



Title: Breast cancer metastatic in colonic mucosa: report of a case

Authors: Ortoleva, A., Erra S.¹

Type: Brief Report

Keywords: Lobular carcinoma, Unusual metastasis, Differential diagnosis.

Summary

Ductal breast carcinoma can metastasize in many organs, above all in lungs, bone and liver.

In rare cases, gastroenterical secondary localizations have been described.

We report a case of metastases from undifferentiated carcinoma in bowel mucosa with breast primitivity in an asymptomatic woman operated on for breast cancer 14 years before.

Introduction

Breast cancer is the most common cancer in women worldwide after skin cancer.

Invasive lobular carcinomas represent about 10% of all invasive breast cancers.

Common sites of metastasis for lobular carcinoma are bones, lungs, central nervous system, liver and regional lymph nodes.

We report an unusual colonic mucosa localization from invasive lobular breast cancer.

¹ S.O.C. Anatomia Patologica
A.S.L. AL, P.O. Casale Monferrato
Casale Monferrato (AL)
tel: 0142-434894
E-mail: serra@aslal.it

Case report

On May 2013, a 68-years-old asymptomatic woman was subject to a colonic endoscopy for a regional screening exam. Endoscopic image revealed a little erosive area and some bioptic specimens were made. Histologic examination of the bioptic material highlights a diffuse and infiltrative proliferation of small atypical cells in the colonic mucosa, intermixed to normal glandular epithelium (Fig. 1).

Immunohistochemical analysis of these neoplastic elements revealed an immunophenotype consistent with lobular carcinoma of the breast with antibodies for ER and CK19 positive (Fig. 2) and CK20 negativity (Fig. 3) in dispersed epithelial cells.

Anamnestic examination of the patient's history revealed that in July 1999 she had undergone a radical mastectomy followed by chemotherapy for breast lobular carcinoma. During the last 14 years the woman was free from disease.

The analysis of the immunohistochemical results suggests a diagnosis of colorectal localization from lobular carcinoma of the breast.

Discussion

Gastrointestinal localization from breast primitivity is very unusual. The risk of a second primary tumor following breast cancer is about 12% and the incidence of primary colorectal metastasis is estimated to be about 1% [1].

The literature highlights 26 cases of metastatic carcinoma of the breast to the colorectum, 4 of them were reviewed.

Our case is very rare because there have been described only one asymptomatic metastasis from lobular carcinoma in literature before this one [2]. During the 14 years after the surgery the patient had no kind of symptoms like nausea or diarrhoea; McLemore et al. declared that average interval between breast cancer and gastrointestinal metastasis in reported cases is 7 years [3]. In the literature, the longest interval between diagnosis of breasts lobular carcinoma and colorectal metastasis is reported as 25 years [4].

The diagnosis of our case was straightforward because the history of primary breast cancer was known in the initial presentation of gastrointestinal lesion. In some cases the diagnosis was difficult because the metastasis mimics a primary colorectal cancer, above all on morphological aspects. Lobular breast carcinoma expresses different phenotypes from colorectal carcinoma. For this reason, immunohistochemical detection is essential to discriminate the origin of the cancer.



Conclusion

The diagnosis of colorectal cancer localization from a breast primitivity is very difficult because these cancers can be clinically asymptomatic and then they can mimic a primitive adenocarcinoma of colonic mucosa.

A definitive diagnosis is essential to establish the correct and specific treatment for the patient. For this reason, it is very important to have a complete anamnestic history of each case of intestinal tumor.

Morphological aspect of the bioptic specimens and the use of specific immunohistochemical markers are essential to discriminate primitive epithelial tumors of colonic mucosa from secondary localizations.

Acknowledgments:

We think our laboratory technician, above all Eleonora Mazzoni for immunohistochemistry and Silvio Modena as coordinator of practice activity of our service.

Fig. 1
Histological analysis of bioptic specimens shows colonic mucosa infiltrated by small atypical cell. (10X; H/E)

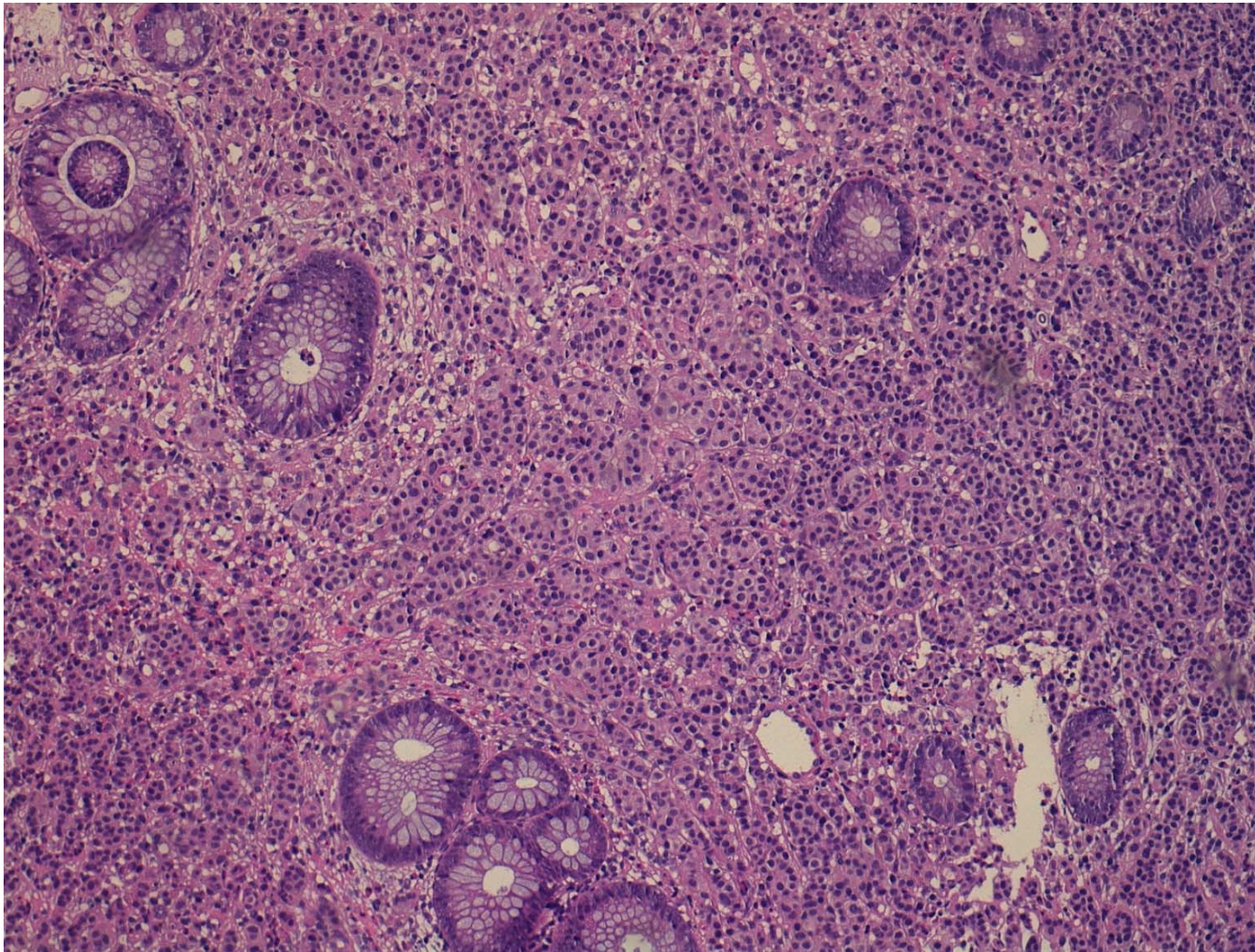


Fig 2
Anti -CK20 immunohistochemistry shows negativity in neoplastic dispersed elements (20X).

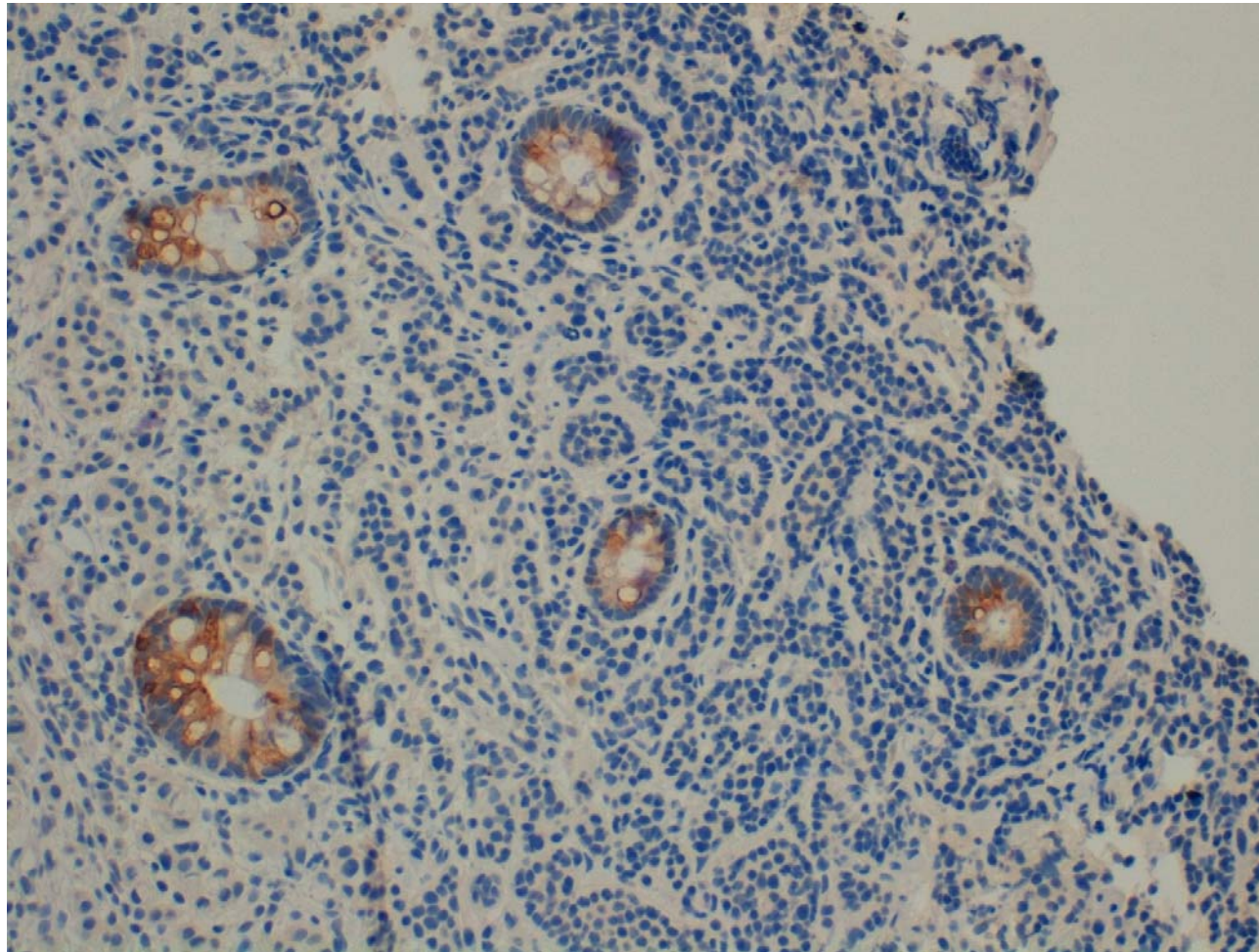
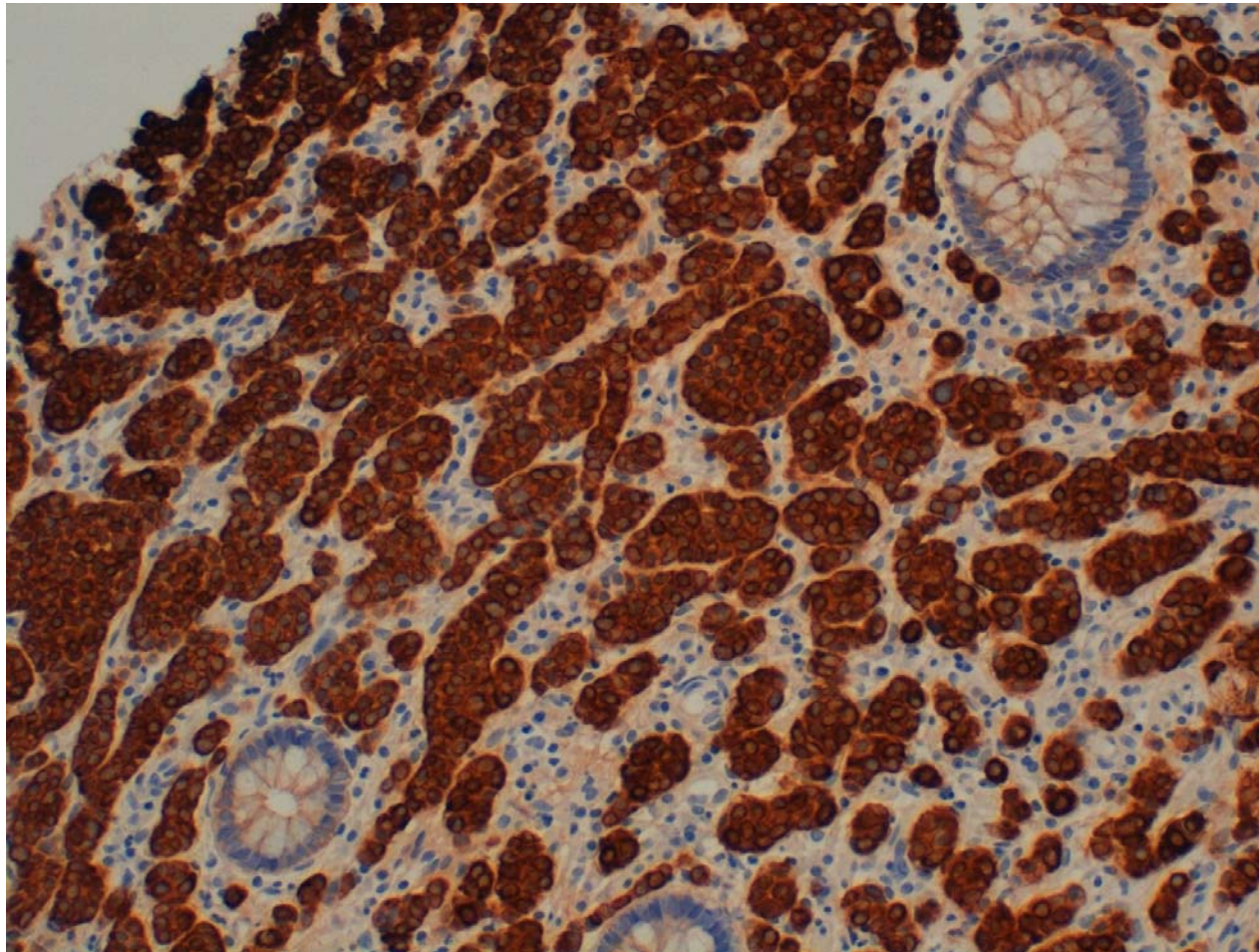


Fig 3

Anti-CK19 immunohistochemistry displays positivity in tumoral interstitial cells and negativity of the colonic glands (20X).





References:

- [1] Prijatel P. *Surviving triple negative breast cancer: hope, treatment, and recovery*. Oxford: University Press 2012.
- [2] Ciulla A, Castronovo G, Tomasello G, Maiorana A M, Russo L, Daniele E and Genova G. *Gastric metastases originating from occult breast lobular carcinoma: diagnostic and therapeutic problems*. *World J Surg Oncol*. 2008; 6: 78.
- [3] McLemore EC, Pockaj BA, Reynolds C, Gray RJ, Hernandez JL, Grant CS, Donohue JH. *Breast cancer: presentation and intervention in women with gastrointestinal metastasis and carcinomatosis*. *Ann Surg Oncol*. 2005;12:886–894.
- [4] Mistrangelo M, Cassoni P, Mistrangelo M, Castellano I, Codognotto E, Sapino A, Lamanna G, Cravero F, Bianco L, Fora G, Sandrucci S. *Obstructive colon metastases from lobular breast cancer: report of a case and review of the literature*. *Tumori*. 2011;97:800–804.