EDITORIAL

Treatment of Cancer in the Elderly

The elderly accounts for 13-15% of the total population in the U.S. and Europe [1]. The age range of old people is defined as 65 years and older. However, this broad definition does not distinguish between patients at different stages of aging. Sometimes, it is useful to consider three different stages: the old people between 65 and 74 years of age, the older people between 75 and 84 years of age, and the oldest, who are 85 years or older.

Currently, 50% of malignant tumors occur in people 65 years and older. The final outcome data on survival and epidemiology (SEER: Surveillance, Epidemiology and End Results) of the National Cancer Institute show that people aged 65 or older are 11 times more likely to develop cancer than people between 25 and 44 years and 2-3 times more likely than those aged 45 to 64 years. As a result, more than two-thirds of patients with a prevalent type of cancer (colon, rectum, stomach, pancreas, and bladder) are 65 years old or older, and over 50% of all hematologic malignancies are diagnosed in the elderly [2,3].

In 2020, approximately 60% of all cancers will affect the elderly if the current trend of population growth continues [4]. The annual crude incidence of cancer in Europe is 338 per 100,000 inhabitants in Eastern Europe and 447 per 100,000 inhabitants in Western Europe [5], and this incidence increases with age.

Due to population growth, the management of the elderly with cancer is a challenge for the medical community. The life expectancy for men has increased from 48 years in 1900 to 71 years in 1980 and from 51 years to 77.7 years in women [6]. Between 1900 and 1980, the elderly experienced an increase in life expectancy of nearly 3 years (from 11.1 to 14.0 years) The longest life expectancy above age 65 years was recorded in Japan (15.7 years for women and 19.3 years for men) and in Nordic countries (14.6 years for men and 18.7 years for women). It has been estimated that in industrialized countries, the life expectancy exceeds 90 years in women [7].

Approximately 70% of deaths attributed to cancer occur in people 65 years or older. It is clear that 35% of cancer deaths in men and 46% of deaths in women occur after age 74. Cancer-specific mortality continues to increase with age, and despite considerable progress in the management and treatment of cancer in the general population, mortality among the elderly has increased by 15-20% between 1970 and 1994 [8].

In Europe, after adjusting for age, the survival of patients with any type of tumor at 5 years was 55.8% (95% CI 55.3 to 56.2%) (EUROCARE-4). In the U.S., the survival was 62.9% (95% CI 62.6 to 63.2%), and in Spain, the survival was 59.0% (95% CI 56.9 to 61.2%) [9].

However, cancer also has a dramatic impact on the autonomy of the elderly. Cancer often increases the progressive deterioration that occurs during aging. In 2050, the "ratio" of dependency is expected to increase from 22% today to 46% [10]. The incidence of disabling cancer is much higher in the elderly than in young people. For this reason, if they are not given the best treatment available, there will be a negative impact on prognosis [11].

Despite increasing evidence of treatment benefit, cancer in older adults is often undertreated [12,13], which contributes to poor outcomes [14]. However, many of the patients diagnosed with cancer are in relatively good health and potentially have many years of life ahead of them [15].

There is a need for studies to better identify, at baseline, patients who are likely to benefit from and tolerate aggressive treatment. The systematic use of the geriatric assessment may allow physicians to select patients and reduce the underutilization of aggressive cancer treatments in elderly patients [16].

In this “Hot Topic”, an analysis of the role of the Comprehensive Geriatric Assessment (CGA) as a detector of problems that are not readily recognizable in the elderly has been performed. It has also been analyzed how this tool let us to improve the decision making in this group of the population. CGA can identify 3 groups of patients: those who are fully independent and without comorbidity, frail patients (patients that are dependent on instrumental activities and with severe mortality) and vulnerable patients. Depending on these groups, the elderly patient should be treated with more aggressive or less aggressive treatment.

This “Hot Topic” also contains many articles about some of the most common malignances in the elderly, as an update of the treatment used in these neoplasms and its effectiveness in elderly patients.

Lung cancer is the most common cancer in the world and the leading cause of cancer-realated deaths in Western countries [17]. More than 50% of advanced non-small-cell lung cancers (NSCLCs) are diagnosed in patients older than age 65 years [18]. In the last decade, the incidence and the mortality form lung cancer have decreased among individuals aged 50 years and younger but have increased among those aged 70 years and older [19)]. So that, lung cancer in the older individual is common problem faced by the oncologist [20]. Nowadays, different clinical trials have explored elderly-specific response to treatment and the results indicate that fit elderly patients should be considered equal to younger NSCLC patients [21]. But in elderly patients with many comorbidities, erlotinib and gefifinib, as said by Passaro *et al.*, could be considered as valid therapeutic options in these group of the population.

Aging is the major risk factor for breast cancer [22]. The risk of developing a new breast cancer is 1 in 15 for women 70 years old as contrasted to 1 in 203 for those younger than 39 years old [23]. Although most tumors in this population express estrogen receptors and benefit from hormonal treatment, 8% of these tumors are HER-2 positive and result in a shorter progression-free survival [24]. In the article by Molina-Garrido *et al.*, they analyze the tolerance and efficacy of trastuzumab and lapatinib in elderly women diagnosed with breast cancer. Both drugs are well tolerated in this group of the population and both have been recommended by agents to consider for use in the elderly breast cancer patients. In another article by these authors, they have analyzed the most important available oral cytostatic drugs in metastatic breast cancer in the elderly, such as vinorelbine, capecitabine and cyclophosphamide. Most oncologists prefer not to use oral chemotherapy in the elderly because of frequent polypharmacy and comorbidities. However, oral chemotherapy may be an alternative to intravenous chemotherapy in elderly patients. This Hot topic includes many oral agents which can be used in elderly patients diagnosed with breast cancer.

A disproportionate number of patients diagnosed with non-Hodgkin´s lymphoma are aged ≥65 years, including 52% of follicular lymphoma patients [25]. While most cases are accessible to treatment with chemotherapy, elderly patients tolerate treatments less well than

younger ones. Newertheless, treatment efficacy does not seem different. In this Hot topic, *Schmitt et al*., have analyzed the different options in elderly patients.

In summary, cancer is the leading cause of death in women and men aged 60 to 79 years. As chronological age is not reliable in estimating life expectancy, it is necessary to make a careful assessment of the older patient. CGA can help to develop a coordinated plan for cancer treatment. In this Hot Topic, it has been analyzed the role of CGA in assessing the best treatment in the elderly, and many of the most frequent tumors in this group of age (breast cancer, lung cancer and follicular lymphoma).

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