

Are the Number of Operations Appropriate to Define a High-Quality Breast Cancer Center?

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To the Editor

The European Society of Breast Cancer Specialists (EUSOMA) in 2000 published a position paper, “The requirements of a specialist breast unit”, which first set out the standards for establishing high-quality breast cancer centers or units throughout Europe [1]. Based on a growing body of evidence, the paper stated that a multidisciplinary team could deliver ideal care for breast cancer patients in a dedicated facility. The center is thus defined as the place where breast cancer is diagnosed and treated with the intervention of all necessary health services (genetics, prevention, early stage and metastatic stage treatments, psychosocial support, simultaneous care, longevity and finally, terminality).

More recently, in 2020, EUSOMA published an update, also approved by the European Cancer Organization (ECCO) under its Essential Requirements for Quality Cancer Care (ER-QCC) program and by the European Society of Medical Oncology. According to this update, which considers innovative therapeutic aspects, audits and quality indicators, to be able to define a breast center, it is essentially necessary that the center must be able to manage at least 150 cases of newly diagnosed breast cancer in the initial stage and 50 cases of metastatic disease.

In the following years, the promotion of a universal breast cancer unit was called in European Parliament resolution and declarations [2, 3], and quality standards were published [4, 5]. Conservative surgery or mastectomy is a standard loco-regional treatment of the initial stages of breast cancer [6]. After surgery, an adjuvant systemic treatment (hormone therapy, polychemotherapy, molecular targeted therapy) and/or radiotherapy are generally proposed [7, 8].

More recently, neoadjuvant chemotherapy (NACT) is instead indicated, as an initial treatment and before surgery, in the therapeutic strategy of locally advanced inoperable forms and inflammatory carcinoma (to make the tumor operable), in resectable but candidate forms for mastectomy (to increase the chances of conservative surgery) or in operable breast cancer at high risk of recurrence (as for early stage triple negative or human epidermal growth factor receptor-2 (HER2)-positive breast cancer) [9-11].

The overall use of chemotherapy declined over time from 42.0% (2008) to 32.0% in 2017. NACT gradually replaced adjuvant chemotherapy (ACT) during this period. Indeed, the proportion of NACT increased from 20% to 57%. This replacement of ACT with NACT was seen regardless of breast cancer subtype: the relative proportion of NACT by breast cancer subtype in 2017 was highest in hormone receptor (HR)- HER2+ and HR+ HER2+ tumors, with 79.0% and 77.6%, respectively. Triple-negative (TN) tumors closely follow this rate with 76.2% and lowest in HR+ HER2- tumors with 39.3%. The pathological complete response (pCR) rate (defined as ypT0 ypN0) at surgery after NACT increased from 15.0% to 34.2% [10]. More recently, the addition of immune-checkpoint inhibitors to chemotherapy has been shown to translate into pCR rates of up to 60% when administered as primary treatment in TN early breast cancer [12]; based on this evidence, it is possible to hypothesize that in the next future organ-preserving procedures could become standard in some subgroups of early breast cancers. Consequently, several groups have generated potential concept trials to investigate further the possibility of avoiding surgery after NACT [13, 14]. Given these high response rates in defined subgroups of early breast cancer treated with NACT [15], it is appropriate to question whether surgery is now a redundant procedure in their management [16].

In recent years, breast cancer prognosis has significantly improved over time: an improvement in survival has been recorded with rates of 90% at 5 years and 80% at 10 years [17, 18]. These data have been observed in countries where participation in screening programs is widespread and are favored by the possibility of initiating personalized therapies concerning the molecular characterization of the tumor. To this, it should be added that the median overall survival in patients with HER2-positive metastatic breast cancer reached 50 months and that the recent introduction of cyclin-dependent kinases (CDK) 4/6 inhibitors significantly improved survival in estrogen receptor (ER)+ patients [19]. These results reveal how even metastatic disease can be considered a chronic disease characterized by

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an increasing percentage of patients who live for a long time.

At the same time as data indicating a better life expectancy, alongside the traditional effects [20] the emergence of new needs was also recorded as linked to side effects, even late, of the treatments received, which are contextualized in physical, psychological and social areas [21, 22] and require interventions aimed at satisfying these needs and promoting a global approach with rehabilitation and prevention and correct lifestyles [23-25].

Finally, considering what is happening in terms of the treatment of breast cancer and the life expectancy that most of these patients manifest, in cured or chronic conditions, we can state that current models of care for cancer survivors probably are often not able to address the many unmet needs of cancer survivors, which represents a relevant component of breast unit mission. Considering the acute phase as the only criterion that defines a breast unit is outside the current context of the disease [26, 27].

A surgery-centered model of managing breast cancer patients is just now obsolete, as the acute phase of the disease, which immediately follows the diagnosis, represents only a brief and transient segment of the history of disease of our patients, which leads to gradual reductions as a result of the growing efficacy of pharmacological therapies. Moreover, it should be emphasized that a safe de-escalation of the surgical approach is in progress in favor of primary medical therapy [28].

All of this brings us to the consideration that defining a breast unit predominantly through surgical or medical volumetric criteria of advanced disease should be overcome by a more congruous vision with the healthcare actions correlated with the current history of breast cancer disease.

Therefore, in our opinion, the pathology model must require evaluation parameters which, while recognizing the decisive role of the volume of activity, must also pay attention to and enhance those that are the essential components of survivorship care, such as: 1) prevention of recurrent and new cancers, late effects from treatments and lifestyle promotion; 2) surveillance for recurrence, new cancers, and for medical and psychosocial effects; 3) management of consequences of treatments, including symptom management and assistance with practical aspects; and 4) coordination between cancer and primary-care providers, to ensure that all needs of the survivor of cancer are met. Given the ever-increasing number of long-term cancer patients, the correlated burden of medical, psychosocial and economic sequelae, once considered complementary necessities, represent today important factors to be considered and managed within the breast unit [29, 30]. The satisfaction of these needs must be considered a relevant qualitative point (proportion of patients with NACT managed, production of a care plan, patients referred for nutritional support or pre/rehabilitation support, etc.) within the clinical activity of a breast unit, the lack of which, detected during the audit, would invalidate/prevent the definition of “the place where breast cancer is diagnosed and treated” in all its aspects.

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Informed Consent

Not applicable.

Author Contributions

PT conceived and drafted the manuscript. RB, FF PT and GT revised the manuscript. All the authors read and approved the manuscript.

Data Availability

Any inquiries regarding supporting data availability of this study should be directed to the corresponding author.

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