

A Rare Case of Male Invasive Lobular Breast Cancer

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Abstract

A 57 year-old man with a 20-year history of a left breast mass presents to the ED with increased breast pain, skin changes, and discharge. He is diagnosed with invasive lobular carcinoma (ILC), which makes up 10-15% of all breast cancers, and 1% of male breast cancer diagnoses. ILC is defined by loss of the E-cadherin protein, encoded by the CDH1 gene. This case report details a rare case of invasive lobular breast cancer in a male patient with significant ILC disease burden.

Introduction

The lifetime risk of developing breast cancer for a man is less than 1%, about 1:1000, compared to 1:8 for a woman. Compared to women, the median age at diagnosis for men with breast cancer is 5 years older (67 in men, 62 in women). Risk factors for male breast cancer are largely similar to risk factors in women, including primarily age, but also BRCA mutations, elevated estrogen exposure (i.e. liver disease, obesity), 1st degree family members with breast cancer, and radiation exposure. Among male patients with breast cancer, invasive lobular breast cancers comprise 1% of the cancer subtypes.

Case Report

In November of 2017, this 67-year old gentleman visited the doctor for a breast mass, which he had known about for approximately 20 years, when his pain increased, and he noted itching, bleeding, and skin changes. At that time, ultrasound and diagnostic mammogram were performed. Radiologic readings deemed the left-sided, palpable mass as BI-RADS 3, most likely a calcified epidermal inclusion cyst with overlying skin infection. He was prescribed a 10-day course of TMP-SMX and asked to return to the physician in 3 weeks' time.

Approximately 1 month later, in December of 2017, he returned for a diagnostic mammogram, which was diagnosed as BI-RADS 4 and a diagnostic biopsy was subsequently performed, which demonstrated the following pathologic findings:

Stage: IIb

Grade: II

Histologic Type: Invasive ductal carcinoma.

Hormone Receptors: ER+ (90%), PR+ (70%), HER2 equivocal,

Ki-67 35%.

Core needle biopsy pathology, December 2017

Unfortunately, the patient did not seek appropriate management following the core needle biopsy in December 2017.

In March of 2025, the patient presented to the ED over concern of chest pain. On arrival, he was in hypertensive urgency, with systolic blood pressures over 200 and diastolic blood pressures over 110. He believed his pain to be stemming from an enlarging left breast mass, which had become increasingly painful, ulcerated, and itchy. Physical examination on presentation was notable for a left-sided ulcerated, retroareolar mass with bilateral axillary adenopathy. He was admitted 3/21 for hypertensive urgency and started on appropriate antihypertensive medications. Ultrasound and CT of the chest during this admission demonstrated an indeterminate, oval lobulated mass measuring 60 mm x 46 mm x 26 mm with internal vascularity and calcifications. He was discharged home 3/22 with instructions to follow-up with breast surgery as an outpatient. To evaluate for metastatic disease, the patient underwent CT and Technetium scans, which confirmed the left breast mass and were negative for metastases or other suspicious lesions [1]. He was scheduled for left mastectomy with left sentinel lymph node biopsy and possible left axillary lymph node dissection.

He underwent left mastectomy with and left axillary lymph node dissection May 27, 2025. Two 2 JP drains were placed intraoperatively. The surgical pathology report is detailed below:

Stage: IIIB

Grade: 3

Histologic Type: Invasive lobular carcinoma

Estrogen Receptor (ER) Status: Positive

Percentage of Cells with Nuclear Positivity: 90%, Strong

Progesterone Receptor (PgR) Status: Positive

Percentage of Cells with Nuclear Positivity: 70%, Strong

HER2 (by immunohistochemistry): Equivocal (Score 2+)

HER2 (by in situ hybridization): Negative (not amplified)

Ki-67 Percentage of Positive Nuclei: 35%

Mastectomy specimen pathology, May 2025

Post-operatively, the patient was educated on managing his drains and started on a regular GI diet, which he tolerated well. He was discharged home the following day. Since leaving the hospital, he has had 2 follow-up telemedicine appointments and 1 in-office visit with his breast surgeon. He continues to do well, with no post-surgical complaints. A radiation oncology, medical oncology, and a plan for lymphedema therapy have been arranged. No further surgery is indicated [2].

Discussion

Male breast cancer makes up approximately 1% of new cancer diagnoses each year. Invasive lobular carcinoma (ILC) comprises roughly 1% of new cancer diagnoses and 10-15% of all breast cancers. ILC is defined by its loss of E-cadherin molecules, leading to a unique, linear growth pattern. Without E-cadherin, tumor cells infiltrate the stroma in a single-file arrangement or as dispersed individual cells. In contrast, invasive ductal carcinoma (IDC) is known to form cohesive masses.

ILC most commonly arises from breast lobules, and is more likely to demonstrate bilateral, multifocal, or multicentric pathologic features compared to other breast cancer subtypes. Most cases are ER and/or PR positive and HER2 negative, as was the case with our patient. Fewer than 10% are either HR-negative or HER2-positive [3]. Despite most cases being hormone-receptor positive, ILC notoriously responds poorly to systemic chemotherapies, leading to increased therapeutic mastectomies, as in the case for our patient. Current studies demonstrate ILC responding well to endocrine therapy, making it the ideal 1st line treatment option.

Pathologic features characteristic of ILC are many. ILC presents with a unique metastatic behavior, known to spread to the serosa, meninges, and ovaries, among others. Patients with ILC commonly have worse clinical outcomes, with increased risk of late recurrences: Long-term survival and clinical outcomes in patients with ILC are worse than in stage- and grade-matched patients with IDC [4].

Clinically, ILC is a diagnostic challenge due to subtle imaging features and infiltrative behavior. Thus, underestimation of tumor size and depth on mammogram and ultrasound is common. In our patient's initial evaluation, for example, he was thought to have an infected subepidermal cyst rather than an early malignancy.

Future needs to be addressed include improved ILC diagnostic methods and a deeper understanding of ILC's molecular profile. ILC's unique molecular profile and subtle pathologic features commonly evade early screening tools, lending patients to experience more advanced stages of the disease. Despite a known biologic difference, ILC's current treatment guidelines are based on those described for IDC. ILC presents a unique challenge among breast cancer patients and providers, one that demands a tailored approach to improve patient outcomes.

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