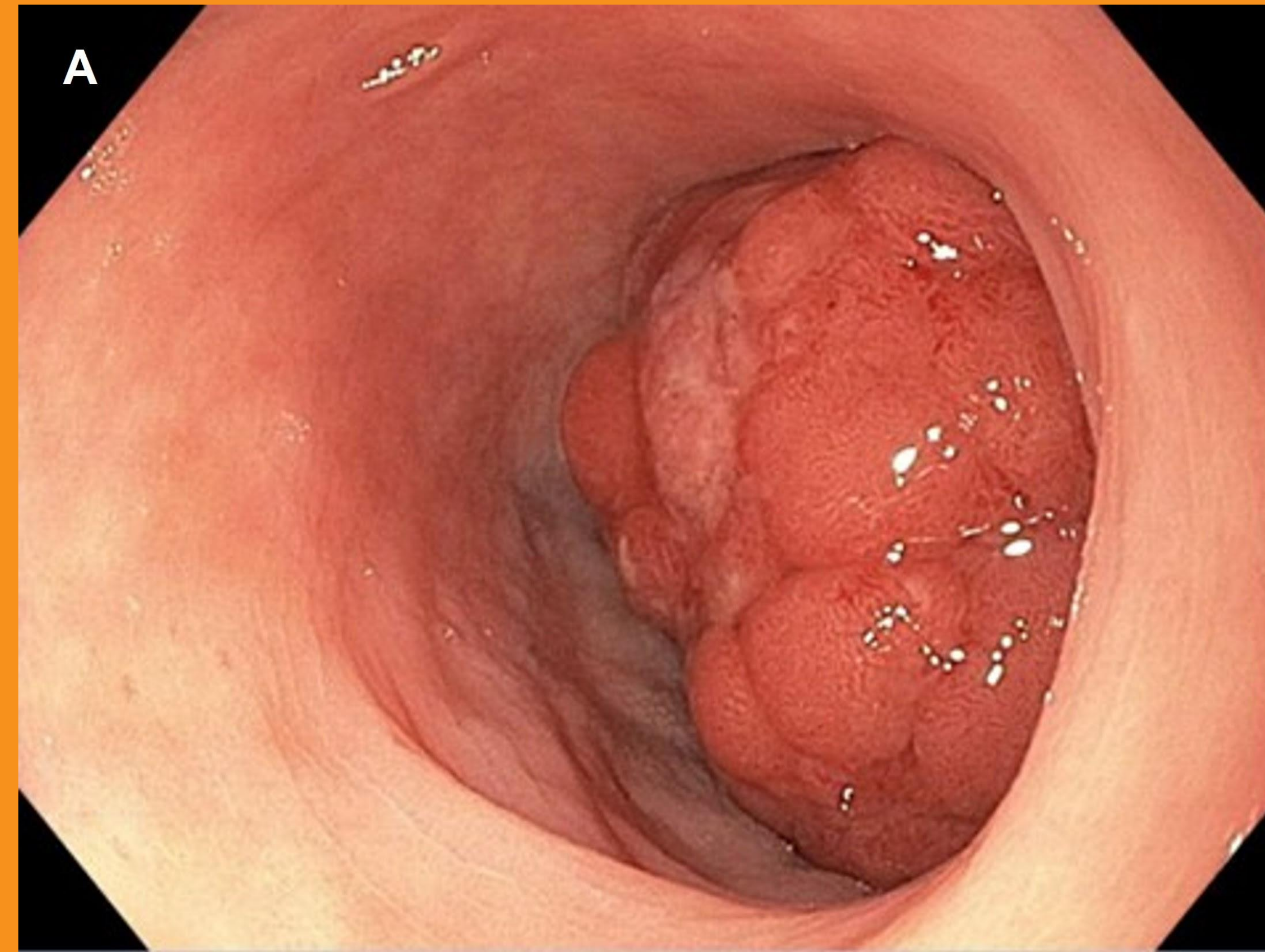
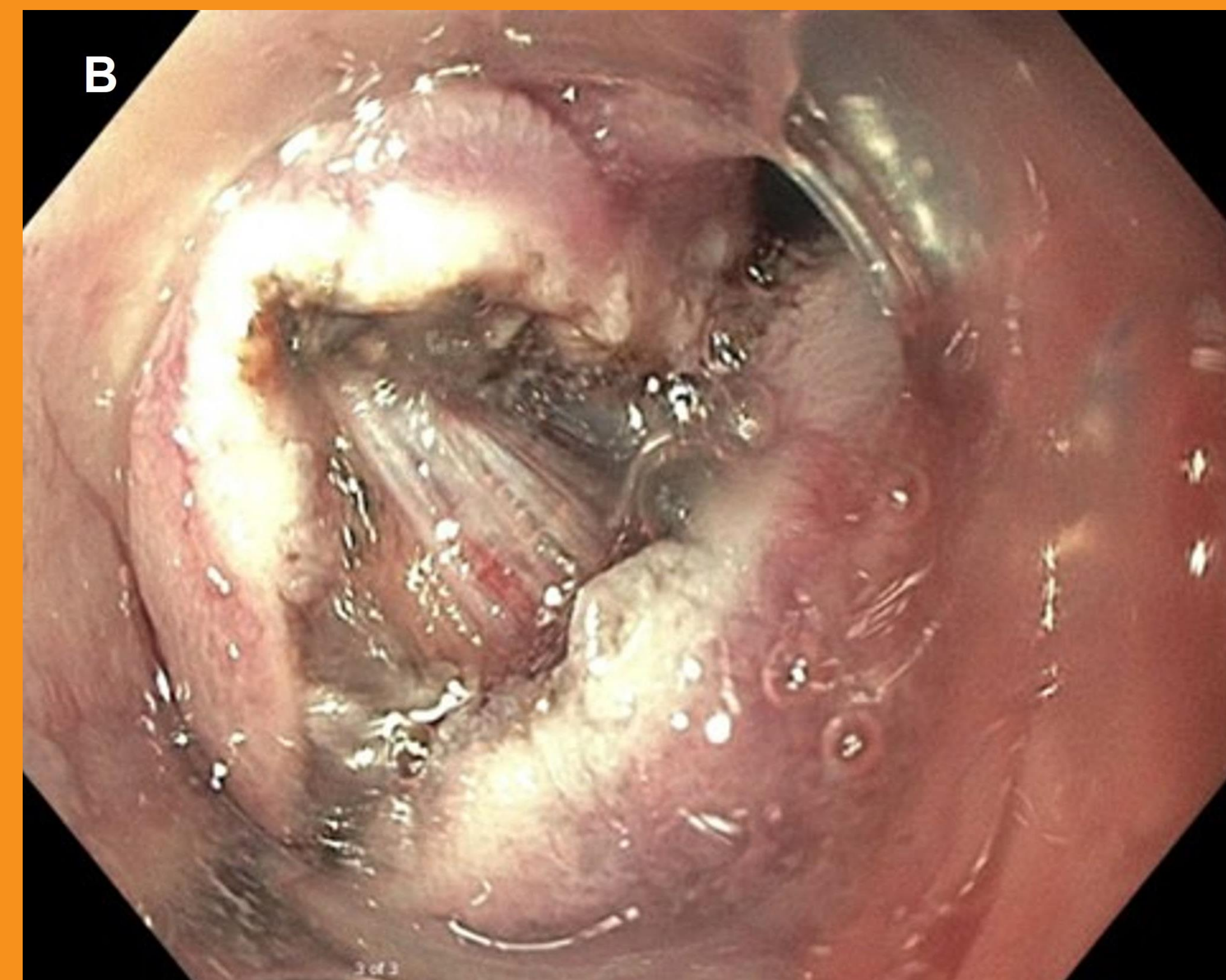


BACKGROUND

- Endoscopic submucosal dissection (ESD) allows for en-bloc resection of large early-stage gastrointestinal tumors.
- During the submucosal dissection of colorectal polyps, the muscle layer can be found to extend into the polyp, this is termed as the Muscle-Retracting Sign.
- This endoscopic sign requires a high index of suspicion to prevent inadvertent dissection of the muscle layer.
- This case demonstrates the first reported case in the US of the Muscle-Retracting sign identified during colorectal endoscopic submucosal dissection (ESD) of a large adenoma.



We demonstrate the Muscle-Retracting sign seen during colorectal ESD of a large adenoma



CASE PRESENTATION

- A 74-year-old male presented for routine colon cancer screening and was found to have a 5cm pedunculated sigmoid colon polyp.
- Biopsy of the polyp revealed tubular adenoma with high-grade dysplasia with mucosal prolapse-type changes.
- Given the endoscopic impression of the mass lesion, a more advanced pathology could not be ruled out. The patient was planned to undergo ESD through the stalk of the large polyp.
- Submucosal dissection was performed using a dual and IT knife. In the center of the tumor stalk, the muscle retraction sign was seen, with the muscular propria being pulled toward the center of the polyp
- The procedure was stopped due to the risk of muscle perforation. The patient went home after the procedure, was doing well on follow-up, and had no adverse events.
- Given the high-grade dysplasia, the patient was referred to surgery for resection.

DISCUSSION

- Some colorectal neoplastic lesions can have the muscle layer drawn toward the center of the neoplasm.
- Previous studies in Japan have shown lesions positive with MR sign, have a significantly lower successful resection rate.
- These lesions should be carefully dissected, and elective surgical resection should be considered if appropriate.

References

Toyonaga T, Tanaka S, Man-I M, East J, Ono W, Nishino E, Ishida T, Hoshi N, Morita Y, Azuma T. Clinical significance of the muscle-retracting sign during colorectal endoscopic submucosal dissection. *Endosc Int Open*. 2015 Jun;3(3):E246-51. doi: 10.1055/s-0034-1391665. Epub 2015 May 5. PMID: 26171438; PMCID: PMC4486035.