Where Geriatrics Meets Oncology

A Clinical Oncological Society of Australia (COSA) workshop

Stamford Hotel, Sydney Airport 4 April 2008

Summary report

Prepared by Alison Evans Consulting on behalf of COSA

AMGEN
Oncology

BACKGROUND

Management of cancer in older people in Australia presents an unprecedented challenge, with the ratio of Australians aged over 65 years set to double to one quarter of the population over the next 35 years.

In 2006, the Australian Institute of Health and Welfare (AIHW) revised its formula for lifetime risk of a cancer diagnosis from one in three for men and one in four for women by age 75 to one in two for men and one in three for women by age 85.[1] In 2003, the median age of patients diagnosed with cancer in Australia was 67.8 years (personal communication Dr Mark Short, AIHW)[2] with 44% of patients aged over 70 at diagnosis.[3]

Despite this increase in Australia's ageing population, and an increase in the growth of aged care services, there is currently no distinct, standalone service delivery vehicle for older patients with a diagnosis of cancer. There is also currently little or no crossover between the disciplines of oncology and aged care. Given the median age of new cancer patients in Australia, it could be said that that *all* oncologists outside paediatrics are 'cancer in the elderly' specialists by default. Yet despite this elderly patient load, evidence suggests that current care providers lack the resources to handle the complex management of an older patient with cancer.

Managing cancer in the elderly has been a priority for a number of interest groups in Europe and the USA for some years. Groups such as the International Society of Geriatric Oncology (SIOG) and the Geriatric Oncology Consortium (GOC) in the USA have raised the profile of geriatric oncology, providing a catalyst for research. International taskforces working under SIOG have produced a number of clinical practice guidelines, and a considerable amount of research has been undertaken to examine the use of screening and assessment tools for use in older patients.

The Clinical Oncological Society of Australia (COSA) has identified a need for a strategic and focused approach to managing cancer in older people in Australia. Given the lack of formal recognition in Australia of onco-geriatrics as a specialist oncology discipline, the first identified task is to assess priority issues to be addressed. This includes scoping current and future infrastructure needs as well as drawing on international expertise in this area. The potential for a 'Cancer in the Elderly' special interest group has been identified as a way of raising awareness of the unmet needs of this important patient group and encouraging targeted professional support, education, research and funding, with the ultimate aim of improving patient outcomes.

WORKSHOP OVERVIEW

A 1-day workshop was convened by COSA in Sydney on 4 April 2008 with the aim of:

- outlining service delivery models for onco-geriatrics appropriate for the Australian context
- identifying the major research questions that can be addressed by an Australian workforce
- identifying the key objectives for a *Cancer in the Elderly* COSA Special Interest Group
- identifying strategies to promote the issues of *Cancer in the Elderly* to the broader community.

The workshop program is provided as Appendix I.

The workshop, the first of its size to be held in Australia on this topic, was attended by over 70 participants from the fields of oncology and geriatrics (see Appendix II). Attendees included health professionals, health service administrators, consumers and representatives from national and international cancer and government organisations.

WORKSHOP INTRODUCTION

Dr Gavin Marx, Co-Chair of the Workshop Steering Committee, welcomed participants and emphasised the importance of agreeing a way forward for the management of older patients* with cancer in Australia. Dr Marx welcomed participants and speakers to the workshop, in particular, keynote speaker, Dr Matti Aapro, Director, Multidisciplinary Oncology Institute, Genolier, Switzerland and Executive Director of the International Society for Geriatric Oncology (SIOG).

The workshop facilitator, Mark Douglas from ETHOS Australia, provided an introduction to the workshop, stating that workshop outcomes would be used to inform policy around cancer amongst the older population in Australia.

**Throughout the workshop there was discussion about the appropriate terminology for this population of patients. The term 'older patients' is used in this report but it is acknowledged that an alternative term may be selected in future.*

SUMMARY OF PRESENTATIONS

The workshop opened with a series of presentations providing context for the day. A brief outline of the key points covered in each presentation is provided below.

Geriatric oncology (the European experience)

Dr Matti Aapro *(Director, Multidisciplinary Oncology Institute, Genolier, Switzerland)*

Dr Matti Aapro provided a European perspective of geriatric oncology issues. To demonstrate the growing importance of this area of cancer care, he provided data from Globocan in 2000, predicting a 50% increase in new cancer cases in the next 20 years, mainly due to the ageing population.

Issues highlighted by Dr Aapro included:

- the lack of clinical trials that address cancer treatment in the 'real elderly', with only the 'fit elderly' typically included
- the large variability in health status in older adults – from fit to frail

- the current focus on age rather than health status as a determinant in decision-making processes for reimbursement.

Dr Aapro described the practical complete geriatric assessment (CGA) used in Europe, stating that the potential survival benefit associated with use of the tool may be as high as that seen with adjuvant treatment for breast cancer. He indicated that while the CGA is not designed to predict tolerability of treatment, it does provide an understanding of the patient and their needs that facilitates appropriate decision making about treatment options. Dr Aapro called for prospective evaluation of the tolerability of cancer treatments in older patients through ongoing clinical trials.

Dr Aapro provided an overview of European experience with regard to geriatric oncology, citing examples in which good progress has been made, including:

- development of National Cancer Institute-designated centres of geriatric oncology in France with ongoing studies including a validation trial of a simplified version of the CGA with the European Organisation for Research and Treatment of Cancer (EORTC)
- establishment of a Geriatric Oncology working party in Germany with several ongoing clinical trials
- conduct of six projects in different stages of development by the EORTC, including three clinical trials, a quality of life study, a database of information relating to cancer in the elderly, and the simplified CGA validation trial
- development of eight guidelines by the International Society for Geriatric Oncology (SIOG/ISGO) based on expert opinion (see Appendix III for a full list of the guidelines).

Dr Aapro flagged the following issues for particular consideration in geriatric oncology:

- the increased risk of neutropenia in older patients
- the increased potential for drug interactions in older patients due to the increased number of medications taken in this population; he noted that not all interactions can be predicted and not all that can be predicted are avoidable
- the increased risk of osteopenia/osteoporosis in older patients with the risk of fracture independent of bone mineral density.

Given the variable status of onco-geriatrics at an international level, Dr Aapro indicated the potential for Australia to show leadership in this area. He emphasised that cancer is a small component of the geriatric workload and that it will be important to develop specialist centres in which oncologists and geriatricians can work together to drive improvements in practice and provide guidance to the broader health community.

The epidemiology of cancer in the elderly in Australia

Professor Graham Giles *(Chair, Australasian Association of Cancer Registries)*

Professor Graham Giles provided an overview of the epidemiology of cancer in the elderly in Australia, using information from the Australasian Association of Cancer Registries (AACR), the Australian Institute of Health and Welfare (AIHW), the Australian Bureau of Statistics (ABS) and other data sources. Throughout the presentation, he identified three categories of elderly people:

- young old (65–74 years)
- old old (75–84 years)
- very old (85+ years).

Professor Giles highlighted the increasing number of older patients who are developing cancer and presented a broad range of data supporting the need for a strategic approach to the management of cancer in this population. Key statistics included:

- AIHW data on cancer incidence and mortality showing that in 2005, approximately 57% of new diagnoses of cancer and 73% of cancer deaths were in people aged ≥ 65 years
- AIHW data showing that the most common cancers in this population included prostate, colorectal, lung and breast cancers, with an age-related increase in incidence and mortality from cancers of 'unknown site' that present as a metastasis
- projected increases in cancer incidence and mortality to 2015, demonstrating an increase of over 30,000 new cases of cancer and around 9000 cancer deaths in people aged ≥ 65 years
- 5-year Australian cancer prevalence data and projected estimates suggesting an increase in 5-year active prevalence in people aged 65 years and older from 138,500 in 2005 to 192,600 in 2015
- Victorian relative survival data showing an age-related decrease in relative survival across a range of cancer types
- health economic data demonstrating that the age profile of health spending per person is highest after 65 years
- ABS predictions of an enormous increase in the number of elderly people and a corresponding decrease in the number of people in the economically active population over the next 20–50 years
- Victorian predictions of a change in family composition, with an increase in the proportion of older men and women living alone by 2031.

Professor Giles emphasised the need for equity in care based on age rather than only social class or geography.

Questions prompted by Professor Giles' presentation identified potential future areas for data collection/review by cancer and clinical registries in relation to older patients with cancer. Examples included:

- the potential impact of treating cancer in older patients on the development of new cancers in this population
- potential markers for determining which older patients die of cancer rather than with cancer
- approaches for modelling which cancers will provide the best return in view of limited resources.

Models of care for cancer in the older adult (the American experience)

Dr Christopher Steer (*Medical Oncologist, Border Medical Oncology Murray Valley Private Hospital, Albury-Wodonga****)***

Dr Christopher Steer provided an overview of the Senior Adult Oncology Program developed by Lodovico Balducci at the H. Lee Moffitt Cancer Center in Tampa, Florida. The Program, which focuses on patients older than 70 years, was developed on the basis that individualised cancer treatment in the elderly should consider the following questions:

- is the patient going to die of or with cancer?
- is the patient going to live long enough to suffer complications of cancer?

- is the patient able to tolerate treatment?
- what are the long-term complications of cancer treatment in older individuals?

The CGA determines life expectancy and treatment tolerance, as well as revealing conditions that might interfere with treatment if left unchecked. It evaluates:

- function
- co-morbidity
- presence of geriatric syndromes
- nutrition
- polypharmacy
- cognition
- emotional status
- social supports.

Dr Steer reported that the initial approach of undertaking a CGA for all patients older than 70 years proved to be time and resource intensive. A revised approach involves screening each new patient older than 70 years for age-related problems, with a CGA completed only for those patients for whom a problem is identified. The Program uses a team approach involving physicians, nurses, a nurse practitioner, dietician, pharmacist, social worker, research nurse and research coordinator, as well as administrative staff. In addition, a network of referring physicians around the state has been identified who are willing to participate in the research studies initiated by the program. The team has a weekly meeting at which all new patients are discussed together with other patients with ongoing problems.

The Program also undertakes four lines of research covering:

- assessment to predict chemotherapy-related toxicity
- assistance to caregivers
- long-term disability following cancer chemotherapy
- influence of co-morbidities on cancer treatment.

Dr Steer reported that the Moffitt Senior Adult Oncology Program has demonstrated the importance of the CGA in planning individualised treatment in older patients and provides a mechanism for stratifying patients for clinical trials. Funding has now been approved for a geriatric assessment centre for all older patients treated at the Moffitt Cancer Center.

A geriatrician's perspective

Dr Robert Prowse *(Geriatrician, Royal Adelaide Hospital**)***

Dr Robert Prowse provided an overview of issues relating to the management of cancer in older patients from a geriatrician's perspective. He indicated that oncology is not currently a priority area of interest for geriatricians, with surgeons, general physicians and general practitioners typically referring older patients with cancer to an oncologist rather than to a geriatrician. Older patients with cancer who are seen by a geriatrician tend to be seen for another reason or are diagnosed while under the geriatrician's care. These patients are typically frail and have other co-morbidities, including cognitive impairment.

Dr Prowse stated that, historically, the geriatrician's approach to the management of cancer in older patients has been to determine the patient's suitability for cancer care, which may not lead to a referral to oncology. Given their experience in palliative care, geriatricians are

likely to seek help in this domain of practice only if the patient is experiencing major pain issues.

Dr Prowse highlighted the importance of improved communication between the fields of geriatrics and oncology, emphasising the importance of awareness by both specialties of changes in practice. As an example, he noted the importance of geriatricians being sufficiently familiar with current oncology practice that they can recognise patients for whom investigation and treatment would be beneficial. In return, Dr Prowse identified a range of benefits that geriatricians could bring to the care of cancer in older patients, including:

- knowledge of pharmacology and complex co-morbidities
- understanding of the effects of cognitive impairment on suitability for treatment, consent etc
- experience of managing and working in multidisciplinary teams.

He highlighted examples in other aspects of geriatric services that demonstrate inter-disciplinary practice, including liaison services to other acute hospital units such as orthogeriatrics, general surgery, emergency care and stroke.

In considering future models, Dr Prowse suggested that geriatricians are likely to continue to make decisions about older patients with cancer without consulting an oncologist, especially in the presence of co-morbidities. However, he acknowledged that geriatricians should consult oncologists more often and questioned whether cancer services and geriatric services are resourced adequately to manage such referrals in terms of personnel, time and funding. He recommended collaboration between oncology and geriatrics, with the potential for joint involvement in working parties and a joint special interest group between COSA and Australian and New Zealand Society for Geriatric Medicine.

The development of an onco-geriatric program at Royal Adelaide Hospital

Dr Nimit Singhal *(Medical Oncologist, Royal Adelaide Hospital)*

Dr Nimit Singhal provided an overview of a geriatric oncology program in development at the Royal Adelaide Hospital. Through the program, all newly diagnosed cancer patients older than 70 years will be given a self-administered screening questionnaire that is scored by a geriatric nurse and an oncologist. Low-risk patients are referred to an oncologist, but if problems are identified that require specialist geriatric input, the patient is referred to an onco-geriatric multidisciplinary team. There are three possible outcomes of the multidisciplinary team discussion:

- fit for treatment – leads to routine treatment and no geriatric input with complications managed as an outpatient
- unfit for treatment – leads to palliative care at home or in a facility
- requires ongoing geriatric input – patients have a comprehensive geriatric assessment prior to treatment; once treatment starts, if the patient has a good response, they are managed in the community by a GP or by a medical oncologist or geriatrician

The assessment tool is the central component of the process and has drawn on a range of other tools including CALGB[4] and the Frailty tool.[5] It includes sections relating to functional assessment, co-morbidity, psychological status, nutritional status, social support and frailty.

To date, 10 patients have been screened as part of the program pilot, with the process taking around 15 minutes per patient. Multidisciplinary meetings will start at the end of April.

Cancer in the elderly and clinical trials – models for consideration

Associate Professor Martin Stockler *(Co-director of Oncology at the NHMRC Clinical Trials Centre and consultant medical oncologist at the Sydney Cancer Centre)*

Associate Professor Martin Stockler gave an overview of issues to be considered in relation to the planning and conduct of clinical trials involving older patients with cancer. He provided three examples of trials with a focus on older cancer patients:

- ANZ2001 – a trial of daily oral chemotherapy vs standard IV chemotherapy in advanced breast cancer
- MAX – a trial of a combination chemotherapy regimen for a broad range of patients with advanced colorectal cancer
- ELVIS – a trial examining the impact of vinorelbine on quality of life in patients older than 70 years.

The three examples, while involving older patients, did not include large numbers of very old patients and in some cases, data analysis grouped all patients older than 70 years, preventing more detailed analysis of the results.

In recommending an approach for undertaking clinical trials in geriatric oncology, Associate Professor Stockler cautioned against setting up a collaborative trials group in the first instance. He stated that a collaborative trials group has the primary aim of testing interventions in humans and is set up to conduct multi-centre trials with high numbers of patients. Such a structure is inefficient for the conduct of smaller surveys, patterns of care studies and pilot studies that may be required in order to determine the research questions to be examined. He suggested that there may be value initially in collaborating with site-specific trials groups and method groups such as the Psycho-oncology Cooperative Research Group (PoCoG) to include questions relating to older patients.

Associate Professor Stockler suggested that as a first step, an interest group could be formed to identify problems and gaps, determine the priority research questions and the best methods to be used to address these questions. This would allow the development of an appropriate and efficient structure that would best support the conduct of the research. He indicated that this may ultimately involve the creation of a collaborative trials group, but this should not be a short-term target. In the meantime, the goals of the interest group could include:

- promoting the inclusion of older patients and questions relating to cancer in the elderly in general oncology trials
- joining one major pragmatic international trial
- initiating one major pragmatic local trial (longer term goal)
- fostering (not running) several small explanatory trials (e.g. phase 1, pharmacokinetic studies)
- fostering (not running) several observational studies.

WORKSHOP OUTCOMES

Workshop outcomes were achieved through small multidisciplinary group discussion, followed by consolidation and refinement by larger self-appointed interest groups. Time limitations precluded a full consensus approach and the outcomes reported summarise areas of convergence reported back to the plenary group.

Participants were asked to consider three issues:

1. **Research** – what are the priority areas for research in geriatric oncology?

   This question was initially considered by pairs of participants, with topics later sorted to identify and prioritise affinity groupings.

2. **Service delivery** – Why are different service models needed for geriatric oncology? What should the new models be? What needs to happen in order to move forward?

   These questions were initially considered by table groups, with drivers and suggestions later sorted to identify commonalities, recommendations and required areas for change to achieve desired outcomes.

3. **Clinical trials** – What should the approach and priorities be for clinical trials in geriatric oncology? What are the key issues and recommendations?

   These questions were considered by two self-appointed groups.

RESEARCH

Participants identified a broad range of research topics relating to geriatric oncology, with the definition of research ranging from basic pharmacokinetic studies to broader health services research questions around models of care. Key issues summarised and prioritised through group review are outlined below. The complete list of topics is provided in Appendix IV.

Key issues	Detail
Population research	• What information can be drawn from cancer registries, outcome data and survival data to guide research questions?
Models of care	• What are the best models of care in hospital, community and rural/regional settings?
Psychosocial issues	• What psychosocial factors specific to the elderly influence access to treatment and care?
Geriatric assessment and screening tools	• What are the best tools in the Australian setting for stratifying patients and for decision making? • Are tools validated?
Pharmacogenetics/ pharmacokinetics	• Information about drug-drug interactions, toxicities, pharmacokinetics and pharmacogenomics
Patient perspectives	• What are patient preferences for nomenclature relating to ‘older’ or ‘elderly’ populations? • What are the information needs of older patients in relation to decision making?

During the plenary discussion that followed the report back, the importance of health economics data was also raised, with a suggestion that health economics data should be collected prospectively within each trial or study conducted.

In reflecting on the research priorities, Dr Aapro emphasised the need to consider what data would be important to convince funders, health services and health professionals of the need

for a link between geriatrics and oncology and the importance of considering a range of perspectives including that of the patient. As a first priority he recommended the identification of centres of excellence that can work together to refine and prioritise research questions and appropriate methodologies.

SERVICE MODELS

A range of issues were raised in relation to service delivery models relating to geriatric oncology. These are summarised below.

Why do service models need to change?

In identifying the key drivers for change, the lack of data on which to base service provision decisions was identified. The need for registry data and outcome data was identified as an important step in identifying gaps in service delivery.

Key issues	Detail
Demographics	• Broad geography and distribution of people and services in Australia • Issues of isolation further enhanced for the frail elderly • Specific population requirements – e.g. culturally and linguistically diverse populations, Aboriginal and Torres Strait Islanders
Service fragmentation	• Lack of consistency with treatment dependent on point of entry at diagnosis • Need for improved referral and transition from and between community, primary and tertiary care
Service, workforce and infrastructure issues	• Lack of workforce to service an increased volume of referrals through an onco-geriatric team • Need for improved infrastructure to support data collection, telemedicine etc
Ageism	• Current attitudes to older people can lead to under-servicing
Linkages/communication	• Lack of linking and cross-education across nursing and other areas of care and between oncology and aged care professionals

What are the options for new service models?

In identifying new service models, the importance of drawing on international expertise and experience to avoid duplication or ‘reinventing the wheel’ was highlighted.

Key issues	Detail
Requirement for a range of flexible models for provision of onco-geriatric care that consider the needs of metropolitan and regional patients as well as public and private systems	• Centres of excellence provide avenues for driving research, trialling new models and providing guidance for other groups • Options for local delivery of care may involve: o telemedicine o involvement of primary care o use of a consultation liaison service
Trial the use of a triage/screening or care coordinator	• Unlikely to be a medical person

Recommended approaches

Key issues	Detail
Implement a system of multidisciplinary care across the whole pathway from primary to tertiary care	• Identify opportunities to improve communication between oncology and geriatric disciplines (includes identifying current barriers) • Develop and test a formal model for onco-geriatrics • Identify and trial approaches at demonstration sites (draw on the CanNet methodology) • Consider integrating other systems that require assessment, e.g. cardiac assessment
Identify leaders and champions to drive change	• Draw on cooperative and professional groups
Improve training and education across all disciplines	• Aim for health professionals who are multi-trained • Provide opportunities for interdisciplinary education • Consider joint physician training and special interest groups • Identify opportunities for joint meetings of oncology and geriatrics
Trial tools for triage/screening and assessment	• Learn from international experience
Involve consumers in service planning	• Ensure input at each stage of development and utilise advocacy skills
Explore options for funding and incentives	• Appropriate funding required for collaborative models • Use of MBS item numbers

In reflecting on the service model issues and priorities, Dr Aapro emphasised the need for integration of existing primary and tertiary services and the benefits of drawing on lessons learned in other settings such as palliative care.

CLINICAL TRIALS

A range of issues were identified in relation to priorities for clinical trials involving older patients with cancer. The two groups exploring these issues addressed the questions slightly differently. The combined outcomes of these discussions are summarised below.

Participants agreed that clinical trials involving older patients with cancer are important and identified that such trials should have endpoints that are relevant, specific and functional to encourage participation. Suggested endpoints included improved quality of life rather than increased survival, or improved cost-effectiveness in terms of bed days or complication rates.

Possible questions to be considered through clinical trials included:

- how best to select patients for trials – whether this should be done on the basis of co-morbidities or activities of daily living
- what are the predictors of longevity in elderly cancer patients?

The importance of a staged approach in developing a program of geriatric oncology research was acknowledged, with strong support for the formation of a Special Interest Group as a first step. It was suggested that the endpoint of the Special Interest Group should be the identification of priority research questions to be addressed through clinical trials. It was acknowledged that these trials may ultimately be conducted as stand-alone activities or through collaboration with other cooperative clinical trials groups. The importance of basing research questions on evidence rather than opinion was emphasised, with acknowledgement that some evidence is already available. The need for patterns of care or survey data to guide decisions around other less well researched areas was identified.

It was agreed that dual-trained geriatricians and medical oncologists are well-placed to lead the Special Interest Group and that COSA is well-placed to facilitate such a group. It was suggested that in due course, a system should be implemented to review the protocols of trials involving elderly patients to ensure that there is no potential for harm in this group.

In reflecting on these discussions, Dr Aapro indicated that Australia has the potential to move ahead with an Australian-specific study within the next 2 years. He reflected on the experience of the EORTC in developing a clinical trials program for elderly patients with cancer and cautioned against simply extending existing trials to include a wider age range. He indicated that the EORTC would be open to involving Australia in an international trial.

CONSUMER PERSPECTIVE

John Newsom *(Chair, Cancer Voices Australia)*

In reflecting on the outcomes of the workshop, Mr Newsom identified two key themes:

- the importance of building capacity
- the importance of integration of services.

He emphasised the support of Cancer Voices Australia in progressing outcomes from the workshop and identified advocacy and lobbying opportunities for Cancer Voices Australia in driving change in this area.

COSA 'CANCER IN THE ELDERLY' SPECIAL INTEREST GROUP

Professor David Goldstein *(President, COSA)*

Professor Goldstein identified COSA's commitment in facilitating a Geriatric Oncology Special Interest Group to identify gaps, outline the priority questions and establish the best methods to address these questions. He emphasised the importance of collaboration with the ANZGSM and stated that COSA would investigate options for a web-based forum or bulletin board for sharing ideas and information and for inclusion of joint meetings as part of the COSA Annual Scientific Meeting. Professor Goldstein referred to the model used by PoCoG in encouraging inclusion of psycho-oncology research questions in clinical trials and stated that the Special Interest Group has the potential to use a similar model, with a view to establishing a standalone trial in 2–3 years.

In closing, Professor Goldstein thanked the participants for their support and interest and encouraged ongoing support and commitment to this important area of oncology.

ACKNOWLEDGEMENTS

The workshop was sponsored by an unrestricted educational grant from Amgen. COSA gratefully acknowledges the input and support of the workshop facilitator, Mark Douglas from ETHOS Australia and the Chair and members of the Workshop Steering Committee:

- Dr Gavin Marx (Co-Chair)
- Dr Christopher Steer (Co-Chair)
- Dr Robert Prowse
- Dr Nimit Singhal
- Professor David Goldstein
- Margaret McJannett.

COSA would also like to thank the workshop presenters Professor Graham Giles, Dr Christopher Steer, Dr Robert Prowse, Dr Nimit Singhal and Associate Professor Martin Stockler, and in particular keynote speaker Dr Matti Aapro.

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FURTHER READING

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APPENDIX I: WORKSHOP PROGRAM

Clinical Oncological Society of Australia

WHERE GERIATRICS MEETS ONCOLOGY

8:45am – 3:30pm
Friday 4 April 2008
Stamford Hotel. Sydney Airport
Facilitator: Mark Douglas

8:45am	**Registration**	
9:10	**Welcome and purpose**	*Dr Gavin Marx*
9.15	**Introduction and agenda**	*Mark Douglas*
9:20	**Geriatric oncology (the European experience)**	*Dr Matti Aapro*
9:50	**The epidemiology of cancer in the elderly in Australia**	*Prof Graham Giles*
10:20	**Morning Tea**	
10:50	**Models of care for cancer in the older adult (the American experience)**	*Dr Christopher Steer*
11:00	**A geriatrician's perspective**	*Dr Robert Prowse*
11:10	**The development of an onco-geriatric program at Royal Adelaide Hospital**	*Dr Nimit Singhal*
11:20	**Cancer in the elderly and clinical trials – models for consideration**	*A/Prof Martin Stockler*
11:30	**Progressing Together: Discussion Session 1**	*Mark Douglas*
12:30pm	**Lunch**	
1:00	**Progressing Together: Discussion Session 2**	*Mark Douglas*
2:30	**Afternoon Tea**	
2:45	**Review of outcomes and recommendations** • Service models for the Australian setting • Priority research questions • Actions re clinical trials	*Mark Douglas*
3.00	**Where to from here?** COSA Special Interest Group	*Prof David Goldstein*
3:30	CLOSE	

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APPENDIX II: LIST OF ATTENDEES

Name	Discipline
Dr Matti Aapro	Director, Multidisciplinary Oncology Institute, Genolier, Switzerland
Dr Laura Ahmad	Geriatrician
Ms Jenny Aitchison	Program Manager, Cancer Australia
Mr Mark Anns	Manager Quality & Clinical Collaboration Cancer Institute NSW
Kathy Ansell	Project Officer, COSA
Dr Sarah Baldwin	Geriatrician
Ms Gill Batt	Director, Cancer Information and Support Services, The Cancer Council NSW
Dr Glenise Berry	Geriatrician
Dr Christina Bryant	Psychologist
Dr Kerry Cheong	Medical Oncologist
Ms Angela Cotroneo	Social Worker
Tracey Doherty	Principal Project Officer, CanNET South Australia
Mark Douglas	ETHOS Australia (Facilitator)
James Drummond	Medical Student
Dr Alison Evans	Consultant Medical Writer
Kathryn Evans	Product Senior Manager Oncology, Amgen
Nicole Ferrar	Clinical Psychologist
Merran Findlay	Dietician
Dr Farshad Foroudi	Radiation Oncologist
Dr Jane Fyfield	Medical Advisor Health Strategy and Gerontology, Department of Veterans Affairs
Professor Graham Giles	Chair, Australasian Association of Cancer Registries
Dr Amanda Glasgow	Medical Oncologist
Professor David Goldstein	President COSA, Medical Oncologist
Betti Gosarevski	Social Worker
Dr Jonathon Hogen-Doren	Oncology Rural Registrar
Dr Liz Hovey	Medical Oncologist
Dr Mohammad Ilyas	Geriatrics trainee
Dr Agnes Kainer	Geriatrician
Professor Dorothy Keefe	Clinical Director, Royal Adelaide Hospital Cancer Centre
Martin Kennedy	Rehabilitation Pain & Palliative Medicine
Dr Lizbeth Kenny	Radiation Oncologist
Dr Andrew Kiberu	Trainee Geriatrics and Oncology
Dr Ganessan Kichenadasse	Medical Oncologist

Name	Discipline
Dr Geraldine Lake	Palliative Care Specialist
Tish Lancaster	Clinical Nurse Consultant
Dr Clair Langford	Geriatrician
Jude Lees	Senior Pharmacist
Dr Lina Lees	Geriatrics Trainee
Kristin Linke	Project Officer, CanNET South Australia
Professor Bruce Mann	Surgical Oncologist
Dr Gavin Marx	Medical Oncologist
Margaret McJannett	Executive Officer, COSA
Professor Andrew McLachlin	Professor of Pharmacy (Aged Care)
Dan Mellor	Deputy Director of Pharmacy, Peter MacCallum Cancer Centre
Dr Linda Mileshkin	Medical Oncologist
Dr Evonne Miller	Gerontologist
Donna Milne	Clinician Researcher/Oncology Nurse
John Newsom	Chair, Cancer Voices Australia
Professor Ian Olver	CEO, The Cancer Council Australia
Niamh O'Neill	Oncology Pharmacist
Dr Sandro Porceddu	Radiation Oncologist
Jenny Pratt	Social Worker
Gabrielle Prest	Chair, Cancer Nurses Society of Australia
Dr Anthony Proietto	Gynaecological Oncologist
Dr Robert Prowse	Geriatrician
Dr Joanne Ramadge	Deputy CEO, Cancer Australia
Dr Monica Robotin	Medical Director TCCNSW
Dr Jenny Schwarz	Geriatrician
Associate Professor Eva Segelov	Medical Oncologist
Ms Sue Sinclair	Director, Cancer Services and Information, Cancer Institute NSW
Dr Nimit Singhal	Medical Oncologist
Dr Andrew Spillane	Surgical Oncologist
Dr Christopher Steer	Medical Oncologist
Associate Professor Martin Stockler	Medical Oncologist
Professor Martin Tattersall AO	Medical Oncologist
Associate Professor Damien Thomson	Medical Oncologist
Dr Peter Veitch	Geriatrician
Dr Lakshmi Venkateswaran	Medical Oncology Trainee

Name	Discipline
A/Prof Rohan Vora	Palliative Care Physician
Mr Ian Yates AM	Chairman, The Cancer Council South Australia
Dr Desmond Yip	Medical Oncologist
Dr Yun Xu	Geriatrics trainee

APPENDIX III: SIOG/ISGO GUIDELINES

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APPENDIX IV: RESEARCH PRIORITIES – RAW DATA

Listed below is the complete list of research priorities identified by workshop participants (duplicate priorities not listed).

Topic	Research questions
Epidemiology/population research	• Coordinated data collection from all clinical cancer registries to get more evidence • Survival statistics for breast cancer in different age groups with different treatments and co-morbidities • A means of measuring quality of life lost (as opposed to years of life lost) – from the cancer, during cancer treatment and if complications arise • Population studies of survival and quality of life in elderly patients who do/do not receive anticancer treatments • Population-based data capturing treatment and stage • Is there a correlation between age and stage in top four cancers at diagnosis (i.e. impact of lack of screening/vigilance)? • Study to look at elderly population living with prostate cancer and dying with prostate cancer
Patterns of care	• Identifying areas of disparity by age • What proportion of the elderly receive less than standard treatment and why? • Using linkage studies to match cancer diagnosis with treatment by age • Clinical registries of geriatric patients – baseline care, treatments offered, treatment outcomes
Workforce	• Workforce capacity of oncologists and geriatricians • How to encourage recognition of geriatric-oncology expertise • Scoping of community resources available for the elderly • Resource implications of treatment – societal cost-effectiveness • Feasibility of service delivery models in the Australian setting
Tools	• What predictors can be developed for decision making in assessment and treatment • Baseline measures needed • Validated screening tool for assessing biological age • Prospective evaluation of the reliability and validity of assessment tools to stratify elderly patients • Use of existing assessment tool, Medicare item number • Feasibility and practicality of geriatric assessment and triage on first presentation (usually to a surgical service) • Screening tool for patients >70 for referral and further assessment • Develop a tool to measure a person's 'chemo age' which will be a better predictor of tolerability and fitness for treatment than chronological age • Quick assessment/triage tool – who does assessment? • Age-related nomograms taking into account co-morbidity to determine life expectancy • Geriatric assessment to guide suitability for cancer surgery

Topic	Research questions
	• What measures are valuable in determining suitability for radiotherapy? • Developing optimal, efficient and validated assessment tools that are time efficient and can be delivered by a nurse practitioner • Better assessments for distinguishing between fit elderly and vulnerable elderly • Correlation of CGA and its components with outcomes of treatment – i.e. success, toxicity, functional decline • Developing a matrix of severity of treatment vs co-morbidities/functional level • Does geriatric assessment of cancer patients enhance treatment outcomes?
Models of care	• Identifying best models of care (community/hospital/ rural/urban) • Delivery of care to regional and rural at the same standard • Validation of a geriatric oncology model of care • Establishing different models of collaboration for integrated care – e.g. urban cancer centre vs rural/regional • Research on systems for integrating community care options – 24-hour back up • Assessment of potential impact of 'geriatric' advice on service planning and patient management • Would an onco-geriatric program be sustainable, deliver better care and improve patient outcomes? • Models of introducing the CGA into different cancer care models in Australia (not just public hospital setting) • What is the optimal service delivery framework for older people with cancer in Australia (nationally)? • Examining models of care used for onco-geriatric assessment specific to setting and resource availability • Role of the GP in shared care • How can cancer care for older Australians be integrated across community, hospital and residential care
Multidisciplinary care	• Rehabilitation post-treatment with a multidisciplinary approach (i.e. combined clinic with oncologist, geriatrician, physiotherapist and occupational therapist) • MDT approach and outcomes – are toxicities and co-morbidities better managed? • Multidisciplinary teams – who 'owns' the patient? • Research across multiple morbidities as well as cancer/geriatrics • Do MDTs enhance outcomes: survival and participation in clinical trials • Comparison of outcomes for elderly patients with or without onco-geriatric services
Psycho-oncology	• Assessment of accessibility of psycho-oncology support in the elderly cancer population (rural and metropolitan) • Enhanced identification and differential diagnosis of depression in elderly patients • Psycho-oncological research into the needs of geriatric patients

Topic	Research questions
	with cancer • Investigation of psychological adjustment during and after cancer treatment • What is the level of need for support (practical/psychological) in this age group and can we meet that need in the community? • What are the information and support needs for cancer patients and their carers? • Focus on psychological/social issues that influence outcomes
Pharmacology/ pharmacogenomics/interactions/ toxicities	• Learning more about drug-drug interactions and polypharmacy issues in geriatrics • Drug-drug interactions register • Pharmacokinetics and pharmacogenomics of chemotherapy in the elderly • Drug interactions specific to the geriatric population • Specific studies on therapy and organ dysfunction i.e. renal failure • Look at drug interactions – choose class and systematically look at interactions with cancer treatments • Drug interactions and drug metabolism, especially regarding cytotoxics • Palliative care and symptom management – little data for >70 years e.g. opioid conversions, drug interactions etc • Novel causes of unexpected toxicity from standard drugs despite normal physiology • Effect of narcotics on cognitive ability and problem solving in the aged • Clinical relevance of drug interactions with cancer chemotherapy agents and the impact on the older person's outcome • A prospective evaluation of frequency of polypharmacy in elderly cancer patients (including OTC and CAMs) and impact of interventions to limit interactions • Impact of multiple co-morbidities on tolerability of cytotoxic chemotherapy • Does empirical dose reduction of cytotoxic chemotherapy in the elderly result in lesser toxicity than BSA-adjusted dosing?
Population screening	• Increased screening for cancers and increased education for older people about early indicators – impact on early treatment • Validation of screening in the elderly – e.g. mammograms in women >70; 5-year colonoscopies in people >50 • Should screening be age limited, e.g. for breast cancer, cervical cancer where benefit is seen vs where benefit is unclear, e.g. prostate • Cancer screening in older groups outside existing screening programs
Patient perspectives	• Patient preference for treatment • Consideration of older person's perspective of cancer care options in developing service models • Research into communication of risk: benefits of treatments for older people with cancer • Standardise language to describe 'elderly patients'

Topic	Research questions
	• Patient awareness and education about availability of treatment • Factors mediating elderly patients' perceptions and acceptance of cancer diagnosis, prognosis and intervention options • Education to get older people to present earlier with cancers especially when screening programs have stopped • Improved information for patients to enable informed decision making • What do patients want – Years? Quality of life? How to measure? • What are the views/level of understanding of this population group – what do they want? What do they know? And how does culture impact on this process? • Increasing voice of elderly patient in treatment decisions
Carers	• Focus on role/support for families/caregivers • Investigation of burden of care in families of older adults with cancer
Barriers to treatment/referral	• Attitudes, beliefs, practices and barriers to referral and treatment in the elderly – from both referrer and patient perspectives • What proportion of elderly patients with cancer are not referred to cancer services for assessment and why? • Attitudes and barriers to cancer treatment in the elderly – patient, carer, doctors/nurses, community, cultural groups
Trials	• Factors that affect the elderly population being recruited to clinical trials; how to enhance enrolment • Longitudinal studies of the impact of anticancer treatment on cognition in the elderly • Clinical trials in patients >70 to evaluate specific tumour groups, cancer treatments and outcomes, incorporating and validating geriatric assessments
Health economics	• Economic modelling – savings/cost offsets • Cost-effectiveness of cancer treatments specifically in elderly – including supportive care medications
Treatment algorithms	• Frail/vulnerable elderly-specific protocols/trials • How to treat the frail elderly • Selecting the right therapy for functional status and life expectancy • Targeted therapies
Cognitive function	• Impact of cognitive impairment in decision making process for cancer treatment • Impact of mild and severe dementia on ability of patients to consent and act on the toxicity of treatment
Treatment compliance	• Does polypharmacy in elderly patients who are on oral chemotherapy or targeted therapy lead to reduced rates of compliance with their cancer treatment and does this translate to worse outcomes?
Complementary and alternative medicines	• Patterns of use • Interactions
Education	• Cross disciplinary education of geriatricians and oncologists
Other	• Does uncontrolled diabetes influence the rates of febrile

Topic	Research questions
	neutropenia in elderly patients on cytotoxic chemotherapy? • What is the nutritional status of the geriatric oncology population? How does this affect tolerance to treatment? • What happens when geriatric cachexia meets cancer cachexia? • How well does this population respond to nutrition/rehabilitation programs? What is the impact on quality of life?