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Oncology and Cancer Medicine: Understanding the Complexities in Older Patients

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ABSTRACT

The field of oncology and cancer medicine presents unique challenges when addressing the needs of older individuals. These abstract aims to explore the intersection of oncology care and aging, focusing on the assessment, diagnosis, and interventions relevant to nursing practice. Older adults comprise a significant proportion of cancer patients, yet they often present with distinct physiological, psychological, and social characteristics that necessitate tailored approaches to care. The assessment process for older cancer patients encompasses comprehensive geriatric assessments, which evaluate not only disease-specific factors but also functional status, comorbidities, and geriatric syndromes. Diagnosis in this population may be complicated by age-related changes in symptom presentation, response to treatment, and tolerance to therapy. Nurses play a crucial role in facilitating timely and accurate diagnosis through vigilant monitoring, communication, and collaboration with multidisciplinary teams. Interventions for older adults with cancer encompass a holistic approach that addresses physical symptoms, psychosocial needs, and quality-of-life considerations. Nurse-led interventions may include symptom management, medication reconciliation, supportive care, and patient education tailored to the unique needs of older individuals. By integrating geriatric principles into oncology nursing practice, nurses can optimize care outcomes and enhance the quality of life for older adults living with cancer.

Keywords: Oncology; Cancer Medicine; Older Adults; Assessment; Diagnosis; Interventions; Nursing Practice; Geriatric Oncology; Comprehensive Geriatric Assessment; Symptom Management; Supportive Care

Introduction

Oncology, the branch of medicine that deals with the diagnosis, treatment, and prevention of cancer, presents unique challenges when it comes to caring for older patients (Komatsu [1]). As the global population continues to age (Horta Reis da Silva [2-6]), the incidence of cancer among older adults is expected to rise significantly (Pilleron, et al. [1,7]). However, older patients often face distinct physiological, psychological, and social factors that can impact cancer care and outcomes. By 2040, there would be 28.4 million cases worldwide, with 14 million additional cases among older persons (Sung, et al. [1,8]). This is a 47% increase in the cancer burden since 2020. Because of the length of carcinogenesis, the susceptibility of ageing tissues to environmental carcinogens, and other physiological changes, age is a risk factor for cancer (Balducci [1,9]). When treating older persons with cancer, healthcare practitioners must deal with comorbidities, polypharmacy, and age-related frailty (van der Poel, et al. [1,6,10-14]). While loneliness may not directly cause cancer in older adults, it is intricately linked to cancer risk, progression, and survivorship through its impact on psychological stress, immune function, health behavior, social support, healthcare utilization, and quality of life (Horta Reis da Silva [15-17]).

Recognizing and addressing loneliness as a psychosocial determinant of health is essential for promoting resilience, well-being, and optimal cancer outcomes among older adults. Interventions aimed at enhancing social connectedness, fostering supportive relationships, and addressing emotional distress may

play a critical role in mitigating the adverse effects of loneliness on cancer-related outcomes in this vulnerable population (Horta Reis da Silva [15-17]). Understanding these complexities is essential for providing comprehensive and personalized care to older individuals with cancer. The use of proven clinical assessment instruments and decision-making models is advised by clinical practice guidelines (Soto Perez de Celiz, et al. [1,12]). However, during the first three months of chemotherapy, significant toxicity affects more than 50% of older patients with advanced disease (Hurria, et al. [1,18]). Making educated treatment decisions requires taking older individuals› values and preferences into consideration. Geriatric evaluations can support shared decision-making and assist control the vulnerability of older persons with cancer (Komatsu [1]). Geriatric evaluations can support shared decision-making (SDM) between patients, carers, and oncologists as well as assist control the vulnerability of older persons with cancer (Mohile, et al. [1,19]).

Although their responsibilities in the treatment decision-making process are complicated and need flexibility, nurses play a vital role in determining and enabling patients› choices during cancer SDM (Komatsu [1]). This article provides an overview of the intersection between oncology, cancer medicine, and older people, highlighting key considerations and approaches to improve care for this vulnerable population. Komatsu [1]'s study centers on the role that nurses play in helping older persons with cancer make decisions about their course of treatment. It emphasizes the significance of geriatric screenings, or GAs, and the function that they play in detecting geriatric syndromes, gathering patient preferences, and encouraging effective communication. According to the available research, patients› outcomes improve when treatment choices are made with their preferences and frailty state in mind. But there are time limits associated with implementing GAs, and nurses must become proficient in performing GAs in an efficient and effective manner (Komatsu [1]).

Comprehensive Geriatric Assessment (CGA)

To address the unique needs of older patients with cancer, comprehensive geriatric assessment (CGA) has emerged as a valuable tool for oncology clinicians (Parker, et al. [20]). CGA involves a multidimensional evaluation of older adults› physical, functional, cognitive, psychological, and social status to identify vulnerabilities, optimize care plans, and tailor treatment approaches. CGA enables oncologists to assess older patients› overall health status, frailty, comorbidities, medication use, nutritional status, psychosocial needs, and preferences, which inform treatment decisions and supportive care interventions (2018). The American Society of Clinical Oncology (Giri, et al. [21]), National Comprehensive Cancer Network (DuMontier, et al. [22]), and International Society of Geriatric Oncology (Extermann, et al. [23]) have advised geriatric screening and assessment (GAs) for all older persons with a new cancer diagnosis (Komatsu [1]). By determining each patient›s level of comprehension and aiding in interpreting the material, nurses play a crucial role in detecting the information requirements of older patients. Many elderly cancer patients have faith in their doctors and are content with the information they receive, but they also encounter inadequate communication both before and after making treatment decisions (Komatsu [1]). In addition to providing psychological support, eliciting, and identifying the information requirements particular to each patient, and facilitating appropriate risk perception, nurses must employ the teach-back approach (Komatsu [1]).

Sometimes older cancer patients may not see nurses as experts who can provide them with vital information about their treatment. Obstacles in practice, education, institutional regulations, and administration are among the difficulties faced by oncology nurses (Komatsu [1]). To lower these obstacles and elevate nurses› responsibilities as essential healthcare providers for elderly cancer patients, nurses must cultivate communication skills that enable them to direct patients› information demands. Policymakers and clinical practice guidelines propose using Structural Decision Making (SDM) as a conventional strategy in the decision-making process (Maes-Carballo, et al. [1,24,25]). Putting in place a communication training program encourages SDM and patient involvement. Adult children or spouses of older cancer patients are frequently involved in treatment decision-making. Using the fundamentals of a family system approach and family health talks as a basis, nurses should create workable solutions for triadic conversations pertaining to treatment decisions (Komatsu [1]).

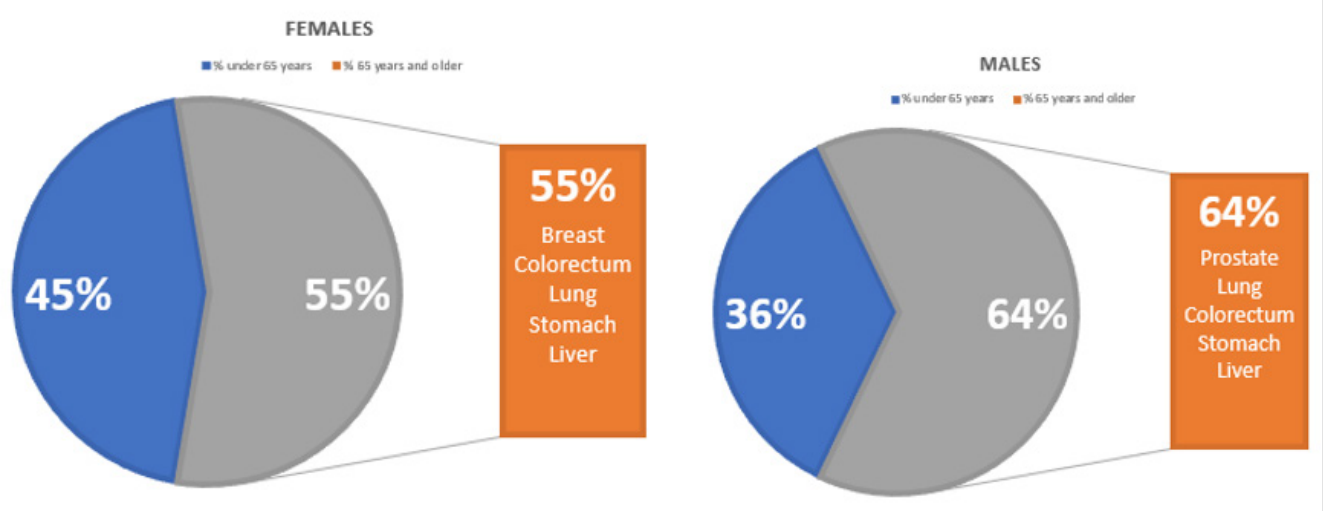
Epidemiology of Cancer in Older Adults

Cancer is predominantly a disease of aging, with most cancer diagnoses occurring in individuals aged 65 and older (Pilleron, et al. [1,7]). As life expectancy increases and the population ages, the burden of cancer among older adults is expected to grow (Pilleron, et al. [1,7]). Common types of cancer in older adults include breast cancer, prostate cancer, lung cancer, colorectal cancer, and hematologic malignancies such as leukemia and lymphoma (Pilleron, et al. [7]). Additionally, older adults are more likely to have multiple comorbidities and complex medical histories, which can impact cancer diagnosis, treatment decisions, and outcomes (Reis da Silva [6]).

Major Cancer Sites Among Older Adults

Prostate cancer was the most common cancer among older men worldwide (Figure 1) and in every area except in Asia, where lung cancer outnumbered all other cancers. In most areas, lung and colorectal cancer were also prevalent malignancies (Pilleron, et al. [7]). In Asia, the Middle East, North Africa, and sub-Saharan Africa, stomach cancer was the second most common cancer diagnosed in men over the age of fifty. Liver cancer was more common in these regions. In all locations, these five malignancies accounted for more than two thirds of the overall cancer burden among those 65 years

of age and older (Pilleron, et al. [7]). Breast cancer was the most frequent cancer among older females worldwide (Figure 1) and in most of the world›s regions, except for Asia, which includes China, and sub-Saharan Africa, where cancers of the colon, the lung, and the cervical area were more common, respectively. In Asia, the Middle East, North Africa, and sub-Saharan Africa, liver cancer was the most common cancer site among men, while colorectal cancer was among the top five cancer sites worldwide (Pilleron, et al. [7]). The top five malignancies in this age range explained less of the overall cancer burden than did men, but they nevertheless accounted for 46% of cancer cases in the Middle East and North Africa and 66% of cancer cases in China (Pilleron, et al. [7]). Oceania, northern America, and Europe had the greatest rates of prostate and colorectal cancers in older males, and the highest rates of breast and colorectal cancers in older females, with respect to the rates of the individual primary cancer sites (Pilleron, et al. [7]).



Note: Source: Pilleron, et al. [7].

Figure 1: Incidence of Cancer in Older Adults by Gender.

Sub-Saharan Africa had the lowest rates of lung and colorectal cancers for both sexes, whereas Asia (including China and India) had the highest rates of stomach and liver cancer among older males and females. The cancer site determined how much the rates varied between areas. When comparing the rates of lung cancer in sub-Saharan Africa (24 per 100,000) with northern America (325 per 100,000 in both sexes combined), the biggest difference was seen in lung cancer (Pilleron, et al. [7]). The combined rate of colorectal cancer in Oceania (286 per 100,000) and sub-Saharan Africa (32 per 100,000) was found to be nine times higher. When it came to liver cancer, the variations were smallest, with rates varying three times between Northern America and Asia (from 29 per 100,000 in both sexes to 89 per 100,000) (Figure 2).

Note: Source: Jomar [36].

Figure 2: Nursing Diagnosis in hospitalized older adults with Cancer.

Challenges in Oncology Care for Older Patients

Caring for older adults with cancer presents several challenges due to age-related factors, including physiological changes, comorbidities, polypharmacy, cognitive impairment, functional decline, and social isolation (Seghers, et al. [1,26]). Older patients may also experience disparities in access to cancer screening, diagnosis, and treatment due to ageism, lack of awareness, and underrepresentation in clinical trials. Furthermore, older adults are more susceptible to treatment-related toxicities and adverse events, which can compromise treatment efficacy and quality of life (Seghers, et al. [1,26]). The study (Seghers, et al. [26]) examined the difficulties of treating elderly individuals with multiple comorbidities, such as cancer, in clinical practice. To create a new treatment route for these patients, five elements were found to be important: care coordination, patient support and monitoring, decision making, and patient monitoring. A limited number of patients and carers, selection bias, recollection bias, and the study›s emphasis on geriatric oncology were among its drawbacks (Seghers, et al. [26]). For older cancer patients, geriatric assessment (GA) has been shown to improve the incorporation of non-oncologic information and support decision-making (Wagner, et al. [11, 19,26-31]). For older patients with multimorbidity, including cancer, it is critical to consider GA findings when making treatment decisions and to make sure impairments are targeted with treatments (Seghers, et al. [26]).

More attention was paid by patients and their carers to the aftereffects of therapy, including managing side effects and preserving functionality and quality of life. It is necessary to place a strong emphasis on maintaining and improving functionality, quality of life, and care reliance both during and after therapy (Seghers, et al. [26]). In older patients with multimorbidity, follow-up and reevaluation of ongoing treatment are crucial; however, geriatric oncology has not yet completely perfected this follow-up. Studies have demonstrated increased quality of life, longer survival times, and reduced healthcare utilization using remote symptom monitoring. For our demographic, concurrent monitoring of other illnesses or functioning can be just as crucial (Basch, et al. [26,32-35]). Only patients and their careers, not medical experts, recognized the significance of carer burden and carer engagement (Seghers, et al. [26]). Although it may not receive enough attention in the present healthcare system, carer engagement is crucial and should be considered when developing a care plan for elderly people who have many medical conditions, including cancer. It has been demonstrated that including a nurse navigator and holding multidisciplinary team meetings enhances communication and care coordination within the multidisciplinary team as well as the patient experience (Seghers, et al. [26]). The necessity of switching from a single-disease treatment pathway to an integrated patient-centered strategy has been underlined by research on multimorbidity.

For patients with multimorbidity, each pathway will need to be customized based on a detailed assessment of all issues pertaining to multimorbidity, cancer, general health, and patient values. In summary, the care of elderly individuals with many medical conditions, such as cancer, is intricate and necessitates a departure from a singular disease-focused treatment approach. A patient-centered care route for elderly patients with multimorbidity, including cancer, may be further developed using the information provided here.

Personalized Cancer Care for Older Adults

Personalized cancer care involves tailoring treatment strategies to individual patient characteristics, preferences, and goals. In older adults, personalized cancer care emphasizes a holistic approach that considers not only cancer-related factors but also overall health status, functional status, quality of life, and treatment tolerability. Treatment decisions for older patients with cancer should be guided by evidence-based guidelines, multidisciplinary collaboration, and shared decision-making between patients, caregivers, and healthcare providers. Additionally, supportive care interventions, such as palliative care, symptom management, psychosocial support, and rehabilitation, play a crucial role in optimizing outcomes and enhancing quality of life for older adults with cancer.

Nursing Diagnosis

Jomar [36] wrote a integrative review and highlighted the ten most common nursing diagnosis in hospitalized older adults with cancer:

Nursing Interventions

Farrington [37] purposed in their scoping review to identify and describe supportive treatments designed for elderly patients receiving cancer therapy. The emphasis on geriatric evaluation, particularly about oncological decision making, is one of its features. Prior research has demonstrated the potential advantages of geriatric evaluation for cancer patients under consideration for therapy in terms of managing complexity, uncovering latent issues, enhancing functional status, and choosing suitable interventions. Given population trends, certain localities are shockingly lacking, nonetheless (Farrington [37]). The interventions found in this review downplay the complexity of the elder cancer patient›s experience. Complex concerns including frailty, multimorbidity, or the effects of other geriatric disorders in addition to cancer were seldom addressed by the therapies (Farrington [37]). If researchers and practitioners want to make health care responsive to the unique requirements of this population, they must recognize and address complexity in the design and assessment of treatments. Lastly, research (Farrington [37]). indicates that older adults place a high value on freedom, and that preserving independence is just as crucial to maintaining good health. Although several of the described therapies implied the development of independence for this patient population, the outcome measures employed do not explicitly reflect this as an objective (Table 1) [38,39].

Table 1: Domains and tools used for CGA of older adults with cancer.

Domains	Tools
Social	Medical Outcomes Study Social Support Survey Live Alone
Dependency	Activities of Daily Living
Mobility	Timed get up and go test. Short physical performance battery
Nutrition	Mini Nutritional Assessment
Cognition	Short Portable Mental Status Questionnaire Mini Mental State Examination
Mood	Geriatric Depression Scale (4, 15 and 30 items)
Comorbidity	Charlson Comorbidity Index
Medication	Polypharmacy

Note: Source: Caillet, et al. [38]

Conclusion

Caring for older adults with cancer requires a comprehensive and multidisciplinary approach that addresses the unique needs and challenges faced by this population. By understanding the complexities of oncology care in older patients, healthcare providers can deliver personalized and compassionate care that optimizes outcomes and enhances quality of life. Moving forward, efforts to improve cancer care for older adults should focus on integrating geriatric principles into oncology practice, promoting age-inclusive research and clinical trials, enhancing access to supportive care services, and fostering collaboration among healthcare professionals, patients, families, and communities. Through a holistic approach to cancer care, we can strive to improve the health and well-being of older individuals affected by cancer.

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