

## DEN Video Article

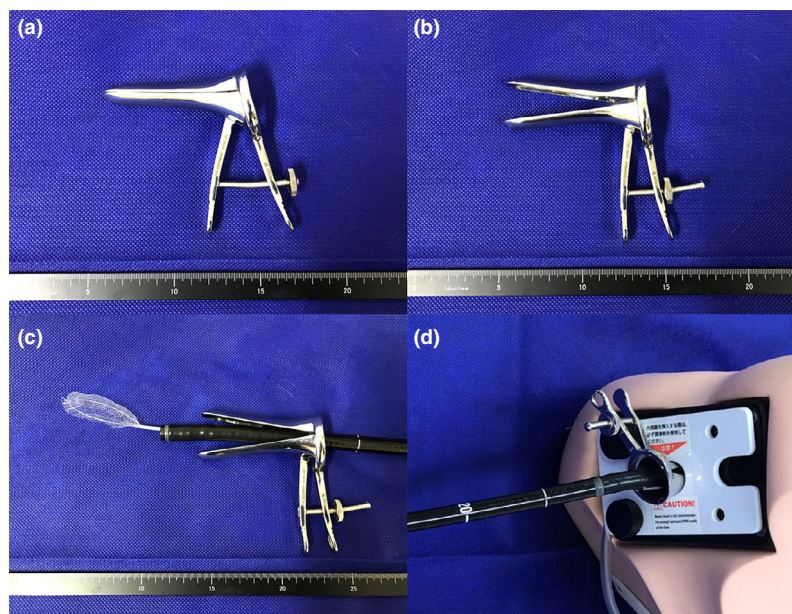
## Using Cusco's speculum to endoscopically remove a large colonic endoscopic submucosal dissection specimen

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## BRIEF EXPLANATION

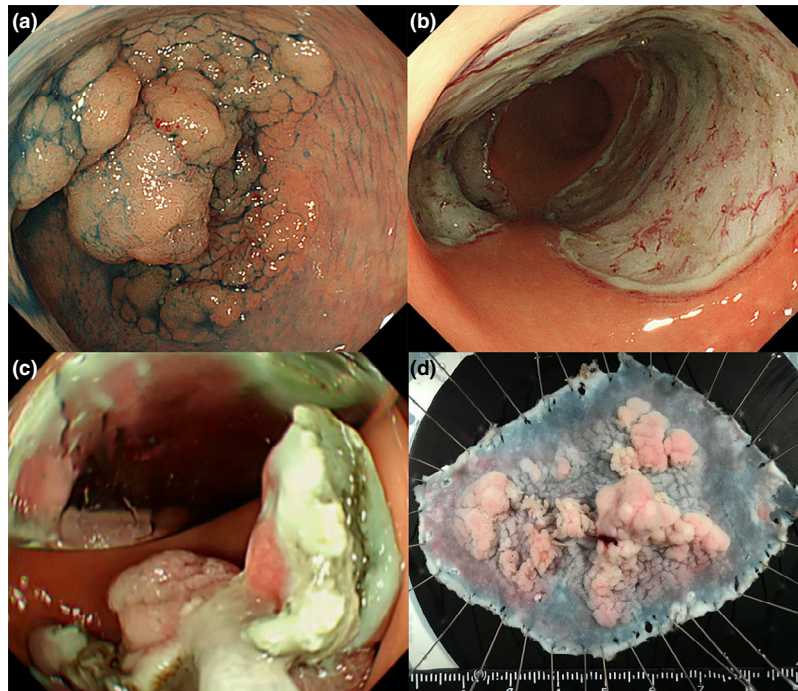
UNLIKE ENDOSCOPIC MUCOSAL resection, there is no size limitation for colonic endoscopic submucosal dissection (ESD), anticipating *en bloc* resection.<sup>1</sup> If the retrieval net fits well and can grasp the entire collected specimen, the resected specimen can be removed through

the anus with minimal resistance. However, it is sometimes difficult to retrieve a large resected specimen after ESD without damage to the specimen by the anal sphincter muscle. Conventional retrieval techniques (e.g., the use of the forefinger-compression method,<sup>2</sup> Valsalva maneuver defecation,<sup>3</sup> a small plastic bag,<sup>4</sup> or sliding tube<sup>5</sup>) have been suggested, but are often ineffective. We devised a



**Figure 1** (a) Image showing the Cusco's speculum (SS size, 110 × 90×35 mm). (b) Image showing that the Cusco's speculum is opened and fixed. (c) Image showing the endoscope and retrieval net through the Cusco's speculum. (d) Image showing that the Cusco's speculum is inserted, opened and fixed into the anus using the Colon model.

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**Figure 2** (a) Endoscopic image showing a huge rectal laterally spreading tumor. (b) Endoscopic image showing mucosal defect of right after rectal endoscopic submucosal dissection. (c) Endoscopic image showing the grasped resected specimen with the retrieval net. (d) Macroscopic image showing resected specimen (specimen size: 80 × 67 mm and lesion size: 60 mm × 51 mm, respectively).

method to collect specimens by widening the inner diameter of the anus sufficiently. This novel technique uses Cusco's speculum. First, after moving the resected specimen to the rectum, only the endoscope was removed. Next, after passing through a Cusco's speculum (SS size, 110 × 90 × 35 mm) (Fig. 1a), an endoscope was reinserted into the anus. Subsequently, the Cusco's speculum was inserted into the anus with an endoscope (Fig. 1b), opened (Fig. 1c), and fixed. Finally, the anus was sufficiently expanded, and the resected specimen grasped by a retrieval net (Roth Net – foreign body – standard. The width is 1.8–3.0 cm, US endoscopy, Mentor, OH, USA) could be collected without resistance through the Cusco's speculum (Fig. 1d, Video S1). It is a safe and convenient method, and does not require any change in the patient's posture.

A 50-year-old woman was referred to our department for a laterally spreading rectal tumor measuring approximately 60-mm and occupying approximately 2/3 of the circumference of the rectum (Fig. 2a). An ESD was performed with dissection of the semi-circumference of the rectum (Fig. 2b).<sup>1</sup> After ESD, we collected a large colonic ESD

specimen without damage, using Cusco's speculum (Fig. 2c,d, Video S1).

Authors declare no conflicts of interest for this article.

## ACKNOWLEDGMENT

**I**NFORMED CONSENT WAS obtained from the patient for publication of her information and imaging.

## REFERENCES

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## SUPPORTING INFORMATION

**A**DDITIONAL SUPPORTING INFORMATION may be found in the online version of this article at the publisher's web site.

**Video S1** The colonoscope is pulled out from the anus. The colonoscope is reinserted into the anus through the Cusco's speculum. Opening of the Cusco's speculum. Grasped specimen is pulled out with the colonoscope. Colonoscope showing a huge rectal laterally spreading tumor. After rectal endoscopic submucosal dissection for a large lesion, a Cusco's speculum was inserted into the anus with an endoscope. The specimen is grasped with the retrieval net. The specimen is pulled out smoothly through the Cusco's speculum. Macroscopic image showing resected specimen (specimen size: 80 × 67 mm and lesion size: 60 mm × 51 mm, respectively).