Head and Neck Cancer in the Elderly

Frailty, Shared Decisions, and Avoidance of Low Value Care

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KEYWORDS

• Head and neck cancer • Older adult oncology • Frailty • Shared decision making • Patient-centered care • Supportive and palliative care

KEY POINTS

- Head and neck cancer is a disease of older adults, with an estimated 61% of patients ages 65 and older by the year 2030.
- Even with treatment advancements, recurrent/metastatic head and neck squamous cell carcinoma remains a lethal disease with median overall survival of less than 12 months.
- It is imperative to distinguish fit individuals, who may tolerate multimodality therapy, from frail patients, who may benefit from prehabilitation or palliative and supportive services.
- Chemotherapy, radiation, and targeted molecular agents have limited efficacy when used for the palliation of symptoms in advanced disease.
- Shared decision making considers evidence-based best practices in the context of a patient's goals and values and forms the foundation of end-of-life considerations in geriatric oncology.

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INTRODUCTION

Head and neck cancer (HNC) refers to a diverse group of histopathologic malignancies that can originate in the upper aerodigestive tract. More than 90% are squamous cell carcinomas that arise from the mucosal surfaces of the oral cavity, oropharynx, and larynx.[1] In the setting of early disease (stages I–II), there is an 80% cure rate with single-modality therapy, either surgery or radiotherapy.[2,3] A majority of patients (>60%) with head and neck squamous cell carcinoma (HNSCC), however, present with locoregionally advanced disease (stages III and IVA/B) and metastatic tumors (stage IVC).[2,4] Despite multimodality therapy, more than half of patients with locally advanced HNSSC develop recurrences and 30% are at risk of distant metastases.[5,6]

Survival Rates

Survival rates have demonstrated only marginal improvements over the past 30 years, with 5-year overall survival rates reported between 40% and 60%.[7] The growing incidence of human papillomavirus–associated oropharyngeal HNSCC as well as advances in multimodality therapy, including targeted therapy, intensity-modulated radiotherapy, and minimally invasive surgery, have contributed to observed improvements in prognosis.[8,9] Emerging immunotherapeutic agents are also promising developments currently undergoing clinical testing.[3,10] Despite these advancements, recurrent or metastatic HNSSC remains a lethal disease with median overall survival of less than 12 months.[11]

Epidemiologic Trends

The theory of "epidemiologic transition" describes the shift from infectious to degenerative and chronic diseases as the primary causes of morbidity and mortality, particularly in developed countries.[12] The concept illustrates the evolution of neoplastic disease in the setting of increasing life expectancy. Between 1980 and 2000, adults ages 65 and older in the United States increased by 10 million, with a projected doubling in growth to 72 million by 2030.[13] Given advanced age is the most significant risk factor for cancer overall, increases in age-related malignancy rates and survivors will challenge current treatment paradigms.[13,14] Between 2010 and 2030, a 67% increase in overall cancer incidence is projected for patients ages 65 and older.[13] HNSCC demonstrates comparable epidemiologic trends. Despite the increasing proportion of human papillomavirus–positive oropharyngeal cancers, which characteristically affect younger patients, HNC remains a disease of older adults.[15] By 2030, an estimated 61% of HNC patients will be ages 65 and older.[13]

Older patients have been historically underrepresented or excluded from clinical trials, which define standards of care, with only 3.4% of current studies globally involving patients older than 65 years.[15,16] In a meta-analysis of HNC chemotherapy, only 4% of patients across 93 clinical trials were older than 70 years.[17] In the absence of high-level evidence to drive treatment models, a multidisciplinary approach to understand the goals of elderly patients and their caregivers is paramount.

Treatment at the End of Life

Despite the introduction of the Medicare hospice benefit in 1983, care for patients at the end of life comprises more than 25% of Medicare expenditures. Between 1978 and 2006, multiple hospitalizations in the last few months of life and the use of intensive/coronary care units increased among Medicare patients ages 65 and older.[18] The is consistent with reported trends in increased aggressiveness of inpatient and cancer care near the end of life.[19] More than 30% of elderly Americans undergo surgery in the