Short Communication

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Geriatric oncology: where age is not measured by years

Keywords: oncology, neuropsychological, drugs

Abbreviations: CGA, comprehensive geriatric assessment; ECOGPS, eastern cooperative oncology group performance status; ASCO, american society of clinical oncology; SIOG, society of geriatric oncology

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The profile of aging is dramatically changing over the last century. In the United States of America, the proportion of the population over 65years of age will exceed 20% by 2030.[1] Similarly, world wide's number of adults over 60years of age will constitute over 20% of the world's population in 2050.[2] According to the ''Insee'', the probability to reach 85years old, in 2050, will be 82% for women and 56% in men. A large proportion of the population is aging with this increase in the life expectancy. Age is a risk factor for many diseases, especially cancer. Currently, 60% of newly diagnosed malignant tumors and 70% of cancer deaths occur in people aged 65years or older.[3] In the literature, many cancers are linked to aging; these include breast, colorectal, prostate, pancreatic, lung, bladder and bladder carcinomas. Consequently, Medicine created a sub-specialty of Geriatric Oncology. This branch is mainly concerned by the diagnosis and treatment of cancers in the elderly, defined as aged 65 and older, while incorporating the special needs of the elderly into the treatment of cancer. So, the age was transformed from an absolute chronological number to an association and accumulation of multiple comorbidities.

Older adults with cancer have different needs compared with younger adults suffering from the same diagnosis. While growing in age, elder population will accumulate a decrease in many physiologic reserves associated with other medical problems. They have a lower ability to tolerate certain cytotoxic or targeted therapies, making them prone to develop higher rates of toxicities. They may also have functional problems related to basic daily activities (dressing, bathing and eating) or other more advanced activities (such as using transportation, going shopping or handling finances). Moreover, the mortality of a certain cancer increases when it is diagnosed at an elder age compared with younger age at diagnosis. Besides, clinical trials usually exclude the elderly. Thus, the guidelines for treatment of cancer were mainly based on the younger population. A lot of research in this area is needed.[4] Older patients have their unique needs because of their frequent complex medical histories, numerous drugs they are taking, their social situations on top of the possible problems with cognitive dysfunction related to age.

Hence, these patients need a special evaluation during the work up and staging of the neoplasm in order to be better psychologically, mentally and physically prepared to the next therapeutic phase. Extensive surgeries are known to be curative in some malignancies. Other tumors require intensive chemotherapeutic management with curative intent. These options could be heavy and are usually not tolerated in the geriatric population. So, elder patients above 65 to 70years require special evaluation called: comprehensive geriatric assessment (CGA). The Karnofsky index and the Eastern Cooperative Oncology Group performance status (ECOG PS) have been widely used to assess functional status in cancer patients. These serve mainly to evaluate adult patients. In the elder population, the performance is conditioned by many factors that make an elder more frail compared to another with same physiologic age. These factors include an evaluation of the food intake, weight loss, mobility, neuropsychological problem and body mass index, prescription of drugs and self-perception of health. These 7 items were grouped together in a score called G8 screening tool. It takes 3-5minutes. The score ranges from 0, which is considered a poor score, to 17 that is a good score. A score of ≤14 is considered abnormal and define the population category called frail, which is associated with poor outcome of the disease and increased toxicity to treatment.[5] The test's sensitivity ranges from 65% to 92%, but it was shown to be more than 80% in many previous studies that underwent a full geriatric assessment detecting the impairments.[6] In addition, several studies reported that G8 has a prognostic value regarding the survival outcomes in many solid and hematological malignancies.[7,8] Moreover, Bellera and colleagues tried to identify the frail elder population that requires special evaluation for an adequate management. A group of patients, even at more than 70years of age were classed in the favorable group; thus, they were assessed and treated according to standard adults' protocol.[9] Over the previous epidemiological studies and age group analyses, elderly patients with good ECOG-PS scores, that were generally considered fit and able to receive standard intensive therapy comparable to younger patients, were found heterogeneous. Some patients, even with good ECOG-PS, have poor survival outcomes and/or cannot tolerate standard therapy.

Conclusion

In conclusion, the worldwide cancer burden is growing rapidly proportionally to the population increasingly aging. There is an urgent need for a stronger research based on the diagnosis, treatment and survivorship care for older adults, especially the frail subgroup. In the geriatric oncology, the age should not be defined as the number of years, but as the degree of frailty with all its associated poor outcome and decreased survival. Thus, the American Society of Clinical Oncology (ASCO) and the International Society of Geriatric Oncology (SIOG) are insisting on the practice-changing and geriatric based clinical guidelines, adopting new effective tools and assessments for the clinicians, caregivers and patients.

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Conflict of interest

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