



## Management of Breast Cancer in Geriatric Patients

Tolga Canbak, MD<sup>1</sup>, Aylin Acar, MD<sup>1</sup>, Huseyin Kerem Tolan, MD<sup>1</sup>, Mustafa Ozbagriacik, MD<sup>1</sup>,  
Prof. Fikret Ezberci<sup>1</sup>

<sup>1</sup>Health Science University, Umraniye Education and Research Hospital, Department of General Surgery, Istanbul, Turkey

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### ABSTRACT

**Introduction:** We aimed to evaluate the diagnosis and treatment of breast cancer in women over 70 years.

**Material & Methods:** Patients who were operated due to breast cancer between January 2012 and January 2015 evaluated retrospectively. Patients were classified as Group 1 with patients aged 70 and over and Group 2 with patients under 70 years of age. For statistical analyses,  $\chi^2$  and Mann-Whitney U tests were underwent ( $P < 0.05$ ).

**Results:** The study included 381 patients. Comorbidities were found in 156 patients. Of the patients, 53 aged 70 years and over (Group 1) and 328 under 70 years (Group 2). 48 patients of Group 1 and 143 patients of Group 2 underwent mastectomy and 5 patients of Group 1 and 185 patients of Group 2 underwent breast conserving surgery ( $P < 0.0001$ ).

Estrogen receptor was positive in 51 patients of Group 1 and in 313 patients of Group 2 ( $P = 0.79$ ). The mean follow-up duration was 46 months. During follow-up, local or systemic metastasis or recurrence and mortality occurred in 4 and 2 patients in Group 1 and in 10 and 5 patient in Group 2, respectively.

**Discussion:** Age-related, breast cancer risk factors may also change. Treatment should be determined considering tumor characteristics and comorbidities in elderly patients with breast cancer. Thus, clinically, treatment strategies can be better identified. Surgical and oncologic treatment approaches do not differ in geriatric patients. Treatment options as well as surgical, chemotherapy and radiotherapy should be planned considering the patient's wishes, general condition and comorbidities.

Corresponding Author:  
Aylin Acar, MD

**KEYWORDS:** Geriatrics; Breast cancer; Treatment.

### Introduction

Breast cancer is one of the most common type of cancers seen in elderly women and its incidence increases with age [1]. Treatments for breast cancer in geriatric patients have recently become standardised [2,3]. More common comorbidities in elderly patients pose a great challenge for their optimal treatment. The general health status of geriatric patients can be assessed through a comprehensive evaluation; treatment toxicity and outcomes can also be predicted [4]. For geriatric patients with breast cancer, individualised treatment should be defined by taking into account tumour characteristics and patient-related factors such as comorbid diseases [5,6]. We aimed to evaluate the presence of comorbid diseases, outcomes of histopathologic examination and postoperative treatment in women over 70 years who were diagnosed with nonmetastatic breast cancer.

### Material & Methods

Patients undergoing surgery for breast cancer between January 2012 and January 2015 and with no organ metastasis were retrospectively evaluated from the hospital data registry system. All patients provided informed consent. Patients were classified into two groups: Group 1 ( $\geq 70$  years of age) and Group 2 ( $< 70$  years of age). Patient demographics, comorbidity, oestrogen /progesterone receptor status, operations performed, postoperative treatment received and follow-up status were analysed. The disease was staged according to the 2010 Tumour, Nodes and Metastasis (TNM) classification.

All statistical analyses were performed using SPSS 22.0 statistical package software (SPSS, Inc., Chicago, IL, USA). Categorical variables were presented as medians, and the  $\chi^2$  test was used for comparisons. Continuous variables were presented as median with interquartile range (IQR), and

subjected to the Mann–Whitney U test. *P* values <0.05 were considered statistically significant.

## Results

The study included 381 patients [4 (1%) male; mean age 52.4 years; range 21–88]. Comorbidities were found in 56(41%) patients. There were 53 (14%) patients in Group 1 and 328 (86%) patients in Group 2 [mean age, 76.2 (range, 70–88) and 48.6 (range,21–69) years, respectively].

Mastectomy was performed in 48 (90%) and 143 (44%) patients in Group 1 and Group 2, respectively, whereas, breast-sparing surgery was performed in 5 (10%) and 185 (56%), respectively (Table 1). Statistically significant difference between the group in terms of the type of operation ( $p<0.0001$ ) (Figure 1) (Table 1).

Oestrogen receptor was positive in 51 (96%) patients in Group 1 and 313 (96%) in Group 2, and it was negative in 2 (4%) and 15 (4%), respectively. Statistically no difference between the groups ( $p= 0.79$ ) (Table 2). Progesterone receptor was positive in 51(96%) and 313 (96%), respectively, and negative in 2 (4%) and 15 (4%), respectively ( $P= 0.79$ ).

According to the molecular classification, 48 patients in group 1 and 294 patients in group 2 were Luminal A and 3 patients in Group 1 and 19 patients in Group 2 were Luminal B. Statistically no difference between the groups ( $P= 0.83$  and  $P=0.96$ , respectively)

Mean follow-up was 46 months (range 24–66). During follow-up, local or systemic metastasis or recurrence and mortality occurred in 4 and 2 patients in Group 1 and in 10 and 5 patient in Group 2, respectively.

## Discussion

Age is an important risk factor in breast cancer which usually occurs in patients in the age range of 50–60 years; 40% of women with breast cancer are  $\geq 65$  years of age [5]. However, more studies are needed on the increasing elderly population and breast cancer [7]. In this study, 14% of our patients were  $\geq 70$  years and 19% were  $\geq 65$  years of age. The number of geriatric patients in this study was significantly smaller compared to that in the literature. Numerous factors may have a role in the aetiology of breast cancer, such as oestrogen and environmental factors. For this reason, age-related, breast cancer risk factors may also change. Breast cancer screening programmes are not recommended for patients >70 years. The reasons for this include incompatibility, presence of comorbidities leading to mortality and high treatment costs. Because screening cannot be performed in this age group, usually the diagnosis is delayed and metastasis is detected during diagnosis [8–10]. Breast cancers observed in geriatric patients and those observed in patients during the reproductive period may differ in terms of diagnosis.

Treatment should be determined considering tumour characteristics and comorbidities in geriatric patients with

breast cancer. Thus, better treatment strategies can be clinically identified [11]. Surgical and oncological treatment approaches in geriatric patients are same as those in other patients [12]. However, because comorbidities are frequently encountered, the necessary treatment facilities may not be always used. Guidelines for adjuvant chemotherapy in elderly patients have not been established [13–15]. The lack of evidence-based data remains the greatest obstacle in providing individualised cancer care for geriatric breast cancer patients [7].

## Conclusion

Surgical treatment options such as breast conserving surgery, simple mastectomy, modified radical mastectomy, as well as chemotherapy and radiotherapy, should be planned considering the patient’s wishes, general condition and comorbidities.

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