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Title: Cost-effectiveness of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) for the preoperative staging of lung cancer, results from the French prospective multicenter trial “EVIEPEB”

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Body: Introduction: Whereas EBUS-TBNA could avoid many mediastinoscopies, there is currently no specific tariff for the procedure in France. The EVIEPEB study (NCT00960271) aimed to assess the cost effectiveness of EBUS-TBNA for the preoperative staging of NSCLC, in the French medico-economic

setting. Methods: After a 6 months learning period, 16 French centers were selected for the study on the basis of their ability to perform 9 informative from 10 consecutive EBUS-TBNA procedures. Resectable NSCLC patients with at least one PET positive or > 1 cm mediastinal lymph node were included. Mediastinal staging followed a definite algorithm, where EBUS-TBNA was performed first, followed by mediastinoscopy in patients with negative or non-informative EBUS-TBNA. All direct and indirect costs related to the node's final diagnosis were recorded. Results: 163 patients were included from February 2009 to December 2010. EBUS-TBNA was performed under general anaesthesia in 90 cases (55.2%), with ROSE in 30 (18.4%). EBUS-TBNA allowed a mediastinal diagnostic in 91.4% of the procedures, leading to a non-surgical treatment in 76 patients. A total of 129 mediastinoscopies were avoided (79,1%), and 29 surgical mediastinal explorations performed, from which only 8 did not confirm EBUS-TBNA findings. According to the current French reimbursement system, this resulted in €1610 saving per patient for the insurance system, but in a €1947 loss / patient for the hospital. Conclusion: EBUS-TBNA appears highly cost-effective for NSCLC staging in France. (Supported by French National Cancer Institute, INCa).