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Solutions for submucosal injection: What to choose and how to do it

Castro R *et al.* Submucosal injection: What, when and how

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#### Abstract

During the past decades, endoscopic resection techniques have gradually improved and gained more importance for the management of premalignant lesions and early cancers. These endoscopic resection techniques can be divided in 3 major groups: snare polypectomy, endoscopic mucosal resection (EMR) and endoscopic submucosal dissection (ESD). The use of submucosal injection is essential for the majority of EMR techniques and is an integral part of ESD, whereas during polypectomy it is not crucial in most cases except to prevent bleeding in large polyps and/or those with large stalks as an alternative to mechanical methods. Injection provides a lifting up effect of the lesion separating it from the muscular layer, thereby reducing thermal injury and the risk of perforation and bleeding while also facilitating *en-bloc* resection by improving technical feasibility. With this work, we aim to review the most common endoscopic resection techniques and the importance of submucosal injection in each one of them. For that, we present some of the most commonly

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