Role of EUS in staging T1aN0 vs T1bN0 esophageal, gastric and rectal cancers.

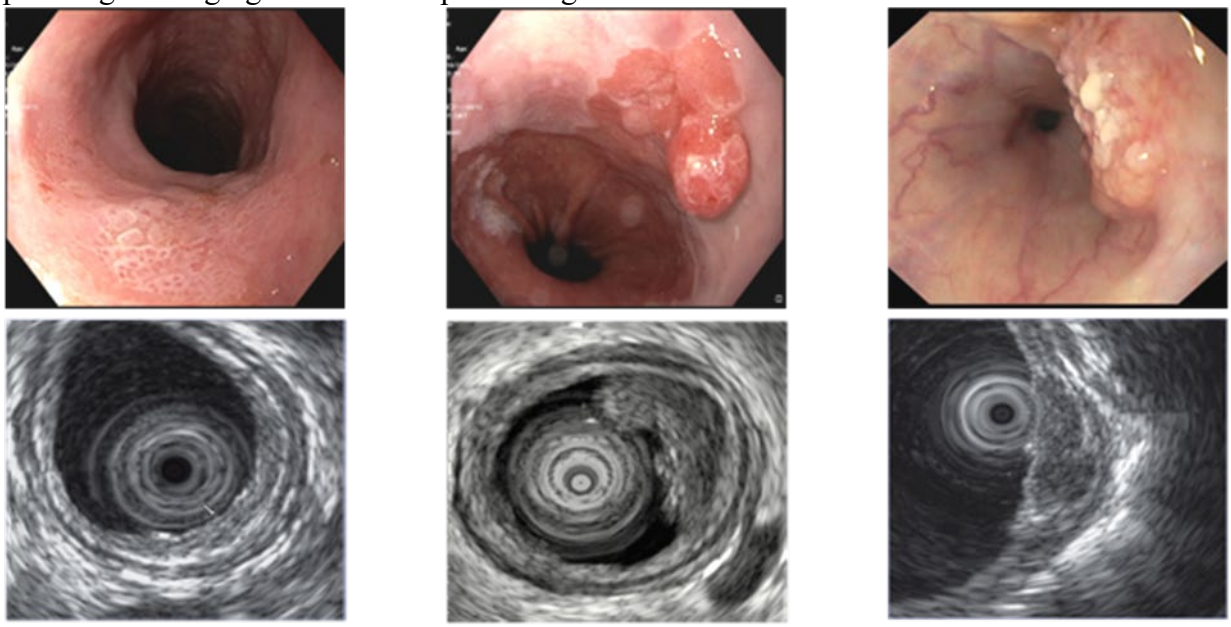
Abstract presented by Thomas Togliani et al at the 2025 National Gastroenterology Congress.

Background and aims

In superficial GI cancers the choice between a minimally invasive treatment (EMR, ESD or TEM) and resective surgery mainly depends on the depth of neoplastic infiltration alongside the GI wall and the consequent risk of lymph node metastases. In this setting the EUS ability to distinguish T1a (mucosal) from T1b (submucosal) tumors is debatable and the current tendency is to choose the treatment strategy of superficial-appearing lesions according to the endoscopic pattern, without any additional staging procedure. The aim of this study was to assess the EUS performance in staging T1N0 GI cancers.

Materials and methods

This is a retrospective study on patients affected by esophageal, gastric or rectal cancers staged as T1N0 with a 10MHz radial EUS probe. These patients preferably underwent an endoscopic treatment with a potentially curative purpose; instead, a surgical approach was planned if the endoscopic resection seemed unfeasible, or if it was attempted but resulted not curative after the histological assessment. The EUS results of T1aN0 or T1bN0 cancer were compared to the final pathological staging after endoscopic or surgical resection.



T1a SSC T1a ADK T1b SSC

Results

From 1/2022 to 6/2024 37 patients were included. Lesions were located in the esophagus (12), stomach (20), rectum (5) and they underwent EMR (7), ESD (16), TEM (3), upfront surgical resection (11); 8 patients underwent a rescue surgical resection or TEM after a not radical endoscopic treatment (6) or post-ESD gastric perforation (2). Regarding T staging EUS found 20 T1a lesions: 13 (65%) were correctly staged; 7 (35%) were understaged being T1b at histology. EUS staged 17 lesions as T1b: 9 (53%) were correctly staged; 7 (41%) were overstaged being T1a and 1 (6%) was an understaged T2 cancer (accuracy for T1a tumors: 59%). Regarding N

staging 2 out of the 18 (11%) patients that underwent surgery resulted N1 (PPV for N0 tumors: 89%); they were T1b at EUS and underwent upfront surgery; no patients treated endoscopically are currently showing nodal metastases at follow-up.

Conclusions

In this series the EUS ability in identifying T1a tumors was unsatisfactory. Although high-frequency intracanalar miniprobes could get a better performance, the EUS benefit in the T staging of cancers potentially fit for an endoscopic resection seems poor and the high-definition chromoendoscopy pattern should still be considered the gold standard to guide the therapeutic decision. In this setting EUS could maintain a useful role to exclude regional lymph node metastases.