

Introduction

- Breast cancer most commonly metastasizes to the bone, lung, liver, and brain, but rarely to the GI tract.¹
- Invasive lobular carcinoma is the most common breast cancer to metastasize to the GI tract.¹
- We report a case of primary breast cancer with diffuse metastasis to the colon.

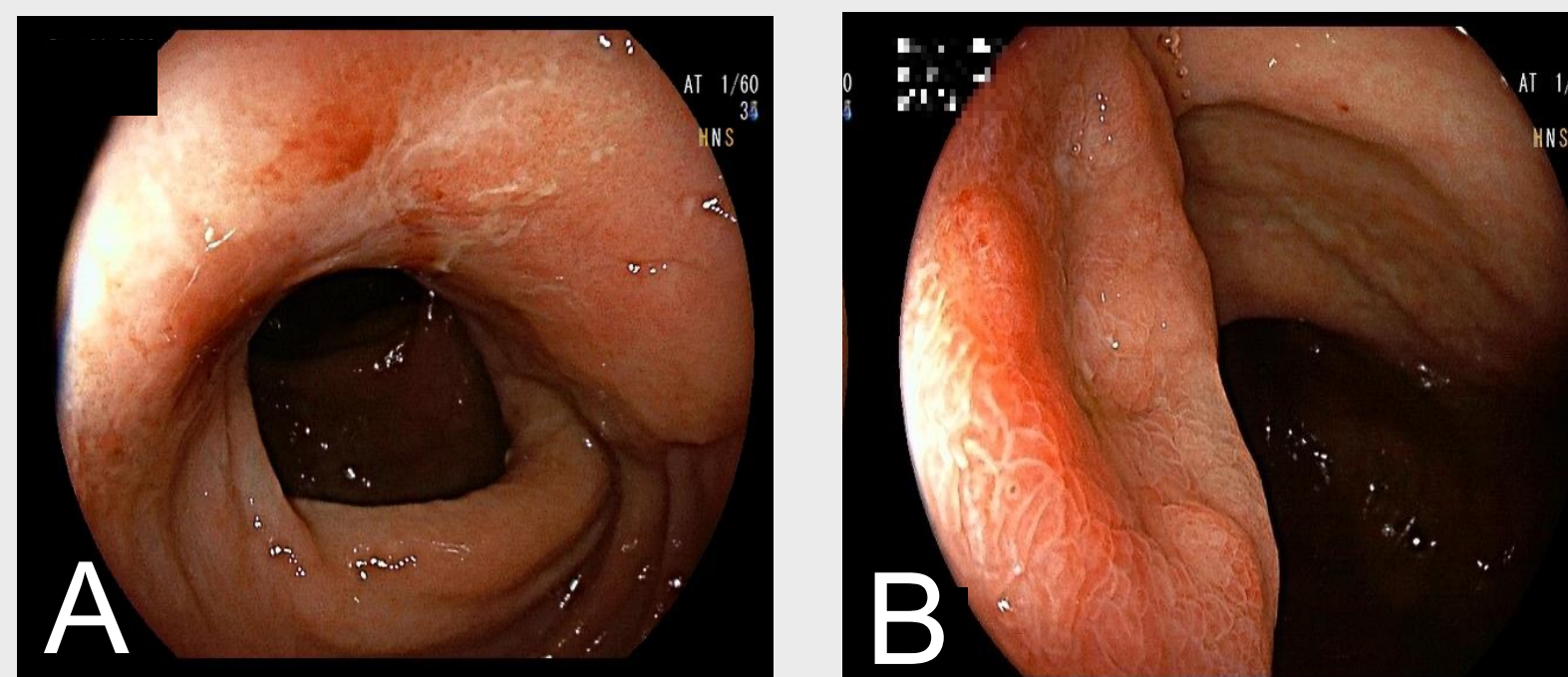
Take Home Points

- Breast cancer metastasizing to the gastrointestinal tract (GI) is rare and has been reported in about 1% of cases.¹
- Gastrointestinal symptoms in patients with a history of breast cancer should be investigated and clinicians should remain vigilant for progression of disease.
- There have been no prior reports of a primary metastatic breast cancer with diffuse colonic involvement.

Case

- 67-year-old female with history of collagenous colitis was diagnosed with stage IIIA (T3, N2, M0) invasive lobular carcinoma (ILC) ER+/PR+/Her2+ of the left breast identified on screening mammogram.
- **Prior Treatment**
 - Neoadjuvant chemotherapy
 - Anti-HER-2/neu therapy
 - Left chest wall radiation
 - Left modified radical mastectomy
- **Interim History**
 - 2 years after diagnosis, had prophylactic contralateral mastectomy with incidental finding of right breast cancer, unknown stage ER+/PR-/Her2-.
- **Presentation of metastasis to colon**
 - 3 years after diagnosis, she developed early satiety and abdominal pain prompting repeat colonoscopy. Prior colonoscopy 2.5 years ago with diverticulosis.
 - Updated colonoscopy (**Figure A**) showed multiple polyps in the entire colon, diffuse ulceration/congestion, and a stenotic ileocecal valve (**Figure B**) concerning for IBD. Pathology (**Figure C**) matched breast cancer primary.
- Computed tomography (CT) of chest, abdomen, and pelvis showed abdominal lymphadenopathy and osteoblastic metastatic disease.
- Based on these new findings, treatment was changed from Exemestane to Xeloda and Zometa. At 15 months of follow up, she is tolerating therapy well with radiographic resolution of metastatic disease.

Figures



Figures A and B: Colonoscopy revealed multiple polyps were found in the cecum, descending, sigmoid and distal rectum along with diffuse congestion, erythema, induration, and ulceration (**A**). Also revealed a stenotic ileocecal valve (**B**) concerning for inflammatory bowel disease (IBD).

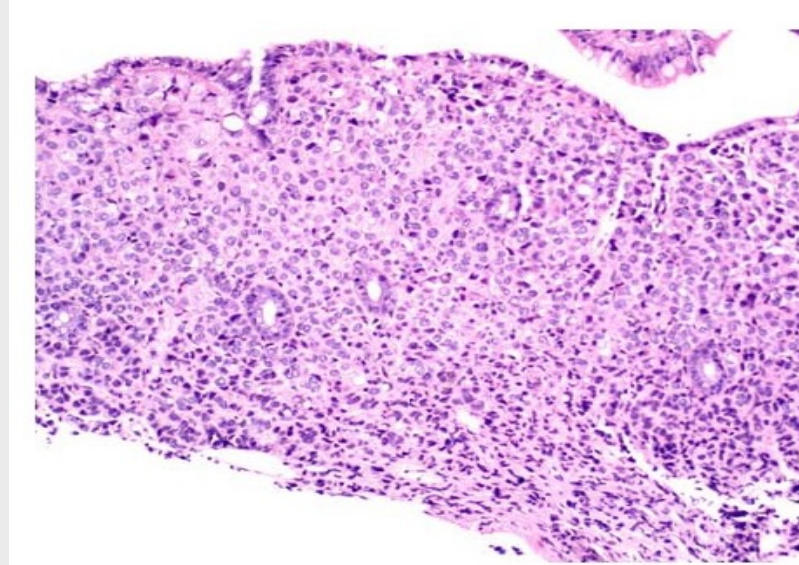


Figure C: Biopsy taken from entire colon all showed similar feature of infiltrate of neoplastic cells within the lamina propria. The infiltrate was made up of signet ring cells. A PAS stain highlighted focal intracellular mucin confirming diagnosis of poorly differentiated adenocarcinoma. Further staining matched breast cancer primary (ER+, PR-, and HER2-).

Discussion

- The latency period between initial diagnosis of breast cancer and discovery of colonic metastasis is variable and can occur up to 30 years afterwards.²
- In cases where breast cancer metastasizes to the GI tract, the stomach is the most affected site followed by the colon, rectum, and small bowel.¹
- Metastatic breast cancer (MBC) to the colon can present with a variety of symptoms ranging from bowel obstruction to non-specific symptoms such as abdominal pain, early satiety, nausea, and vomiting.
- MBC to the colon can be mistaken for inflammatory bowel disease or primary colon cancer.²
- Definitive diagnosis is made by histopathology.
- It is crucial to be on alert for non-specific symptoms in patients with history of metastatic breast cancer as this can indicate possible progression of disease.

References:

1. Montagna E, Pirola S, Maisonneuve P, et al. Lobular metastatic breast cancer patients with gastrointestinal involvement: features and outcomes. Clin Breast Cancer. 2018;18(3):e401-5.
2. Murad Bani Hani, Bashir Attuwaybi, Bryan Butler; Breast Cancer Metastasis to the Colon and Rectum: Review of Current Status on Diagnosis and Management. Int Surg 1 November 2019; 104 (11-12): 508-513.

