



# The management of locally advanced, ulcerated breast cancer in a menopausal woman: a case report

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**Introduction and importance:** This case report presents the clinical details of a 46-year-old postmenopausal woman who was diagnosed with a locally advanced, ulcerated, hormone receptor-positive, HER2-negative stage 2B lobular carcinoma of the breast. The complexity of the case necessitated a multidisciplinary, personalized approach.

**Case presentation:** The patient, a postmenopausal woman, presented with locally advanced lobular carcinoma of the breast. The tumor was of significant size and exhibited ulceration. Given the hormone receptor-positive status of the tumor, a comprehensive treatment plan was formulated, taking into account the patient's overall health and potential tolerance to treatment. Surgical removal of the tumor was performed, followed by adjuvant therapy with aromatase inhibitors.

**Clinical discussion:** The complexity of this case highlights the importance of a personalized and patient-centered strategy in managing breast cancer. The patient's menopausal status, tumor characteristics, and potential tolerance to treatment were crucial factors that influenced the treatment plan. The successful outcome of the treatment and the patient's ability to tolerate the therapy underscores the significance of individualized treatment planning.

**Conclusion:** This case report emphasizes the necessity for a comprehensive and patient-centered approach to managing complex cases of breast cancer. The findings support the development of personalized therapeutic strategies aimed at improving patient outcomes and quality of life. The successful treatment of the locally advanced, ulcerated lobular carcinoma of the breast in this postmenopausal patient further highlights the importance of considering individual factors and tailoring treatment plans accordingly.

**Keywords:** breast cancer in a menopausal woman, locally advanced breast cancer, multifaceted approach, stage 2B lobular carcinoma, ulcerated breast cancer

## Introduction

Our patient, a 46-year-old woman, currently in menopause, presented with a locally advanced stage 2B lobular carcinoma, characterized by ulceration. Lobular carcinoma, which originates in the milk-producing glands or lobules of the breast, is the second most common type of breast cancer, representing ~10–15%

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## HIGHLIGHTS

- Aromatase inhibitors (AIs) were chosen as adjuvant therapy for the patient due to her menopausal status and the hormone receptor-positive nature of her tumor.
- AIs, such as anastrozole, letrozole, and exemestane, reduce the availability of estrogen for hormone receptor-positive breast cancer cells by inhibiting the enzyme aromatase, impeding their growth.
- AIs have shown superiority over tamoxifen in reducing the risk of recurrence in postmenopausal women with hormone receptor-positive breast cancer and have a more favorable side effect profile.
- The patient in this case tolerated the AIs regimen well, which is significant as treatment tolerability can impact patient compliance, quality of life, and overall treatment success.
- The positive response to adjuvant therapy highlights the importance of a multidisciplinary and individualized approach to breast cancer management, considering factors such as overall health, tumor characteristics, menopausal status, personal preferences, and potential treatment tolerance.

of all breast cancers<sup>[1]</sup>. Stage 2B indicates a tumor that has started to spread to nearby lymph nodes or is of significant size, but is not yet metastatic. In this case, the cancer is locally advanced,

suggesting that it is large and/or has spread to nearby tissues or lymph nodes, but has not yet disseminated to distant organs. The presence of ulceration adds another layer of complexity to the patient's condition. This typically refers to an open sore or break in the skin, a phenomenon that is relatively rare in breast cancer but can occur, particularly in advanced cases<sup>[2]</sup>.

The patient's menopausal status is significant because hormonal changes during this period may affect both the progression of the disease and the effectiveness of various treatment options<sup>[3]</sup>. Her age, while not unusual for a breast cancer patient, places her in a higher risk category, as breast cancer risk tends to increase with age<sup>[4]</sup>.

Thus, this case warrants a multifaceted approach for optimal treatment planning, considering not only the characteristics of the cancer itself but also the patient's overall health and menopausal status<sup>[5]</sup>.

## Methods

The work has been reported in line with the SCARE (Surgical Case Report) criteria<sup>[6]</sup>.

## Case presentation

The patient, a 46-year-old woman in menopause, presented with a palpable lump in her left breast. On physical examination, an ulcerated, irregularly shaped mass was identified in the upper outer quadrant of the left breast, which was associated with tenderness and local warmth. No palpable axillary or supraclavicular lymph nodes were identified during the initial assessment (Fig. 1).

Mammography revealed a large, irregular, high-density mass, and subsequent breast ultrasound corroborated these findings. A core needle biopsy was performed, and a histopathological examination revealed a diagnosis of lobular carcinoma. Immunohistochemical staining was positive for estrogen and progesterone receptors and negative for human epidermal growth factor receptor 2 (HER2), categorizing the tumor as hormone receptor-positive and HER2-negative. Further imaging via a breast MRI demonstrated a single large mass with no signs of



**Figure 1.** Large, irregular, ulcerated tumor in the left breast.

multifocal or multicentric disease. Whole-body positron emission tomography-computed tomography (PET-CT) scan did not reveal any distant metastases, confirming cancer as locally advanced. The patient's clinical staging, according to the TNM classification system, was determined as T3N0M0, corresponding to stage 2B. The T3 classification indicates a tumor larger than 5 cm in greatest dimension, N0 signifies no regional lymph node involvement, and M0 denotes no distant metastasis<sup>[7]</sup>. The patient reported no significant family history of breast or ovarian cancer. Her menopausal status was confirmed through hormonal assays, showing reduced levels of estradiol and increased levels of follicle-stimulating hormone and luteinizing hormone, consistent with the postmenopausal state<sup>[8]</sup>. The patient's overall health was good, with no significant comorbidities. She had no history of prior breast disease or surgeries. The case thus represented a considerable clinical challenge due to the locally advanced, ulcerated nature of the tumor in the setting of menopause. Treatment planning would necessitate a multidisciplinary approach, taking into account the patient's overall health status, the characteristics of the tumor, and the patient's menopausal status.

## Discussion

Following the surgical removal of the tumor, the patient initiated adjuvant therapy with aromatase inhibitors (AIs), a treatment decision aligned with her menopausal status and the hormone receptor-positive nature of her tumor.

AIs, including drugs such as anastrozole, letrozole, and exemestane, inhibit the enzyme aromatase, which converts androgens into estrogens in postmenopausal women<sup>[9]</sup>. As a result, these medications significantly reduce the availability of estrogen for hormone receptor-positive breast cancer cells, thus impeding their growth. AIs have demonstrated superiority over tamoxifen, a selective estrogen receptor modulator, in reducing the risk of recurrence in postmenopausal women with hormone receptor-positive breast cancer and tend to have a more favorable side effect profile<sup>[10]</sup>. Importantly, in this particular case, the patient's adjuvant therapy with AIs was well-tolerated. This is a significant point to note, as the tolerability of treatment can impact patient compliance, quality of life, and overall treatment success. Adverse effects can often be a limiting factor in the administration of adjuvant therapies; however, the patient's ability to tolerate the AIs regimen enabled her to receive the full benefit of this effective therapy without a significant negative impact on her daily life.

The patient's positive response to adjuvant therapy underscores the importance of a multidisciplinary and individualized approach to the management of breast cancer<sup>[11]</sup>. Treatment decisions should consider several factors, including the patient's overall health, tumor characteristics, menopausal status, personal preferences, and potential tolerance to treatment<sup>[12]</sup>.

The strength of this article lies in the fact that it is very well documented, describing the patient's clinical history point by point, allowing the reader a full understanding of the text, thus hoping that they will get the maximum benefit from this manuscript. However, remember the very nature of the article, which as a case report, has obvious limitations.

## Conclusions

This case report presents a comprehensive approach to managing a locally advanced, ulcerated stage 2B lobular carcinoma in a postmenopausal woman. Key to the successful management of this case was the consideration of the patient's menopausal status, overall health, characteristics of the tumor, and the patient's ability to tolerate treatment<sup>[13]</sup>.

The patient underwent surgical resection of the tumor followed by adjuvant therapy with aromatase inhibitors. This personalized approach was designed to reduce the risk of recurrence, considering the tumor's hormone receptor-positive status and the patient's postmenopausal condition<sup>[14]</sup>. The use of aromatase inhibitors, as an alternative to tamoxifen, was crucial given their proven effectiveness and favorable side effect profile in postmenopausal women<sup>[15]</sup>.

The patient's positive response to this treatment strategy, as evidenced by her good tolerance of adjuvant therapy, underscores the necessity of individualized, patient-centered care in the management of breast cancer. It highlights the need for a multidisciplinary approach<sup>[16]</sup> that encompasses various considerations, including the patient's menopausal status, the biological characteristics of the tumor, potential treatment side effects, and the patient's personal preferences and overall health.

In conclusion, this case reaffirms the importance of a comprehensive and personalized approach in the management of locally advanced breast cancer<sup>[17]</sup>. It emphasizes the need for continued research and innovation in developing therapeutic strategies that not only improve survival outcomes but also maintain patient quality of life.

## Ethical approval

The local Institutional Review Board deemed the study exempt from examination.

## Consent

Informed written consent was obtained from the patient for the publication of this report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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## Author contribution

P.I., S.I., and C.D.I.: contributed to manuscript writing and editing and data collection; A.P., D.C., and S.S.: contributed to the data analysis; L.I., M.C.-P., and R.G.: contributed to conceptualization and supervision. All authors have read and approved the final manuscript.

## Conflicts of interest disclosure

The authors declare that they have no conflicts of interest.

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