Accuracy of endoscopic ultrasound in preoperative staging of esophageal cancer: results from a referral center for early esophageal cancer

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BACKGROUND AND STUDY AIM
Endoscopic ultrasound (EUS) has been regarded as the most accurate staging tool in esophageal cancer. Staging results have a strong impact on the decision as to whether a patient should undergo endoscopic treatment, surgery alone, or neoadjuvant therapy. This retrospective study was conducted to analyze the accuracy of esophageal cancer staging using EUS.

METHODS
All patients who received EUS for staging of esophageal cancer before esophagectomy from February 2003 to December 2007 at a high volume academic tertiary care center were included.

RESULTS
179 consecutive patients (mean age 64.4 +/- 9.5 years; 142 men) underwent esophageal resection for Barrett's adenocarcinoma (n = 134) and squamous cell cancer (n = 45). Postoperatively, 99 patients were staged as having T1 cancers (55 %), 30 patients T2 (17%), 46 patients T3 (26%), and four patients T4 (2%). The sensitivity and specificity of EUS relative to the T stage were 82% and 91%, respectively, for T1; 43% and 85% for T2; and 83% and 86% for T3. The overall accuracy for EUS in identifying the correct T stage was 74% (95%CI 66-80). Positive lymph nodes were diagnosed histologically in 68 patients (38%). The sensitivity, specificity and accuracy of EUS for the diagnosis of N1 were 71%, 74% and 73% (95%CI 65-79), respectively.

CONCLUSIONS
The diagnostic accuracy of EUS in patients with esophageal cancer is still unsatisfactory. T2 cancers in particular are frequently overstaged, with a significant effect on the subsequent treatment strategy.

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