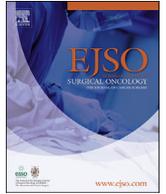




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Editorial

Breast cancer treatment in the modern era of multidisciplinary oncology: Now we need new models of training



Since Halsted's revolutionary proposal, breast cancer treatment has been based primarily on radical mastectomy.

Extensive and aggressive surgery dominated the clinical management of this pathology, which for almost a century was exclusively pertinent to the surgeon. The dogma was: "the more you cut, the more you cure" in close analogy with the concept of maximum tolerable treatment used in oncology until well beyond the middle of the last century. In short, we wanted to strike with all the available firepower a feared enemy of whom little or nothing was known, if not the undeniable lethality.

Although the results, in terms of survival, were quite satisfactory for that time, loco-regional control was inevitably achieved at the price of severe consequences on the quality of life of the patients due to the treatment itself. Demolitive surgery, based on a substantially anatomical approach, dominated the scene for a very long time, until, starting from the second half of the 70s, a dogmatic revolution in the treatment of breast cancer began.

Three fundamental events marked the origin of this revolution:

1. The success of conservative treatment, proposed by Veronesi in Europe and by Fisher overseas
2. The discovery of hormonal receptors and the intuition that not all breast cancers were the same. The possibility of identifying hormone-dependent tumors and differentiating them from non-hormone-dependent tumors quickly led to the hypothesis that some of them could benefit from a different treatment, based on the presence of these receptors, which became the target of drug therapies that soon proved highly effective
3. The introduction of the concept of "adjuvant chemotherapy" and of the CMF regime by G. Bonadonna in 1977 [1].

There was a growing awareness that surgeons could no longer treat breast cancer as solo actors.

The purely anatomical approach showed its limits in the face of a new and much more complex biological vision. The characteristics of each disease, the "identity card" of each tumor, had to be known before being able to plan its adequate treatment.

Two dogmas that dominated breast cancer treatment for decades were falling apart:

- 1 From the "maximum tolerable treatment" to the minimum effective treatment. From "one size fits all" medicine to "precision medicine".

Conservative surgery quickly replaced a large portion of unnecessarily demolitive interventions, radiotherapy and pharmacotherapy doses were adapted to the new concept.

- 2 From independent management, in which the individual doctor assumed responsibility for the decision-making process and the execution of the treatment, to the collegial and multidisciplinary approach, capable of coping with the new complexity and the evolution of medical knowledge.

The more we know about the disease we are treating, different biological profiles of aggression, metastatic potential, sensitivity towards specific drug therapies or radiotherapy, the more we will be able to modulate therapeutic decisions planning from case to case: more or less radical surgery, pre- or postoperative medical treatments, chemotherapy, hormonal therapy, immunotherapy and radiotherapy, extended to the whole organ, only partial, or even intraoperative.

No doctor today can manage this complexity alone. Those who still claim to do so either have lagged behind culturally or are driven by purely economic considerations. In both cases, they operate in an ethically inadequate manner. Patients run the objective risk of not receiving the best possible treatments, but simply the treatments that doctor, to whom they turn, is able to offer.

With the evolution of medical knowledge and the new "biological approach", the initial group consisting of surgeon, radio-oncologist and medical oncologist, soon became enriched with the figure of the pathologist, the only one able to define which type of pathology they were facing. In other words, to define the identity card "of the disease, case by case (hormone-dependent or independent, with high or low degree of differentiation, with fast or slow growth rate, the presence or absence of molecular targets on the cells of the disease etc.). Once we have accepted the concept that there must be at least four, instead of just one, to offer the patient the best possible treatment, it becomes easy to enlarge the group. A fifth member joins, the radiologist, a sixth, the dedicated nurse, a seventh, the plastic surgeon an eighth, the psychologist; and even a ninth, the geneticist so we find ourselves forming a multidisciplinary team, which meets weekly to discuss all the cases handled pre- and post-operatively.

Collective discussion has gradually become the norm, at least in large and advanced centers for cancer treatment and research. Breast cancer patients began to be treated by a group of doctors,

no longer by the single figure of the surgeon.

Today we are starting to collect evidence on the positive impact the multidisciplinary approach can have in terms of overall survival, reducing the risk of error and refining the quality and precision of care [2].

The European CanCer Organization (ECCO), with a series of articles regarding the essential criteria for the quality of cancer treatment, has recently defined the types of tumors for which a multidisciplinary approach should be considered essential [3,4].

The European Society of MAsTology (EUSOMA) in May 2000 published an article on the essential requirements that a specialist Breast Unit must possess; an article, updated in 2013, that has become the reference document for defining the criteria for quality certifications recognized in many European and non-European countries [5]. One of the central aspects is the establishment of a "Core Team" of specialists from the various disciplines involved in the management and treatment of breast cancer, who have gone through a level of training higher than that generally guaranteed by their own specialty field [6].

Patients, for their part, express greater confidence in undergoing treatment knowing that their case has been evaluated and discussed by different professional figures rather than by a single doctor, whose decisions may be affected by confounding subjective factors. The multidisciplinary team offers the benefits of a second or third opinion in a practical and effective way, increasing the sense of safety of patients and their families.

The multidisciplinary approach has the potential to improve the quality of cancer treatments, because it is able to cope with the complexity of current scientific knowledge and the biological-molecular approach to disease, it reduces the margin of error of the individual and finally increases the possibility of identifying the best possible treatment for each specific case.

However, these conclusions come from the assumption that it is a multidisciplinary team where cases are carefully prepared before and after each discussion and that each member is given time to study them thoroughly. The team must be driven by a spirit of collaboration, not of competition. Everyone must face the commitment to define the therapeutic indications with the utmost responsibility and the level of knowledge and competence of the leader and all the members of the group must be adequate to the task. This aspect is not least in terms of importance and opens the question of the training of doctors working in modern oncology. The multidisciplinary approach necessarily requires a modern, multidisciplinary preparation that goes beyond knowledge in the context of one's specialty. This is the only way to sit at the discussion table, understand and speak the colleague's "language" and express an informed opinion.

In September 2006, a group of top exponents in the breast cancer scientific community met under the aegis of EUSOMA to define and publish the guidelines [7] on the training standards of professionals working in the field of Senology, in order to guarantee the best possible specialist training for each discipline and enhance the multidisciplinary knowledge of professionals working in the field.

To go beyond the standard achieved with the establishment of the Breast Units, the challenge of these years is the definition of the specific curriculum that every professional, who provides his/her service within a Breast Unit, must have. Curriculum that must maximize the effectiveness of that multidisciplinary collaboration that today is the gold standard in the optimal management of breast cancer.

In Europe, however, due to heterogeneous training systems across countries, a standardized training is lacking and fellowship

programs in breast surgical oncology are limited to few countries [8].

To overcome this problem and promote the highest multidisciplinary standards of care, a panel of experts from across Europe have gathered in a common platform, led by ESSO, to produce a unitary effort aimed at defining a unique certification process in breast cancer surgery across Europe [9].

The BRESO, Breast Surgical Oncology project, involving some of the most important professional breast surgery societies, is now a reality. In the near future, this working group will have to expand to include other societies and all the different specialties involved in the multidisciplinary care of breast cancer, to develop a system of certification for specialist training recognized at European level, as demanded also by patient associations.

Considerable effort is required, but once again, we are witnessing the process of oncological modernization, the ultimate aim of which is to raise standards even further in the treatment of breast cancer. This time we have the opportunity to participate in history.

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Declaration of competing interest

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F. Meani*

Clinical Director of Centro di Senologia Della Svizzera Italiana, Ente Ospedaliero Cantonale, Switzerland

T. Kovacs

*Chair BRESO, President ESSO, Chair of the BRESO Organizational/
Management Structure Working Group, United Kingdom*

T. Spanic

*President of Europa Donna - the European Breast Cancer Coalition,
Italy*

A. Costa

CEO of ESO, European School of Oncology, Italy

* Corresponding author.

E-mail address: francesco.meani@eoc.ch (F. Meani).

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