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How we treat early systemic prostate cancer in older men

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ABSTRACT

With the aging of our population, the prevalence of prostate cancer is anticipated to rise dramatically. Consequently, physicians will be confronted with the challenges of managing prostate cancer and treatment side effects in older men. The maintenance of mobility and functional independence, which are fundamental goals of the aging patient with cancer, should not be overlooked when choosing treatments and their toxicities focused on cancer control. Consistent with the SIOG (International Society of Geriatric Oncology) guidelines, we recommend standard approaches for older patients with prostate cancer who are fit. Vulnerable patients should also receive standard treatment, provided their health status can be maintained with appropriate interventions. Treatment for frail patients should be adapted to their health status and supportive care interventions should be considered. Individualized treatment plans should take into account patient's remaining life-expectancy from coexisting comorbidities and disability, aggressiveness of the prostate cancer, treatment preferences as well as potential adverse effects of treatment.

Contents

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1. Introduction

Prostate cancer (PCa) is the most common non-skin malignancy among older men. Over 60% of all PCa cases are diagnosed in men over 65 years of age.[1] The estimated prevalence of PCa in men aged 75 years and older is currently over a million and expected to quadruple by 2030 in the United States, given the long natural history of the disease and aging of the population.[2–4] All of these statistics portend an increasing number of older men, including those in the oldest age groups, with a diagnosis of PCa who will likely develop systemic disease and experience significant treatment toxicities. In this article we provide a geriatric oncologist's perspective in the management of patients with early systemic prostate cancer, with an emphasis on preservation of quality of life and functional independence.

2. Characteristics of the Older Patient with PCa

Compared to younger patients, older adults have a higher likelihood of having decreased physiologic reserve, functional impairment, and comorbidities including cognitive impairment.[5] These age related changes impact tolerance and could shift the risk benefit profile of cancer treatment. The prevalence of each of these changes is however not uniform as older patients are a heterogeneous group and hence oncologists should "stage the age". Bylow et al., noted that in men (≥70 years.) with systemic PCa, a substantial number were vulnerable to frail at baseline, and were at risk of significant functional and physical decline after even short-term cancer treatment[6].

Table 1 – Stages of aging.
Adapted from Balducci L and Extermann M. Management of the frail person with advanced cancer. Critical Reviews in Oncology/Hematology 33; 143–48, 2000.

Stage	Proposed Definition*
Fit	• No functional dependence in ADL and IADLs • No comorbidities • No geriatric syndromes
Vulnerable	• Dependence in one or more IADLs but not ADLs • Comorbidities present but not severe or life threatening • May have mild memory disorder and/or mild depression but no other significant geriatric syndromes
Frail	• Age ≥ 85 years • Dependence in one or more ADLs • Any significant geriatric syndrome • 3 or more grade 3 comorbidities or any grade 4 comorbidity (with limitation of daily life)

* Fit patient should meet all criteria, while a person is designated as vulnerable or frail if he has any one of the above criteria.

3. Assessing Health Status and Treatment Preferences

Chronologic age and common assessment instruments in oncology (e.g., Karnofsky performance status) do not address critical geriatric domains that predict morbidity and mortality in the older patient. Hence physiologic age may be more helpful information for making treatment decisions. At the initial visit, we determine the functional status of the patient before discussing the risks and benefits of management options.

Assessments such as a Geriatric Assessment (GA) can help individualize and optimize treatment strategies, thereby helping to avoid both over- and under-treatment of prostate cancer.[7,8] A GA includes a compilation of reliable and validated tools to assess geriatric domains such as comorbidity, functional status, physical performance, cognitive status, psychological status, nutritional status, medication review, and social support. A GA can detect unsuspected conditions that may affect cancer treatment in more than 50% of older patients.[9] A GA can help identify the vulnerable older individual who is likely to benefit from and tolerate standard therapy, as well as the seemingly fit older individual who is more likely to experience undue side effects. Hence the National Comprehensive Cancer Network (NCCN) recommends a GA as a key component of the management approach for all older patients with cancer. With these assessments, patient can be categorized into one of the three management groups: fit, vulnerable, or frail (Table 1); they can also be used to estimate remaining life expectancy (RLE).[10] Vulnerable and frail patients are at a high risk of functional decline or death as well as adverse outcomes.[11] Along with taking into account the cancer and treatment risks, we clarify patient's values, goals, and preferences before making a shared decision regarding treatment. At each subsequent visit, we reassess each of these parameters to be certain that the current treatment remains in patient's best interest.

4. Who Benefits from Salvage Surgery or Radiation Therapy?

In the setting of biochemical relapse (BCR), there is a subset of men in whom the disease may be confined to the prostate bed for whom salvage therapies can provide prolonged disease free intervals. While there are no prospective trials to support criteria for salvage therapies in older patients, we consider patients with a long disease-free interval following definitive treatment, low PSA levels at recurrence (≤0.5), PSA doubling time ≥12 months, without extra-prostatic extension of cancer at diagnoses, or persistent PSA elevation following definitive treatment as candidates for salvage radiation or prostatectomy.[12–14] In older patients who meet all of these conditions, we use a GA to estimate their fitness level and RLE; if they are fit and have greater than 10 years of RLE, we discuss salvage options.[15] In the vulnerable and frail population, we prefer observation to