, is integral to the management of workloads. The management of workloads will, however, continue to be a challenge for clinicians and nurses. Currently, few validated models exist to determine current workloads, care planning and staffing requirements in the oncology setting, especially in ambulatory care. In the cancer care setting it is essential that any such workload models factor in the complex clinical components and the support and education roles of the nurse to ensure that these essential components of patient care are incorporated into workload calculations. Moreover, the pressures of finite resources demand efficiency in the workplace and in some cases a re-evaluation of current practices. Work redesign programs are needed to develop models of care centred on addressing the needs of the person with cancer, within the context of a flexible multidisciplinary team approach to care.

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be an appropriate response to the complex challenges faced by today’s health systems, some nurses have expressed concern that they may shift away from hands-on care to serve as ‘team leaders’ and that they may return nursing to a fragmented, task-oriented discipline.

Workplace Culture and Leadership
As the largest group of health care worker, nurses have considerable opportunity to shape the system itself. A significant challenge for nurse leaders is to create positive work environments in which staff feel valued. Constructive leadership behaviour can influence the culture of the work unit and the morale and retention of employees, which in turn improves patient satisfaction and outcomes. Studies suggest that nurses’ trust in their managers has been linked to improved productivity, improved patient care, job satisfaction and commitment. Clinical leadership roles should be developed to mentor and develop new cancer nursing practitioners and promote innovative practice in cancer care, thereby contributing to the retention of experienced and motivated cancer nurses. Nurses with leadership potential should be identified and supported, to shape and lead our profession in the future.

Educational Strategies
Education is an essential component for the preparation of new professionals and specialist nurses. The provision of appropriate funding, flexible and responsive education and the building of collaborative relationships across academic and clinical settings are key to building the capacity of the nursing workforce. Immediate strategies that may be implemented include relief from Higher Education Contribution Scheme and other course fees to overcome the financial barriers nurses face in undertaking postgraduate cancer courses.

The recently released NSW Cancer Plan identifies that cancer nursing education is required to develop a workforce that can provide optimal patient care. Specifically, the plan states that advanced practice positions need to be developed, providing clinical experts and leaders. Such initiatives may provide excellent opportunities to recruit and retain cancer nurses and also to evaluate the efficacy of specialist nurse models in improving outcomes for patients with cancer.

Coordinated National Approaches to Workforce Planning
Three important national initiatives are currently underway that have the potential to set the agenda for future directions in nursing workforce planning. Firstly, the 2002 National Review of Nursing Education and Senate Inquiry into Nursing made many recommendations emphasising the importance of nationally coordinated approaches to addressing nursing workforce and education issues. In November 2003, state/territory and Australian Ministers for Health and Education announced the establishment of a National Nursing and Nursing Education Workforce Planning Network (NNEWP). NNEWP has been set up to implement the recommendations of the report Our Duty of Care, including issues such as the skill mix and work organisation, as well as the identification and retention of the current workforce, training of care assistants, funding of clinical education and national education standards. This is the first time there has been national collaboration on these issues.

Secondly, the Nursing Workforce Planning in Australia document has recently been published to guide the Australian Health Workforce Advisory Committee (AHWAC), the National Health Workforce Secretariat and members of nursing workforce planning bodies established by AHWAC. It provides a set of principles to guide health workforce planners. This report highlights that workforce planning for the nursing specialties is highly complex and poorly understood and suggests that planners need to examine work practices, changing roles and scopes of practice as part of workforce redevelopment.

Thirdly, an Australian study is currently being undertaken to reveal what influences nursing workloads and how this affects patient care. The effect of patient acute and decreased length of stay on nursing workloads will also be assessed, in an attempt to match staffing to workloads. It is expected that the results will be available in 2005.

Conclusion
The complex nature of cancer and its treatment and the increasing population of people living with this disease requires a workforce of nurses that can provide care across the cancer continuum. Cancer nurses possess the specialised knowledge and skills to provide treatment, education and emotional support to patients with cancer and their families, however recent reports have identified that the cancer nursing workforce is in shortage, suggesting that patient outcomes may be compromised. Strategies that facilitate the development of a sustainable cancer nursing workforce include increasing the future supply of nurses, increasing the capacity of the current workforce through education and providing an infrastructure that supports nurses at the workplace and promotes retention. Nursing workforce issues have become increasingly prominent in policy agendas, suggesting that the impact of the nursing shortage of Australia’s health care system is becoming more visible. This is an ideal time for nurses to discuss nursing and patient care issues that are important to their practice and to provide solutions to enhance the cancer nursing workforce.

References

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La Jolla

With a C J Martin MH & MRC Fellowship I was able to spend two years at UCSD with Mickey Goulion and John Mendelsohn. Mickey Goulion had come from the University of Chicago and before that was a student of Arthur Kornberg (Nobel Prize winner, DNA polymerase) who had synthesized OX174, a simple viral plasmid, representing the first in vitro synthesis of “a living organism”.

La Jolla, a northern suburb of San Diego, is similar to Sydney with its climate and beautiful beaches. We lived in a small 1920s timber house in a street lined by eucalyptus trees, 200 yards from the beach. The newly formed UCSD Medical School was close to the Salk Institute on the headlands overlooking the Pacific. Salk himself was still Director of the institute and I remember his vast office lined with wall to wall Picassos. He had married one of Picasso’s former models and I was expecting some famous guests some years later as to the ownership of those Picassos.

At the Salk was Robert Holley, who had won the Nobel Prize for the structure of transfer RNA, as well as Jacob Bronowski who had created the BBC Television series and book entitled The Ascent of Man. I would catch the bus up to the medical school, becoming acquainted with an elderly lady paediatrician. She was the widow of Leo Szilard, a physicist from the Institute of Technology in Chicago. We became friends and she introduced me to Leo’s widow, the retired film star Greta Garbo. I was a confirmed bachelor but I was charmed by Greta...and I married her 21 years later.

John Mendelsohn, at that time a lowly assistant professor, went on to become the Director of the San Diego Comprehensive Cancer Centre and then Chairman of Medicine at the Memorial Sloan Kettering Cancer Centre in New York, more latterly, President of the MD Anderson Hospital in Houston.

Working in our lab was Flossie Wong-Stahl, who had come from Hong Kong to do a post-doctoral fellowship with Mickey Goulian. She was destined to become the Director of the San Diego Cancer Institute. A year later she married John Mendelsohn, the Institute’s Director.

I was appointed Director of Clinical Research at the CSL.

In particular, Rick Kefford’s work in the lymphocyto-toxicity of leucocytes has made a major contribution to the understanding of the role of these cells in therapy. This work has also led to the development of bone marrow transplantation. This was a major breakthrough in the treatment of patients with bone marrow disorders, and has led to the development of bone marrow transplantation as a treatment for a variety of disorders, including leukemia and myelodysplasia.

The Sydney LICR was highly productive. The unit played a major role in establishing the ANZ Breast Cancer Trials Group, as well as the randomised trials of high dose chemotherapy in the treatment of bone marrow transplantation. They were able to show the dramatic elevation in the neutrophil count after administration of G-CSF and the protection against neutropenia induced by cyclophosphamide.

An unexpected effect of the release into the peripheral blood of hematopoietic progenitor cells (CD34 cells) serendipitously observed by Ule Durrson in the WEHI. This led to leucapheresis procedures by which we could harvest these cells and use them as an alternative to bone marrow transplantation. In the early 1980s, Bill Sheridan had returned from Emory University in Atlanta and demonstrated the successful use of these cells in achieving a rapid recovery of the neutrophils, as well as platelets. These findings, published sequentially in the Lancet, were to revolutionise bone marrow transplantation. Stem Cell Autologous transplantation as well as Allogeneic stem cell transplantations are now widely established as the standard of care for the many conditions for which it was the fourth most widely cited paper in its year of publication.

Subsequently Megakaryocyte Growth and Development Factor (MGDF) was also pioneered in Melbourne with the translational research carried out by Glenn Begley. The effects of MGDF in the treatment of acute myeloid leukemia (AML) were largely reported as cause of its antigentic character.

The success of Aegon and its rapid growth as one of the world’s largest biotechnology companies, led to its recruiting many of the original Melbourne trialists, including George Monty, Bill Sheridan and subsequently Glenn Begley back to California. Russell Basset, who played an integral role in the success of this venture is now one of the senior executives of Genentech, the company that acquired Aegon.

The complexity of the developments saw creation of multiple...
groups within the department. Geoff Lindeman, who had come from Sydney, interested in cancer genetics, as well as breast cancer research. Mark Boughen created the Familial Cancer Centre, Mark Boughen the Palliative Care Service, Glen Bell the Bone Marrow Research Laboratories later on run by Steve James, and I the Grant of Medical Oncology at the Western Hospital with a combined appointment between both RMH and the Western Hospital. An organisation for running phase III clinical trials within the department that had evolved from the Cancer Therapeutics, which the clinical research activities of the Austin Reperation Hospitals, Western Hospital and Peter MacCallum were linked. This was initially run by Daryl Maher, subsequently Russell Basser and more latterly Mark Rosenthal, changing its name to “Cancer Trials Australia”.

I had to participate in a considerable amount of administrative activities and sequentially chaired the Medical Oncology Group, then President of the Clinical Oncological Society of Australia, President of the Australian Cancer Society as well.

Two Decades of Progress in Treating Chemotherapy Induced Emesis

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The use of cytotoxic drugs such as cisplatin, which caused severe nausea and vomiting unresponsive to standard antemetics, stimulated research into the mechanisms of nausea and vomiting. Cisplatin was associated with both an acute emesis in the first 24 hours and a delayed emesis which could last for a week. The discovery that 5 hydroxytryptamine3 receptors in the small intestine and brain were responsible for acute chemotherapy induced vomiting and the introduction of 5-HT3 receptor antagonists, resulted in the treatment of acute chemotherapy induced emesis, but had only minor impact on delayed emesis, which was thought to be mediated by a different mechanism. Now aprotin a new drug that is a neurokinin1 receptor antagonist, which is centrally acting and given orally, has improved the control of acute emesis when added to a 5-HT3 antagonist and dexamethasone, but more importantly has improved the control of the delayed emesis which continued for two further days in combination with dexamethasone. This control of nausea and vomiting associated with chemotherapy has been translated into improved quality of life of the patients receiving chemotherapy.

Nausea and vomiting have been listed by patients as amongst the most distressing side effects of chemotherapy. Much of the knowledge gained over the last two decades about the mechanisms of emesis has resulted from the need to control chemotherapy induced emesis following the introduction of cytotoxic drugs of high emetogenic potential, such as cisplatin.

Nausea and vomiting have been listed by patients as amongst the most distressing side effects of chemotherapy. Much of the knowledge gained over the last two decades about the mechanisms of emesis has resulted from the need to control chemotherapy induced emesis following the introduction of cytotoxic drugs of high emetogenic potential, such as cisplatin.

There are three phases of emesis associated with chemotherapy. Following cisplatin, which is the cytotoxic used in trials of new antiemetics, there are two phases of emesis. In most patients, there is an acute phase of emesis starting a few hours after chemotherapy and lasting until 18 to 24 hours, then a delayed phase which can last for up to a week. Finally there is anticipatory nausea and vomiting which is a conditioned response prior to the chemotherapy in subsequent cycles when emesis has occurred with previous doses. This provides the rationale for prophylactically trying to prevent post chemotherapy induced emesis so there can be no learned response.

Early Drugs Used For Emesis

The initial anti-emetic drugs used for chemotherapy induced emesis were dopamine antagonists, particularly metoclopramide, which blocked the D2 receptor thought to mediate emesis. At conventional doses this drug was not very effective, however, a breakthrough came when, based on animal studies, clinical trials established that high doses of metoclopramide, up to 30mg/kg were more effective for preventing cisplatin induced emesis and were tolerated without the extrapyramidal reactions.2 It is now believed that high-dose metoclopramide affects the 5 hydroxytryptamine3 (5HT3) receptor.

Other drugs available at the time included prochlorperazine, where again low doses were minimally effective and higher doses more so, but at the expense of toxicities such as hypotension and extrapyramidal reactions. Of the butyrophenones, oral domperidone has been most useful, particularly when extra- pyramidal reactions were more frequent than extrapyridal effects, but tends to have higher bioavailability and produces a greater extrapyramidal effect.3,4 Even cannabinoids were tried because of anecdotal reports from young patients who smoked marijuana that it alleviated the vomiting after chemotherapy. Delta-9-tetrahydrocannabinol was less active than high-dose intravenous metoclopramide in controlling cisplatin-induced emesis, but is better with chemotherapy of moderate emetic potential as are the synthetic cannabinoids levonantradol and nabilone.5 They are, however, more toxic than other antiemetics with the somnolence and dysphoric reactions tolerated poorly, particularly in older patients.

Co-Administered Drugs

The empirical observation that chemotherapy cycles including a corticosteroid were associated with less emesis than those without led to these being suggested as antiemetics.2,6 Although they have been recommended as having no extrapyramidal actions in the control of delayed emesis which continues for two further days in combination with dexamethasone, these drugs exert their greatest role has been as part of antieptic combinations.

Benzodiazepines such as lorazepam have been used in addition to antieptics, particularly metoclopramide and prochlorperazine.7,8 Lorazepam has an amnestic anxiolytic effect and is a sedative. This can improve the patients’ tolerance of chemotherapy and can reduce the risk of extrapyramidal reactions from metoclopramide. Benzodiazepines have been described at reducing anticipatory emesis.9,10

5-Hydroxytryptamine3 Receptor Antagonists

It was the discovery that cisplatin-induced acute emesis could be ameliorated by specifically blocking one of the seven 5-hydroxytryptamine (5-HT) receptors, the 5-HT3 receptor, that allowed a great stride in our understanding of the pathways of the emetic response.11,12 The 5-HT3 receptors are found centrally and peripherally where the main site of activity is in the small intestine. The 5-HT3 receptors have allowed identification of the role of the vagal afferent enterochromaffin cell unit in the emetic response. Cytotoxic drugs cause a calcium dependent release of hydroxytryptamine from enterochromaffin cells in the upper gastrointestinal mucosa. This is reflected by the fact that cisplatin-induced acute emesis are associated with increases in urine and plasma 5-Hydroxyindoleacetic acid (5 HIAA), a metabolite of 5-HT supposedly released from the enterochromaffin cells.13 It is an anomaly, however, that cyclophosphamide induced emesis which responds to 5-HT3 antagonists fails to induce these changes to 5-HT9 and so the precise mechanism of emesis remains undefined.

The recognition of the role of the 5-HT3 receptor in acute post chemotherapy emesis and the development of selective antagonists including ondansetron, granisetron, tropisetron and dolasetron has revolutionised the management of this complication of anti-cancer chemotherapy.12,14 They are not broad spectrum antiemetics, their major uses being confined to the treatment of acute chemotherapy induced emesis, but had only minor impact on delayed emesis, which was thought to be mediated by a different mechanism. Now aprotinin a new drug that is a neurokinin1 receptor antagonist, which is centrally acting and given orally, has improved the control of acute emesis when added to a 5-HT3 antagonist and dexamethasone, but more importantly has improved the control of the delayed emesis which continued for two further days in combination with dexamethasone. This control of nausea and vomiting associated with chemotherapy has been translated into improved quality of life of the patients receiving chemotherapy.
for control (p<0.001) and for the Hesketh trial 72.7 per cent versus 69.1 per cent (p<0.001). For acute nausea and emesis the results were aprepitant 82.8 per cent versus control 76.4 per cent (p<0.001), for Poli-Bigelli and aprepitant 89.2 per cent versus 78.1 per cent (p<0.001) for Hesketh.

The biggest differences were seen in delayed emesis; 67.7 per cent versus 46.8 per cent (p<0.001) and 74.4 per cent versus 55.8 per cent (p<0.001) respectively. Similar results were seen with dexamethasone. The efficacy of aprepitant was maintained over six courses as was consistent with the result of a study designed to specifically test protection over multiple cycles.

In the two phase III trials logistic regression analyses of the Functional Living Index-Eisen (FLI) quality of life showed that more patients in the aprepitant groups reported minimal or no impact of chemotherapy induced nausea and vomiting on their daily life compared to those on the standard treatments (74.7 per cent versus 63.5 per cent in Poli-Bigelli and 70.4 per cent versus 64.3 per cent in Hesketh). Moreover this result was independent of the gender of the patients. In the Hesketh study, the percentage of males (69.5 per cent) and females (77.6 per cent) with complete response overall were similar in the aprepitant treated group, but in the standard arm complete responses were less for females (38.8 per cent) than males (50.5 per cent), which is the more usual result since females don’t respond to other antiemetics as well as males.

Aprepitant added to a 5HT3 receptor antagonist and dexamethasone was effective in both the older and younger age groups, whereas other antiemetics tend to be less effective in younger patients. The overall complete response rate in patients ≥65 and over was 76 per cent for the aprepitant arm and 54 per cent for the standard arm (p=0.001). Similar results are seen in the recent phase III trials.42-44 The safety and tolerability, as well as reported side effects in older patients, showed no difference.45 The FLIE also showed that the addition of aprepitant to standard therapy reduced the impact of chemotherapy-induced nausea and vomiting.

Aprepitant was well tolerated. The incidence of drug related adverse events was 19.5 per cent for aprepitant versus 14.4 per cent controls on Poli-Bigelli and 14.6 per cent versus 11.0 per cent in the Hesketh trial. Adverse events were more frequent with aprepitant; the other side effects were similar to the SHT3 antagonists with which they had combined.

Conclusions

The new standard for antemetic prophylaxis for drugs of high emetic potential will be a SHT3 receptor antagonist, dexamethasone and aprepitant for the acute phase followed by aprepitant and dexamethasone for two days of the delayed phase.

Traditionally, with cytotoxics of moderate emetic potential, similar antemetic regimens are used to those used with drugs of high emetic potential, although one of the newer HT3 receptor antagonists has been specifically given in the SHT3 phase III trials with the 5-HT3 receptor antagonist aprepitant. This phase III trial was specifically designed to look at the use of aprepitant in combination with dexamethasone in patients receiving chemotherapy for breast cancer. The results indicate that the inclusion of a 5HT3 receptor antagonist to standard antiemetics provides protection against nausea and vomiting induced by cyclophosphamide based chemotherapy.

Aprepitant is effective in reducing the impact of chemotherapy-induced nausea and vomiting as well as improving patient outcomes in busy clinical settings.

References

16. Martin AR, Ma JG, Carides AD et al. The oral neurokinin-1 antagonist, aprepitant, was effective in maintaining patients’ daily life activities in both male and female patients receiving highly emetogenic chemotherapy. Proc Am Soc Clin Oncol 2002;21:750.
treatment system on 50 patients newly diagnosed with breast, prostate, bowel and head and neck cancer.

**Methods**

**Questionnaires**

Radiation toxicity questionnaires were developed by radiation oncologists for each of the selected cancer sites (breast, prostate, bowel and head and neck cancer). Toxicity questions were based on scales developed by the Radiation Therapy Oncology Group and the European Organisation for Research and Treatment of Cancer (RTOG/EORTC)\(^1\). Three sets of questions were developed for each of the four cancer sites. The first set of questions (pre-treatment questionnaire) sought to ascertain baseline values such as the patient's normal bowel or urinary habits prior to radiation treatment. The second set of questions was designed to be answered by the patient during the course of their radiotherapy and contained questions dealing with expected immediate or acute toxicity. The final set of questions (post-treatment questionnaire) was designed to be answered by patients during their follow-up visits to the clinic after completion of their radiotherapy and dealt with the possible long-term side-effects of radiotherapy.

The HAD scale was used to screen for anxiety and depression. This scale was specifically developed for patients with physical illness and is designed so that somatic items are largely separated from anxiety and depression subscales\(^2\). The patients in this trial answered the HAD questionnaire every time they were referred to the psychosocial team, comprising a clinical psychologist, social worker and breast nurse trained in counselling. Treatment options included provision of information, problem solving, support, reassurance, psychotherapy, social interventions or recommendation for referral to a psychiatrist for further management of depression or anxiety.

**Results**

**Patient Characteristics**

A total of 50 patients with breast, prostate, bowel or head and neck cancer were recruited into the study. Twenty-one patients (42 per cent) were female. Table 1 shows the primary cancer site and median age of patients in the trial. The time that had elapsed since the diagnosis of primary cancer was five months or less in 63 per cent of patients.

<table>
<thead>
<tr>
<th>Cancer site</th>
<th>No of patients</th>
<th>Median age (years)</th>
<th>Median Time to complete initial questionnaires (mins)</th>
<th>Number with Elevated(^*) HAD scores (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>17</td>
<td>56</td>
<td>9 (7-16)</td>
<td>6 (35)</td>
</tr>
<tr>
<td>Prostate</td>
<td>15</td>
<td>66</td>
<td>12 (7-21)</td>
<td>1 (7)</td>
</tr>
<tr>
<td>Bowel</td>
<td>9</td>
<td>60</td>
<td>14 (9-23)</td>
<td>5 (55)</td>
</tr>
<tr>
<td>Head and neck</td>
<td>9</td>
<td>65</td>
<td>10 (8-15)</td>
<td>3 (33)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>63</td>
<td>15 (33)</td>
<td></td>
</tr>
</tbody>
</table>

* Score of 8 or above

**Discussion**

Anxiety and depression are known to be widely prevalent in cancer patients. Approximately 25 to 30 per cent of cancer patients experience anxiety and/or depression severe enough to merit psychological intervention\(^3\). Most of these patients receive no support for their psychological condition; Maguire\(^4\) reported that only 20 to 30 per cent of cancer patients with significant anxiety or depression were diagnosed and treated. DiMatteo et al\(^5\) found that depressed patients were three times more likely to be non-compliant with medical treatment than patients who are not depressed. Patients need more support to deal with the side effects of cancer and cancer treatment\(^6\).

Electronic self-administered questionnaires for the collection of patient information have several advantages, including increased patient privacy and confidentiality, more accurate data capture and improved storage of data. Velikova et al\(^7\) compared touchscreen computerised administration of the HAD and EORTC QLQ-C30 with paper questionnaires and found that despite the fact that many of the patients had never used a computer before, the vast majority of patients (93 per cent) found that the touchscreen survey was easy to use and all agreed that it did not take too long and was not stressful. All the patients felt that it was a good way to convey information to their treating doctor.

Screening for Anxiety and Depression

Most patients experienced some degree of radiation toxicity, which increased in severity with the duration of treatment. The majority (80 per cent) of patients with breast cancer reported no breast pain or discomfort during their first touchscreen session, but by their fifth touchscreen session, 70 per cent of patients experienced mild or moderate degrees of breast pain or discomfort. Patients with head and neck cancer reported maximal toxicity (pain or difficulty in swallowing) at their third touchscreen session. Patients with prostate cancer reported gradually increasing levels of bowel and bladder toxicity over visits, one to five and similarly patients with bowel cancer experienced increasing symptoms over the duration of their treatment.

**Patient Compliance**

Patients were asked to continue to answer the touchscreen questionnaires on their own, once a week during their course of their radiation treatment and during all follow-up visits. As can be seen from Figure 2, patient compliance fell markedly with time. The average number of touchscreen sessions completed by patients on the trial was 4.6 (ranging from a minimum of one to a maximum of eight sessions). Patient compliance during follow-up visits was extremely poor with only nine patients answering at least one follow-up questionnaire (however some patients attended follow-up visits at other hospitals).

![Figure 1: Touchscreen computer with purpose built desk that prevents unauthorised access to the hard drive and maintains patient privacy.](image)

![Table 1: Age, Primary cancer site and Time taken to complete initial touchscreen questionnaires](image)

![Figure 2: Patient Compliance on Touchscreen Program](image)
were included in our study. Several studies 2-4;19 have shown that in our study may be the small sample size, the time that per cent) had HAD scores of 11 or higher. Pascoe et al2 in a above on the HAD scale. In our trial only two patients (four per cent) had HAD scores of 7 or higher. The possible explanations for the comparatively lower incidence of anxiety and depression in our study may be the small sample size, the time that had elapsed since patients’ completion of radiotherapy and the fact that only outpatients receiving potentially curative radiation treatment were included in our study. Several studies 2-4;19 have shown that cancer patients with advanced disease, more metastases, pain or treatment activity may not be depressed than patients without these factors. Aas et al20 found that the risk of psychiatric distress in hospitalised patients, measured using the SAS-14 scale, was approximately twice that of patients in the outpatient clinic. The majority (66 per cent) of patients in our trial who had elevated HAD scores had an elevated on one occasion and this was often during their initial visit before radiotherapy or chemotherapy treatment. Ford et al21 studied a group of 117 newly referred outpatients with cancer and found that the incidence of both anxiety and depression was greater at initial referral than at six-month follow-up. Although other studies have looked at computerised administration of the HAD questionnaire, no previous studies have examined the use of computerised questionnaires to the touchscreen for the incidence of the side effects of radiotherapy, possibly because the questions need to be specific to the cancer site. Veikko et al21 assessed the feasibility of touchscreen computer administered quality of life measurements of cancer patients receiving chemotherapy to medical oncologists in oncology clinics. They found that having symptoms and functional problems expressible quantitatively on a scale was useful for detection of change over time. This trial has demonstrated that computerised screening for the side effects of radiation treatment is acceptable to patients. A further trial is currently being conducted to determine whether giving computerised feedback to oncologists about their patients’ incidence of radiation toxicity and level of anxiety and/or depression would result in a change in patient management and ultimately in better patient outcomes.

References

The results of our study examining the management of early breast cancer in Victoria prior to 1999 suggest that although ease to quit smoking (p<.001). However, there were no smoking cessation interventions were also examined. The manager and a staff member at the agency were sent questionnaires, with around 60 percent of the agencies completing the questionnaire.

Only approximately one quarter of agencies indicated that they have smoking cessation intervention policy. In most cases, the only cessation intervention smokers receive involves the recording of their smoking status on the client file. Based on the staff's own assessment, about two thirds of clients of such agencies receive smoking advice. In summary, the survey showed that smoking cessation receives little attention from drug and alcohol agencies indicating an urgent need for training and policy interest in this area.

Fresh Start is a comprehensive quit smoking course which provides information, resources and support to smokers about quitting and staying stopped. The course consists of eight 1-1 1/2 hour sessions, held over four weeks. Since August 2002 the Fresh Start program has been evaluated and conducted with participants 9-12 months after participation. A response rate of 83 percent was achieved and a consent rate of 98 percent. Responses were compared with pre-course and post-course questionnaires completed immediately prior to and after the course. Fresh Start course participants were smoking, smoking cessation courses and has also supported eight independently facilitated courses in regional Western Australia to 107 smokers.

Follow-up telephone interviews were conducted with participants 12-18 months after participation. These results examined the impact of smoking cessation. The Fresh Start program is funded by the Cancer Council WA.

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Childrenhood Obesity: Investigating the Influence of Television Food Advertising

Rebekah Donovan and Owen Carter have been awarded a two-year grant to investigate the influence of television food advertising on childhood obesity. A record number of Australian children are overweight or obese, leaving them susceptible to a range of serious psychosocial and short- and long-term health problems, including a range of cancers. The causes of obesity are both genetic and environmental, yet only environmental factors can account for the recent increased prevalence of overweight and obese children. The environmental factors likely to have contributed to increases in childhood obesity include: the marked increase in Australian children's consumption of energy dense foods that are high in fats and sugars; and the decreased energy expenditure associated with the large amount of sedentary time Australian children spend watching television. Television is also thought to be interrelated to food consumption as television ads for such foods are ubiquitous in children's programming timeslots. Younger children have been shown to be highly susceptible to television ads and are able to greatly influence the purchasing intentions of their parents for food. It is not until around the age of 12 years that a large majority of children are able to discern the persuasive intent of advertising. Current advertising regulations within Australia do not appear capable of protecting children from junk food ads. A number of groups are advocating stricter controls of food advertising in Australia, yet much of the data to support such controls is not specifically related to food advertising, nor is it based on Australian samples of children. These weaknesses can be exploited by advertisers and manufacturers and as such it is both a public health and political imperative that advocates have Australian data to support stricter controls on food advertising. We will be investigating the extent to which food advertising aimed at children breaches current advertising regulations over a four week period and through a series of experiments with 600 children aged 5 to 12 years, assess their verbal and non-verbal understanding of the persuasive intent of food advertising and the ability of food advertising to alter their food preferences.

Mental Health Promotion Intervention

Poor mental health is associated with higher levels of smoking, physical inactivity and poor diet – all risk factors for cancers. We have received funding from Healthway to develop a mental health promotion intervention in regional areas of Western Australia, aiming to evaluate the relative effectiveness of various approaches to mental health promotion campaigns as identified by the Healthway Mental Health Promotion Scoping Project (Donovan et al., 2003). Two approaches were identified, including: Individual focused campaigns which aim to make people’s perceptions of mental health as the absence of mental illness by emphasising that pro-active steps can, and should, be taken to protect and strengthen individual mental health; and Authority focused campaigns, which focus on interactions between those in authority and those under their charge (e.g. supervisors/ workers; parents/children; teachers/students; coaches/trainees etc), where emphasis is placed upon replacing coercive, negative interaction styles with encouraging, positive styles under the overall message that “you treat people under your care has significant implications for their mental health”. A cross-over study has been designed whereby three pairs of matched regional towns will receive either the individual or authority focused campaigns for one year, followed by the alternative the year after. Overall, the project will provide a blueprint for implementing a state-wide or national mental health campaign that will include lessons about appropriate campaign messages, sequences, target behaviours for target groups, partnerships with local groups and performance indicators.

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Caroline Miller and Jacqueline Hickling attended the 7th Biannual Behavioural Research in Cancer Control Conference in June, presenting four posters. The topics were: Mounting Public Support for Smoke-free Hospitality Venues in South Australia; Smoking and Social Inequalities in South Australia; Community Perceptions about Tobacco Control Policy and the Tobacco Industry; and Quit Mass Media Campaign Comparisons: South Australia 2001-2003. Caroline also gave an oral presentation on: Tackling Social Inequalities by Reducing Passive Smoking.

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The official launch of the newly released Clinical Practice Guidelines for the Prevention, Diagnosis and Management of Lung Cancer was held at the Queensland Cancer Fund on 9 September, attended by clinicians, practitioners and consumers. The new guidelines represent an important step forward in quality care for patients with lung cancer.

Researchers from the Viertel Centre for Research in Cancer Control presented papers at the recent Behavioural Research in Cancer Control Conference in Newcastle in June. The papers demonstrated the range of research taking place at the centre, including: 1) The Queensland Cancer Risk Study, a study of the cancer risk behaviours of 10,000 Queenslanders; 2) research on the prevalence and predictors of skin screening behaviour; 3) The Colorectal Cancer and Quality of Life study, a prospective cohort study of outcomes and quality of life in survivors of colorectal cancer; 4) The Logani Healthy Living Study, a cluster randomised trial of a telephone and print delivered lifestyle intervention targeting cancer survivors recruited from general practice; and 5) The ProCan Study, a large randomized trial of a telephone and print delivered psychosocial and lifestyle intervention targeting men newly diagnosed with prostate cancer in Queensland.

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CHeRP recently hosted the 7th Behavioural Research in Cancer Control Conference from the 23rd-25th June. The conference was attended by 91 people from around Australia representing cancer control and applying behavioural research: Bridging the gap between research and practice. Over the remaining two and a half days of the conference, a range of presentations and workshops were featured. Key themes of the conference focused on: 1) Tackling Social Inequalities by Reducing Passive Smoking; 2) The Logan Healthy Living Study; and Quit Mass Media Campaign Comparisons: South Australia 2001-2003. Caroline also gave an oral presentation on: Tackling Social Inequalities by Reducing Passive Smoking.

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Associate Professor Sin Fritschi PhD has been appointed to lead the Cancer Epidemiology Unit within the Viertel Centre for Research in Cancer Control, commencing in early February 2005. Dr Fritschi is a cancer epidemiologist with a wealth of experience in research into occupational health-related matters and smoking and cancer. The official launch of the newly released Clinical Practice Guidelines for the Prevention, Diagnosis and Management of Lung Cancer was held at the Queensland Cancer Fund on 9 September, attended by clinicians, practitioners and consumers. The new guidelines represent an important step forward in quality care for patients with lung cancer.

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Researchers from the Viertel Centre for Research in Cancer Control presented papers at the recent Behavioural Research in Cancer Control Conference in Newcastle in June. The papers demonstrated the range of research taking place at the centre, including: 1) The Queensland Cancer Risk Study, a study of the cancer risk behaviours of 10,000 Queenslanders; 2) research on the prevalence and predictors of skin screening behaviour; 3) The Colorectal Cancer and Quality of Life study, a prospective cohort study of outcomes and quality of life in survivors of colorectal cancer; 4) The Logani Healthy Living Study, a cluster randomised trial of a telephone and print delivered lifestyle intervention targeting cancer survivors recruited from general practice; and 5) The ProCan Study, a large randomized trial of a telephone and print delivered psychosocial and lifestyle intervention targeting men newly diagnosed with prostate cancer in Queensland.

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ChEReP recently hosted the 7th Behavioural Research in Cancer Control Conference from the 23rd-25th June. The conference was attended by 91 people from around Australia representing cancer control and applying behavioural research: Bridging the gap between research and practice. Over the remaining two and a half days of the conference, a range of presentations and workshops were featured. Key themes of the conference focused on: 1) Tackling Social Inequalities by Reducing Passive Smoking; 2) The Logan Healthy Living Study; and Quit Mass Media Campaign Comparisons: South Australia 2001-2003. Caroline also gave an oral presentation on: Tackling Social Inequalities by Reducing Passive Smoking.

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Giles presented the second plenary on Diet & cancer: Where's the evidence? A number of papers were presented by delegates covering diet, cancer control, UKK, nutrition and physical activity and cancer risk; life after cancer – understanding and meeting survivors' needs; and changing clinical practice. Copies of all presentations and photos are available at http://www.newcastle.edu.au/cancer/kConFab/index.html.

Congratulations to Clare Johnson, a PhD student with CHERP working in palliative care, who received the Education Prize (US$300) from the Human Rights Institute (HRI) Awards Night held on the 9th September. This will contribute to her attendance at the 17th Multinational Association for Supportive Care in Cancer International Symposium in Geneva, 30 June-2 July 2005. She will also enable her to visit the office of Supportive and Palliative Care, Department of Health in the UK.

CHERP staff and affiliates received two further HRI Awards: Dr Jong Li, A/Prof Afaf Girgis, Dr Chris Paul and Ms Alison Boyes received $10,000 funding for their study on the lifestyles and cancer survival outcomes of newly-diagnosed cancer patients. Professor Jon Adams from the Centre for Clinical Epidemiology and Biostatistics, University of Newcastle, along with A/Prof Afaf Girgis and others, received a collaborative grant of $15,000, funded by the Lions Club of Adamstown and the Lions/Lionesses Club of Toronto, for research into the use of complementary and alternative medicine amongst prostate cancer patients.

A/Prof Afaf Girgis also received the Newcastle Conference Ambassador Program Appreciation Award in recognition of her contribution as a Newcastle Conference Ambassador 2001-2004 for bringing the Behavioural Research in Cancer Control Study to Newcastle. This award was presented by the University of Newcastle and Newcastle City Council.

CHERP has published a number of papers:


CHERP staff have presented at a number of conferences including:

- Afaf Girgis was invited to present in two workshops on Influencing Breast Cancer Research and Lymphomadona at Australia’s 2nd National Breast Cancer Conference for Women - Still Making a Difference, Melbourne Convention Centre, 27-29th August


- It is with much sadness that we announce that our dear colleague and friend, Professor Jill Cockburn, passed away on 13th October. Jill demonstrated exceptional courage during a long illness with breast cancer, through which she had the support of her devoted husband Craig (known to her many cancer research colleagues), her loving family and a dedicated group of friends and colleagues.

- Jill was an extraordinary person who achieved more in her 48 years than many would in a dozen lifetimes. She was made paraplegic by a viral infection as a young teenager, but never let this interfere with a stellar academic career and a life lived to the full. She had a long association with the University of Newcastle, graduating in 1981 with first class honours and the University Medal in Psychology, before graduating in 1986 as the first PhD student in the Discipline of Behavioural Science in Relation to Medicine of the then Faculty of Medicine, under the supervision of Professor Rob Sanson-Fisher. After completing development and tumorigenesis.

- There were six international plenary session speakers:

  - Valerie Beral from the University of Oxford, UK, presented an overview of findings from the UK Million Women Study, The Collaborative Group on Hormonal Factors in Breast Cancer and the Collaborative Group on Epidemiological Studies of Ovarian Cancer. Based on epidemiological data, a strong case was made for the role of parity (9 per cent reduction in risk for each additional birth) and in cancer control (6 per cent reduction in risk for each year of breast feeding) with respect to breast cancer risk. This (rather than other factors) may largely explain the striking difference in breast cancer incidence between developed countries in Europe/Africa (6.3 per cent versus 1 per cent by age 70, respectively). Despite the many thousands of women in these studies, there still remain difficulties in evaluating the interaction effect of modifiers (such as alcohol, body mass index and oral contraceptive pill use) in subgroups, such as those with a family history of breast or ovarian cancer.

  - Bruce Ponder from Cancer Research UK, Cambridge, presented an update on efforts to evaluate Single Nucleotide Polymorphisms (SNPs) in putative cancer susceptibility genes. Analysis of patterns of familial cancer clustering suggests that the difference in relative risk between 20 per cent of women who are most highly predisposed to the 20 per cent least predisposed may be as great as 40-fold. Only a small part of familial risk is accounted for by highly penetrant mutations (eg in BRCA1 or BRCA2) and most risk within the population will be due to a large number of genes. In initial work, analysis of 295 SNPs in 74 candidate genes (such as DNA repair or oestrogen signalling pathways) in 2300 cases and controls has revealed six genes where a modifier effect may be present, but with a large degree of variation in a second set of 2300 cases and controls. Future plans include a genome-wide evaluation of 250,000 SNPs in 400 cases and controls.

  - Malcolm Pike from the UC/Norris Cancer Center, Los Angeles, California, presented an epidemiologist’s view on preventative strategies to reduce breast and ovarian cancer using hormonal intervention. Data was presented supporting the lasting benefits of oral contraceptive pill use reducing endometrial and ovarian cancer risk, although breast cancer risk appears to be increased with current or recent use. Since the proliferative index of breast epithelium appears to be increased with hormone use, it was argued that analogous labelling studies in mouse mammary glands provides a good surrogate outcome measure. Prevention of ovulation with a GnRH analogue with minimal add-back of oestradiol (at early follicular phase) may be one option. Additionally, pseudopregnancy, parity or short-term progestin treatment appears to protect rats from DMBA-induced mammary tumours. It might therefore be feasible to mimic these beneficial effects with a short course of treatment in young women (with concurrent oestrogen to increase progesterone receptor levels). While these hormones clearly play a fundamental role in breast tumorigenesis, the effect of other hormones (such as prolactin) and signalling pathways are also of interest, but were not addressed.

  - Fergus Couch from the Mayo Clinic College of Medicine, Rochester, Minnesota, gave a fascinating presentation on a recently devised algorithm to determine whether missense variants in BRCA1 or BRCA2 represent pathogenic/deleterious mutations in cancer predisposition genes (based on a combination of in vivo functional studies (such as subcellular localisation, protein stability and effects on genomic stability) as well as in silico methods (e.g. evolutionary sequence conservation)). This kind of approach is likely to assist in the management of patients who harbour BRCA1 and BRCA2 variants of uncertain significance, which is a remarkable achievement.

- Kith Baggery from the Department of Biostatistics & Applied Mathematics, MD Anderson Cancer Center, Houston, Texas, presented reanalysis of data from a SLEDI-TDF mass spectrometry study published by Petricoin et al (Lancet 359:272-7, and more recent work). The distribution of biomarker profiles in serum from ovarian cancer patients (not present in controls or those with benign disease) has led to the development of an ‘OvaClock’ ovarian cancer screening kit. Re-evaluation of the data seems to convincingly suggest that the perceived differences are more likely to be due to poor experimental design and systematic bias rather than true biological differences. It would seem that this finding requires dissemination and rebuttal through the original high profile journal, although this has not occurred to date. Independent studies are clearly also required.

- Sara Sukumaran from Johns Hopkins, Baltimore, Maryland, has used SAGE analysis to identify a number of genes whose expression is silenced by promoter hypermethylation in breast cancer cells when compared to normal breast epithelium. Six genes (RASS1, TIS1, Twist, CyclinB1, Inhibin and MAP2K6) have been evaluated for promoter hypermethylation and reduced expression in breast cells derived by ducal lavage, suggesting that hypermethylation may be predictive of disease. These findings are to be evaluated in a prospective clinical trial. She also presented some intriguing findings using intra-ductal injection of liposomal doxorubicin to treat carcinogen induced in vivo mice models of breast cancer. This treatment appears to largely clear using this approach. She plans to evaluate the utility of this approach in the treatment of established tumours prior to mastectomy and for pre-invasive disease in humans.

- Other overseas speakers included Richard Pestell (Lombardi Comprehensive Cancer Center, Georgetown University, Washington DC), who spoke about his group’s work that links the breast tumour suppressor BRCA1 with inhibition of EIA activity, an effect that is antagonised by cycin D1.

- Representation by Australian speakers was again strong, with a range of interesting talks on topics ranging from basic biology to clinical intervention studies, as listed in the conference program, which can be accessed from the KConFab website: www.kconfab.org.

Geoff Lindeman
Head, Royal Melbourne Hospital Feminic Cancer Centre and Co-Head, VBRC Laboratory, The Walter and Eliza Hall Institute of Medical Research, Melbourne on behalf of the KConFab Project.
Unprecedented Political Support

For the first time in a federal election, both the Coalition and the ALP included detailed cancer control policies among their campaign promises, with commitments that reflected much of The Cancer Council Australia’s recommended policy platform.

In separate announcements in September, the ALP committed to more than $112 million in prevention and treatment initiatives, while the Coalition launched its comprehensive $137 million policy, Strengthening cancer care, in October.

The Cancer Council Australia publicly endorsed both policies, particularly the many initiatives consistent with the evidence-based position we put forward to all federal parliamentarians in June.

One of the most significant announcements was the Coalition’s pledge to establish a national cancer care agency, Cancer Australia, at $10 million over four years, which was a key Cancer Council priority.

There was unanimous support for funding independent clinical trials capacity building, with the Coalition and the ALP committing to $15 million and $12 million respectively over four years. The Cancer Council Australia had sought $5 million per annum.

Both sides also committed to rolling out a national bowel cancer screening program, as well as funding for national SunSmart campaigns. The ALP allocated $21 million for a tobacco control program aimed at a five per cent decrease in national smoking rates, while the Coalition announced $4 million to reduce smoking in pregnancy.

The ALP’s commitment to introducing a Medicare Benefits Schedule item for cancer multidisciplinary care reflected The Cancer Council Australia’s overarching theme of improving multidisciplinary care.

The Cancer Council Australia CEO, Professor Alan Coates, said considerable effort was being made to engage with both sides of politics in the lead-up to the election.

“We continue to emphasise the fact that, while there have been improvements in cancer outcomes for Australians over recent years, cancer remains the nation’s deadliest disease and there is great scope for federal policy makers to reduce the burden,” Professor Coates said.

“We were very pleased to see both sides of politics show strong leadership in cancer control and look forward to continuing to build good relationships with our supporters in Federal Parliament.”

Cancer Control in Indigenous Communities: Ways Forward

The Cancer Council Australia is developing a national advocacy strategy aimed at reducing the unacceptable disparities in cancer outcomes between Indigenous and non-Indigenous Australians.

The strategy will be based on the recommendations made at Australia’s first national discussion forum on cancer control in Indigenous communities, held in Darwin on 25-26 August, 2004.

Aboriginal and Torres Strait Islander peoples have markedly poorer overall cancer survival rates and higher incidence rates of some cancers than non-Indigenous Australians.

The discussion forum drew many of Australia’s leading cancer specialists, frontline Aboriginal health workers, health administrators and Indigenous cancer survivors to Darwin to examine the epidemiological data and the reasons for the disparities.

Issues explored included: language and cultural barriers affecting access to prevention, screening and treatment services; Indigenous peoples’ spiritual views about health; tobacco use; concerns about institutionalised racism; and funding availability.

Speakers noted the “double burden” on Indigenous health – infectious diseases typical of developing countries coupled with disproportionately high rates of chronic diseases prevalent in developed nations, such as cancer, diabetes and heart disease.


Health Groups Welcome Ratification of Tobacco Treaty

The Cancer Council Australian and other national health organisations have welcomed the Federal Government’s ratification of the World Health Organisation’s Framework Convention on Tobacco Control (FCTC).

Commenting that the initiative would help combat the tobacco epidemic in Australia and among our neighbours in the Asia-Pacific region, The Cancer Council Australia, National Heart Foundation of Australia and Action on Smoking and Health (ASH) all congratulated the Government for its ratification of the treaty.

The Cancer Council’s Chief Executive Officer, Professor Alan Coates, said smoking remained the world’s biggest cause of cancer and that in Australia alone it was responsible for more than 10,000 new cancer cases every year. “Ratifying the FCTC commits governments to a range of measures to improve controls on tobacco use and will help reduce smoking’s unacceptable toll in Australia and the Asia-Pacific,” Professor Coates said.

The health groups had collaborated on a submission last year supporting the signing and ratification of the FCTC.

Deadly Perception of a “Healthy Tan”

New research showing half of all Australians still believe a tan is healthy has added to cancer experts’ fears of a prolonged national skin cancer epidemic.

The finding is contained in preliminary data from the first National Sun Survey, released by The Cancer Council Australia.

The Cancer Council’s Chief Executive Officer, Professor Alan Coates, described the finding as “disturbing” and said that while sun protection programs had made an impact, there still remained a widespread lack of understanding about the dangers of sun exposure.

“Back in the 1980s we would have expected a much higher response to the question of a tan being healthy and while this research demonstrates we have made progress, clearly we

Hope blooms on Daffodil Day

Throughout August daffodils were in full bloom helping The Cancer Council Australia spread the message of hope for all touched by cancer.

Daffodil Day is one of the largest national cancer awareness day in Australia, raising $7.3 million to fund the cancer control initiatives, patient support and education services of our eight state and territory member organisations.

Daffodil Day relies heavily on the supporting retail outlets to sell event-related merchandise. These products include silk ribbons, pens, enamel pins, magnets, balls and the popular Dougal teddy bear.

The Cancer Council Australia would like to thank its national supporters: Coles, QUIX, First National Real Estate, Amcal, ANZ, Katies, Rockmans, HIC network of Medicare offices and the Miller’s Retail Club.

For more information on the event, please visit the Daffodil Day website – www.daffodilday.com.au or 1300 65 65 85.

World Health Organisation: www.who.int/tobacco/

Pink Ribbon Day


The pink ribbon is a national symbol of support and recognition for women who have been touched by breast cancer. Through Pink Ribbon Day, The Cancer Council aim to make a difference to the lives of the 11,000 Australian women who will be diagnosed with breast cancer this year.

One in 11 Australian women are diagnosed with breast cancer, making it the most common cancer, and cause of cancer death, in women. Elisabeth Kochman, a breast cancer survivor, supported The Cancer Council Australia’s Pink Ribbon Day.

“As a breast cancer survivor, I am proud to support Pink Ribbon Day. The Cancer Council Australia not only funds research, but also helps with the day-to-day challenges of living with breast cancer by providing support services and assistance for women with cancer, and their family and friends,” said Ms Kochman.

“By buying a pink ribbon, people are investing in breast cancer research which could improve the future of thousands of Australians,” says Professor Alan Coates AM, Chief Executive Officer of The Cancer Council Australia.

“We are making progress. Since Pink Ribbon Day’s inception, we have seen a decrease in the breast cancer death rate and an increase in awareness of the disease. However, breast cancer remains the number one cancer killer of Australian women, so we still have much to do. The funds raised from Pink Ribbon Day will assist The Cancer Council to continue our vital work in breast
AC Ward
Published by Kluwer/Plenum (2002)
RPP: US$147.00

THE JAK-STAT PATHWAY IN HEMATOPOIESIS AND DISEASE

The stated aim of the Editor is to describe the role of the Jak-Stat pathway in the normal development and function of haemopoietic cells and to describe how perturbations of this pathway lead to diseases, including one form of cancer - leukaemia. By all measures, this aim is well achieved. A compendium of invited chapters by seven, different groups of authors, this book works particularly well as a detailed introduction to the importance and basic biology of the Jak-Stat signalling pathway. Central to our understanding of how cytokines and growth factors extrinsically influence cell proliferation, differentiation and function, the Jak-Stat pathways have been the subject of thousands of original articles in the last decade and a focused review is most welcome.

The book logically proceeds from a broad discussion of the Jak family, through a very detailed chapter on Jak3, to a chapter on non-Jak pathways to Stat activation and a superb discussion of the Jak family, through a very detailed chapter on Jak3, to a chapter on non-Jak pathways to Stat activation and a superb review of the Jak-Stat pathways in the fruit fly, but current knowledge of Jak-Stat signalling in leukaemia, in particular, has not yet been summarised to current knowledge of Jak-Stat signalling in the fruit fly, but does maintain the high standard of academic writing that characterises the book. Balancing out the compendium is a chapter detailing recent knowledge of the SOCS family of proteins which potently negatively regulate cytokine signalling by inhibiting the Jak-Stat pathway.

International authorities in the field have written each chapter and the quality of information is high. While presentation style varies between chapters and there is inevitable redundancy, I found the layout easy to follow. Diagrams are included to good effect. Overall, Alister Ward and co-authors have presented a thoughtful introduction to a subject in which they have a strong personal interest.

G R Vande and G Klein
Published by Academic Press (2003)
ISBN: 0-1200-6687-4. 168 pages plus index
RPP: A$278.95

ADVANCES IN CANCER RESEARCH (VOL 88)

This is a book in an annual series of Advances in Cancer Research, edited by George Vande Woude and George Klein. The book consists of five lengthy reviews of new or topical areas in cancer biology. The topics are: 1) HAML/LET (Human alpha-lactalbumin made lethal to tumor cells); 2) Survivin and Apoptosis control; 3) Retinoic insertion mutagenesis to tag cancer pathways; 4) Ubiquitin-mediated proteolysis affecting cell cycle, regulation, stress and 5) The role of epigenetic variability and the evolution of human cancer.

The topics are varied and the reviews are well written and do not assume detailed specific knowledge of the subjects. However sold grounding in molecular biological concepts and techniques is essential. Those with such a background will find the reviews informative. Some of the chapters are easier to read than others, with the discussion of HAML/LET being particularly lucid and that of retinoid mutagenesis being much heavier.

The strength of this book is that it provides five comprehensive reviews of topics that may otherwise stay within the confines of specialist journals. The interested reader is taken through the backfire current research and potential implications of the findings. There is a moderate amount of speculation in the text. The distinction between data and speculation is clear and the speculative comments contribute to the strength of the book by giving the reader an insight into the thinking of experts in the areas. The future prospects are discussed with the correct balance of imagination and caution.

The five topics covered are quite diverse, ranging from the intricacies of the cell cycle regulation to a discussion of epigenetic variability in human cancer. All are focused on molecular biology, presenting the fact that this remains the focus of most basic cancer research. It will be a very useful introduction to an area for someone embarking in research in that particular field and a good overview for anyone wanting a general understanding of these promising areas of cancer research. Those primarily interested in clinical research will find the book difficult, but may find some of it helpful in introducing them to new concepts.

It is unlikely to find its way into many private collections, but is worth a place in university and research institute libraries.

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Cancer Medicine (6th Edition) Vol 1 and 2
E Frei, J Holland et al (eds)
Published by BC Decker Inc, Ontario (2003)
RPP: A$623.70

This impressive two volume tome is the 6th edition of Cancer Medicine and marks the 30th anniversary of its original publication. It is one of this reviewer’s thoroughly comprehensive textbooks of oncology and covers aspects of surgical oncology, radiation oncology and medical oncology. The scope of this text takes the reader through the basic science of oncology, provides a collection of recent scientific discoveries and more importantly meshes the science and the clinical applications that arise from these findings. Fortunately it comes accompanied by an CD, which is a far more portable and practical way for most of us to access. The two volumes contain an impressive array of contributions from 357 eminent scientists and oncologists all over whom (with four exceptions) are from North America. One of the outstanding features of this text is the excellent tables, diagrams and pictures.

The first section describes the cardinal manifestations of cancer including the essential biological properties of cancer cells and the components of clinical presentations. Part two contains five chapters on the basic science of oncology ranging from tumour biology and immunology, clinical epidemiology to the fundamentals of drug development and clinical trial conduct. As a provoking introduction to the basic science of oncology it gives an historical perspective to scientific discoveries. Given the vast array of contributors it is inevitable that there is some repetition in the chapters. Interestingly, there is not a good description of gene microarray technology and recent findings in this area. The majority of the scientific chapters finish with a section describing how the findings of basic science have lead to the identification of therapeutic targets, which brings the reader back into the clinical context.

There are detailed chapters on the fundamentals of clinical trial design and good description of basic statistical methods. It does not however, contain a reference to standard criteria for assessing tumour response and toxicity of treatment. Discussions on cancer screening and health care delivery have a necessarily American perspective. The chapters on medical imaging contain detailed site-specific tumour evaluation, but interestingly a detailed description of the use of PET imaging for particular tumour types is lacking. The inclusion of sections on multidisciplinary care, psycho-oncology, palliative care, paediatric oncology and oncology informatics complete a truly comprehensive oncology resource.

For a book which contains such a wealth of scientific information, it also contains a surprisingly insightful sections on physician burnout and psychosocial and ethical issues relevant to the clinical practice of oncology. This book provides a firm foundation for students of oncology from any discipline and is a useful reference for the experienced clinician and educator. I was particularly impressed by the inclusion of Loeb’s rules of therapeutics:

1. If what you are doing is doing good, keep doing it.
2. If what you are doing is not doing good, stop doing it.
3. If you do not know what to do, do nothing.
4. Never make the treatment worse than the disease.

It is unlikely these basic tenets will ever be surpassed by scientific advances.

C Shannon
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HANDBOOK OF COLORECTAL SURGERY (2ND EDITION)
D Beck (ed)
Published by Marcel Dekker (2003)
ISBN: 0-8247-4025-4. 526 pages plus index
RPP: US$99.75

This textbook is of a good size that is small, light, portable and yet very comprehensive. Aimed at the resident and fellow, it will also find a place with consultants as a useful teaching tool.

Revised and updated in this second edition, this handbook serves as a basic guide to the management of patients with colorectal diseases. It illustrates anatomical structures, examination procedures and surgical techniques.

It covers preoperative preparation, pain management, postoperative management and the care of conditions including paediatric conditions, functional disorders, diverticular disease, inflammatory bowel disease, rectal prolapse, haemorrhoids, perianal sepsis and colorectal carcinoma. Illustrations and photographs are in black and white. New concepts in patient care and operative techniques, including laparoscopic surgery, are covered.

On showing this book to a few colorectal surgical colleagues it had an instant and universal appeal. The responses were all favourable and related to its size, handling, hard cover, ability to fit in a bag and the self explanatory nature of the photographs. The well organised content was also a strong point.

I anticipate that those who purchase this excellent book will use it much more often than the weightier volumes, which though thorough, often inhibit use by their sheer size. It would make a welcome addition in any library.

C Young
Royal Prince Alfred Hospital Medical Centre
Newtown, NSW

BONE METASTASES AND
**MOLECULAR MECHANISMS**

G Singh (Ed)
RRP: US$138.00

This is a thorough yet readable book covering a spectrum of areas related to bone metastases, from experimental models through to clinical modalities for detection and treatment. Following the standard format of the Cancer Metastases - Biology and Treatment series, each chapter is a review of current literature by a team of experts in that field. It is gratifying to see that the first two chapters are authored by Australian groups.

This book is aimed at non-expert clinicians and scientists interested in recent advances regarding the pathophysiology of bone metastases. The references are extensive and reasonably current. The diagrams are well chosen and helpful.

One criticism is that although the chapters are very readable, there is no logic to the order in which they are presented. Chapters describing clinical practice, such as diagnostic methods and bone phosphonate therapy, are interspersed with research chapters seemingly randomly. This makes the flow of the book somewhat awkward.

Overall, a useful but not essential text that would be worthwhile having in a hospital or departmental library.

E Segelov
St Vincent’s Hospital
Darlington, NSW

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**PRINCIPLES AND PRACTICE OF RADIATION THERAPY**

(2nd Edition)

CM Washington and O Leaver (Eds)
Published by Lippincott Williams & Wilkins (2003)
ISBN: 0-7216-1748-7. 941 pages plus index
RRP: A$280.00

This textbook is primarily aimed at the radiation therapist, although some chapters provide rice overviews for a trainee radiation oncologist or medical physicist. The book has been divided into three sections. The first part of the book includes an overview of cancer management (including pathology, chemotherapy and surgery), the ethics and legal considerations of cancer management, detection and diagnosis, equipment, education, and drug administration. Some chapters (eg. legal aspects of radiation therapy) are written from a US viewpoint and therefore some of the issues are not particularly useful for the non-American reader. However, some concepts such as informed consent have wider application and may prove useful for those interested.

The second section relates to physics, simulation and treatment and includes chapters on mathematical concepts, radiation physics, radiation safety, quality improvement and dosimetry. The sections on electronic charting and image management are a welcome addition, as departments are increasingly storing records electronically.

The final part discusses specific tumour or treatment sites and covers the majority of treatment sites, including sections on total body irradiation, splenic irradiation, prostate brachytherapy and paediatrics, as well as the more common treatment sites. Each chapter describes the epidemiology, prognostic factors, natural history, clinical presentation, detection and diagnosis, anatomical pathology and staging before describing treatment techniques including possible immobilisation techniques and possible field arrangements. Recent technological advances such as three-dimensional planning systems and technology enhancements such as multileaf collimation have been incorporated where appropriate. There is some discussion of non-radiation treatment modalities in each of the chapters, but one of the strengths of the book is that it focuses on the issues related to the radiotherapy and leaves other well-known oncology tests to better discuss other treatment modalities. The omission of large amounts of discussion relating to other treatment modalities maintains the size at a reasonable level for a textbook.

Most of the criticisms that could be levelled at the book are relatively minor and mainly relate to layout. For instance, a helpful table on all of the Radiation Therapy Oncology Group morbidity scores is presented in the breast cancer section even though this table would be better placed in a general toxicity section.

Overall, this textbook provides a good, solid educational resource for any radiation oncology department or individual radiation therapist.

G Delane
Liverpool and Campbelltown Hospitals
Sydney, NSW

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**PAIN MANAGEMENT MADE INCREDIBLY EASY**

J Mundun et al (Eds)
Published by Lippincott Williams & Wilkins (2003)
RRP: A$59.40

Pain Management Made incredibly Easy combines all major aspects of current pain management in a comprehensive guide to practice, primarily at nurses. Indeed, 24 of the 25 contributors/contributors are nurses based in the US, many of whom are nurse practitioners or clinical nurse consultants in pain management. The 25th has a pharmacy doctorate and is a Drug Information Specialist at the University of Maryland. In the foreword, mention is made of the requirement of the US Joint Commission on Accreditation of Healthcare Organisations (JCAHO) for health facilities to meet standard of pain assessment and management and one assumes that the text is written to aid compliance with this requirement.

From a quick search of the internet, this book appears to be of an incredibly Easy series; other titles covering wound care, diagnostic tests, clinical pharmacy and medical-surgical nursing. Its format is intended to be user-friendly, with annotated cartoon characters making pertinent points to reinforce the accompanying text and unique features that include “Rein in the pain” – pointers on how to manage pain, and “Myth busters” – dispelling misconceptions about stereotypes and prejudices. Each chapter ends with a quick quiz to consolidate knowledge on the chapter’s main messages.

The text provides an easy to understand discussion of pain physiology and psychological responses to pain. It is encouraging to see a chapter devoted to pain assessment, including standards introduced by JCAHO in 2000 and a comprehensive description of the range of pain assessment tools. Pharmacological and non-pharmacological treatments, including therapies such as aromatherapy, yoga and biofeedback are discussed. Differentiation is made between acute, chronic non-malignant, cancer and HIV/AIDS pain, with a chapter on each that includes suggestions for both pharmacological and non-pharmacological treatments within these domains. Specific areas of paediatric and geriatric pain management plus addictive disease, including understanding addiction, managing addiction and managing pain in patients with addiction, are discussed. A final chapter looks at lifestyle management for people with chronic pain.

The scope of the book is impressive; no aspect of pain management comes to mind that is not covered. Of particular interest to oncology/palliative care nurses is management of cancer pain. The chapter on this topic is broad, it includes current thinking about pain management, such as suggestion of a fourth rung to the WHO analgesic ladder to incorporate invasive interventions (epidural and intrathecal drugs), different routes of drug administration, adjuvant therapies, surgical intervention and complementary therapies. What is not discussed and what many practitioners are keen to know, are specifics of opioid conversion rates, opioid rotation, uses and doses of co-analgesics and costs to consumers. This level of detail however, would be unnecessarily limited to local and idiosyncratic pain management strategies of specific practice settings and could not be expected in a general text such as this.

Overall, the text provides a good overview of a wide range of topics associated with pain management and is appropriate for nurses wishing to increase their general knowledge in the area. A personal note about the whimsical additions, like the cartoon characters, aimed to increase appeal and appreciation of a complex subject. Although this format may appeal to some, I found the whimsy distracting and superficial and incredibly annoying.

J Greaves
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**POCKET GUIDE TO CHEMOTHERAPY PROTOCOLS**

E Chu
Published by Jones and Bartlett (2004)
RRP: A$49.15

This book lists commonly used combination and single agent regimens used in the treatment of solid tumours and haematological malignancies. The book presents the regimens in alphabetical order, listed by tumour type. Each entry lists the drugs to be used, at which doses, on what days and how often the cycle is repeated. The last 50 pages (one third of the book) consist of the references for the regimens.

The preface states that the Food and Drug Administration in the US has not approved all the regimens contained within the book for the stated uses, and this information is repeated in the first and only chapter, which is curiously numbered 4! The preface also suggests that this manual should be used as a quick reference and carries the disclaimer that users should “carefully review the original reference for each regimen.” It is of concern that the reader must not base treatment decisions and prescription solely on the information presented in the book is repeated a number of times. The reader is asked to “check the package insert for each agent” on three occasions in the preface and introductory notes.

There are many protocol books available today and many pocket sized versions, which provide more comprehensive information. The Baxter Oncology’s Selected Schedules of Therapy for Malignant Tumors would be a good example.

The information presented does not include particular indications for regimens, guiding the user as to why one regimen would be used over another. The book states infusion administration details for a couple of regimens, but most do not.

The author suggests the book provides a handy, quick reference for physicians, nurses and health care providers. Attempting to provide a simple resource, which is relevant to such a wide range of health professionals, is problematic.

From an Australian perspective it omits some commonly used regimens, such as PCAB and C-VAMP. It includes new combinations, such as Gemcitabine and Omalizumab for pancreatic cancer, which have already been shown to be of limited additional benefit over single agents and new agents, such as Bortezomib, which are only used in trial situations in Australia.

The back cover claims the book to be quick access, evidence-based, up-to-date, comprehensive, authoritative and pocket-sized. Well it is certainly pocket sized, but it is hardly comprehensive and it is certainly not authoritative. In this day of net based protocols, one would hope that chemotherapy treatments are written up based on more then memory and basic prompts such as this.

B Jansems
Shoalhaven District Memorial Hospital
HOW CANCER WORKS


RRP: A$40.15

This book is an American publication with the author being a retired professor from the Department of Molecular, Cellular and Developmental Biology University of Colorado Boulder, Colorado.

The book is written in the form of lectures utilising metaphors, humour and diagrams, thus making sometimes complex concepts understandable.

Each lecture concludes with a concept table with examples and thought questions, with each new lecture starting with a review of the previous lecture before introducing new concepts.

Professor Sompayrac chose nine cancers as models as he felt they offered the clearest examples of how cancer works. For each model he addressed three questions:

“What risk factors make it more likely that an individual will get this cancer?”

“How does this cancer do to a person that has it?”

“What does this cancer do to a person that has it?”

The first chapter is an overview introducing cellular control growth systems, leading on to how multiple growth promoting systems are activated inappropriately and multiple safeguard systems are corrupted.

Professor Sompayrac uses the prostate cancer chapter to introduce the idea of a cancer journey. He discusses how prostate cancer is a treatable disease that can be cured with surgery or radiotherapy.

The book contains an enormous amount of information and is indeed a welcome addition to an ever-growing literature. The authors of this book have taken the journey through prostate cancer and have written about their experiences with it.

I found myself taking notes in a number of places to apply the knowledge gained from this book to clinical practice.

Overall, the book is excellent for high school students, student nurses and will be utilised as part of orientation for new graduates undergoing orientation in our unit.

K McFarland
Port Macquarie Base Hospital
Port Macquarie, NSW

SEEDS OF MORTALITY: THE PUBLIC AND PRIVATE WORLDS OF CANCER

S Justman
Published by Ivan R Dee (2003) ISBN 0-7637-4838-2 RRP: A$149.50

The book is a collection of essays by nine authors who have taken the journey of living with cancer. The essays are written in a personal and reflective style and discuss the experience of cancer from the perspective of the patient and the family.

The book ends with a closing sentence: “You hear of trees that wait for fire to release their seeds. Can cancer cells ride the fire of radiation, awaiting their time? I am left with a seed of doubt”.

E Lobb
WA Centre for Cancer Palliative Care
Churchill, WA

CANCER CYTOGENETICS, METHODS AND PROTOCOLS


Cancer Cyto genetics, Methods and Protocols is an immensely valuable book for anyone working in the field of cyogenetics. The book is based on a volume with the same title that enables ready translation of methodology into practice and provides clear explanations of individual steps within procedures, which are as valuable to the experienced cyogeneticist as they are to the novice.

The book is divided into chapters dealing with conventional cytogenetics, techniques for different malignancies including myeloid disorders, acute lymphoblastic leukaemia, other lymphoid malignancies and solid tumours. These chapters are then followed by explanations of other techniques: fluorescence in situ hybridisation (FISH), comparative genomic hybridization and multicoloured FISH (M-FISH or spectral karyotyping). Each group of malignancies has a chapter devoted to background, summarising the utility of cytogenetics in these areas and the common abnormalities that one might expect to observe in such disorders. The subsequent chapter then outlines techniques for culturing and harvesting each type of malignancy. For areas that prove problematic, such as the culturing of acute lymphoblastic leukaemias (ALL), two chapters by different authors describe the techniques that work best in their laboratories.

Overall, the background areas are brief but appropriate. One might take issue with the author’s contention that the term chronic myeloid leukaemia (CML) can be used to cover a range of disorders including chronic myelomonocytic leukaemia and that the finding of a Philadelphia translocation, t(9;22), in essential thrombocythaemia does not necessarily indicate that the patient has CML. However, it is for the technical insights that this book should be read, rather than for the background details that are available from many other sources.

The wealth of detail given with each method provides invaluable pointers. I found myself taking notes in a number of places to apply in my own laboratory; for example, the author provides an explanation and solution for a difficult problem frequently encountered with extreme cellularity and the resulting cell pellet post harvest to meld into a geltainous mass. The book is filled with such little nuggets of information for the practical cyogeneticist.

The author also makes some rather frank statements concerning the practical realities of providing a cyogenetics service. His comment in chapter eight regarding the cytogenetics of lymphoid disorders other than ALL would strike a chord with all who work in the area. There is a large amount of work involved in a proper cytogenetic study of lymphoid disorders. Can a strain on the manpower and finances of a cytogenetics unit, an imposition that is rarely appreciated by the referring clinician. Of course, the techniques outlined in this book for the “proper” analysis of lymphomas make it clear why such a heartfelt comment made its way into the book. The author advocates the use of at least eight or nine cultures for each sample. This is probably an ideal way to analyse lymphomas, but the practical realities of a busy service laboratory preclude such practices.

L Campbell
Sir Charles Gardiner Hospital
 Nedlands, WA

PRINCIPLES OF MOLECULAR ONCOLOGY (2ND EDITION)


This book contains an enormous amount of information and is indeed a welcome addition to an ever-growing literature. The book is divided into three parts, the first introducing molecular markers in oncology, the second detailing regulatory pathways that are involved in disease development and the third which examines future directions in disease treatment. Together, the three sections of this book make for a comprehensive treatise, bringing together a range of concepts and evidence to show that molecular approaches to cancer treatment and prevention are likely to offer the best therapeutic modalities in the near future, compared to current treatment practices.

Importantly, this book contains much information about many of the key genes that have been identified over the past decade or so and is, by this inclusion alone, an extremely useful resource for anyone wishing to get an overview of the field without having to trawl through a considerable amount of literature. There remains a level of redundancy, which is inevitable in such a volume but it does not detract from the
overall usefulness of the book. What is surprising is how up-to-date the contents of the book are, which makes it extremely useful for the practicing oncologist to come up to speed in this ever-changing discipline. The main drawback to a book like this is the relatively small amount of apparent thought that went into cross-referencing and the indexing section. With a more comprehensive indexing system and the removal of repeated figures from later chapters, it would be a more concise and easily referred to source of information. To emphasise this point, there are areas where certain aspects described early in the book are referred to in later chapters and these really ought to be indicated in the reference section. Notwithstanding, this book represents an excellent edition dealing with a complex and growing area of oncology and it may well become a leading reference source for molecular oncology.

R Scott  
John Hunter Hospital  
Newcastle, NSW

Understanding Breast Cancer Genetics

BT Zimmerman  
Published by University Press of Mississippi (2004)  

Breast Cancer Genetics is a relatively short book of six chapters by scientist Barbara Zimmerman. The author’s background is in cellular and molecular biology, although she is currently the director of a US-based consulting firm. She has written the book for the general audience and claims that her principle aim is to explain the genetics of both sporadic and familial breast cancer.

The book begins with an overview of the epidemiology of breast cancer before taking a step back into the science lab where normal and tumour cell biology, breast anatomy and the malignant potential of breast cancer are outlined. The third and forth chapters are devoted to the role of specific genes known to have a role in breast cancer tumorigenesis, metastasis and resistance. The fifth chapter diverts back to the clinical side of breast cancer and describes prevention, the diagnostic process, staging and treatment possibilities. The final chapter, Breast Cancer Research, gives a brief summary of the some of the major areas of both clinical and scientific research.

The language and detail is extremely complex in parts and would be beyond the scope of many readers. However, given there are some serious information seekers in the world of breast cancer, there are likely to be some breast cancer aware readers who would persevere with the text and come out a little ahead on completion.

The biggest criticism I have with this book is that the promise of genetics is limited to two of the six chapters. There are dotted references to inherited versus sporadic cancers in the remaining chapters, however largely the book is a general overview of breast cancer with a serious but brief step into genetics. This would be an ideal text for a student (medical or nonmedical) about to undertake a project in breast cancer, who wanted a quick review of breast cancer and some of the more prominent areas of current research focus.

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Westmead Hospital  
Westmead, NSW
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<td>Glenelg</td>
<td>Royal College of Nursing Australia PO Box 219</td>
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<td>SA</td>
<td>Deakin West ACT 2600 Tel: +61 2 6282 3563 Fax: +61 2 6282 3565 Email: <a href="mailto:Nicole@rcna.org.au">Nicole@rcna.org.au</a> Web: <a href="http://www.rcna.org.au">www.rcna.org.au</a></td>
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<td>Pharma Events Tel: +61 2 9280 0577 Fax: +61 2 9280 0533 Email: <a href="mailto:conferences@pharmaevents.com.au">conferences@pharmaevents.com.au</a></td>
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**CALENDAR OF MEETINGS – International**

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<td>Immedex, 70 Technology Drive</td>
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<td>New Targets in Cancer Therapy III</td>
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<td>58th Annual Cancer Symposium of the Society of Surgical Oncology</td>
<td>Atlanta, Georgia, USA</td>
<td>D.K. Kubis - Society of Surgical Oncology 85 W Algonquin Rd Suite 55 Atlanta Heights, IL 60005</td>
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<td>Web: <a href="http://www.shaukatkhanum.org.uk">www.shaukatkhanum.org.uk</a></td>
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<tr>
<td>13-16</td>
<td>13th International AKB-AKD Cancer Congress</td>
<td>Wurzburg, Germany</td>
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<td>Web: <a href="http://www.akb-akd.com">www.akb-akd.com</a></td>
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<tr>
<td>15-16</td>
<td>Building Palliative Care programs in Hospitals</td>
<td>Miami, USA</td>
<td>Center to Advance Palliative Care</td>
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<td>Mount Sinai School of Medicine 1255 Fifth Avenue, Suite C-2</td>
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<td>New York New York 10029-6574 USA Tel: +1 212 201 2680</td>
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<tr>
<td>17-19</td>
<td>6th International Symposium and Expert</td>
<td>Amsterdam, Netherlands</td>
<td>VU University Medical Center Dept. PAOG</td>
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<td></td>
<td>Workshops on Leukemia and Lymphoma</td>
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<td>PO Box 707, Amsterdam 1070 MB Netherlands</td>
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<td>Tel: +31 20 448844 Fax: +31 20 4488445 Email: <a href="mailto:cm.veenstra@vumc.nl">cm.veenstra@vumc.nl</a></td>
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<td>Web: <a href="http://www.vumc.nl">www.vumc.nl</a></td>
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<tr>
<td>18-19</td>
<td>3rd Annual Atlanta Lung Cancer Symposium</td>
<td>Atlanta, USA</td>
<td>Immedex, 70 Technology Drive</td>
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<tr>
<td>18-19</td>
<td>National Update on Advances in Urology</td>
<td>New Orleans, USA</td>
<td>Immedex, 70 Technology Drive</td>
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<td>18-20</td>
<td>Second Annual Winter Lung</td>
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<td>May 05-08</td>
<td>Second quadrennial meeting of the World Federation of Neuro-Oncology EANO VI</td>
<td>Edinburgh, UK</td>
<td>Federation of European Cancer Societies</td>
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<tr>
<td>May 13-17</td>
<td>41st Annual Meeting of the American Society of Clinical Oncology (ASCO)</td>
<td>Orlando, USA</td>
<td>American Society of Clinical Oncology (ASCO)</td>
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<tr>
<td>June 30 –</td>
<td>ONCO Cancer Conference: MAP Kinases and Cancer</td>
<td>Madrid, Spain</td>
<td>ONCO, Spanish National Cancer Centre</td>
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<tr>
<td>June 01</td>
<td>12th Reach to Recovery International Breast Cancer Support Conference</td>
<td>Athens, Greece</td>
<td>Hellenic Association of Women with Breast Cancer</td>
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<tr>
<td>April 16-20</td>
<td>96th Annual Meeting of the American Association for Cancer Research</td>
<td>Anaheim, California, USA</td>
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<tr>
<td>April 19-24</td>
<td>10th International Congress on Oral Cancer</td>
<td>Crete, Greece</td>
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<tr>
<td>April 25-27</td>
<td>The 4th Regional Conference of APOCP</td>
<td>Zibakner, Rasht, Iran</td>
<td>Gastrointestinal &amp; Liver Diseases Research Center</td>
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<tr>
<td>April 28-30</td>
<td>1st International Symposium on Cancer and the Lymphovascular System</td>
<td>San Francisco, USA</td>
<td>University of California, San Francisco Office</td>
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<td>13th Reach to Recovery International Breast Cancer Support Conference</td>
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<td>16-18</td>
<td>International East-West Symposium on</td>
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<td>23-26</td>
<td>2nd Quadrennial Meeting of the World</td>
<td>Edinburgh Scotland</td>
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<td>26-30</td>
<td>XVIII World Congress of Gerontology</td>
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<td>14-16</td>
<td>2005 Gastrointestinal Oncology Conference</td>
<td>Arlington USA</td>
<td>International Society of Gastrointestinal Oncology (ISGIO)</td>
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<td>3-6</td>
<td>11th World Conference on Lung Cancer</td>
<td>Barcelona Spain</td>
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<td>25-28</td>
<td>109th Annual Meeting of the American</td>
<td>Los Angeles USA</td>
<td>American Otosanaryngology – Head and Neck Surgery</td>
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<td>Academy of Otosanaryngology  – Head and</td>
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<td>29 –</td>
<td>10th International Conference on Genetic</td>
<td>Genolier</td>
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<td>01 Oct</td>
<td>Oncology &amp; Neck Surgery</td>
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<td>62-05</td>
<td>31st European Congress on Cytology</td>
<td>Paris France</td>
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<td>34th Congresso Brasileiro de Radiologia</td>
<td>Brazil</td>
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<td>16-20</td>
<td>ASTRO 47th Annual Meeting</td>
<td>Denver Colorado USA</td>
<td>American Society for Therapeutic Radiology and Oncology (ASTRO)</td>
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<td>30 – Nov</td>
<td>EECO 13 The European Cancer Conference</td>
<td>Paris France</td>
<td>Federation of European Cancer Societies Avenue E Mourner 83</td>
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<td>33rd Annual Scientific Meeting of the</td>
<td>San Diego USA</td>
<td>American Society of Cytopathology</td>
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<td>Oncology Nurses Society Institutes of</td>
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<td>91st Meeting of the Radiological Society of North America (RSNA)</td>
<td>Chicago USA</td>
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<td>47th Annual Meeting of the American</td>
<td>San Diego California USA</td>
<td>American Society of Hematology</td>
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<td>28th Annual San Antonio Breast Cancer</td>
<td>San Antonio USA</td>
<td>American Society for Cell Biology (ASCB)</td>
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<td>Symposium</td>
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<td>8120 Woodmont Avenue Suite 750</td>
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<td>Email: <a href="mailto:ascbinfo@ascb.org">ascbinfo@ascb.org</a></td>
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Cancer Forum - Volume 28 Number 3 - November 2004
THE CANCER COUNCIL AUSTRALIA

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

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

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

CEO
Professor A Coates AM, MD, FRACP, AStat

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Mrs J Roberts AO SRN
Vice-President
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Mr R McGowan
Assoc Professor S Smiles RN, RM, ICC, BHA, GradDipPSEM
Professor J Ward MBBS, MHPed, FAFPHM, PhD
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.

EXECUTIVE COMMITTEE
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Dr S Ackland MBBS, FRACP

President Elect
Prof D Currow BMed, MPH, FRACP

Executive Officer
Ms M McJannett

Council Nominees
Ms K Cameron RN, OncCent, GrDipN, MNSc
Dr D Goldstein MBBS, MRCP (UK), FRACP
Professor B Stewart MSc, PhD, FRACI

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

Membership fees for 2004
Ordinary Members: $140
Associate Members: $80
(includes GST)

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