OBJECTIVES: The European Society of Thoracic Surgeons (ESTS) has proposed a revised preoperative lymph-node staging guidelines for potentially resectable non-small-cell lung cancer (NSCLC) patients. We aimed to assess the validity and resulting survival of these guidelines.

METHODS: A total of 571 patients who underwent CT-integrated positron emission tomography (PET-CT) between January 2004 and November 2013 were included in the study. The preoperative mediastinal stage was confirmed by mediastinoscopy or video-assisted mediastinoscopy in all patients with peripheral cT1N0 patients with a tumour of non-adenocarcinoma. A resection via thoracotomy or videothoracoscopy was done for mediastinoscopy-negative patients. N2 patients underwent chemoradiotherapy before planned surgery. The mediastinal staging results were adapted to the staging guidelines (direct thoracotomy for T1-2 N0 tumour according to PET-CT and invasive staging for others) and the validity of the guidelines was tested. The mean follow-up time was 34 months.

RESULTS: In this series, mediastinal lymph-node metastasis were unveiled in 170 patients (29.8%). A total of 397 patients underwent resectional surgery. If the guidelines had not been applied, resectional surgery would have been done in 451 patients. Mediastinoscopy would have been performed in 501 patients and N2 or N3 disease would have been found in 137 (25.0%). Thus, the sensitivity, specificity, and positive and negative predictive values of the guidelines were calculated as 81%, 100%, 100% and 92%, respectively. When we analyzed the rates of patients who underwent videomediastinoscopy as suggested by guidelines, the sensitivity, specificity, and positive and negative predictive values of the guidelines were calculated as 95.0%, 100%, 100% and 94.1%, respectively. The five-year survival of all patients was 65.5% and the mean survival time was 97.1 months (95% CI: 89-104 months).

CONCLUSION: The use of ESTS preoperative lymph node staging guideline for patients with NSCLC seems to be effective and it may provide better survival following resectional surgery.

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