





Hospital Universitari MútuaTerrassa BARCELONA



WHICH PATIENTS BENEFIT FROM EBUS DURING A NAVIGATION **BRONCHOSCOPY PROCEDURE?**

Desi K.M. ter Woerds 1; Roel L.J. Verhoeven 1; Erik H.J.G. Aarntzen 2; Erik H.F.M. van der Heijden 1

1 Department of Pulmonary Diseases, Radboudumc, Nijmegen, the Netherlands; 2 Department of Medical Imaging, Radboudumc, Nijmegen, the Netherlands

Objectives: In patients with a small peripheral pulmonary nodule referred for navigation bronchoscopy (NB) the incidence of lung cancer is high. Performing EBUS in the same diagnostic procedure is commonly done and becomes more relevant when selecting patients for neo-adjuvant treatment. In this study we investigate the added value of performing EBUS during NB to establish characteristics for improving patient selection for EBUS.

Methods: This is a retrospective analysis of patients referred for a diagnostic NB for peripheral pulmonary nodule(s). Imaging status of mediastinal and hilar lymph nodes was determined based on preoperative status on routine [18F]FDG-PET and/or contrast enhanced CT imaging. Lymph nodes status was correlated to EBUS outcome, and a number needed to treat was calculated.

Results: An analysis was performed with the 403 included patients with 504 nodules (median diameter 17 mm). Imaging positive lymph nodes (35%) were found in 141 patients (81% based on PET). Systematic EBUS was performed in 327 patients (81.1%) and detected node metastases in fourteen patients, all in the imaging positive subgroup. Thus, in unselected NB population 25 patients need to undergo EBUS to find one metastasis. When only considering patients with imaging positive lymph nodes, ten patients need to undergo EBUS to find one patient with metastases, while no metastatic disease will be missed.

Conclusions: In a population of patients with a small peripheral nodule referred for navigation bronchoscopy, EBUS could safely be omitted in patients where PET/CT imaging does not indicate presence of nodal involvement.