Optimal Management of T1 Gastric Cancer: An Open Question

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The development of endoscopic resection techniques has seen widespread adoption. However, as Kamarajah and colleagues¹ demonstrate in their study, numerous unanswered questions remain. The authors used the National Cancer Database (NCDB) to investigate the overall survival of 5842 patients with cT1a and cT1b gastric cancer who underwent either gastrectomy or endoscopic resection (ER). In this retrospective database study, patients with both T1a and T1b cancers who underwent a gastrectomy had a longer overall survival than those who underwent an endoscopic resection.

Several limitations of the study make it difficult to interpret its applicability to clinical practice. The authors used a propensity-matching approach in their attempt to account for individual patient-level factors. However, the ER group had significantly more poorly differentiated tumors and positive margins. Two established factors associated with a poor prognosis could account for the survival difference observed in the study.

Additionally, the results must be framed within the limitations of a retrospective database review that fails to account for many individual patient factors that further confound the results of this study. For example, the NCDB uses a modified Charlson-Deyo comorbidity score truncated at 2, which may fail to identify patients with the highest degree of comorbidities who possibly are more likely to be selected for endoscopic therapy. Thus, as has been described previously, studies using the NCDB are unable to adjust adequately for the competing survival risk of patients with poor overall health.²

One troubling finding was that a large portion of the patients received ER outside established guidelines. Recommendations from NCCN, ESMO, SAGES, and EJSO all clearly state that gastrectomy is the treatment of choice for cT1b tumors with a high likelihood of lymph node involvement. However, a full 16 % of the cT1b patients in this study received ER. International guidelines recommend endoscopic resection for T1 tumors falling within strict criteria that generally follow the Japan Gastroenterological Endoscopy Society (JGES) guidelines for endoscopic submucosal dissection (ESD) and endoscopic mucosal resection (EMR) published in 2014 and updated this year.³ The original guidelines recommended ER as a safe treatment for tumors smaller than 2 cm, well-differentiated or moderately differentiated tumors, and tumors without evidence of ulceration or lymphovascular invasion (LVI).

In this study, almost 50 % of the patients had poorly differentiated tumors, and more than 10% had positive-margins after ER, suggesting technical and selection issues. In addition, such a high percentage of patients receiving treatment outside of established guidelines raises the possibility that many of these ER patients were undergoing palliative attempts at resection because of their inability to undergo surgery. If so, the difference in survival between the groups was to be expected.

Although the authors ask interesting questions, we find it difficult to apply their findings in a meaningful way given the deficiencies we have mentioned. At our institution, we have found high-quality endoscopic ultrasound (EUS) to be a crucial component for appropriate identification of patients who may benefit from EMR or ESD. We do not believe endoscopic treatment of T1b lesions is appropriate given the greater than 20 % risk of lymph node metastasis, as highlighted in both this study and a prior meta-analysis.⁴ For T1a lesions, we follow the Japanese criteria for EMR or endoscopic submucosal resection (ESR), with

appropriate selection of patients whose tumors meet the criteria requiring well-differentiated or moderately differentiated tumors smaller than 2 cm, without LVI, and non-ulcerated.

The results of this study can be used to highlight the need for further research investigating the actual outcomes for patients with early gastric cancer using either well-annotated institutional studies from high-volume centers that have expertise in EMR/ESD or, preferably, studies that prospectively use a randomized approach. Additionally, although the differences between patients from the Eastern and Western hemispheres are well established, it currently is unknown whether applying Japanese criteria for the management of early gastric cancer results in similar outcomes in Western centers.

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