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Endoscopic submucosal dissection using a novel therapeutic thin gastroscope for a locally recurrent rectal tumor after endoluminal rectal surgery

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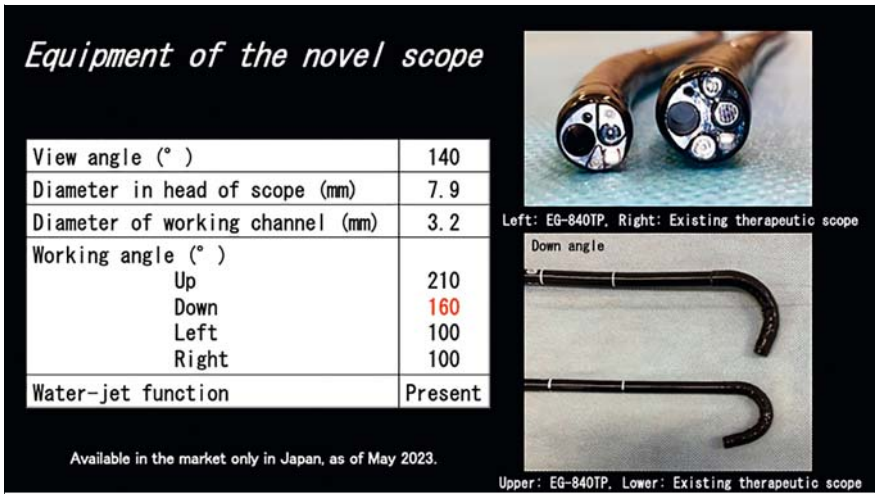
▶ **Fig. 1** The target lesion was located on the post-surgery scar at the posterior wall of the lower rectum.



▶ **Fig. 2** Details of the novel therapeutic thin gastroscope.

Video 1 Endoscopic submucosal dissection of the target lesion using a novel therapeutic thin gastroscope.

The lower rectum is the part of the gastrointestinal tract that gains most benefit from minimally invasive treatment such as endoscopic resection, because invasive surgery results in such a significant decrease in quality of life [1]. However, endoscopic resection in the lower rectum is sometimes technically difficult due to the narrow lumen and steep angle of the rectal wall. Here, we report the first description of endoscopic resection in the lower rectum using a novel thin therapeutic gastroscope.

A 70-year-old woman was referred to our hospital for treatment of a recurrent rectal tumor after endoluminal rectal surgery, which was performed at a different hospital. The lesion was located on the post-surgery scar at the posterior wall of the lower rectum (▶ **Fig. 1**). Maneuverability of the endoscope was limited because the anal side of the lesion was within a confined space adjacent to the anal canal. Moreover, it was difficult to approach the lesion even by retroflexion because the gastroscope faced perpendicularly to the steep rectal wall. Therefore, we performed endoscopic submucosal dissection using a novel therapeutic thin gastroscope (EG-840TP; Fujifilm Corp., Tokyo, Japan), which has a thinner diameter (7.9 mm) and a wider range of down angles (160°degree) than existing therapeutic gastroscopes (▶ **Fig. 2**).

The procedure was carried out with the scope in the straight position (▶ **Video 1**). The thin diameter of the scope was very useful even in a confined space and made it easy to enter the submucosal layer. The wider range of down angles enabled the endoscopic knife to approach at a precise depth in the submucosal layer. Finally, the lesion was resected en bloc without any adverse events.

This case suggests that the novel thin gastroscope may be an option for endoscopic resection in lower gastrointestinal tumors.

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Competing interests

The authors declare that they have no conflict of interest.

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