

Chromoendoscopy Using the Non-extension Sign as a Marker Is Comparable to Endoscopic Ultrasonography in Terms of Diagnostic Performance for Evaluating the Invasion Depth of Early Colorectal Cancer

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Abstract

Background: No reports have compared diagnostic performance between non-extension sign (NES) -based chromoendoscopy (CE) and endoscopic ultrasonography (EUS), magnifying endoscopy with narrow-band imaging (M-NBI), or magnifying chromoendoscopy (M-CE) for invasion depth evaluation for T1b cancer (submucosal invasion depth $\geq 1000 \mu\text{m}$). This study compared NES-based CE with EUS, M-NBI, and M-CE for evaluating invasion depth in early colorectal cancer.

Methods: We retrospectively analyzed 45 patients with early colorectal cancer who underwent endoscopic or surgical resection. Invasion depth was evaluated using CE with NES as a marker, M-NBI, M-CE, and EUS in preoperative examination. The primary aim was to compare CE using the NES as a marker with EUS in evaluating invasion depth of T1b.

Results: CE had an accuracy of 75.6%, sensitivity of 78.1%, and specificity of 69.2% for T1b cancer invasion depth, while the corresponding figures were 71.1%, 78.1%, and 53.9% for EUS. Thus, CE showed comparable sensitivity to EUS but had higher specificity and accuracy without significant differences.

Conclusions: CE using the NES as a marker demonstrated comparable diagnostic performance to EUS for invasion depth evaluation, suggesting its potential as an excellent and cost-effective modality for early colorectal cancer.

Key words: Non-extension sign, early colorectal cancer, submucosal invasion, endoscopic ultrasonography, chromoendoscopy