

## Simultaneous Adenocarcinoma and Malignant Lymphoma of the Stomach

A 57-year-old man presented at our hospital with melena. Endoscopy showed an ulcerative tumor in the antrum and a polypoid tumor in the gastric body. Endoscopic ultrasonography (EUS) also showed two tumors (Figure 1). We suspected that the antral tumor was a carcinoma invading the muscularis propria, and that the gastric body tumor was a lymphoma invading the submucosa. A total gastrectomy was performed, and two completely separate tumors were found (Figure 2). Histologically, the ulcerative tumor consisted of moderately differentiated adenocarcinoma invading the muscularis propria, and the polypoid tumor consisted of diffuse large B-cell type of malignant lymphoma, expanding mainly into the submucosa, with minimal infiltration into the muscularis propria. The patient received adjuvant chemotherapy, and has not suffered a recurrence during the first year of follow-up.

Whereas the incidence of multiple gastric carcinomas is high, the simultaneous presence of carcinoma and lymphoma in the stomach is rare (1). Surface biopsies have limited value in the diagnosis of lymphoma (2). EUS has provided a useful real-time diagnostic modality for visualizing the depth of wall penetration and the extent of the submucosal spread of the tumor (3). Lymphomas are more homogeneous and hypoechoic than carcinomas (4); lymphomatous involvement mainly proceeds by longitudinal, expanding growth, while carcinoma is associated with vertical growth (5). These characteristic patterns help to distinguish lymphoma from carcinoma before histological confirmation. Although it is not possible to detect minimal infiltration by any of the current imaging methods, EUS images can be directly compared with the cross-section of the resected specimens. Using EUS, we were able to provide a real-time diagnosis and select a management plan for simultaneous gastric carcinoma and lymphoma.

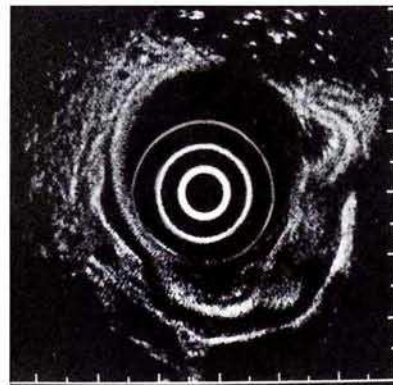
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### References

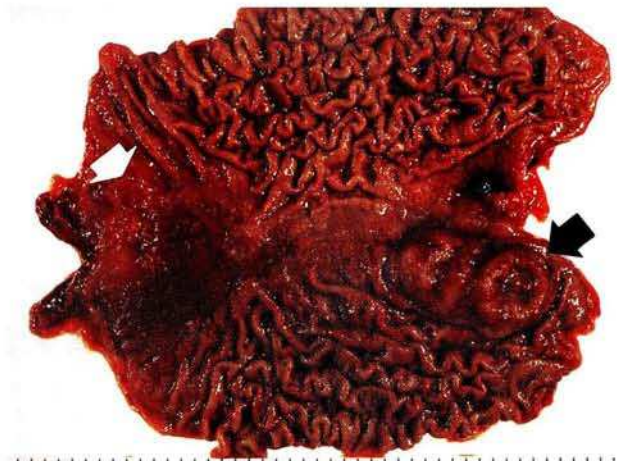
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**Figure 1a:** Endoscopic ultrasonography reveals a heterogeneous hypoechoic tumor in the antrum, invading the fourth layer, which is irregularly thickened.



**Figure 1b:** There is a homogeneous hypoechoic tumor in the gastric body, located mainly in the third layer, and compressing the fourth layer.



**Figure 2:** The resected specimen reveals a firm, irregular, ulcerative tumor measuring 2 × 2 cm in the anterior wall of the antrum (white arrow), and a large, soft, polypoid tumor with a smooth surface, measuring 6 × 3 cm, in the posterior wall of the upper gastric body (black arrow).

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