# IMAGE | ESOPHAGUS



# A Rare Case of Esophageal Metastasis of Invasive Mucinous Adenocarcinoma of the Lung

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### CASE REPORT

A 66-year-old woman was referred to our hospital because of an incidental finding of a 50 mm mass in the lower lobe of the left lung with liver and lymph node metastases. Lymph node biopsy revealed mucinous adenocarcinoma. Chemotherapy was initiated, which markedly reduced the tumor size. Two months after starting chemotherapy, she developed dysphagia. A plain computed tomography scan revealed circumferential and concentric wall thickening of the lower esophagus adjacent to the lung tumor (Figure 1). Endoscopy showed stenosis in the lower esophagus with apparently normal overlying mucosa (Figure 1). Endoscopic ultrasound revealed a submucosal cystic lesion measuring 30 mm in diameter with an irregular septum (Figure 1). Fine-needle aspiration was performed for diagnosis, which also helped to reduce the volume of cystic fluid, thereby improving the esophageal stricture. Histology revealed adenocarcinoma with intracytoplasmic mucin (Figure 2). Immunohistochemistry staining showed abundant CK7 and HNF4 $\alpha$ , consistent with invasive mucinous adenocarcinoma, suggesting esophageal metastasis from the lung tumor (Figure 2). Metastatic esophageal tumor is relatively rare, and most metastatic esophageal tumors take the form of submucosal solid tumors.<sup>1-4</sup> To the best of our knowledge, this is the first case of submucosal metastasis of invasive mucinous adenocarcinoma retaining mucin producibility.

# DISCLOSURES

Author contributions: S. Kimura and M. Kobayashi drafted the article equally. I. Onishi provided the pathological diagnosis and assisted in preparation of the manuscript. M. Kobayashi supervised the article. The final version of the manuscript was approved by all authors. M. Kobayashi is the article guarantor.

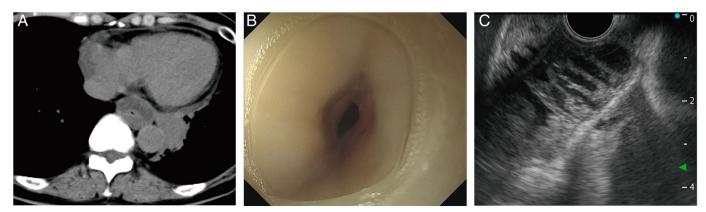


Figure 1. Computed tomography and endoscopic ultrasound images. (A) Computed tomography revealed circumferential and concentric wall thickening in the lower esophagus adjacent to the lung tumor. (B) The endoscopic view of the lower esophagus showing stenosis with apparently normal overlying mucosa. (C) Endoscopic ultrasound showed a submucosal cystic lesion measuring 30 mm in diameter with an irregular septum.

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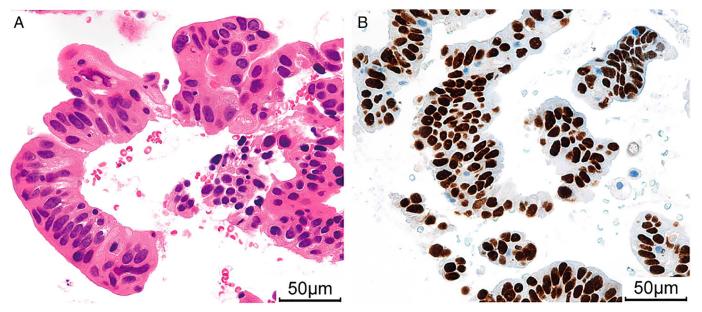


Figure 2. Histological images of endoscopic ultrasound-guided fine needle aspiration specimens. (A) Hematoxylin and eosin staining showing irregular enlargement of nuclei. (B) Immunohistochemical staining showing abundant HNF4 $\alpha$ .

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#### REFERENCES

 Abrams HL, Spiro R, Goldstein N. Metastases in carcinoma; analysis of 1000 autopsied cases. *Cancer*. 1950;3(1):74–85.

- Mizobuchi S, Tachimori Y, Kato H, Watanabe H, Nakanishi Y, Ochiai A. Metastatic esophagealtumors from distant primary lesions: Report of three esophagectomiesand study of 1835 autopsy cases. *Jpn J Clin Oncol.* 1997; 27(6):410–4.
- Simchuk EJ, Low DE. Direct esophageal metastasis from a distant primary tumor is a submucosal process: A review of six cases. *Dis Esophagus*. 2001; 14(3-4):247–50.
- Teh GXJ, Tan D, Khor JL, Wan WK, Wang YT. Esophageal metastatic adenocarcinoma diagnosedwith endoscopic ultrasound. *Case Rep Gastroenterol.* 2017;11(3):694–700.

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