Submission from the COSA Geriatric Oncology Group to the Australian Cancer Plan 2023 – 2033 consultation

The **Clinical Oncology Society of Australia (COSA)** is the peak national body representing health professionals from all disciplines whose work involves the care of cancer patients. This submission is made on behalf of the **COSA Geriatric Oncology Group** which aims to improve outcomes for older people with cancer through education, support for clinical practice, advocacy, and research.

Executive Summary

The burden of cancer in older people is high. Older people make up the largest proportion (6 in 10) of Australians diagnosed with cancer. They also make up the majority living with and surviving cancer. Those over 60 years account for 4 in 5 deaths from cancer. A quarter of Australians over 85 will have a diagnosis of cancer in their lifetime.

Assessment and interventions based on geriatric screening improve quality of life, function, and ability to complete cancer treatment. When this doesn't occur, cancer outcomes are demonstrably poorer. This includes increased hospital admissions and length of stay, toxicities from cancer therapies, poorer cancer-specific survival, and higher dependency.

Integration of geriatric assessment and management into cancer care is required to truly achieve person-centred, collaborative, equity focused, and evidence-based care for the large proportion of Australians with cancer who are older.

Our seven key recommendations for the Development of the Australia Cancer Plan are:

1. Embed principles of respect, value and dignity in the Australian Cancer plan to achieve health equity for older Australians with cancer
2. Screening embedded to identify older Australians with cancer who would benefit from further assessment and interdisciplinary care
3. Support carers as an integral partner in optimal cancer care
4. Build a cancer and aged care workforce with skills and competency to meet the needs of the large number of older Australians with cancer
5. Establish a national advisory group which oversees the delivery of the Australian Cancer Plan for older Australians with cancer and evaluates key performance indicators
6. Develop and implement an Optimal Care Pathway for older Australians with cancer

7. Research to improve our understanding of optimal treatment and care for older people with cancer

These recommendations are further defined and grouped into the categories of (i) Integrated and coordinated care; (ii) Workforce and training; and (iii) Research and data; with two, five and ten year outcomes as outlined in Table 1.

We would like the Australian Cancer Plan to achieve a health system that addresses the care needs of all older Australians with cancer, guided by evidence-based practices that is person-centred, minimises harm, equitably applied, and is consistent with 'What Matters'[1] to the older person.

This will require care pathways that are coordinated and age friendly. To deliver this to 6 out of 10 people with cancer who are older requires:

- Geriatric assessment and management alongside oncological care.
- Better integration of Oncology services with geriatric medicine services and community-based Aged Care services (especially social support services), with new more flexible and responsive models to meet the needs of older people with cancer and their families.
- A greater recognition of the importance of carers and families as care-partners in the patient's cancer experience, thereby ensuring their involvement in communication and decision-making (in line with patient preferences/care requirements).
    - It should also be recognised that many older people with cancer are themselves carers, and care includes recognising and managing the flow-on effects of their illness.
- A shift in the language used throughout the cancer care space to put the older person with cancer at the centre of care.

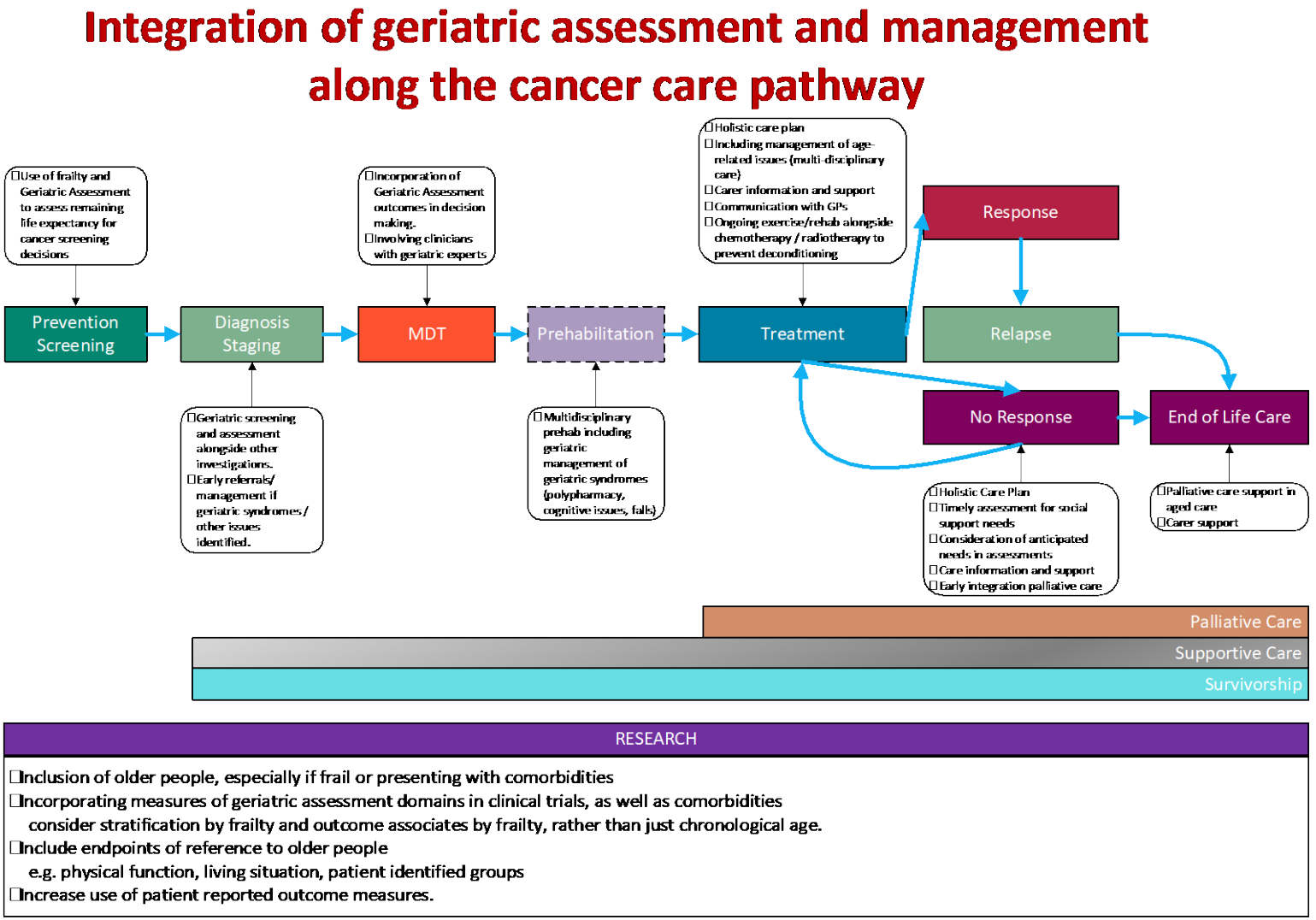
We offer tangible recommendations which have the greatest potential to realise this vision within the decade of the new Australian Cancer Plan:

- Ensure all older people with cancer have screening for frailty and geriatric needs during their initial assessment and over the course of their cancer treatment using validated tools.
- Optimal care pathways for older people with cancer to provide guidance and resources for organisations on pathways/models integrating oncological and geriatric care, which also links to tumour specific pathways.
- Creation of age-friendly health services.
- Increasing resources for older people with cancer and their carers.
- Advocacy of terminology which emphasises the older person with cancer's preferences, priorities, and autonomy.
- Prioritise and fund a program of clinical research and trials which answer questions directly to improve care of older people.
- Plan for the interdisciplinary workforce that is trained to meet the needs of older people with cancer at the highest quality.

There are significant examples and centres of excellence within Australia, and internationally which can provide learnings to inform the Australian Cancer Plan and proposed activities.

The guiding principles of the Australian Cancer Plan namely: Patient-centred, equity focused, tumour agnostic, whole care continuum, future focused, collaborative, evidence-informed and strength based are directly aligned with the principles of care of older adults with cancer. We believe that if the Australian Cancer Plan directly addresses the needs of older Australians with Cancer it will be transformative for all Australians with cancer.

Figure 1: Integration of geriatric assessment and management along the cancer care pathway



Older Australians with Cancer are a significant proportion of the cancer population and have unmet needs

Epidemiology of cancer in older people in Australia

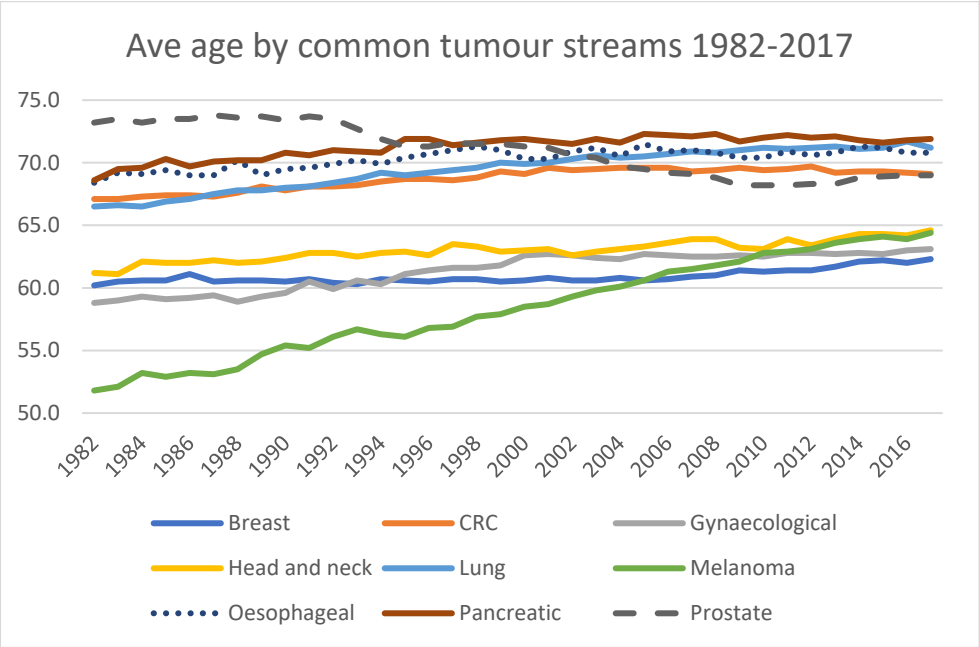
In Australia, people aged 70 or older account for 16% of the population,[2] with a projected increase to over 20% by 2040.[3] Cancer incidence increases with age, with a peak in the age specific incidence of cancer in those over 85 years of age, at 2,678 per 100,000 persons.[4] An estimated 91,190 new cases of cancer per year will be diagnosed in people aged 65 years or older in 2021, accounting for 60% of all new diagnoses[4] with a projected increase to 67% of all new cancer diagnoses by 2035.[5] Nearly 80% of all cancer related deaths will occur in people aged 65 or older in 2021.[6]

Similarly, the older cancer survivor population is growing, with 23% of all Australians aged 60 and over having had a cancer diagnosis in the previous 5 years.[7] A projected 58% of Australians over the age of 70 will be living with, or beyond cancer by 2040.[3] These absolute numbers are set to grow as survival improves, our population ages and as rates of cancer increase from 1 in 22 to a projected 1 in 18 in 2040.[3] The average age of cancer diagnosis is increasing for the most common cancers with the exception of prostate cancer. The greatest increase in average age is seen in people diagnosed with melanoma. (Appendix 1).

Aboriginal and Torres Strait Islander Australians are more likely to be diagnosed with and die from cancer at a younger age, with an estimated 14% increase in cancer incidence and a 20% decrease in five-year survival after a cancer diagnosis compared to non-Indigenous Australians.[8] These numbers increase for older Aboriginal Australians, with Aboriginal Victorians aged over 70 1.8 times more likely to be diagnosed with cancer than non-Aboriginal Victorians. The median age at death for an Aboriginal Victorian diagnosed with cancer is 66 years compared to 75 years among other Victorians.[5] Aboriginal Australians are also more likely to have medical comorbidities and age-related health problems at a younger age, and thus, it is important to note they are eligible for aged care services from the age of 50 (compared with 65 for other Australians).

Cancer is also a leading cause of burden of disease in older Australians (the combined impact of living with ill-health and dying prematurely).[9] The number of adults over the age of 70 number living with and beyond cancer is projected to double from approximately 0.5 million (2019 figures) to over 1 million people by 2040.[3] Cancer care is a substantial and rising cost to the health care system, equating to approximately 9.7 billion (2015-2016 figures).[10 11] Half of this expenditure is for people older than 65.[11] It ranks third in terms of total health expenditure on diseases. Hospital admission equates for 36% of this cost.[11]

Figure 2: Average age by tumour type 1982-2017



Data source: Australian Institute of Health and Welfare. Cancer in Australia 2021. Supplementary tables for Chapter 5: Number of new cancer cases.

Older people have specific needs due to their age and life stage

Whilst "older people" are typically defined as those with a chronological age of 65 years or older in Western societies, "older" people are very diverse. Heterogeneity increases with age, as older people vary more in physical, psychological and social characteristics than younger people.[12] [13] Socio-culturally, being "older" is influenced by social roles, frailty, appearances, and medical and age-related conditions. Aboriginal and Torres Islander populations have an increased incidence of frailty and medical and age-related conditions at younger ages, and therefore are eligible to access Aged Care Services from 50 years of age.[14]

For the purposes of this document we will define older people as those aged 65 or older and Aboriginal and Torres Strait Islander Australians as older at 50 or older, consistent with Australian definitions used to determine access to aged care services.

Whilst some older people are fit and active, medical and age-related conditions (often referred to as geriatric syndromes) are common and increase with age. Amongst community dwelling older Australian men, 16% of those aged 70-74 and 37% of those aged 85-89 have dependency in one or more instrumental activities of daily living.[15] Polypharmacy (the use of five or more medications) and multi-morbidity (two or more medical conditions) are also common, with rates of 30% and 63% in those aged 70-74 and 51% and 78% in those aged 85-89.[15] Such issues are also common in older people with cancer. Geriatric syndromes amenable to intervention are commonly identified amongst older cancer patients when geriatric assessment is conducted, including social issues 39%, polypharmacy 31%, mobility problems 20%, comorbid medical problems 19% and cognitive impairment 14%.[16]

Older people will differ in their priorities and preferences for medical treatment, influenced by their life and illness experiences, life stage, medical conditions and disabilities. Older people are more likely to prioritise quality of life over length of life than their younger counterparts.[17 18] Protocol guided medical advice may not prioritise the patient's goals and preferences. A shift to patient priority-directed decision-making is required, particularly for patients who are frail or have multiple chronic conditions as well as cancer.[19] This should include a focus on Patient Reported Outcomes and experience to support older people with cancer informing their care, and to evaluate quality of cancer care.

The evidence exists to inform approaches to improve outcomes and reduce unmet needs

The heterogeneity of the older adult population with cancer means basing cancer treatment decision-making on chronological age alone is clearly discriminatory and would result in fit older adults not being able to access beneficial treatments. However, ignoring age related issues and life stage changes is also ageist and risks exposing frail older adults to treatments which may not be beneficial and may result in toxicities or other harms. Identification of frailty and geriatric syndromes amongst older people with cancer requires a broader approach to assessment than currently occurs, with incorporation of geriatric assessment and management principles into mainstream cancer care.

Geriatric assessment identifies previously unrecognised non-cancer related medical and aged related needs, with non-oncological interventions recommended for 72% of patients.[16] Information provided by geriatric assessment assists clinicians, patients, their carers and families in making cancer treatment decisions, altering cancer treatment decisions in 28% of patients, most commonly to a less aggressive, but also at times to a more aggressive approach.[16] Most importantly, randomised controlled trials (Appendix 2 Table 1) provide evidence of improved outcomes for older people, with the incorporation of geriatric assessment and management into their oncological care, with a variety of approached to care model used. Positive outcomes included reduced chemotherapy toxicity,[20-23] improved mobility with reduced falls,[22 23] improved quality of life,[20] improved rates of Advanced Care Planning [21 24], and reduced unplanned hospitalisations.[20]

Internationally, geriatric assessment is recommended for older people with cancer

We provide an overview of key international initiatives (Appendix 1) which provide international insights for consideration within the Australian context. A number of cancer organisations internationally recommend geriatric assessment and management for all older people with cancer (see Appendix 2 evidence summary table 2).[25-29] Other regions and centres use an initial screening approach and then target more detailed geriatric assessment to those most likely to benefit from this.[30 31] A number of geriatric screening tools have been demonstrated to correlate with the need for a more detailed geriatric assessment.[32]

Geriatric oncology services are well established in some centres and countries. In France, long-standing integrated services are established through Coordination Units in each regional territory. The Units promote screening all older adults with cancer using the G8 screening

tool. They also train health care professionals to complete comprehensive geriatric assessments, promoting organisation of integrated geriatric oncology services, and coordinate, conduct and disseminate research.[31] In Belgium geriatric assessment is widely implemented in routine oncology practice.[30] In the USA, healthcare delivery varies widely, however, a number of centres offer comprehensive integrated Geriatric Oncology services.[33-35] Recognition of the importance of Geriatric Oncology is growing internationally, with an increasing development of geriatric oncology services, research and national Geriatric Oncology organisations all over the world.[36-39]

Current status of Geriatric Oncology in Australia

In Australia, the health systems are not always designed to address vulnerabilities in older people with cancer which puts them at increased risk of complications. Although most metropolitan and regional hospitals have both Geriatric Services and Oncology Services in some form, these services often work in "silos" with limited collaboration. Discussions of coordinating cancer care typically refer to coordinating care between cancer care specialists (such as surgeons, radiation oncologists and medication oncologists), and perhaps with GPs and palliative care services. Geriatrician and aged care services are typically not considered part of the cancer care team.

Aged care services, including geriatric medicine, allied health and community social support services, tend to be set up to serve people with "frailty" and a slow trajectory of decline. Thus, waiting lists for specialist outpatient clinics or allied health clinics may be several months in length. In contrast, patients with advanced cancer typically need prompt assessment to aid treatment decision-making, whilst those with advanced disease often have a steeper trajectory of functional decline and require prompt support service planning and implementation.

In a survey of Australian oncologists, the majority of respondents perceived geriatric assessment and geriatrician review to be valuable, but respondents reported access was a barrier for referral. The majority of respondents, would require such services to be responsive, providing reports within two weeks.[40]

Referrals for aged care community-based support services through My Aged Care ask a number of questions about current care needs and are triaged on this basis. Patients with cancer may have anticipatable future needs which may not be taken into consideration at the time of assessment, particularly those with advanced disease. Those undertaking these assessments may have limited education in the needs of older people with cancer, and may not appreciate the potential for rapidly changing care needs.

More recently a program funded by a Cancer Australia Supporting people with cancer grant developed a suite of resources (OlderCan) for older people with cancer.[1] [41] These resources aim to provide advice and support to help older people make decisions about treatment and care, and to make sure that their GP and cancer team are aware of information that is important to an older person with cancer.

[1] https://wecan.org.au/oldercan/

RECOMMENDATIONS

The COSA Geriatric Oncology Group provide actionable recommendations which at 2, 5, and 10 years will demonstrably improve outcomes for all older Australians with cancer.

Table 1 provides a summary of our key recommendations and timeframe, and we outline in these in more detail below

Table 1: Key recommendations to deliver coordinated, collaborative and national action to deliver world-class cancer outcomes for Older Australians with cancer by two, five and ten years.

	Two years	**Five years**	**10 years**
INTEGRATED AND COORDINATED CARE	Australian Cancer Plan approach fosters listening to older people and involving them in the decisions that affect them, and uses respectful language to refer to older people	Pilot programs are funded to lead development of Age-Friendly cancer services in all jurisdictions	All Australian cancer services have developed age-friendly systems
	Optimal care pathway for older people with cancer is developed guided by a national expert interdisciplinary advisory group inclusive of older people with cancer	The Optimal care pathway for older people with cancer is integrated within the optimal care pathways for specific tumour groups Implementation of optimal care pathways for older people with cancer is included in state and territory cancer plans	All cancer care delivered to older Australians is aligned with the optimal care pathway
	Screening should be embedded to identify older Australians with cancer who would benefit further assessment and interdisciplinary care	Cancer services are supported with resources, training and investment to build multidisciplinary care teams based on successful models already operating both in Australia and	All older Australians have equitable access to interdisciplinary geriatric oncology care based on need

		overseas, working in partnership with geriatric and aged care services	
	The Australian Cancer Plan specifically addresses the needs of carers, particularly considering the needs of carers of older people with cancer who may be older themselves	Carer support services are improved for carers of older people with cancer Aged care packages (particularly level 3 and 4) or equivalent are more rapidly available recognising the more rapid trajectory of increasing needs which occurs with a progressive cancer.	Social services and care supports to meet needs are available to all carers regardless of age, background or geography.
	National advisory group which oversees the delivery of the Australian Cancer Plan for older Australians with cancer	Key performance indicators to evaluate the implementation of Australian Cancer plan in relation to outcomes for older people with cancer developed	Data is available reporting performance against key performance indicators.
WORKFORCE AND TRAINING	Continued professional development is available for all health professionals who care for older people with cancer in geriatric oncology	Geriatric oncology training should be embedded within the training programs for medical oncology, radiation oncology, haematology and geriatric medicine. Within nursing it should be included in speciality cancer and geriatric postgraduate and nurse practitioner degrees, and the equivalent degrees and vocational training for allied health	Australia has a workforce planning approach for cancer care that continues to project the appropriate workforce with required scope of practice to meet the needs of the projected population of older people with cancer
	Cancer workforce planning processes should consider the projected population of older people with cancer and the required workforce		
RESEARCH AND DATA	14 Australian Collaborative Trial Groups (CTGs) will develop clinical trials which	Clinical guidelines and optimal care pathways which are tumour specific	Australian cancer clinical trials do not discriminate based on age

	are open for recruitment independent of age.	specifically address knowledge translation of emerging trial data for older people with cancer	
	CTGs will include clinical trials and clinical research which addresses specific questions pertinent to older Australians with cancer	Competitive funding opportunities available for clinical research answering questions pertinent to older people with cancer.	Strong pipeline of evidence to inform clinical questions important to older people with cancer
	Targeted funding call for research pertinent to older people with cancer (for example through NHMRC targeted calls, MRFF and/or Priority driven collaborative cancer research scheme) and those which support emerging researchers to ensure we build the next generation of geriatric oncology researchers with capability to lead this research field	Increased number of research proposals and dollar investment for geriatric oncology research Ongoing investment in geriatric oncology researchers through national schemes Older people with cancer are included as consumer representatives in grant review panels for all major cancer research schemes	Sustained investment in geriatric oncology research and researchers through national schemes
	The AIHW reports for Cancer in Australia consider the specific data available regarding older adults and report this regularly	A plan is developed to build the variables where national data is available relating to older people with cancer	Comprehensive data is available to guide service delivery, policy and workforce planning

Recommendation 1: Embed principles of respect, value and dignity in the Australian Cancer Plan to achieve health equity for older Australians with cancer

The Australian Cancer Plan must ensure that it fosters positive attitudes toward older Australians, to ensure that prejudices and unconscious biases against older adults do not influence diagnosis and treatment recommendations.[42] Significant research supports that the wellbeing and quality of life of older adults are compromised by ageism.[42] The Australian Cancer Plan needs to ensure that its approach fosters listening to older people and involving them in the decisions that affect them.[42] Recommendations to combat ageism require public policy which is broad and consistent with the need of older adults, ensuring it is addressed in how we train our workforce, and encouraging intergenerational activities.[43]

Recommendation 2: Screening embedded to identify older Australians with cancer who would benefit from further assessment and interdisciplinary care

The Australian Cancer Plan emphasises the need to address issues that lead to variation in cancer outcomes and experience. Older people with cancer often present with multi-morbidity and variable health status. Inadequate assessment places older adults at risk for under- or over-treatment, resulting in reduced treatment efficacy, increased treatment toxicities and reduced quality of life. The existing literature supports a coordinated interdisciplinary approach to deliver geriatric assessment and manage comorbidity burden to improve outcomes. However, little has changed to embed system-wide geriatric assessment into routine clinical care for older people in most cancer services in Australia.

The use of brief screening tools to case-find those who require in-depth geriatric assessment is the pathway of choice in most geriatric oncology services worldwide.[44] This approach delivers a systematic approach to identify and support vulnerable or frail older patients with cancer, while avoiding the time, cost and resourcing of in-depth assessments for fit older patients. In addition, cancer-specific geriatric assessment can inform risk of treatment toxicity, thereby aiding value-added decisions in oncology by targeting anti-cancer therapy to those who would derive substantial benefit and avoiding treatments of little value to the patient.

Recommendation 3: Support carers as an integral partner in optimal cancer care

Carers are often depended on to facilitate cancer care, at all ages, by increasingly frail older people who have other care needs. Carers thus need to be recognised and involved in treatment decision making and identification of other aged care and social support care needs, whilst respecting the patient's autonomy.

Recommendation 4: Build a cancer and aged care workforce with skills and competency to meet the needs of the large number of older Australians with cancer

Geriatric oncology is a burgeoning field that spans multiple disciplines, including medical oncology, radiation oncology, geriatric medicine, palliative medicine, nursing, allied health, primary care, surgery and haematology. Despite the high incidence and prevalence of cancer in older individuals, education regarding this important discipline is lacking, with few dedicated educational opportunities within medical schools, medical and surgical colleges, and subspeciality groups.

The Australian Cancer Plan has emphasised "new models of care", and we believe that geriatric oncology education is a critical step in achieving this goal. Geriatric oncology demands a multidisciplinary, comprehensive, patient-centred approach, and we believe that this aligns with the stated goals of the Australian Cancer Plan, which aims to reduce inequality and improve access to world-class cancer treatment for all individuals. Education is a critical component in developing this model and developing comprehensive educational opportunities for health care professionals will allow for further development of this innovative field.

Education within the field of geriatric oncology is inherently future focussed. As the Australian population ages, an increase in the oncologic care of older individuals will be of utmost importance and will be critical to the safe functioning of the national health care system.

Education within the field of geriatric oncology has been a cornerstone of cancer plans internationally. In France, for example, each regional territory has coordination units (*unites pilotes de coordination of onco-geriatrie*, or UCOG) responsible for the provision of geriatric oncology. A key task of individual UCOG is to collaborate on educational programs and train health care professionals to comprehensively attend to the cancer needs of older patients. Similar programs also exist in Japan, Singapore and Denmark.

Education in geriatric oncology is an important, essentially universal component of cancer planning in Australia. We believe in the following goals within the next ten years:

- Geriatric oncology training should be embedded within the training programs for medical oncology, radiation oncology, haematology and geriatric medicine. Within nursing it should be included in speciality cancer and geriatric postgraduate and nurse practitioner degrees, and the equivalent degrees and vocational training for allied health.
- Continuing professional development opportunities in geriatric oncology should be available for health professionals caring for older people with cancer.
- Forums to exchange ideas and learn best practice should be available for Australian practitioners of geriatric oncology.
- At ten years, we expect to have a mature, robust geriatric oncology network within Australia, which will serve as a landing point for further research and advocacy within this field.

Recommendation 5: Establish a national advisory group which oversees the delivery of the Australian Cancer Plan for older Australians with cancer and evaluates key performance indicators

The integration of the geriatric principles within the Australian cancer care ecosystem and the development of age-friendly health services[45] will involve complex change management and require implementation science. This is unlikely to occur without evidence-based guidance. Advocacy is needed to address ageism within the system and advocate for and enable the necessary change. An established advocacy network exists within the age care community to enable the improvements in care needed for vulnerable older Australians.

The Older Persons Advocacy Network (OPAN www.opan.org.au) provides advocacy and support within the sector. The recent Royal Commission into aged care quality and safety recommended the establishment of an Aged Care Advisory Council and Aged Care commissioner role recognising the need for systemic change, guidance on service delivery and adequate governance to ensure implementation of reforms.

A national, multidisciplinary advisory group is needed to provide the necessary guidance, advocacy and governance as health systems evolve to become age-friendly; and could serve a dual purpose as an expert advisory role in development of the older people with cancer optimal care pathway.

Recommendation 6: Develop and implement an Optimal Care Pathway for older Australians with cancer

Using the principles of multidisciplinary care based on the optimal care pathways we need to learn from the projected demographics and existing evidence to create a system that is fit for purpose to deliver care for older adults. Older patients are our core demographic, not an added extra.

We propose the development of an optimal care pathway for older Australians with cancer. The existing, and in development, optimal care pathways also need to be modified to recognise that older adults are more than an addendum and a vulnerable minority. Given that over 50% of patients with cancer are aged over 65 years and the fastest growing demographic is the oldest old (85+), the system needs to change to accommodate their needs. This will be a complex change management process. The optimal care pathway will promote age friendly health systems to deliver an essential set of evidence-based practices which improve outcomes for older adults (The '4Ms' including attention to mentation, medication, mobility and "What matters" to the older person and systems are in place to work with them to achieve it).[46]

There is significant opportunity to build multidisciplinary care teams based on successful models already operating both in Australia and overseas. The Australian Cancer Plan should actively facilitate collaboration between aged care and oncology, to avoid 'silos' driving inequity and uncoordinated care.

Ultimately the Australian Cancer Plan should address the needs of older Australians at every level with attention to screening and prevention with a laser focus on the delivery of appropriate care. Current systems can often discriminate on the basis of age.

Recommendation 7: Research to improve our understanding of optimal treatment and care for older people with cancer

Research is a critical component of best-practice, evidence-based health care. Whilst age cut-offs for trial recruitment are rare, clinical trial populations are often younger than the population encountered in real world clinical practice. Clinical cancer research has also typically involved recruitment of fit individuals with few comorbidities. This has led to a population bias within clinical research, where patients represented in trials often differ from the "real world" patients that are frequently encountered in clinical practice. Though this may be regarded as a benign complication of clinical research, it in fact serves to marginalise and exclude segments of the population and must be addressed in order to establish equitable and patient-centred care.

Whilst deficits in geriatric assessment domains correspond with treatment outcomes and toxicity and add to prognostic information, these domains are not routinely reported in clinical trials. Additionally, mortality is typically the primary end-point for cancer clinical trials. However, for older people with incurable disease longevity may not be their priority. Quality of life and functional outcomes may be more important. Guidelines on trial end points and design in Geriatric Oncology research have been published.[47]

As a discipline, geriatric oncology accepts and celebrates the real-world patient: the individual with comorbidities, vulnerabilities and social circumstances that may have historically been exclusion criteria for clinical trials. As a field committed to understanding the 'everyday' patient, geriatric oncology recognises the importance of research in developing best-practice protocols and guidelines for older individuals.

Research is a critical component of advocacy, and we believe that deepening the research portfolio as it pertains to geriatric oncology is a key component in reducing the inequality that is currently active in clinical trials. Valuable research is relevant and applicable to real-world practice, and as the government strives to reduce inequality in cancer medicine, we believe that a focus on geriatric oncology is critical.

Furthermore, geriatric oncology recognises the importance of systems of support in caring for individuals with cancer. As a discipline, the field pays specific attention to the role of carers, who provide essential support across the continuum of a patient's journey. A focus on carers prioritises the individual patient and their support network.

Research in geriatric oncology faces many challenges, but we feel that such research is critical in challenging ageist assumptions that permeate the health care system. An increasing emphasis on ageism has developed over the past decade, and as clinicians dedicated to equity and best practice, we feel that it is our responsibility to advocate for change within the ideological paradigm that currently restricts care for older patients with cancer.

Our ambitious aims over the next decade, as they pertain to geriatric oncology research, are as follows:

- At **two years**, the 14 Australian Cancer Cooperative Trial Groups (CCTGs) will develop clinical trials which are open for recruitment independent of age. Additionally, the CCTGs will include clinical trials and clinical research which addresses specific questions pertinent to older Australians with cancer.
- At **five years**, Australia will have established a comprehensive portfolio of investigator initiated clinical trials addressing the needs of older people with cancer. In addition, clinical trials will have integrated geriatric assessment domains into existing clinical trials, to improve the value of these data to directly inform the tolerability and outcomes in older Australians to inform cancer treatment of the largest proportion of people with cancer in Australia. The Australian government cancer funding and research programs have targeted calls for research to address the unmet needs of older Australians. Collaborative groups are funded to foster national interdisciplinary research collaborations with knowledge translation (through NHMRC Centres for Research Excellence or Medical Research Futures funds) to drive research activity and knowledge translation.
- At **ten years**, international trials and industry trials which are open for recruitment in Australia do not limit eligibility by chronological age. Furthermore, we hope to have established a comprehensive baseline repertoire of evidence from which further data analysis and research programs in geriatric oncology could be generated.

Appendix 1: International programs

Country	Description	Links/further information
France	Each regional territory in France has coordination units in geriatric oncology" called UCOG (Unites pilote de coordination en onco- geriatrie). This commenced in 2006. These promote frailty screening, train health care professionals to perform Comprehensive Geriatric Assessment in each cancer centre and hospital, as well as contribute to research. Thus, there are well established Geriatric Oncology Services throughout France, some running for as long has 20 years (personal correspondence).	https://ressources-aura.fr/onco-geriatrie-presentation-unites-de-coordination-onco-geriatrie/
Japan	The JSMO (Japanese Society of Medical Oncology) has a working group on Geriatric Oncology aiming to improve cancer care for older adults, including developing guidelines, providing education, increasing collaboration with geriatricians. The Japan Clinical Oncology Group, has established policy for geriatric oncology research including GA domain in design and functional and cognitive endpoints	https://www.annalsofoncology.org/article/S0923-7534(19)32919-9/fulltext https://academic.oup.com/jjco/article/49/10/901/5576059
Singapore	The National University Cancer Institute Singapore has a Specialised geriatric Oncology Service proving integrated care. There is a Singapore Geriatric oncology Society, aiming to provide education	https://www.ncis.com.sg/Our-Services/Specialties/Pages/Geriatric-Oncology.aspx.
Denmark	The Aarhus University Hospital provides onco-geriatric team services to a region on Denmark. Odense University Hospital has an Academy of Geriatric Cancer Research, an Elite Research Centre	https://www.en.auh.dk/departments/department-of-geriatrics/research/geriatric-intervention-in-cancer-patients/ https://www.agecare.org/news.asp.
Unites States of America	There are some very well established centres of excellence in geriatric oncology, which provide comprehensive multidisciplinary integrated geriatric and oncology services to their older cancer patients and produce a lot of research,	https://pubmed.ncbi.nlm.nih.gov/33632642/ NCCN Clinical Practice Guidelines Older Adult Oncology version 1.2021 https://www.nccn.org/guidelines/guidelines-detail?category=4&id=1452

	including the Moffitt Cancer Centre, the University of Rochester, and Memorial Sloan Kettering Cancer Centre (MSKCC). - The MSKCC provide outpatient consults and inpatient consults, multidisciplinary input into management, pre-operative evaluations, and transitional care management. MSKCC uses their own electronic Geriatric Assessment tool, the electronic Rapid Fitness Assessment, for all older adults evaluated in geriatric clinics. - The City of Hope Cancer Centre in Duarte, California has a world- renowned geriatric oncology service that provides geriatric assessment with a particular focus on nurse-led supportive care interventions. - The Specialized Oncology Care & Research in the Elderly (SOCARE) Clinic at the University of Chicago provides specialised geriatric oncology care - The Senior Adult Oncology Center at the NCI designated Jefferson Health Sydney Kimmel Cancer Center in Philadelphia provides geriatric assessment driven care pathways as a standard of care for older adults ASCO has a position statement and NCCN guidelines both advocating Geriatric assessment for all older people with cancer. National research funding agencies like the NCI (National Cancer Institute) and NIA (National Institute on Aging) have supported Geriatric Oncology research (for example Cancer and Aging research group).	ASCO current initiatives in geriatric oncology https://www.asco.org/news-initiatives/current-initiatives/geriatric-oncology/resources ASCO Guideline for Geriatric Oncology https://ascopubs.org/doi/10.1200/JCO.2018.78.8687?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed Cancer and Aging research group https://www.mycarg.org
Canada	Canadian Network on Ageing and Cancer	https://www.cancerandaging.ca/copy-of-about https://sinaigeriatrics.ca/geriatric-oncology/

United Kingdom	The Specialised Clinical Frailty Network is tasked with incorporating of the Clinical Frailty Scale assessment (frailty screening tool) across all aspect of health care in the NHS, including oncology. The NHS England Cancer Strategy plan for 2015–2020, includes recommendations on piloting a comprehensive care programme for older people with cancer [assessment of holistic needs and comprehensive geriatric assessment (CGA)] and to develop dedicated research protocols. There are geriatric oncology programs (different models) now running in an increasing number of hospitals. There is a Geriatric Oncology Special Interest Group within the British Geriatric Society.	NHS England (2015) *Cancer Taskforce—Achieving World-Class Cancer Outcomes: a Strategy for England 2015–2020*[https://www.england.nhs.uk/wp-content/uploads/2017/10/national-cancer-transformation-programme-2016-17-progress.pdf]. https://ecancer.org/en/journal/article/1101-the-care-of-older-cancer-patients-in-the-united-kingdom

Appendix 2: Evidence summary

Table 1: Randomised controlled trials of Geriatric Assessment and Management in cancer care for older adults

Study name	**Integerate** [20]	**GAIN** [21]	**GAP70+** [22]	**GERICO** [23]	**Orum et al** [48]	**DuMontier et al** [24]
Site	Eastern health (VIC, Australia)	City of Hope (USA)	University of Rochester (USA)	Copenhagen (Denmark)	Aarhus University (Denmark)	Boston (USA)
Number of participants	154	613	718	142	363	160
Population	≥70, starting chemotherapy	≥65, starting chemotherapy	≥70, advanced cancer, starting chemo, GA domain impairment	≥70, G8[#]<14, starting adjuvant or 1st line chemo for colo-rectal cancer	≥70, starting chemo	≥75, frail and pre-frail new patients with multiple myeloma, lymphoma, leukaemia
Study groups	Geriatrician co-management vs no GA[*]	GA driven intervention vs standard care	GA and management recommendations vs no GA	CGA[**] based intervention vs standard care	CGA based intervention vs CGA based intervention and follow-up	Geriatrician consultation vs standard care
Interventionalist	Geriatrician	Geriatric MDT	Oncologist	Nurse	Geriatrician and nurse	Geriatrician
Significant outcomes	↑ HRQOL[##] ↓Unplanned hospitalisation ↓Treatment discontinuation	↓Chemotherapy toxicity ↑ Advanced care plan completion	↓ Chemotherapy toxicity ↓Cycle 1 chemotherapy ↓Falls	↑Quality of life ↑Mobility ↑Treatment completion ↓ Chemotherapy toxicity	No significant differences identified and all patients received geriatric assessment	↑Advanced care planning discussions Considered useful by haematologists

[*]GA = Geriatric Assessment, [#]G8 = G8 Geriatric oncology screening tool, [**]CGA = Comprehensive Geriatric Assessment, [##]HRQOL = Health related quality of life

Table 2. Guidelines on the assessment of older adults with cancer.

Guidelines	**Organization**	**Year of Publication**	**Recommendations**
Geriatric assessment in daily oncology practice for nurses and allied health care professionals: Opinion paper of the Nursing and Allied Health Interest Group of the International Society of Geriatric Oncology (SIOG) [49]	Nursing and Allied Health Interest Group of SIOG (International Society for Geriatric Oncology)	2016	The domains of the Geriatric Assessment (GA) are used as a guiding framework to guide practice. The following geriatric domains are described: demographic data and social support, functional status, cognition, mental health, nutritional status, fatigue, comorbidities, polypharmacy, other geriatric syndromes (e.g. falls, delirium), and quality of life.
Practical assessment and management of vulnerabilities in older patients receiving chemotherapy: ASCO guideline for geriatric oncology [25]	ASCO (American Society of Clinical Oncology)	2018	In patients age 65 and older receiving chemotherapy, geriatric assessment (GA)—the evaluation of functional status, physical performance and falls, comorbid medical conditions, depression, social activity/support, nutritional status, and cognition—should be used to identify vulnerabilities or geriatric impairments that are not routinely captured in oncology assessments
General recommendations paper on the management of older patients with cancer: The SEOM geriatric oncology task forces position statement [28]	SEOM (Spanish Society for Medical Oncology)	2018	CGA [Comprehensive Geriatric Assessment] is the basic tool by means of which to evaluate older people with cancer and to understand their needs. Domains of assessment recommended are: functional, nutritional, cognitive, mood, socio-familiar, comorbidity, drug use, and 'geriatric syndromes.
What every oncologist should know about geriatric assessment for older patients with cancer: Young International Society of Geriatric Oncology position paper [27]	Young SIOG (Young International Society for Geriatric Oncology)	2018	All oncologists should strive to include some form of geriatric assessment in their everyday clinical practice….In cancer centers in which resources are more widely available, a full geriatric assessment should be performed in all older patients with cancer age 70 years and older who are considered for any cancer treatment, as well as younger patients with age related health concerns.

NCCN Clinical Practice Guidelines in Oncology :Older adult oncology, version 1.2019 [26]	NCCN (National Comprehensive Cancer Network)	2019	Chronological age is not reliable in estimating life expectancy, functional reserve, or the risk of treatment complications. The best guide as to whether cancer treatment is appropriate may be provided by careful assessment of the older patient. CGA [comprehensive geriatric assessment] can be utilised to assess life expectancy and risk of morbidity from cancer in older patients. CGA in turn can enable physicians to develop a coordinated plan for cancer treatment as well as guide interventions tailored to the patients problems.
Comprehensive geriatric assessment in older adults with cancer: Recommendations by the Italian Society of Geriatrics and Gerontology [29]	SIGG (Italian Society of Geriatrics and Gerontology)	2021	The Italian Society for Geriatrics and Gerontology proposes a CGA [Comprehensive Geriatric Assessment] model (ONCOGER CGA) to be adopted by oncology centers for their routine approach to older patients with cancer.

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