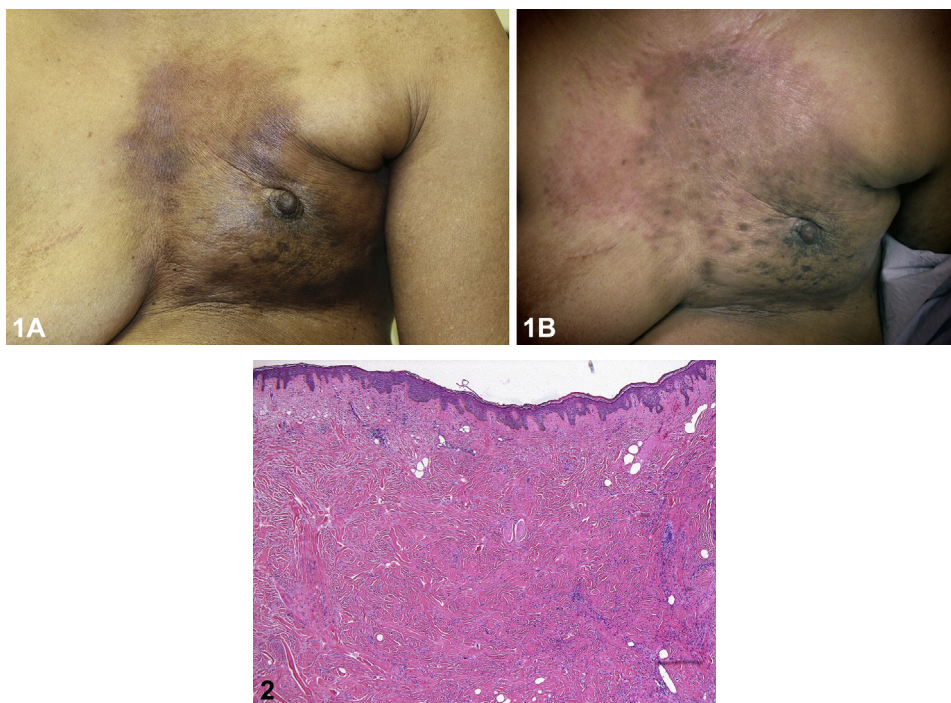


## Slowly progressive chest rash in an elderly woman



Lisa M. Tom, MD,<sup>a</sup> and Jules B. Lipoff, MD<sup>b</sup>  
*Brockton, Massachusetts, and Philadelphia, Pennsylvania*



A 78-year-old woman with remote history of breast cancer treated with lumpectomy presented to the dermatology department for eczema on her legs. Incidentally, breast skin changes were noted on examination, and she admitted to approximately 1 year of thickening, itchy breast skin. Her left breast was markedly indurated with hyperpigmented brown-to-erythematous plaques, subtle peau d'orange appearance, and shotty left axillary lymphadenopathy (Fig 1, A). She declined biopsy and treatment at that time. Fifteen months later, her rash had slowly progressed (Fig 1, B), with erythematous nodules spreading medially and superiorly on her chest skin. She remained otherwise well, living independently.

From the Department of Medicine, Signature Healthcare Brockton Hospital<sup>a</sup> and the Department of Dermatology, University of Pennsylvania.<sup>b</sup>

Funding sources: None.

Conflicts of interest: None declared.

Correspondence to: Jules B. Lipoff, MD, Department of Dermatology, University of Pennsylvania, Penn Medicine University City, 3737 Market Street, Suite 1100, Philadelphia, PA 19104. E-mail: [jules.lipoff@uphs.upenn.edu](mailto:jules.lipoff@uphs.upenn.edu).

JAAD Case Reports 2018;4:111-3.  
2352-5126

© 2017 by the American Academy of Dermatology, Inc. Published by Elsevier, Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<http://dx.doi.org/10.1016/j.jidcr.2017.04.019>

**Question 1: What is this patient's most likely diagnosis?**

- A. Metastatic breast cancer
- B. Metastatic lung cancer
- C. Lymphedema
- D. Eczema
- E. Cellulitis

**Answers:**

**A.** Metastatic breast cancer – Correct. The patient's markedly indurated skin and axillary lymphadenopathy are consistent with carcinoma en cuirasse, a form of breast cancer metastatic to skin with infiltrative disease causing firm "cuir-asse" or "armorlike" changes. Further history showed that 17 months before her initial dermatology visit, the patient had had a mammogram highly suspicious for recurrent carcinoma, and 9 months prior, a left breast tissue and skin biopsy showed invasive lobular carcinoma estrogen receptor (ER)<sup>+</sup>/progesterone receptor (PR)<sup>+</sup>/human epidermal growth factor receptor 2 (Her2)<sup>-</sup> (Fig 2).

**B.** Metastatic lung cancer – Incorrect. Less often, the primary malignancy in patients with carcinoma en cuirasse may be from lung, oral mucosa, gastric, or colorectal cancer. Compared with breast cancer, in lung and gastrointestinal cancer, cutaneous metastases occur earlier and are more likely to be associated with visceral metastases that worsen prognosis.<sup>1</sup>

**C.** Lymphedema – Incorrect. Fifteen years ago, the patient's breast cancer was treated with lumpectomy and partial mastectomy of the left breast, after which she declined chemotherapy and radiation. The timing of her symptoms and induration rather than edema on examination make infiltrative malignancy more likely than lymphedema.

**D.** Eczema – Incorrect. Although the patient complained of itch, the morphology findings show minimal epidermal change (no scale). Further, the distribution of the rash by the previous site of breast cancer makes this case more concerning for recurrent carcinoma.

**E.** Cellulitis – Incorrect. Although inflammatory metastatic breast cancer may mimic cellulitis (carcinoma erysipeloides), the timing (>1 year), lack of symptoms (no pain, no warmth), and overall appearance make cellulitis unlikely.

**Question 2: What is the recommended treatment?**

- A. Hydrocortisone cream
- B. Systemic hormonal or chemotherapy
- C. Surgical Excision
- D. Photodynamic therapy
- E. Antibiotics

**Answers:**

**A.** Hydrocortisone cream – Incorrect. Symptomatic treatment may include emollients and hydrocortisone cream to reduce itching, but this treatment does not address the etiology of the patient's symptoms.

**B.** Systemic hormonal or chemotherapy – Correct. Characteristics of the primary tumor or visceral metastases generally guide systemic treatment; however, there has been a report of ER<sup>-</sup>/PR<sup>-</sup>/Her2<sup>-</sup> breast cancer that progressed to estrogen receptor–positive skin metastases.<sup>2</sup> Two patients have been reported with resolution of skin metastases for more than a year after treatment with capecitabine.<sup>3</sup>

**C.** Surgical excision – Incorrect. Carcinoma en cuirasse typically cannot be treated surgically because of difficulty achieving negative margins and involvement of large skin areas that would require extensive skin grafting. Of note, however, in one patient with ulcerating tumors of her breasts, treatment with antibiotics and palliative split-thickness skin grafts was successful: the grafts remained intact through subsequent courses of chemotherapy, showing that skin graft survival is possible with active neoplastic disease with sufficient vascularity.<sup>4</sup>

**D.** Photodynamic therapy – Incorrect. A small study of photodynamic therapy for cutaneous metastasis showed best response in patients with minimal and nodular skin involvement.<sup>5</sup>

**E.** Antibiotics – Incorrect. Carcinoma en cuirasse may mimic cellulitis or mastitis, which would be appropriately treated with antibiotics.

**Question 3: What test is most important for determining this patient's prognosis?**

- A. Computed tomography (CT) of the chest, abdomen, and pelvis
- B. Skin punch biopsy
- C. Mammogram

**D.** Breast ultrasound scan

**E.** Bacterial culture

**Answers:**

**A.** CT of the chest, abdomen, and pelvis — Correct. Although cutaneous infiltration is often considered a sign of advanced disease and poor prognosis, a retrospective series reported a mean survival of 57.43 months for breast cancer with cutaneous-only metastases; about one-third of breast cancer cases with cutaneous metastases were confined to the skin with no visceral involvement.<sup>1</sup> Bone scan and CT of the chest, abdomen, and pelvis found no metastatic disease in our patient, and she continues to feel well after 3 years of documented evidence of carcinoma en cuirasse with minimal progression.

**B.** Skin punch biopsy — Incorrect. Although skin punch biopsy is crucial for diagnosis and ascertainment of receptor positivity to guide treatment, the receptor positivity of the malignancy is less important to prognosis than the presence of visceral metastases.

**C.** Mammogram — Incorrect. At this point in our patient's evaluation, clinical suspicion is high for recurrence, so the priority is imaging to assess for metastasis. Previous workup before her dermatology presentation included diagnostic mammography with a normal right breast and high suspicion for recurrent carcinoma in the left breast.

**D.** Breast ultrasound scan — Incorrect. A left breast ultrasound scan in our patient showed confluent masses and associated marked skin thickening with an abnormal axillary lymph node. Metastatic workup with positron emission tomography scan or CT of the chest, abdomen, and pelvis is more important than local imaging for prognosis.

**E.** Bacterial culture — Incorrect. Bacterial culture would direct antibiotic therapy in patients with purulent drainage or infection and would not assist in assessing this patient's prognosis.

**Abbreviations used:**

CT: computed tomography

ER: estrogen receptor

Her2: human epidermal growth factor receptor 2

PR: progesterone receptor

**REFERENCES**

1. Hu S, Chen G, Lu Y, Wu C, Lan C. Cutaneous metastases from different internal malignancies: a clinical and prognostic appraisal. *J Eur Acad Dermatol Venereol.* 2008;22(6):735-740.
2. Lee SM, Kang EJ, Kim JH, et al. Triple-negative breast cancer that progressed as estrogen receptor-positive skin metastases. *Korean J Intern Med.* 2015;30(3):411.
3. Sideras K, Zahasky KM, Kaur JS. Response of cutaneous metastases from breast cancer to capecitabine. *Clin Med Oncol.* 2008;2:415.
4. Noe JM, Lewin A, Schnipper LE. Combination chemotherapy followed by skin grafts in the management of locally advanced breast cancer. *Ann Surg.* 1978;188(5):666-668.
5. Khan SA, Dougherty TJ, Mang TS. An evaluation of photodynamic therapy in the management of cutaneous metastases of breast cancer. *Eur J Cancer.* 1993;29(12):1686-1690.