



Not All Gastric Masses are Gastric Cancer

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Learning Objectives

- Lung cancer metastasizing to the stomach is extremely rare.
- TTF-1 and Nap-A are highly sensitive and specific for primary lung cancer.
- CK7 and CK20 are useful for cancers of unknown origin but not definitive.
- EGFR TKI therapy is the treatment of choice for EGFR mutation positive lung adenocarcinoma.

History of Presenting Illness

CC: A 77yo W F with a PMH of primary gastric adenocarcinoma, diagnosed 1 month ago at another hospital, presented with SOB that worsened on exertion and lying flat.

- Denies cough, fever, chest pain, nausea, vomiting, and calf pain.
- Commented that she was being evaluated for palliative care and a feeding tube.

PMH: Primary gastric adenocarcinoma and hypothyroidism. No surgical history.

FH: Denies any family history of cancer.

SH: Retired. Lives half the year in another state and the other half in California. Denies tobacco, alcohol, and drug use.

Physical Exam: Mildly distressed cachexic female saturating 93% on room air. Decreased breath sounds on the left side. Rest of exam WNL.

Imaging: A chest x-ray showed a large left-sided pleural effusion. An ultrasound-guided thoracentesis and pleural biopsy were positive for primary lung adenocarcinoma.

Labs and Imaging

	Other Hospital	Our Hospital
TTF1	-----	Positive
Nap-A	-----	Positive
CK7	Positive	Positive
CK20	Negative	Negative
cdx-2	Negative	Negative

Pathology described at other hospital: "gastric body/fundic-type mucosa with patchy infiltration by atypical epithelial cells with irregular hyperchromatic nuclei and abundant eosinophilic cytoplasm"

FIG 1. Both Hospitals' IHC of the cancer

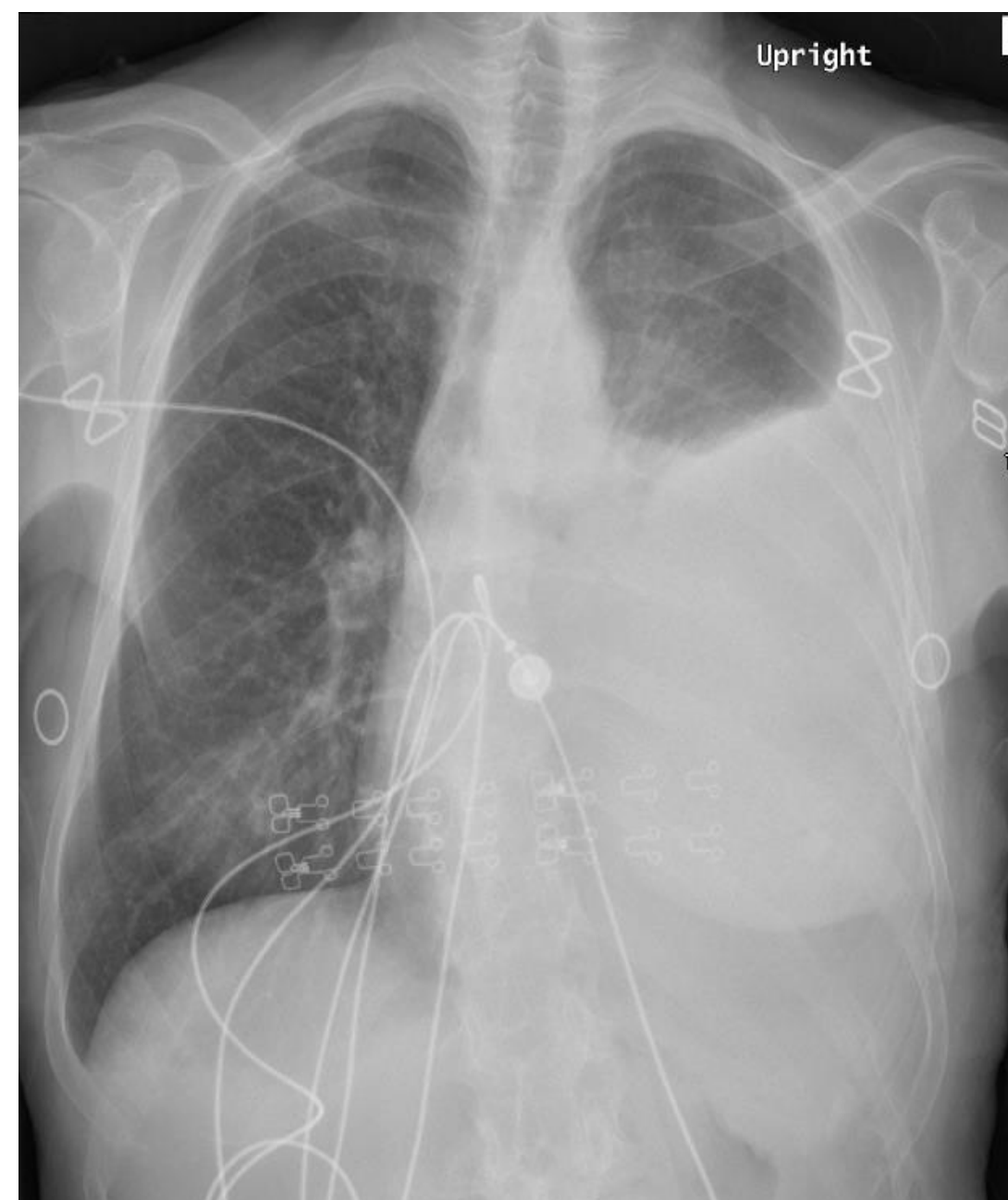


FIG 2. CXR Large left sided pleural effusion

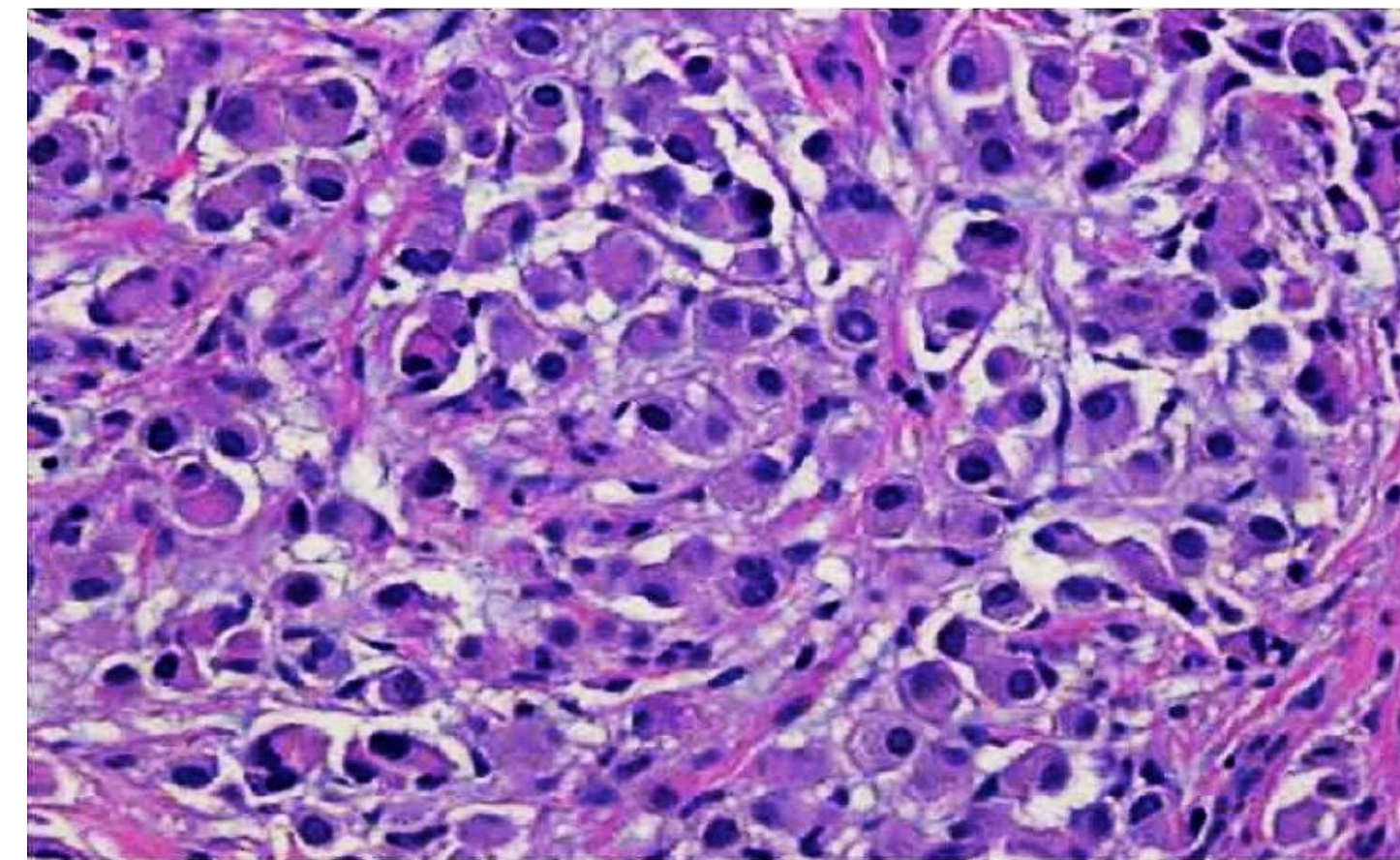


FIG 3. Pleural biopsy pathology

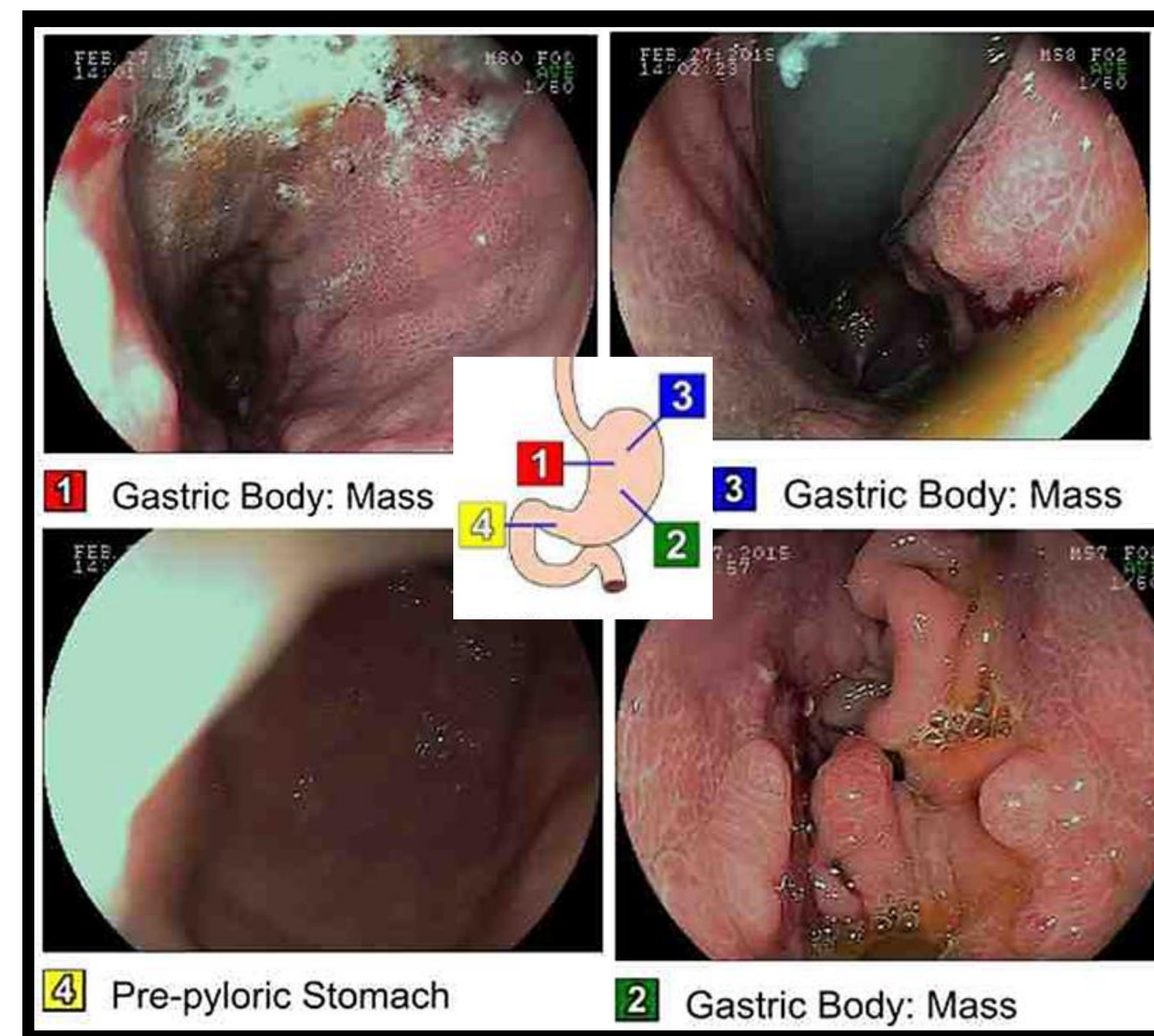


FIG 4. Endoscopy showing large fungating gastric mass

Hospital Course and Discussion

Assessment: Two separate primary cancers, one pure metastatic gastric cancer, or one pure metastatic lung cancer?

The incidence of lung metastases to the stomach varies from 0.2% to 0.5%.

Normally gastric cancers have CK7-/CK20+ pattern, however it was likely diagnosed via clinically with histopathological description. Lung cancer was not on their differential, so they did not test for TTF-1 and Nap-A.

- TTF-1 is highly specific for adenocarcinomas of pulmonary origin (PPV 100%)
- Nap-A is superior than TTF-1 for detecting Lung ACA
- TTF-1 (+) and Nap-A(+) = Primary Lung Adenocarcinoma
- CK7+/CK20- suggestive of Lung CA
- CK7-/CK20+ suggestive of Gastrointestinal CA

Therefore, we endoscopically examined the patient's stomach. Biopsy showed same immunophenotype as the pleural effusion.

- Our patient was TTF-1+, Nap-A+, CK7+/CK20- at both sites, therefore proving that she has metastatic lung adenocarcinoma.

Further, our patient was epidermal growth factor receptor (EGFR) positive.

- Meta-analysis has shown that EGFR tyrosine kinase inhibitors (TKI) significantly prolong progression free survival in patients with advanced non-small cell lung cancer as compared to platinum based chemotherapy.
- Our patient did well on erlotinib (EGFR TKI)
- Patient returned to playing golf and traveling.
- She never needed the feeding tube.

References

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