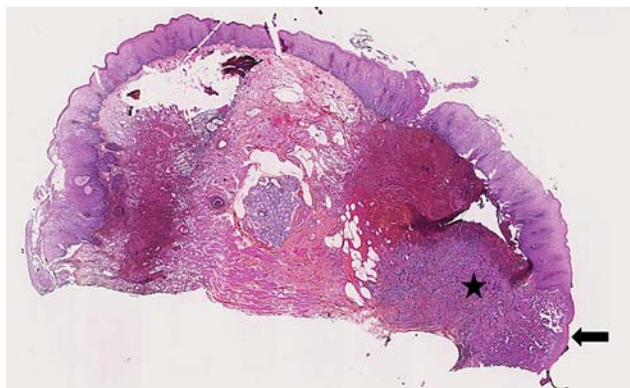


## Development of esophageal adenocarcinoma on buried glands following radiofrequency ablation for Barrett's esophagus

Radiofrequency ablation (RFA) of Barrett's esophagus mucosa is associated with high rates of complete eradication of intestinal metaplasia and dysplasia [1]. RFA can be combined with endoscopic mucosal resection (EMR) when superficial adenocarcinoma is present. After RFA the likelihood of buried glands under the layer of neosquamous epithelium is lower than after photodynamic therapy or argon plasma coagulation [2].

We report the first case of buried Barrett's adenocarcinoma developing after RFA. A 55-year-old man with a history of alcoholic cirrhosis was admitted for treatment of a COM3 Barrett's esophagus with a superficial adenocarcinoma resected by EMR. The resection was complete and complementary RFA was performed to eradicate the remaining Barrett's esophagus mucosa with high grade dysplasia. Endoscopic follow-up after two sessions of RFA (with a 360° and 90° probe, respectively) revealed a 10-mm islet of Barrett's esophagus without dysplasia. Another endoscopic follow-up 10 months later showed a 7-mm, elevated nodule in the squamous epithelium of the lower esophagus, which was classified as T1N0M0 with endoscopic ultrasonography and removed by EMR. Histological analysis revealed invasive adenocarcinoma developing under the normal squamous epithelium (► Fig. 1). The resection was R1 and because of the underlying liver cirrhosis, external radiation therapy was proposed.

► Fig. 1 clearly demonstrates that the adenocarcinoma developed in the glands located beneath the squamous epithelium. Recurrence of the previously resected adenocarcinoma was unlikely since the



**Fig. 1** Microscopic examination of the endoscopic mucosal resection (EMR) specimen: note the invasive adenocarcinoma (\*) located under the normal squamous epithelium (arrow) (hematoxylin and eosin stain, ×15 magnification).

resection was complete. Considering the short time interval between the RFA and the discovery of the adenocarcinoma, the second neoplasm more likely originated in the buried dysplastic glands. In conclusion, clinicians must be aware of the possibility after RFA of the development of new adenocarcinoma in dysplastic or nondysplastic glands buried under the neosquamous epithelium. The present case report further justifies the need for close endoscopic surveillance after RFA.

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**Competing interests:** None

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