

# Colorectal endoscopic submucosal dissection for all LSTs: histological information loss due to piecemeal EMR is no longer acceptable



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## Bibliography

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Laterally spreading tumors (LSTs) are colorectal neoplastic flat or sessile lesions with lateral extension exceeding 1 cm. This term is generally used for superficial adenomas or adenocarcinomas, but very rarely for supracentimetric sessile serrated lesions or ulcerated invasive adenocarcinomas.

There is still a very active debate in the endoscopic community about the best choice of technique for resecting superficial neoplasias with negligible risk of metastatic lymph node evolution (intramucosal or superficial submucosal adenocarcinoma without vascular or lymphatic embols, without budding and not undifferentiated). Some defend piece meal endoscopic mucosal resection (EMR), which allows the lesions to be resected in several fragments with a diathermic snare and others, including ourselves, defend endoscopic submucosal dissection (ESD), which most often allows removal of a single piece with safety margins using a dissection knife.

Endoscopic prediction of histology is far from an exact science and even Japanese experts predict only a statistical risk of invasive cancer within a lesion based on its endoscopic characteristics [1–3]. For example, this risk is almost 50% for pseudo-depressed non-granular LSTs, nearly 20% for granular LSTs with a macronodule, and risk remains quite low (<3%) for homogeneous granular LSTs without any macronodule. In addition, degeneration of LST is not at all homogeneous and there can sometimes be a very small outbreak of invasive cancer within a large lesion, most of which is adenomatous.

Because it is impossible to predict with certainty which lesion will contain invasive or noninvasive cancer, it is still essential today to choose the resection technique a priori, by assessing a benefit-risk ratio. Finally, only the report of histological analysis allows us to decide in a multidisciplinary meeting if re-

section can be considered curative. However, to rely on that report, we must ensure that it is high quality, and it can only be thorough if the part has been seen in its entirety. That is, it must be in a single piece, oriented, and with lateral and deep safety margins to confirm that resection is complete. Presence of a single vascular embol in a tumor that superficially invades the submucosa is associated with a 5 to 10 times greater risk [4–6] of lymph node metastases developing. How can we still risk missing this embol in 2019 under the pretext that the best technique takes a little longer than the reference technique that cured the majority of patients?

Some argue that risk of perforation of dissection (3–5%) [7] is higher than that for piecemeal EMR (1–3%) [8], but that needs to be verified with the new generation who have performed more dissections than piecemeal EMR, unlike experts who authored literature a few years ago and who compared years of experience in EMR with a low experience in ESD.

In addition, can we still talk about complications when more than 95% of these perforations are closed with clips and do not lead to surgery [9,10]? These diminutive perforations have most often become adverse events without consequence; on the other hand, if an embolus, a budding or focal invasion has been missed because the fragment in question has not been recovered, there will be dramatic consequences for the patient, who will not then benefit from the complementary surgery recommended for permanent healing. Of course these situations are rare and studies to demonstrating outcomes of dissection in terms of survival would require huge numbers of people. However, ESD is now accessible outside Japan and in the colon, facilitated by traction techniques [11]. Therefore, it is no longer possible to consider the technique restricted to use in research

by endoscopists who extremely experienced. Training centers and expertise will be soon available outside of Japan to teach European physicians to use ESD to treat large, superficial lesions of the colon. Even for a homogeneous LST-granular, in which risk does not exceed 3% [1], it does not seem possible to argue that the risk is too low to justify cutting a lesion into pieces and losing information about a pejorative histological element.

At a time when all our activity is focused on improving quality, it no longer seems possible to proceed without a quality sample for histology and the certainty of having cured the patient. How can we expose a patient to a question of cure when a specimen arrives in pieces yet we have no certainty that we have all the pieces?

In addition, risk of local recurrence is much higher after piecemeal mucosectomy [8], and as a result, the need is increased for endoscopic control to ensure that there is no recurrence. These controls are a source of stress and discomfort for the patient with repetition of colonic preparations, and unnecessary expenses for society with repeated readmissions. The medico-economic benefit of the strategy using ESD remains to be demonstrated in a randomized study, which the Japanese refuse to do because they won't degrade lesions through an irreversible process and thus lose information. One of these randomized studies has been planned in France (NCT03962868) but we, too, will have trouble consenting to lowering the quality of histology assessment to demonstrate once and for all that with use of piecemeal EMR, part of the histological information is lost and the need for endoscopic control is increased.

### Competing interests

The authors are instructors in a program supported by Olympus for teaching ESD.

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### CORRECTION

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In the above mentioned article the first name and last name of an author was swapped. Correct is: Jérémie Jacques.