

# Endoscopic procedure (Core and Non-core)

The type of endoscopic procedure is important as it may affect histological analysis, including the evaluation of resection margins.

Polypectomy removes polyps using a snare without or with submucosal injection of a solution to lift the lesion (EMR). Diminutive (1-5 millimetres (mm)) polyps and small (6-9 mm) sessile polyps are usually removed by cold snare or sometimes hot snare (mechanical transection without or with electrocautery). Hot snare polypectomy may be used for larger (10-19 mm) sessile polyps and pedunculated polyps. Depending on polyp size and configuration, en bloc or piecemeal removal is performed.<sup>1</sup>

Endoscopic submucosal dissection (ESD) consists of en bloc resection of superficial lesions of any size after submucosal injection of a solution, using specialised endoscopic knives. It is more commonly used in the upper gastrointestinal tract and sometimes performed in the large bowel for suspected superficial invasive carcinomas. One of the main advantages of ESD compared with EMR is an accurate evaluation of resection margins.

Transanal endoscopic microsurgery (TEMS) is a minimally invasive surgical procedure for en bloc removal of large rectal lesions and early rectal carcinomas not amenable to colonoscopic resection. For malignant lesions, the muscular layer of the rectum is removed with the specimen.

Transanal minimally invasive surgery (TAMIS) is a crossover procedure between laparoscopic surgery and TEMS for resection of benign and early-stage malignant lesions in the lower and mid rectum. The TAMIS technique can also be used for non-curative intent surgery of more advanced lesions in patients who are not candidates for radical surgery.

Endoscopic full thickness resection (EFTR) is a recent minimally invasive endoscopic technique that can be performed in the large bowel resulting in the full transection of all layers of the bowel. EFTR can be used for the management of challenging epithelial and subepithelial lesions that are not amenable to conventional endoscopic resection methods and previously required a surgical approach.

## References

- 1 Ferlitsch M, Moss A, Hassan C, Bhandari P, Dumonceau JM, Paspatis G, Jover R, Langner C, Bronzwaer M, Nalankilli K, Fockens P, Hazzan R, Gralnek IM, Gschwantler M, Waldmann E, Jeschek P, Penz D, Heresbach D, Moons L, Lemmers A, Paraskeva K, Pohl J, Ponchon T, Regula J, Repici A, Rutter MD, Burgess NG and Bourke MJ (2017). Colorectal polypectomy and endoscopic mucosal resection (EMR): European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy* 49(3):270-297.