

# Primary Diagnosis of Metastatic Breast Cancer via Esophagogastroduodenoscopy with Gastric Biopsies

Garrett Beck DO, Jacob Burch DO, Casey Reulbach DO, and Mark Minaudo DO  
Ascension Genesys Hospital  
Medical Education  
Grand Blanc, MI



## Introduction

- Gastric metastases are a rare manifestation of breast cancer and previous case reports suggest they typically occur in patients with a long standing history of breast cancer.
- We present a case of a patient whose primary diagnosis of breast cancer was made via gastric biopsies taken during esophagogastroduodenoscopy (EGD) after the patient presented to the hospital with symptoms of persistent nausea and vomiting.

## Case Report

- 58-year-old female with a reported history of alcohol use disorder who presented to the emergency department with intractable nausea and vomiting.
- Patient had ongoing nausea and vomiting for several weeks prior to presentation resulting in multiple ED visit.
- On arrival, the patient's vitals were stable and labs were only significant for a mildly elevated creatinine of 1.40, which normalized with IV fluids.
- Computed tomography (CT) of the abdomen and pelvis showed diffuse gastric wall thickening.
- EGD was performed which revealed diffuse gastritis with friable mucosa and concern for malignancy or ischemia.
- Gastric biopsies were suggestive of adenocarcinoma with likely primary being breast cancer.
- Immunohistochemical staining was positive for CDK7, GATA3, mammaglobin, and 80-90% estrogen receptor.
- Based on the pathologic appearance and immunohistochemical staining, the diagnosis was made of metastatic lobular carcinoma.
- Due to the patient's poor support system and functional status, the patient elected to pursue hospice, and therefore further workup was not performed.



Image 1: CT Abdomen showing diffuse gastric wall thickening up 12mm



Image 2: Endoscopic appearance of the gastric mucosa. Friable mucosa with ulcerative gastritis with concern for malignancy vs. ischemia

## Discussion

- Breast cancer is the second most common malignancy in women in the United States, with metastatic breast cancer classically spreading to lungs, liver, bone, soft tissue, and adrenal glands. (2,4)
- Metastasis to the gastrointestinal (GI) tract is rare, with lobular breast cancer having higher predilection over ductal carcinoma. (3,4)
- Average time for breast cancer to metastasize to GI tract has been previously reported as many years after primary diagnosis.(4)
- Here we present a case of breast cancer where the primary diagnosis was made after EGD assisted gastric biopsies.
- After extensive literature review, there is sparse information on early gastric metastasis of breast cancer.
- While our patient's previous history of breast cancer screening is unknown, she had no prior knowledge of her breast cancer diagnosis.
- This case signifies the importance of endoscopic evaluation and gastric biopsies in patients with nonspecific symptoms especially with abnormal imaging findings suggestive of gastritis.

## References

1. Saphir O, Parker ML. Metastasis of primary carcinoma of the breast: with special reference to spleen, adrenal glands and ovaries. Arch Surg 1941;42:1003–18.
2. Center for Disease Control and Prevention. (2014-2019) United States Cancer Statistics: Data Visualization. <https://gis.cdc.gov/Cancer/USCS/#/Demographics/>
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 Nov;12(11):886-94.
4. Zhang LL, Rong XC, Yuan L, Cai LJ, Liu YP. Breast cancer with an initial gastrointestinal presentation: a case report and literature review. Am J Transl Res. 2021 Nov 15;13(11):13147-13155. PMID: 34956535; PMCID: PMC8661181.