The Role of the Advanced Practice Nurse in Geriatric Oncology Care

Brianna Morgan and Elise Tarbi

Objectives: *To describe how the Advanced Practice Nurse (APN) is uniquely suited to meet the needs of older adults throughout the continuum of cancer, to explore the progress that APNs have made in gero-oncology care, and make suggestions for future directions.*

Data Source: *Google Scholar, PubMed, and CINAHL. Search terms included: "gero-oncology," "geriatric oncology," "Advanced Practice Nurse," "Nurse Practitioner," "older adult," "elderly," and "cancer."*

Conclusion: *Over the last decade, APNs have made advances in caring for older adults with cancer by playing a role in prevention, screening, and diagnosis; through evidence-based gero-oncology care during cancer treatment; and in designing tailored survivorship care models. APNs must combat ageism in treatment choice for older adults, standardize comprehensive geriatric assessments, and focus on providing person-centered care, specifically during care transitions.*

Implications for Nursing Practice: *APNs are well-positioned to help understand the complex relationship between risk factors, geriatric syndromes, and frailty and translate research into practice. Palliative care must expand beyond specialty providers and shift toward APNs with a focus on early advanced care planning. Finally, APNs should continue to establish multidisciplinary survivorship models across care settings, with a focus on primary care.*

Key Words: *older adult, geriatric oncology, gero-oncology nursing, advanced practice nurse.*

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Older patients with cancer have a major presence in the health care system and present a unique challenge to health care providers (HCPs) because of the complex biological interface between cancer and the aging process.[1,2] To address this complicated physiological effect, older adults often receive highly focused care in specialized oncology practices.[3] However, these older adults are ubiquitous across all care settings. They are seen in primary care for prevention and screening or with early symptoms of disease.[4] They present to the acute care setting with complications of chemotherapy or disease progression and they continue to receive care long after their cancers have been cured.[5,6]

Advanced Practice Nurses (APNs), nurses prepared at the Master's level for advanced clinical practice, are well suited to meet the challenges of caring for older adult cancer patients across the continuum of cancer care (Fig. 1).[7] APNs are a varied group of HCPs (Certified Registered Nurse Practitioners, Nurse Midwives, Certified Registered Nurse Anesthetists, and Clinical Nurse Specialists) who encounter patients at all points in their lifespan, throughout their disease trajectory, and across all care settings (Fig. 2).[8] APNs are unique HCPs in that their care is rooted in the tenants of nursing. APNs focus on health promotion, which in turn increases preventive care, improves functional status, and allows patients more independence.[9] Patients report higher satisfaction with APN-provided care and ultimately health care cost is less.[9] To improve and standardize APN education related to care of the older adult, the Consensus Model for APN Regulation has defined and required comprehensive geriatric competencies across all Master's level programs where APNs have clinical contact with older adults.[10-12]

This article explores the evolution of the role of APNs in the care of older adults with cancer over the last decade and critically analyzes how APNs have met the needs of these patients. It also identifies areas for improvement and suggests future directions for the field. It discusses the role of APNs across the continuum of cancer care through: (1) preventive care, screening, and timely diagnosis; (2) oncology and gerontologic-specific care in geriatric oncology clinics and beyond; and (3) throughout survivorship. A thorough review of the literature was performed using Google Scholar, PubMed, and CINAHL. Search terms included: "gero-oncology," "geriatric oncology," "Advanced Practice Nurse," "Nurse Practitioner," "older adult," "elderly," and "cancer."

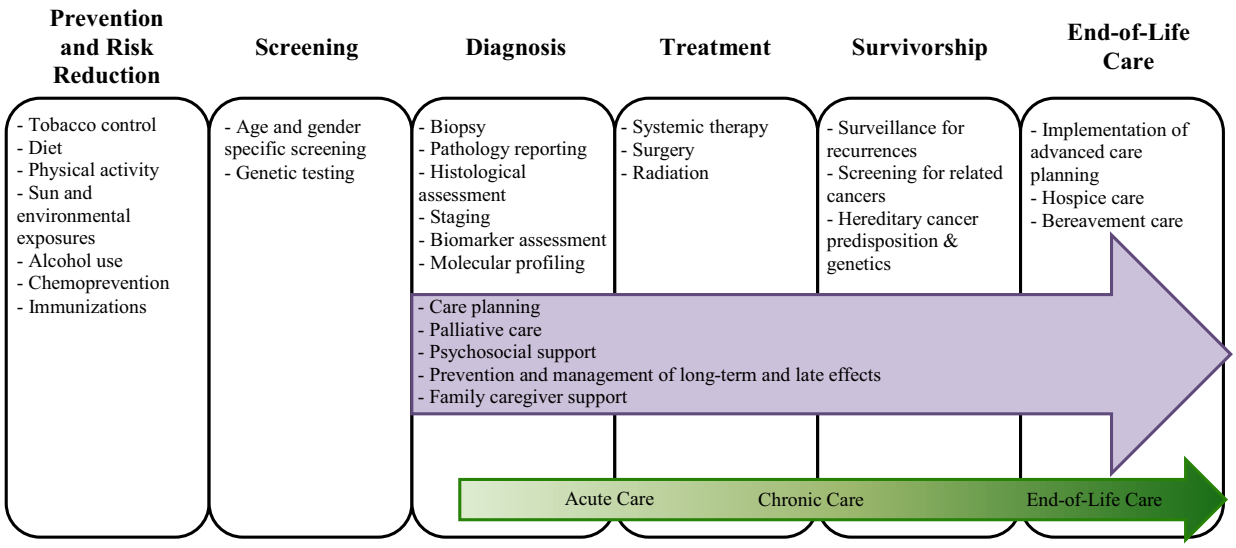

FIGURE 1. Continuum of cancer care. (Adapted with permission. © 2013 by the National Academy of Sciences. All rights reserved.[7]).

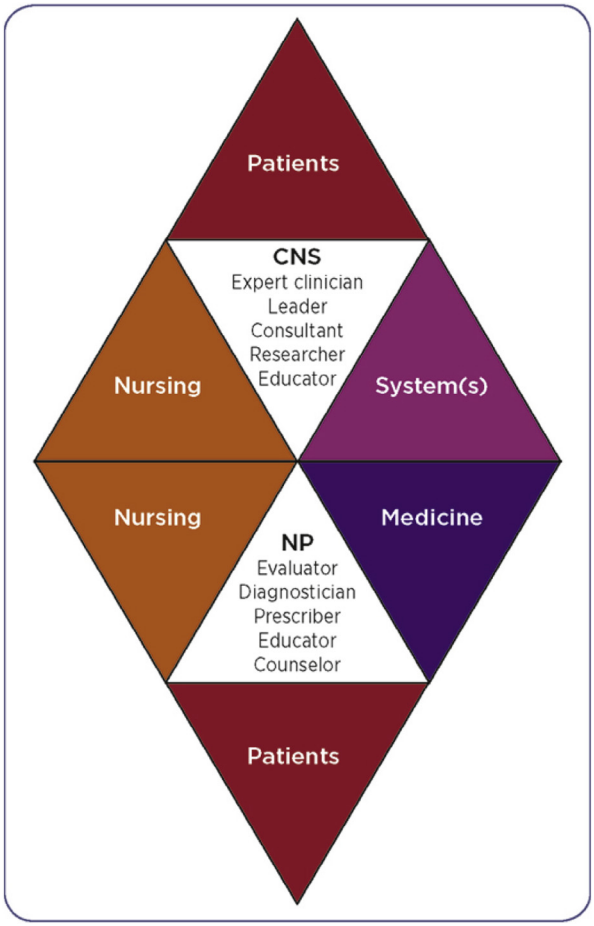

FIGURE 2. Conceptual model of advanced practice nurses in practice. (Reprinted with permission from Economou and Edgington.[8])

Prevention, Screening, and Diagnosis

APNs, like all primary care providers, play a critical role in primary and secondary prevention of cancer, beginning with risk assessment and screening for older patients.[13] APNs in primary care have the opportunity to build significant patient trust over the course of a provider-patient relationship that spans many years. This enhanced trust places primary care APNs in the unique position to partner with older adults and their families to address modifiable health risk behaviors and promote self-management strategies.[14] The responsibility of regular prevention and screening is well suited to APNs because this is consistent with their training, which emphasizes wellness promotion.[15,16]

Numerous lifestyle factors influence cancer risk, including tobacco use, obesity, physical inactivity, and poor nutrition.[17] While older adults and providers may believe that behavior change in old age is either unimportant or impossible,[18] older adults who practice healthy behaviors are more likely to live independently and incur fewer health-related costs.[19] For example, tobacco use is the single largest preventable cause of cancer and premature death worldwide,[17] and many of the adverse consequences of tobacco use are mitigated through cessation. APNs play an important role in the assessment of tobacco use as part of regular health maintenance and screening activities and can decrease an individual's cancer risk through providing assistance with smoking cessation. Similarly, high-calorie foods combined with physical inactivity predispose individuals to obesity and excess adiposity, which increases the risk of several cancers including breast, endometrium, colorectal, esophagus, and kidney.[17] As with tobacco use, APNs offer effective cancer prevention interventions when addressing diet and exercise at regular intervals.

APNs play a role in adhering to evidence-based age-appropriate cancer screening guidelines in older adults, including promoting colonoscopies and mammograms at regular intervals, and participating in discussions related to prostate cancer screening and lung cancer screening in high-risk individuals.[19] Furthermore, APNs can be a part of public health measures that attempt to correct the disparities in screening that exist among individuals who lack health insurance or have inadequate coverage.[20] APNs can challenge pervasive ageism among providers that serves as a barrier to timely diagnosis in the older adult by not stopping screening prematurely.[18] However, APNs must critically evaluate whether cancer screening offers more benefit than harm for the older adult because the harms of screening increase with age and comorbidity and the benefits of cancer screening are typically delayed 3 to 10 years.[21] To avoid advancing ageist views, as well as causing unnecessary harm to the patient and cost to the health care system, the decision to stop screening should be a collaborative process with the patient that takes into consideration the older adult's age, health status, preferences, and risks and benefits associated with the screening test.

Effective communication to cancer patients creates an environment that promotes better emotional response to diagnosis, enhanced cooperation with health professionals, and increased compliance to treatment.[22] Patients commonly report that they lack an understanding of the psychosocial aspects of a cancer diagnosis.[23] As the Institute of Medicine's (IOM) 2007 landmark report, "Cancer

Care for the Whole Patient: Meeting Psychosocial Health Needs," points out, assessment of psychosocial needs is a key component of quality cancer care.[24] APNs have the ability to communicate with their patients to effectively disseminate a cancer diagnosis, educate the patient regarding expected trajectory, and provide empathy. In the realm of gero-oncology, APNs demonstrate a greater emphasis on patient education, addressing psychosocial needs, and implementing psychological interventions.[25] When disclosing a diagnosis to older cancer patients, APNs need to involve the family when appropriate and provide adequate information because as there is often a tendency to withhold information when discussing diagnosis with elderly patients.[22]

Provision of Geriatric Oncology Care

Identifying and Accessing Appropriate Treatment

Accessing appropriate treatment after a cancer diagnosis can be complicated for older adults.[26] Although many older adults with cancer tolerate oncologic treatments,[27] a large percentage of these patients do not have access to the most suitable treatments because of factors intrinsic to the HCP, the type of care delivery system utilized, and a dearth of representative clinical trials.[28]

Ageism is common in geriatric oncology care. HCPs report age as a key factor in determining treatment choices and believe that older adults are less likely to want and tolerate aggressive treatment.[29] In 2006, the American Association of Colleges of Nursing sought to prevent this ageist attitude among future APNs by recommending that nursing faculty use their expertise to serve as role models against ageist practices and develop curricula that include exposure to well elders and positive aging attitudes.[30] In response to this call to action, graduate programs have worked toward the goal of integrating gerontological content across all graduate nursing programs.[31-34] These educational initiatives to address ageism have had a direct impact on clinical practice. Studies since that time have shown that while nurses in general have a positive attitude toward older adults, those with graduate level degrees hold older adults in even higher regard.[35,36] However, the challenge of reducing ageism must be met with substantial evidence. Nursing research to document and address ageism remains limited.[37] In another example of ageism in action, clinical cancer treatment trials have long excluded older adults, leading to a lack of understanding about the pharmacodynamics and pharmacokinetics of therapies on older adults, as well as decreased access for older adults to innovative cancer treatments.[38,39] APNs can advocate for their older patients by campaigning for the inclusion of older adults in clinical trials, staying up-to-date on clinical trials with expanded inclusion criteria, and even developing clinical trials of their own in conjunction with the concepts of gero-oncology.

Chronological age is no longer a metric on which HCPs should base care decisions.[18] By utilizing the Comprehensive Geriatric Assessment (CGA), APNs can better identify individuals who may be at risk of not tolerating treatment, allowing the multidisciplinary geriatric oncology team to offer more appropriate treatment options.[40-43] In one study, consultation with APNs in conjunction with a multidisciplinary team that performed CGA led to different treatment decisions in more than 40% of older adults with cancer.[41] APNs are well positioned to improve the clinical use of CGAs by linking it with outcomes measurements. A wide variety of CGA tools are used, but to provide consistent care, more work must be done in standardizing geriatric assessment across care settings.[42,44-46] APNs have training in tool development and implementation in clinical practice. Additionally, while CGA is widely used in geriatric oncology programs, it is not used as consistently in other care settings where these patients also access health care. APNs who have gerontological expertise are able to bring CGA techniques to other care settings.

The role of APNs in the Patient-Centered Care (PCC) model is well-established and the core principles of PCC (whole person care, coordination and communication, patient support and empowerment) have always been an integral part of nursing practice.[47] PCC shifts away from the paternalistic tendencies of the past and places patients in a role of power, increasing involvement in governing their own care through emphasizing shared decision-making.[48] As PCC improves outcomes, quality of life, and addresses disparities in health care, it unsurprising that older adults desire PCC, yet this role can be daunting for older cancer patients.[46,47] APNs lead the charge as patient advocates when collaborating with patients, families, and the care team to support and empower patients to make cancer treatment decisions that are aligned with their wishes.[47] PCC can be successfully adapted across care settings, especially in regard to cancer

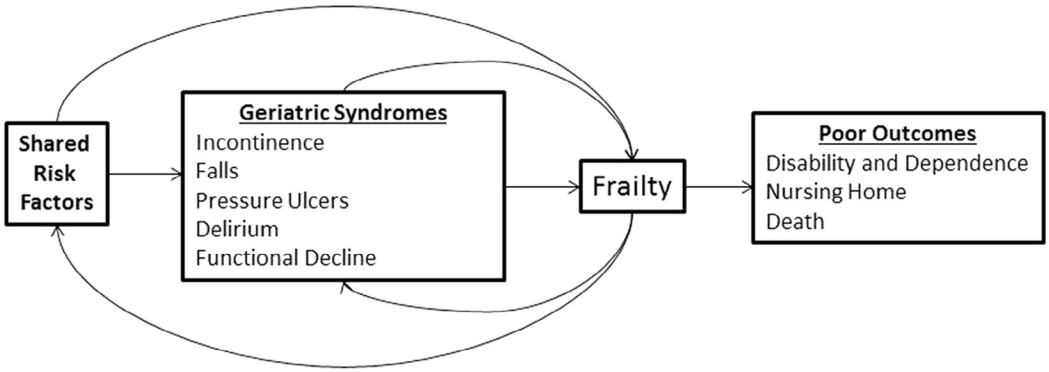

FIGURE 3. Conceptual model of frailty. (Adapted with permission from John Wiley and Sons.[54]).

care, but is often avoided during transitions where older adults are most vulnerable to inconsistent care.[13,49-52] APNs coordinate care between settings, ensuring that care of older cancer patients is consistent, despite the involvement of many providers.[53]

Cancer Treatment: Addressing Geriatric Syndromes and Frailty

Geriatric syndromes and frailty can lead to loss of independence, transition to a higher level of care, longer hospital stays, and higher mortality rates.[54] The deleterious effects of chemotherapy and the biology of cancer are risk factors specific to older cancer patients that lead to higher risk of geriatric syndromes, frailty, and ultimately negative outcomes.[55] In addition, cancer patients are at risk for treatment failure because of these syndromes, leading to advancing disease and further decline.[55]

APNs with geriatric training can help reduce the risk of negative outcomes associated with geriatric syndromes and frailty at each stage of the conceptual model of frailty (Fig. 3), especially in settings that lack a geriatric focus, such as general oncology clinics or some primary care centers.[54,56] APNs must first identify risk factors of frailty through careful assessment of cognition, functional status, and mobility[54,57] Without targeted assessment many older adults are unlikely to reveal these impairments to their provider, so CGA is the gold standard to elicit a complete and accurate history and examination.[57,58] Next, APNs must mitigate and address modifiable risk factors by collaborating with a multidisciplinary team of providers, including nutritionist, social workers, physicians, and physical therapists.[54] Polypharmacy and use of inappropriate medications designated as not safe for elders is a risk factor that can instigate the cascade of frailty in older cancer patients.[5,59] Multidisciplinary teams, including APNs with gerontological training, have been shown to reduce inappropriate pharmaceutical use even when used in consultation.[60] APNs can prevent frailty thorough medication reconciliation and elimination of unnecessary and high-risk medications.

Older adults with an underlying geriatric syndrome often present with non-specific symptoms or complaints that manifest in a manner that is different from typical presentation in younger adults, making these syndromes hard to identify.[54] For example, many older adults with an underlying urinary tract infection may complain of feeling irritable or not themselves because of the altered neural function seen in systemic infection. APNs, as generalists, are ideal providers to identify these multisystem syndromes early, which is key to minimizing poor outcomes.[53] APNs also play a role in educating other providers and caregivers to identify these syndromes.[25] Once an underlying cause is identified, APNs can choose targeted interventions to address geriatric syndromes.

Frailty is a multisystem physiological syndrome, independent of chronological age, that plays an additional role in functional decline in the older cancer patient.[61] Frail elders are at an increased risk of accelerated physical decline, which is associated with disability and death.[61] There are many models of care designed to address frailty that use APNs as their cornerstone, such as Programs of All-inclusive Care for the Elderly.[25] Through these models APNs can address comorbid frailty in older adult patients with cancer in the context of choosing appropriate treatment.[62-65] APNs are also able to identify new onset frailty during the treatment process and implement interventions to combat further decline.[40] Through gero-oncology care, APNs continue to assess for frailty throughout the continuum of survival.[25,40]

Beyond Curative Treatment

Palliative care is an important component of high-quality cancer care for older adults. Palliative care is patient-centered care that emphasizes management of pain and other distressing symptoms, as well as focusing on psychosocial and spiritual care; above all, palliative care aims to alleviate suffering and maximize quality of life for patients and families.[66] Early palliative care among cancer patients has been shown to improve quality of life, lessen depression, and decrease utilization of aggressive care, with some studies even suggesting a survival benefit.[67,68] Palliative care is particularly relevant for the older individual with cancer who may already have multiple comorbidities or a level of frailty that leads to greater functional impairment at an earlier stage of disease.[67,69] Thus, palliative care is most appropriately initiated at the time of diagnosis and continued throughout treatment to provide the greatest benefit to patients and families.

APNs are involved in delivering palliative care through inpatient consult teams as well as outpatient ambulatory clinics.[70,71] Moving forward, palliative care should become a core competency among APNs, especially those working in geriatrics, oncology, or gero-oncology, to provide palliative care without relying on consultant services. Unfortunately, research suggests that older cancer patients are less likely to receive palliative care, but there is an overall lack of studies focusing on palliative care interventions in elderly cancer patients.[67] Therefore, future research should seek to include older individuals in palliative care intervention work.

An important component of high-quality cancer care is maximizing quality of life throughout the end of life (EOL). Yet, EOL for many cancer patients is marked by overly aggressive cancer treatment, typified by the overuse of chemotherapy very near death, high rates of hospitalization or intensive care unit stays for terminal patients, and underuse of hospice services.[72] Taking into consideration this state of EOL, advance care planning (ACP) is an important element of gero-oncology care. Individuals who engage in ACP are more likely to have their wishes known and followed at EOL, improving patient and family satisfaction with the dying.[73,74] However, many APNs are not aware of the Physician Order for Life Sustaining Treatment or their ability to sign the orders.[75] Additionally, some APNs believe that advance directives alone are sufficient to communicate the patient's wishes, where in fact, advance directives along with an actual conversation with the patient and the family have better efficacy in ensuring patients' wishes were met.[75] APNs also report resistance from families and patients, physician attitudes, staff discomfort, and time as common barriers to ACP.[75]

Despite these barriers, research supports APN-led ACP interventions. For instance, one pilot study conducted in patients with metastatic cancer showed that a simple APN-directed discussion-based palliative care intervention that focused on hospice education, ACP, and quality-of-life assessment improved the emotional well-being and mental quality of life in patients and was well-received by families.[70] Moreover, APNs are uniquely suited to facilitate ACP discussions because as their education emphasizes holistic PCC with an emphasis on communication and quality of life.[75-79] Thus, APNs are capable of having ACP discussions and can have a beneficial impact and should not hesitate to initiate ACP discussions with patients across the care continuum. Furthermore, APNs can work with their institution to implement organizational change to embed ACP discussions into the culture. As a recent systematic review examining barriers to ACP concluded integration of ACP conversations into clinical settings cannot be left to the individual clinician alone; for real change to occur, health care organizations must do better to identify, record, share, and act upon patient preferences.[57] APNs can also work to address traditional disparities in ACP discussions by taking extra care to conduct these conversations with poorer, minority, and less-educated patients.[80]

Survivorship

Since the 2006 IOM report *From Cancer Patient to Cancer Survivor: Lost in Transition*, attention has been placed on survivorship and how best to continue to address cancer as a chronic condition.[10] The report emphasizes: 1) prevention of recurrent and new cancers and other late effects; 2) surveillance for cancer spread, recurrence, or second cancers and assessment of medical and psychosocial late effects; 3) interventions for consequences of cancer and its treatment; and 4) coordination between specialists and primary care providers.[10] Because the majority of cancer survivors are older adults, the IOM stresses the importance of focusing efforts on the unique needs of this population. However, research on older adults is still in its nascent stages.[10,81]

APNs have played a pivotal role in addressing the IOM goals over the last decade. Older adult survivors have both physical and psychological sequela from the cancer process and treatment.[81-84] Physical symptoms, such as ongoing rehabilitation, cognitive changes associated with systemic cancer treatment, and continued pain and symptom management can be adequately addressed by APNs in follow-up care.[83,85] Additionally, APNs can identify and target those at greatest risk for physical symptoms, including those with poor baseline functioning, low social support, or comorbidities.[81] The literature also shows that although older adults experience fewer psychosocial consequences in the first few years after diagnosis, they still have negative consequences later in survivorship.[81,82,84] As more older cancer survivors fall into this group,[81,86] APNs have met the call by addressing psychosocial issues early on in cancer diagnosis and through the disease trajectory continuing into survivorship.[82,84,87] Continual tertiary prevention of secondary cancers, recurrent cancer, and long-term complications should be maintained by primary care APNs and specialists alike.[85] Finally, APNs continually play an essential role in care coordination and transitional care.[88,89]

Survivorship care planning (SCP) and treatment summaries delivered through consultation as a part of ongoing care or integrated into oncology care have become an essential part of quality comprehensive cancer care.[8,90] Individuals receiving SCP from APNs had good outcomes and reported improved satisfaction and emotional functioning.[91] In some models, APNs are not only meeting the IOM goals for survivorship, but incorporating the evidence to address the needs of older cancer survivors. One model in Texas even trialed an APN coordinated survivor care model across care settings with positive outcomes.[92]

However, there is still room for growth in improving care for cancer survivors. Models like the one used in Texas are limited in practice. APNs should advocate for comprehensive survivorship programs, especially in primary care, where there are many cancer survivors. While much research focuses on APNs who specialize in survivorship care, APNs in primary care are already providing this type of care.[6] One study in 2011 showed that SCPs and treatment summaries barely met half of the IOMs recommendations.[93] Many older adults report feeling unprepared for the long-term effects of the disease and treatment, so education and anticipatory planning should begin early in diagnosis.[51] More work must be done to standardize survivorship care in the primary care setting to ensure adequate collaboration between oncology and PCPs.[6,8,90,93] Additionally, APNs should further characterize the specialized clinical needs of older adult survivors, who are the majority of survivors.[94] Finally, APNs can contribute to this body of literature and clinical practice by performing outcomes-based research in their own survivorship practices.

Conclusion

APNs have made huge strides in caring for older adults with cancer through prevention, screening, and diagnosis, evidence-based geriatric oncology care, and during the entire continuum of survivorship. However, there is much work to be done. Through innovations in clinical care and a broadened research agenda, APNs can be a part of improving the cancer care of older adults.

Outside of specialized oncology clinics, APNs promote wellness, prevent disease, meet psychosocial needs, and combat ageism through prevention, screening, and diagnosis of cancer. In the future, APNs can lead the field in developing innovative ways to better to ensure that patients are screened appropriately, for example, by utilizing electronic health records and automated systems. Targeted interventions to address modifiable risk factors, including motivational interviewing and patient education programs, should be championed by APNs, specifically in primary care where APNs have built trusting relationships. APNs can conduct careful research about best practices during diagnosis, taking special care to consider family dynamics and the needs of the older adult at this vulnerable time. Finally, APNs must educate other providers about inappropriate ageist screening practices that delay diagnosis, while keeping in mind that cancer screening is not benign.

During cancer treatment, APNs help older adults identify and access appropriate treatment by avoiding ageism, performing comprehensive assessments, and providing care that focuses on the patient. While much has been done to prevent ageism in future providers through education, APNs must lead the charge to explore clinical implications of ageism and best practices for older adults with cancer and advocate for inclusion of older adults in clinical trials.[38,39,95] CGA has been effectively used in geriatric oncology to predict adverse events for older

adults, but more work should be done to standardize geriatric assessment tools, assess how CGA effects treatment decisions and outcomes, and broaden CGA use beyond specialized cancer clinics.[42,44-46] APNs play a central role in providing PCC, which improves outcomes and quality of life, by acting as patient advocates and communicators between care teams.[88] However, PCC is often not adequately provided during transitions in care, where older adults and their families report confusion, unmet needs, and unfulfilled expectations.[50] APNs can improve these transitions by applying PCC in transitional models coordinating care across settings to ensure that the patient's treatment remains consistent and patient-focused.

The complex interplay between risk factors, geriatric syndromes, and frailty is met by APNs with geriatric training who can identify problems early, address underlying conditions, and mitigate risk factors.[54] Evidence for the role of epigenetics in frailty is increasingly present.[96] APNs, who access patients across their lifespan play a key part in exploring the interplay between environment, genetic risk, and frailty. APNs are well suited to conduct translational research to further explain the pathophysiology of frailty and bring the bench to the bedside to better understand which interventions reduce risk.[97]

Early palliative care has had great success for cancer patients, but APNs with geriatric training can help to tailor palliative care to better fit the unique needs of older adults.[67] While palliative care is provided as a specialty practice across care settings, APNs should include core competency of palliative care across all specialties to alleviate the high volume of patients referred to palliative care specialists. Given the state of EOL in older adults with cancer, APNs need to focus on ACP, including addressing barriers and ensuring patient's wishes are followed, by enlisting the Physician Order for Life Sustaining Treatment and having effective goals of care conversations.[72]

APNs have developed models of care for cancer survivors that meet the goals set out by the IOMto address the needs of a growing population of cancer survivors.[8,10] However, coordination between care settings is lacking in survivorship care. APNs can increase communication between teams by developing comprehensive standardized SCP for patients and other HCP. To reach more patients and ensure continuity of care, they can adapt successful models to new settings, such as acute or primary care. Additionally, survivorship models may not be meeting the unique needs of the older adult cancer survivor and APNs can help design research studies to explore specific issues of this population.[93]

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