Title: Transbronchial/transesophageal bronchoscopic ultrasound-guided fine needle aspiration for mediastinal staging of non-small cell lung cancer

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Body: Introduction: Although combination of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) and transesophageal endoscopic ultrasound with bronchoscope-guided fine needle aspiration (EUS-B-FNA) seems to be promising for the mediastinal staging of non-small cell lung cancer, only a few studies have reported on its usefulness. Aims and objectives: The purpose of the present study was to evaluate the efficacy of EBUS-TBNA and EUS-B-FNA in the preoperative hilar/mediastinal staging of non-small cell lung cancer. Methods: A total of 150 consecutive patients with potentially resectable known or suspected non-small cell lung cancer were enrolled in this study. EBUS-TBNA was performed followed by EUS-B-FNA for N2/N3 nodes >5 mm in the shortest diameter on ultrasound images in a single session. Results: One hundred thirty-one patients were eligible for the final analysis. Thirty of them (23%) had N2 or N3 node metastases. EBUS-TBNA was performed for 212 lymph nodes, and EUS-B-FNA for 144 lymph nodes. The sensitivity of EBUS-TBNA, EUS-B-FNA and the combined approach per patient was 57%, 50% and 80%, respectively (EBUS-TBNA vs combined approach; p = 0.016 using McNemar test). The negative predictive value was 89%, 87% and 94%, respectively. No significant complications were associated with the procedures. Conclusion: The combined endoscopic approach with EBUS-TBNA and EUS-B-FNA is a safe and accurate method for the preoperative hilar/mediastinal staging of non-small cell lung cancer, and better than each technique by itself.