

# A Rare Cause of Upper GI Bleeding: Gastric Metastasis from a Primary Lung Cancer

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While upper GI bleeding from primary gastric tumors is relatively common, bleeding arising from metastatic foci is rare. Here we present a case of metastatic lung adenocarcinoma to the stomach presenting with upper GI bleeding.

A 57-year-old man with stage IIIB adenocarcinoma of the lung status post chemo radiation therapy presented with 5 days of melena and dizziness. Orthostatic hypotension was noted; physical examination was otherwise unremarkable. Laboratory evaluation showed nadir hemoglobin of 6.3 g/dL from a baseline of 11.9 g/dL. EGD revealed a small nodular lesion with erosion in the fundus (Figure 1). Forceps biopsies showed a focus of metastatic carcinoma associated with a lymphocytic infiltrate (Figures 2 and 3). Tumor cells stained positive for p63 and negative for TTF-1, consistent with metastatic non-small cell lung cancer (Figures 4 and 5). Hemoglobin improved after blood transfusion, and he had no recurrence of gastrointestinal bleeding. Given rapid disease progression with brain metastasis, he was discharged with home hospice.

Gastric metastasis from lung cancer is rare with an incidence of 0.2%-0.5% [1]. As in our case, the most common type of lung cancer to metastasize to the stomach is non-small cell with the usual sites of metastasis being the fundus and cardia [2]. Metastatic lesions to the

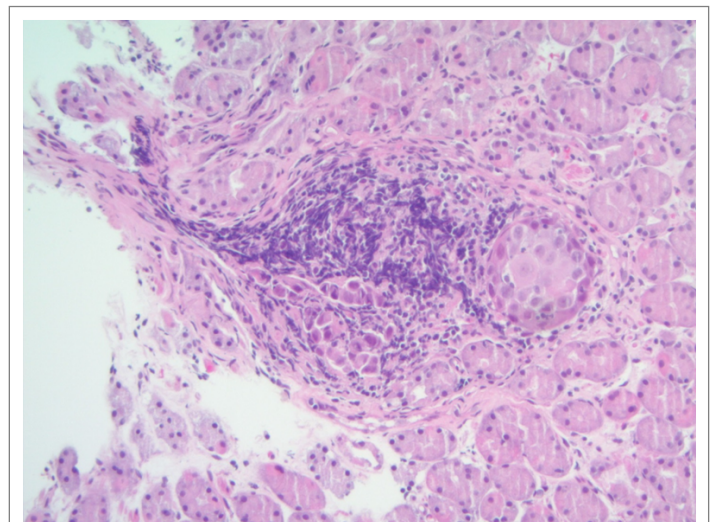


Figure 2: Low power image showing tumor nests associated with a lymphocytic infiltrate (H&E, original magnification, × 200)

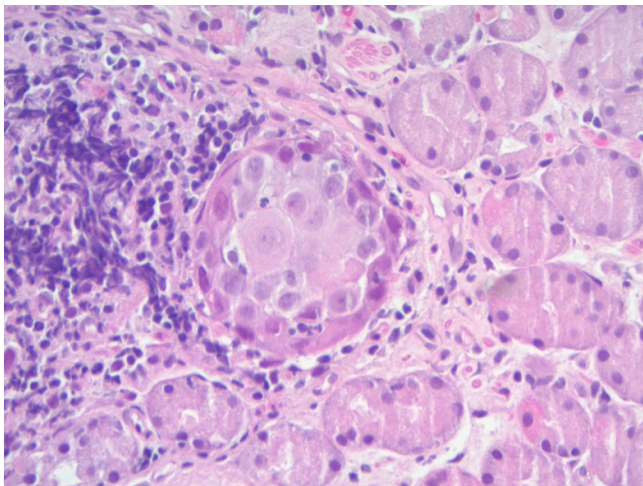


Figure 1: A single diminutive nodule with erosion in the gastric fundus.

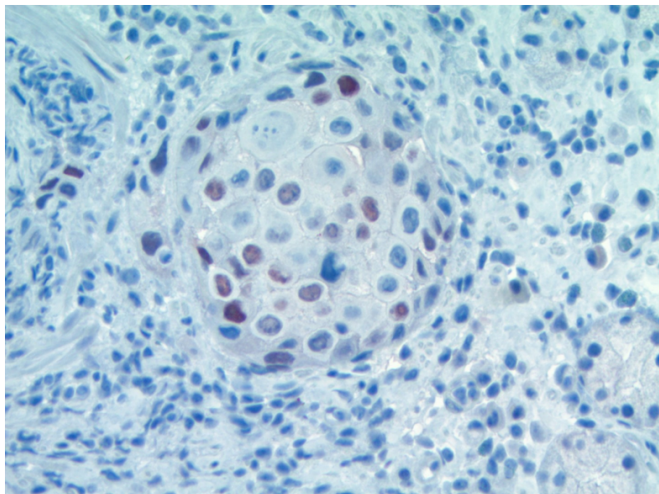
stomach are difficult to diagnose endoscopically. The classic “bull’s eye sign,” which is a sub mucosal tumor with a central depression, is found in only 44% of cases [3]. Multiple lesions are seen in up to one third of cases [3]. Diagnosis is usually confirmed by endoscopic biopsy [3]. As in our case, the majority of non-small cell carcinomas express p63 [4]. Thyroid transcription factor 1 (TTF-1), an immune histochemical marker, is often used to confirm primary lung cancer. Its specificity is approximately 90% with a positive predictive value of 83%; however, the sensitivity is only approximately 60-82% and, as in this case, can be even lower in previously treated lung carcinomas [3,5-7]. In addition to TTF-1, cytokeratin 7 (CK7) and cytokeratin 20 (CK20) have been used to distinguish primary from metastatic lung adenocarcinoma [8]. CK7 expression appears to be more frequent in adenocarcinomas originating from a pulmonary primary with CK20 expression more common in adenocarcinoma originating from the GI tract [8]. Our case demonstrates that stomach metastasis, though rare, should be considered in individuals with primary lung cancer presenting with upper GI bleeding. Immunohistochemical markers, in addition to endoscopic clues, can be helpful in distinguishing primary versus metastatic lung carcinoma.

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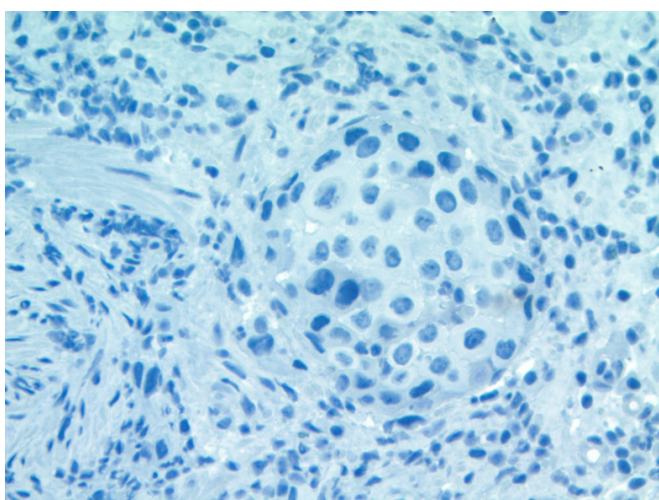
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**Figure 3:** High power image showing tumor nests with prominent nuclei and nucleoli with intracellular bridges surrounded by normal fundic glands (H&E, original magnification, x 400).



**Figure 4:** Immuno histochemical staining for p63 is positive (brown) (x 400).



**Figure 5:** Immuno histochemical staining for TTF-1 is negative (x 400).

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