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Clinical Guidelines from the 2025 International Symposium on Breast Diseases of Inland São Paulo: management of breast cancer in special situations

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ABSTRACT

Introduction: The 2025 International Symposium on Breast Diseases of Inland São Paulo addressed clinically relevant controversies in the management of breast cancer in special situations, including inflammatory carcinoma, axillary micrometastases after neoadjuvant chemotherapy, early luminal tumors in elderly women, and the use of vaginal estrogen therapy after breast cancer treatment. **Methods:** Four priority topics were presented in evidence-based lectures, followed by expert panel discussions and anonymous electronic voting. Consensus was predefined as agreement of at least 75% among panelists. **Results:** No consensus was reached regarding the use of sentinel lymph node biopsy in inflammatory carcinoma, although 73% of panelists voted against its performance. Likewise, no consensus was achieved on omitting axillary lymph node dissection in patients with axillary micrometastases after neoadjuvant chemotherapy, despite 61% considering this approach feasible. In elderly women with early luminal tumors, the most frequently selected option was to maintain standard treatment (29%), with no consensus supporting treatment de-escalation. In contrast, consensus was reached regarding the safety of vaginal estrogen therapy after breast cancer treatment, with 88% of panelists supporting its use in appropriately selected patients. **Conclusions:** These guidelines summarize expert-based recommendations for the management of breast cancer in challenging clinical scenarios and reinforce the importance of individualized, multidisciplinary decision-making. Sentinel lymph node biopsy was generally not supported in inflammatory carcinoma, and vaginal estrogen therapy was considered safe in selected breast cancer survivors. Greater caution remains warranted regarding treatment de-escalation in elderly women with early luminal tumors and omission of axillary lymph node dissection in the setting of residual micrometastatic nodal disease after neoadjuvant chemotherapy.

KEYWORDS: breast cancer; inflammatory carcinoma; sentinel lymph node biopsy; axillary lymph node dissection; luminal tumors; vaginal estrogen therapy; neoadjuvant chemotherapy.

INTRODUCTION

Breast cancer in special situations, such as inflammatory carcinoma, micrometastases post-neoadjuvant therapy, early luminal tumors in elderly women, and the management of genitourinary symptoms post-treatment, poses significant clinical challenges. Inflammatory carcinoma (T4d) is an aggressive entity

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with high lymphatic dissemination, making the use of sentinel lymph node biopsy (SLNB) controversial[1-7]. Axillary lymph node dissection (ALND) post-neoadjuvant therapy in cases of micrometastases is under scrutiny, with interest in less invasive approaches that preserve oncologic safety[8]. In elderly women with early luminal tumors, de-escalation of treatments such as hormone therapy and radiotherapy is debated to reduce treatment morbidity. Vaginal estrogen therapy for genitourinary symptoms post-breast cancer raises concerns about oncologic safety. The 2025 International Symposium on Breast Diseases of Inland São Paulo convened experts to deliberate evidence-based clinical guidelines for these scenarios, addressing four critical thematic axes[1].

METHODS

The plenary sessions were organized around four critical thematic axes:

1. Feasibility of SLNB in inflammatory carcinoma;
2. Possibility of avoiding ALND post-neoadjuvant therapy with micrometastases;
3. Optimal approach for elderly women with early luminal tumors; and
4. Safety of vaginal estrogen therapy post-breast cancer.

Each topic was presented in a 10-minute didactic session with a literature review, followed by 50 minutes of technical debate among panelists, discussants, and speakers, concluding with anonymous electronic voting. Results were tabulated, with consensus defined as ≥75% agreement. The analysis was descriptive, and results were drafted as clinical guidelines.

RESULTS AND DISCUSSION

Feasibility of sentinel lymph node biopsy in inflammatory carcinoma

Voting results

- Yes: 27%
- No: 73%

Inflammatory breast carcinoma (T4d) is characterized by diffuse erythema, skin edema (***peau d'orange***), and high rates of dermal lymphatic embolization (50–65%) and nodal involvement (50–80%)[1-4]. Standard management includes neoadjuvant systemic therapy, modified radical mastectomy with complete axillary dissection, and radiotherapy (trimodality approach)[1-3,9]. Sentinel lymph node biopsy (SLNB) is controversial due to variable sentinel node identification rates (25–80%) and a high risk of false negatives[3-6]. Small case series report higher rates of no residual nodal disease in the axilla after neoadjuvant chemotherapy (ypN0) in pure human epidermal growth factor receptor-type 2 (HER2)-positive tumors, but prospective de-escalation studies exclude inflammatory carcinoma[2-4,7,8,10,11]. A 2017 United States series reported SLNB in 22% of cases, but this is not a standard practice. Exceptional cases with excellent neoadjuvant response and clinically negative axilla may consider selective axillary dissection, though this is not routine[5-8].

Practical recommendations

- Standard surgical approach: Modified radical mastectomy with complete axillary dissection, maintaining the trimodality approach[1-3,9].
- Exceptional cases: Selective axillary dissection may be considered in patients with excellent neoadjuvant response, clinically negative axilla, and multidisciplinary consensus[5-8].
- Education: Reinforce the contraindication of SLNB as a standard practice in inflammatory carcinoma[1-13].

Possibility of avoiding axillary lymph node dissection post-neoadjuvant therapy with micrometastases

Voting results

- Yes: 61%
- No: 39%

Axillary management post-neoadjuvant chemotherapy is debated, particularly in cases of minimal residual disease (ypNmic – microscopic axillary lymph node involvement – micrometastases – after neoadjuvant chemotherapy). Traditionally, avoiding axillary lymph node dissection (ALND) is performed for staging and regional control, but less invasive approaches, such as SLNB or selective axillary dissection with radiotherapy, are being evaluated to reduce morbidity. Retrospective studies and the National Cancer Database (NCDB) analyses suggest that micrometastases can be managed without complete ALND, with similar local control and fewer complications. Evidence from Giuliano et al.[14] and others supports this approach in selected patients, though randomized trials are needed[11,15-28].

Practical recommendations

- Patient selection: Omission of ALND may be considered in cases of micrometastases post-neoadjuvant therapy in selected patients with low nodal disease volume, confirmed by clinical-radiological findings[11,15-28].
- Multidisciplinary approach: Decisions should involve breast surgeons, oncologists, radiologists, and pathologists[11,15-28].
- Alternatives: SLNB or selective axillary dissection with radiotherapy in selected cases.
- Follow-up: Rigorous monitoring for regional recurrences[11,15-28].

Optimal approach for elderly women with early luminal tumors

Voting results

- De-escalate hormone therapy: 24%
- De-escalate radiotherapy: 28%
- De-escalate both therapies: 19%
- Maintain standard treatment: 29%

In elderly women with early luminal tumors (pT1, pN0, low grade), de-escalation of hormone therapy and/or radiotherapy is discussed as a strategy to reduce toxicity and preserve quality of life. Studies like the EUROPA Trial suggest de-escalation may be safe in low-risk cases, but data are preliminary. Maintaining standard treatment was the most favored option (29%), reflecting caution due to uncertainties about local recurrence risk (1% with radiotherapy vs. 10% without, over 10 years)[29-33].

Practical recommendations

- Individualized approach: De-escalation of radiotherapy may be considered in patients >70 years old with low-risk luminal tumors, following multidisciplinary discussion and informed consent regarding recurrence risk[2,9-33].
- Multidisciplinary decision: Involve oncologists, breast surgeons, and radiation therapists[2,9-33].
- Education and follow-up: Inform patients about risks and benefits, with rigorous follow-up for recurrence detection[29-33].

Safety of vaginal estrogen therapy post-breast cancer

Voting results

- Yes: 88%
- No: 12%

Vaginal estrogen therapy is an option for genitourinary symptoms (vaginal dryness, dyspareunia) post-breast cancer. Observational studies, systematic reviews, and the American College of Obstetricians and Gynecologists (ACOG) guidelines indicate that estriol or promestriene use does not increase the risk of recurrence or mortality. Therapy is recommended after the failure of non-hormonal treatments, in shared decision-making with oncologists, particularly for patients on aromatase inhibitors[34-39].

Practical recommendations

- Indication: Consider vaginal estrogen therapy for persistent genitourinary symptoms after the failure of non-hormonal treatments[34-39].
- Modalities: Use promestriene or estriol vaginally[34-39].
- Monitoring: Clinical follow-up and multidisciplinary decision-making[34-39].

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ECP: Conceptualization, Methodology, Project administration, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. FB: Conceptualization, Methodology, Investigation, Validation, Writing – review & editing. MM: Conceptualization, Methodology, Validation, Writing – review & editing. JTAN: Investigation, Methodology, Validation, Writing

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