

“Young-Old”, “Old-Old”, “Oldest-old” and Breast Cancer: Cancer Surrender Prohibited. Our Challenge for 87 Patients

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Abstract

Background: What happens when the biological age is not the same as the chronological age?.....over 70 patients with breast cancer may not be treated properly. Comorbidity, limited mobility, functional dependence, cognitive functions and aspects, socio-economic factors are variables that weight like boulders on the choice to be made. The risk of breast cancer, however, increases with age, but this group of patients continues to be underrepresented in clinical trials. This obliges us to conduct studies that demonstrate how older women can tolerate therapy in the same way as young women and how they should be offered treatments that give the best possible results. Breast cancer management in elderly patients is a challenge. We have accepted it: To evaluate and compare clinical and pathological variables, treatment and survival outcomes in older women of age of 70 or more arrived in Medical Oncology Unit - University Hospital – Messina, from January 2014 to June 2018. **Methods:** We worked on our database and extrapolated: how many female patients were hospitalized during this period; how "elderly" they were considered; how many with histologically ascertained diagnosis of BC; how much "older" they were and diagnosed with BC. **Results:** 87 "older" with ascertained diagnosis, histologically, of BC treated at our center from January 2014 to June 2018. In December 2019, 26% they had died from cancer, 31% from other causes, 5% had developed a T contralateral and the remaining 38% were living and follow up continued. **Conclusion:** The T stage rather than age has proven to be a predictive factor main (23 patients who died from T were younger compared to the others but with advanced disease). In "early" breast cancer, the comorbidities (heart disease and diabetes) played an important role.

Keywords: age, breast cancer, old, over, under.

Introduction

Numerous studies have shown that over 30% of women diagnosed with breast cancer is over 70 years of age, [1,2] with triple risk, higher compared to women aged 50 to 59.[3] The impact of aging on health is complex and aging can influence functional capacities, physiology and social well-being at various levels.[4] Chronological age is increasingly seen as poor information about the process aging. More recently, there is a much greater need for determine "biological age".[5,6] The management of breast cancer in the older patients has been and continues to be the subject of debate. There is no evidence on management optimal for this group of patients due to their low enrollment in randomized clinical trials studies.[7,8] Consequently, the therapeutic decisions were based and rely largely on studies in younger patients that may not be applicable to older patients with breast cancer. The state of confusion in which we continue to move often leads to a under treatment of the older patient, despite breast cancer in older women, compared to younger women, are histological less aggressive, HER-2 negative, hormonal receptors positive and without lymph node involvement, and have a definitely better prognosis and a good response to hormone therapy.

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This favorable biological profile affects the decision to submit or not older patient to therapy and the consequences of these considerations are that older patients are often undertreated compared to younger patients. [9-11] But, in recent years, an increase in multiple forms of cancer has been observed aggressive in the geriatric population, and an estimated 15-18% of breast cancers is triple negative in older patients. [12] So the question that needs to be answered is: are there clinical consequences on insufficient treatment of breast cancer in older women? The 98% of breast cancer is successfully treated if detected early [13]. However, the chances of survival in older women are much lower than the younger ones. The "delay in the diagnosis of breast cancer" compared to younger patients, and "insufficient treatment" towards the older patients with breast cancer, play a decisive role in reducing the chances of effective and good treatment response for these patients. At present there is no consensus on which it is the best treatment for older women. This is partly due to the fact that older patients with breast cancer are not very well represented in clinical trials, and in part cause there are not universally accepted guidelines that include not only the specific survival of cancer, but also functional status and preferences of the patient and her family. [14] Determining the optimal treatment for an older patient largely depends on clinical judgment, weighing the patient's comorbidities with the biology of cancer. [15] Considering the growing number of older women with breast cancer, present in our reality, we wanted to carry out this study because we believe it is essential to be able to improve the standard of treatment and surveillance.

Methods

This study is based on the analysis of the database of our Medical Oncology Unit, University Hospital - Messina, from which we have extrapolated the number of total female patients hospitalized from January 2014 to June 2018 for any oncological pathology: 980 patients. We therefore evaluated how many of these patients were "older": 205 (21%) and how many of them had an established breast cancer diagnosis histologically: 333 (34%). Finally, we evaluated how many patients had one histologically ascertained diagnosis of non-older breast cancer: 246 (74%).

The group of older patients diagnosed with breast cancer has been the subject of the study.

The group selection criteria were: female gender, ≥ 70 years of age, with histologically diagnosed breast cancer. A total of 87 patients (26%) with these selection criteria and treated from January 2014 to June 2018 were identified in this database. The data recorded in the database for each patient included age at diagnosis, date of diagnosis, age of menarche, family history of cancer, diagnostic method, clinical stage, details of treatment (surgery and adjuvant therapy), histopathological features, tumor size, lymph node status, estrogen / progesteron receptor (ER / PR) and Her-2 expression.

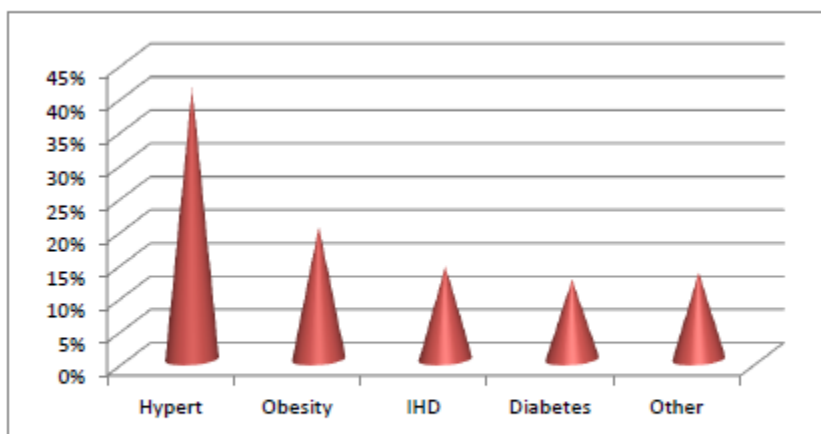
Table 1.

CLINICAL FEATURES	PATIENTS NUMBER (%)
Median Age to diagnosis = 75.2	
Menarch age (median) = 15.3	
Family History (Breast Cancer)	
No	70 (80)
Yes	17 (20)
Family History (other cancer)	
No	74 (85)
Yes	13 (15)
Preoperative Diagnosis	39/87 (45)
Hystology	24 (61)
Cytology	12 (31)
Lymph node Biopsy	3 (8)
Surgery	48/87 (55)
Mastectomy	27 (56)
BCS	21 (44)
Histological subtype	
DCIS	8 (9)
Invasive	75 (86)
Microinvasive	4 (5)
Lymph nodes	
Negative	68 (78)
Positive	19 (22)
Tumor diameter	
\leq />2 cm	24 (28)
2-5 cm	50 (58)
>5 cm	12 (14)
Estrogen receptors	
Negative	30 (35)
Positive	57 (65)
Progesteron receptors	
Negative	37 (42)
Positive	50 (58)
HER2 - Neu	
Negative	77 (89)
Positive	10 (11)

Table.1 Clinical Features

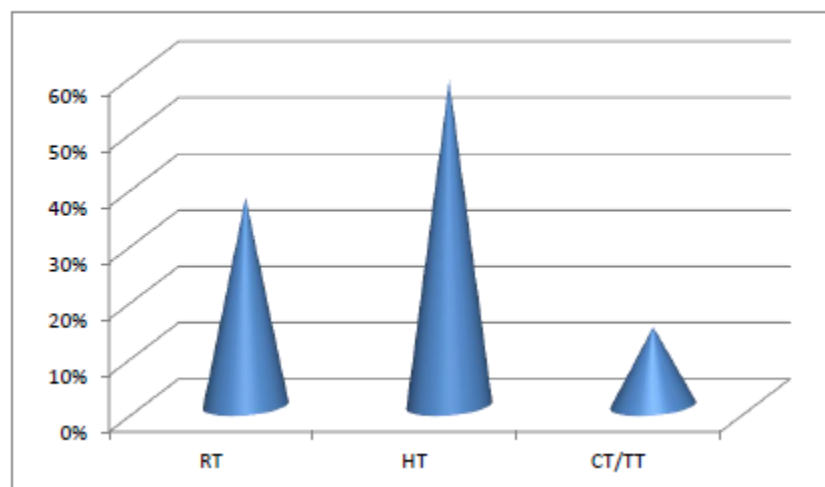
We asked 11 questions to each of our patients (website of Cancer and Aging Research Group) and the calculation of the answers allowed us to highlight in which range the risks of side effects due to treatment of cancer fell, especially chemotherapy and also guided us on what was the possible action to try to reduce these risks. Comorbidities were considered if already present at the time of diagnosis of breast cancer. The following pathologies have been recorded: ischemic heart disease (IHD), significant valve heart disease, congestive heart failure (CHF), cardiac arrhythmia, hypertension, cerebrovascular disease, peripheral vascular disease (PVD), hyperlipidaemia, hypercholesterolaemia, diabetes mellitus, significant arthritis (that requires surgery or steroid use), kidney failure, chronic obstructive pulmonary disease (COPD) / severe asthma, main psychiatric disorder, thromboembolic disease, Parkinson's disease, other invasive neoplasms (excluded non-melanoma skin cancers), wheelchair bound / increased weakness, osteoporosis, thyroid abnormalities and others (reported in <1% of the group study). Hysterectomy history was recorded even if not included in the comorbidity analysis. We found: hypertension in 36 patients (41%), obesity in 17 (20%), IHD in 12 (14%), diabetes in 10 (12%), other 11 patients (13%). **Graphic 1.**

Graphic 1. Comorbidity



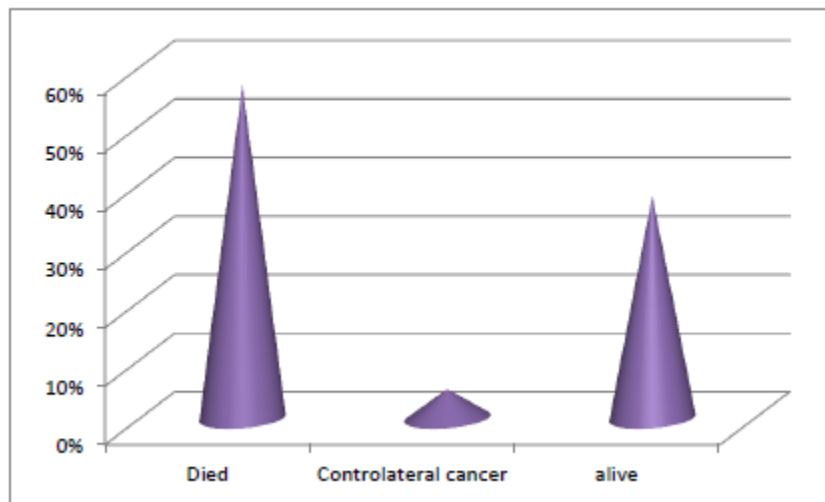
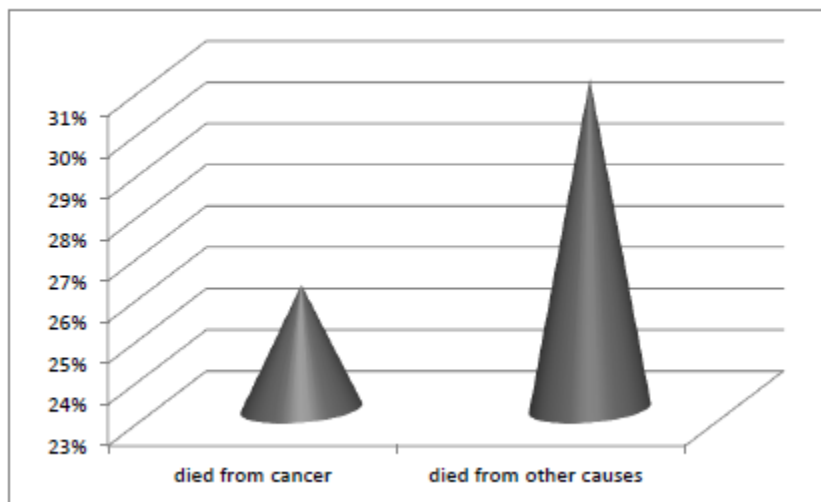
Therapy performed included: RT in 32 patients (37%), HT in 50 (58%), CT / TT in 12 (14%). **Graphic. 2**

Graphic 2. Therapy



Results

A total of 50 patients (57%) died, 23 (26%) from their cancer and 27 (31%) for other causes, 4 patients (5%) developed a contralateral T (of which 3 with a highly aggressive form). The remaining 33 patients (38%), in December 2019, were alive and perform program checks at our center. **Graphic 3/4.**

Graphic 3. Results*Graphic 4. Causes of death*

Chemotherapy: Protective effect on OS only in patients with positive lymph nodes.

Hormonotherapy: Favorable effect emerged on DFS. A subset analysis showed benefit in DFS in patients with stage 1C and in OS for patients with stage 3. The T stage was the major predictor of OS: women with one advanced stage of disease, were at high risk of death due to T and not a due to age (the 23 patients who died due to T, were younger compared to the others but at advanced stage of disease at the time of diagnosis).

Discussion

The older population is growing and we need to establish treatment algorithms better and more appropriate. We have to offer the most effective treatments, regardless of age, and increasingly linked to a geriatric assessment complete. The most important point is that chronological age is not equal to functional age. Age tells us very little and, if we manage to deepen the way in which we think of this patient population, we can identify the therapeutic decisions for them. The main determinants of outcome and survival are the characteristics of the tumor and the comorbidities, not the age itself. In addition, older women "differently healthy" can and must be treated with the same standard adjuvant chemotherapy of younger women. There is strong evidence that in older women breast cancer tends not to be managed according to evidence-based international guidelines, often with the omission of a surgical intervention, even when there is no clinical reason for this conservatism. There is a growing body of evidence on the usefulness of integrating principles and practices care for the elderly in oncology.

Breast cancer treatment requires that the older women, are effectively "targeted" by promotion campaigns of the health as people most at risk of developing breast cancer. The older women must receive personalized care plans for their breast cancer treatment, based on individual circumstances rather than their chronological age. Surgery is the main treatment for breast cancer in initial phase. However, other therapies may be preferable for some "older" women if they suffer from existing conditions, such as heart disease, or are considered too medically fragile to survive surgery. All women should be offered treatment tailored to their type tumor, general health and individual preferences. The results of this study would like to remind everyone that, to ensure patients, it is necessary to offer them the most effective treatment for breast cancer, regardless of their age, not neglecting the weapon of prevention and timeliness of diagnosis.

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