# Three synchronous lesions with different historical types diagnosed by endoscopic submucosal dissection in one patient



A 69-year-old man underwent gastroscopy owing to intermittent abdominal distension for over 4 months. The gastroscopy revealed two distinct lesions in the lower stomach body, which was highly atrophied (O-3) [1], and the background mucosa was infected with Helicobacter pylori. Lesion 1, labeled as 0-Is+IIa [2], measured 40×20 mm and had a nodular mixed-type appearance on the posterior wall of the stomach body (> Fig. 1 a, b). Lesion 2, labeled as 0-IIb, measured 15× 10mm and was adjacent to lesion 1 on the oral side (> Fig. 2 a). Biopsy pathology of both lesions showed atypical cells. Further investigation using magnifying endoscopy with blue-laser imaging (ME-BLI) revealed that lesion 1 had a distinct boundary and mimicked a colonic laterally spreading tumor with a villous surface pattern (> Fig. 1 d, e). ME-BLI also revealed that the area of the lesion presenting noticeable redness had an intensive and irregular vascular pattern (> Fig. 1 f). Lesion 2 also had a distinct boundary and presented a brownish area. ME-BLI further revealed an irregular vascular pattern and white globe appearance (> Fig. 2 d, e). Both lesions were removed completely by endoscopic submucosal dissection (ESD). The histological diagnosis was intestinal adenoma with partial high-grade intraepithelial neoplasia for lesion 1 and crawling-type adenocarcinoma [3] (tub2) for lesion 2 (► Fig. 3, ► Fig. 4b, c).

The patient underwent a follow-up gastroscopy after 10 months, which revealed a 15×10-mm 0-IIc lesion (▶ Fig. 5) with a clear boundary in the gastric antrum. Lesion 3 showed light redness, and further ME-BLI revealed increased density of the glandular ducts with an irregular surface and vascular pattern (▶ Fig. 5 d, e). It was also removed by ESD and the final



Fig.1 Features of lesion 1 under white light endoscopy and magnifying endoscopy with blue-laser imaging (ME-BLI).



▶ Fig. 2 Features of lesion 2 under white light endoscopy and ME-BLI.

diagnosis was well-differentiated tubular adenocarcinoma (tub1) (> Fig. 4e, f).

This case highlights the detection of three synchronous gastric lesions with different pathologic types (**Video 1**). Each one had a different macroscopical appearance.

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### Competing interests

The authors declare that they have no conflict of interest.



▶ Fig. 3 Postoperative specimen and hematoxylin and eosin (H&E) stain of lesion 1. a Endoscopic submucosal dissection specimen. b H&E stain of the red area. c H&E stain of the anal side.

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## **Bibliography**

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**Fig.4** Postoperative specimen and H&E stain of lesions 2 and 3.



Fig. 5 Features of lesion 3 under white light endoscopy and ME-BLI.



**Video 1** Three synchronous lesions with different historical types diagnosed by endoscopic submucosal dissection in one patient.

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