Editorial
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Neoadjuvant systemic therapy in breast cancer: Brazilian guidelines aligned with international best practices

Ruth Helena de Morais Bonini[1,a]

Breast cancer represents one of the greatest challenges in global public health, being the most common type of cancer among women and one of the leading causes of mortality in females[1]. Over the last few decades, a deepening understanding of tumor biology, greater knowledge of the manifestations of breast cancer on imaging, and, consequently, changes in treatment strategies have significantly modified the prognosis of the disease. The introduction of neoadjuvant systemic therapy (NST) as an initial approach in certain cases—especially in patients with one of the most aggressive subtypes—has brought new paradigms in treatment planning and in the evaluation of treatment responses, consolidating itself as an essential tool in the management of a significant portion of patients[2,3].

Because it is a strategy that involves multiple phases of care—from staging through surgical decision-making and systemic treatments—NST requires a multidisciplinary approach, involving radiologists, breast specialists, oncologists, and pathologists. In this context, the radiologist plays a central role, not only in the selection and application of the most appropriate imaging methods but also in the critical interpretation of treatment response patterns[4]. The accuracy of this evaluation directly influences surgical management and subsequent treatment planning. Therefore, it is essential that radiological criteria be well defined and disseminated among the various specialties.

The article "Gramado consensus on imaging evaluation of the response to neoadjuvant therapy for breast cancer"[5], published in **Radiologia Brasileira**, is the result of a consensus meeting promoted by Brazilian medical specialty societies in radiology, clinical oncology, breast surgery, radiotherapy, and pathology. This document was developed on the basis of the convergent opinions of renowned specialists in light of the best available evidence and represents an unprecedented and highly relevant contribution to the standardization of imaging evaluation of the response to NST in Brazil. By offering up-to-date, applicable guidelines, while acknowledging the limited access to complex examinations and procedures for some members of the Brazilian population, this document should have a direct impact on the clinical routines of radiologists, breast specialists, oncologists, and other professionals involved in the care of breast cancer patients, also serving as a practical guide for day-to-day consultations.

Among the 10 themes addressed in the consensus guidelines, the definition of criteria for evaluating the breast and axillary response to NST stands out, detailing response patterns—especially in magnetic resonance imaging (MRI)—including the standardization of tumor measurement. The authors explain in detail the importance of performing imaging evaluation before and after NST using the same method—preferably MRI—as well as the marking of the breast lesion at the beginning of treatment. The accuracy of each method is extensively reviewed, as is the management of cases of tumors with residual post-treatment calcifications. The MRI protocols and the role of diffusion-weighted imaging are also detailed.

The consensus guidelines also point to promising future directions, highlighting the growing role of artificial intelligence in assessing the response to NST. The application of algorithms in mammography, ultrasound, and MRI already demonstrates potential to improve response prediction and the detection of axillary metastases, as well as favoring analyses that are more quantitative and standardized. Emerging methods and pharmacologic advances, such as contrast-enhanced mammography, new radiopharmaceuticals, and the use of radiomics in positron-emission tomography/computed tomography, promise to increase diagnostic accuracy and open new possibilities for personalized patient management. The progressive incorporation of these technologies is likely to significantly transform clinical practice in the coming years.

These guidelines come at a time when Brazilian radiology is a prominent force on the international stage. The growing national scientific output—not limited to breast imaging—with studies published in high-impact journals

1. Radiologist at Barretos Cancer Hospital, Barretos, SP, Brazil - Unidade de Campo Grande- MS, Brazil. Email: ruthmorais@gmail.com
a. https://orcid.org/0009-0007-3104-8751. Editor in charge: Dr. Valdair Francisco Muglia.
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and a record number of works, many of them award-winning, presented at major international congresses, demonstrates the maturity and relevance of research groups in Brazil. The publication of these consensus guidelines shows that **Radiologia Brasileira** is committed to scientific excellence and values national expertise. In addition, it demonstrates that the specialty societies involved are aligned with the main international guidelines, proposing evidence-based recommendations adapted to the reality in Brazil. This supports the integration of Brazilian radiology into the global landscape and directly contributes to improving health care in the country.

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