A 53-year-old man with no relevant past medical history was referred to our department for resection of a laterally spreading tumor (LST) on the descending colon, which had been tattooed previously.

The procedure was performed with a transparent cap attached to the tip of the colonoscope (Q185; Olympus Medical Systems, Tokyo, Japan), with the patient under deep propofol sedation. A 40-mm nongranular, homogeneous LST was identified, overlying a previously placed carbon tattoo (▶Fig. 1), with resulting severe fibrosis that precluded elevation for conventional endoscopic mucosal resection (EMR). Therefore, underwater piecemeal EMR was performed, after marking the lesion limits with snare tip coagulation (▶Video1). Complete resection was achieved without complications. The procedure exposed involvement of almost all of the submucosa by the ink (▶Fig. 2). The patient was discharged on the same day.

Histopathological analysis revealed a tubular adenoma with low grade dysplasia, and with carbon pigment in the margins of most fragments. On surveillance colonoscopy 3 months later, the scar had no endoscopic or histological recurrence (▶Fig. 3).

Endoscopic tattooing is a widely used technique to facilitate the identification of colorectal lesions for subsequent endoscopic or surgical treatments [1, 2]. However, tattooing has been associated with clinically significant complications, including peritonitis [1, 2]. Additionally, tattooing under a lesion can result in technical difficulties because of associated submucosal fibrosis, which makes endoscopic resection procedures hazardous and has contributed to perforation [1-3]. In fact, carbon particles can spread across a significant distance within the submucosal plane; it is therefore recommended that tattoos are placed 2–3 cm anatomically distal to the lesion [1, 2]. Underwater EMR has been shown to be a useful technique for lesions that are difficult to resect, including those associated with fibrosis [4, 5].

Endoscopy_UCTN_Code_CPL_1AJ_2AD
Competing interests
None

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References

Video 1
Underwater piecemeal endoscopic mucosal resection of a laterally spreading tumor overlying a previous endoscopic carbon tattoo with associated severe fibrosis.

Bibliography
DOI https://doi.org/10.1055/a-0624-1362
Published online: 2018
Endoscopy
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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Video 1
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