Variables	No. of patients	Pooled sensitivity (95% CI)	Pooled specificity (95% CI)	Negative Likelihood Ratio	AUC
In all mediastinal stations					
Overall	543	0.70 (0.65-0.75)	1.00 (0.98-1.00)	0.30 (0.21-0.43)	0.93 (0.91-0.95)
EBUS-TBNA	424	0.66 (0.60-0.72)	1.00 (0.98-1.00)	0.38 (0.26-0.54)	0.84 (0.81-0.87)
EUS-FNA	226	0.73 (0.52-0.87)	0.99 (0.90-1.00)	0.27 (0.14-0.53)	0.99 (0.90-1.00)
Combine	106	0.67 (0.53—0.79)	0.96 (0.86—0.99)	N/A	0.81 (0.73 —0.87)
Subgroup analysis					
Chemo alone	365	0.69 (0.63-0.75)	1.00 (0.97-1.00)	0.35 (0.26-0.48)	0.90 (0.88-0.94)
Chemo radiotherapy	130	0.65 (0.50-0.78)	1.00 (0.96-1.00)	0.25 (0.06-1.02)	0.97 (0.95-0.98)

MA13.07
Diagnostic Yield of N3 Hilar Staging by Endobronchial Ultrasonography (EBUS) in Lung Cancer

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Background: Systematic lung cancer staging with EBUS has proven to be equivalent to cervical mediastinoscopy. Nevertheless, in the daily practice it is common to explore and sample negative PET-CT hilar N3 lymph nodes (LN). This study aims to explore if there is enough evidence to support this clinical practice. **Method:** Retrospective study from our database including 1,013 explorations over the last 5 years. Including criteria were patients with lung cancer staged by PET-CT and EBUS-TBNA. Mediastinal and hilar N3 LN with a short axis $\geq$ 5 mm were sampled with a 21G needle and assessed by rapid on site evaluation (ROSE). A single nuclear medicine expert reviewed blindly all PET-CT scans and determined the SUVmax of every LN. Those that were $\geq$ 5 SUVmax by PET-CT and/or $\geq$ 10mm in short axis by EBUS were considered abnormal. **Result:** 87 patients were included, of which 87% were male with a mean age of 66 years (SD 12.6). The final histopathology diagnoses were adenocarcinoma (46%), squamous cell carcinoma (39%) and other histology (14%). EBUS-TBNA was performed 30 days (SD 16.9) after PET-CT. None of the 61 normal hilar and normal mediastinum N3 LN, and none of the 7 normal N3 hilar LN with abnormal mediastinal LN (3 by PET-CT, 3 by EBUS and 1 for both) resulted positive for lung cancer. Of the 19 patients with abnormal N3 hilar LN (6 by PET-CT, 8 by EBUS and 6 for both) malignancy was found in 16.7% , 25% and 60% for both techniques, respectively. **Conclusion:** In absence of abnormal N3 hilar LN (PET: SUVmax<5; EBUS<10mm in short axis) it seems there is not enough evidence to sample them, regardless of N3 mediastinal status.

Mediastinum		Hiliar		Positive N3 hiliar	Sample	%
EBUS	PET-CT	EBUS	PET-CT			
-	-	-	-	0	61	**0**
>10mm	-	-	-	0	3	**0**
-	>5 SUVmax	-	-	0	3	**0**
>10mm	>5 SUVmax	-	-	0	1	**0**
+/-	+/-	>5 SUVmax	-	1	6	**16,7**
+/-	+/-	----------	>10mm	2	8	**25**
+/-	+/-	>10mm	>5 SUVmax	3	5	**60**

MA13.09
Electromagnetic Navigation Bronchoscopy as an Integrated Approach to Aid in Diagnosis and Treatment of Pulmonary Lesions

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Background: Electromagnetic navigation bronchoscopy (ENB) is an image-guided localization approach to guide endoscopic tools to lung targets. In a single procedure, ENB aids in localizing lung lesions for biopsy or molecular profiling, fiducial placement for stereotactic body radiation therapy (SBRT), or dye marking for surgical resection. The multidisciplinary utility of ENB in a large, prospective, multicenter study is unknown. **Method:** NAVIGATE (clinicaltrials.gov, NCT02410837) is a prospective, multicenter, observational cohort study of ENB using the superDimension™ navigation system. From April 2015 to August 2016, 1,215 consecutive subjects were enrolled at 29 United States sites. Two-year follow-up is ongoing. A prespecified 1-year interim analysis is presented. **Result:** ENB was used to aid in lung lesion biopsy (n=1157 subjects), fiducial placement (n=258), pleural dye marking (n=23), and/or lymph node biopsy (n=30). EBUS-guided lymph node staging was conducted in the same procedure in 448 subjects. The median lesion-to-pleura distance was 9mm. The median lesion size was 20mm; most were in the middle (30%) and peripheral (67%) thirds of the lung. Pathology results were malignant in 44.3% (484/1092) (54.1% Stage I, 11.1% Stage II, 17.0% Stage III, 17.7% Stage IV). Molecular testing was attempted in 30.7% (80/261) of adenocarcinoma or NSCLC-not-otherwise-specified cases overall and 57.9% (33/57) of Stage IIIB/IV cases. Tissue was adequate in 87.5% (70/80) of cases. EGFR mutations (14.7%) and ALK translocations (4%) were the most frequently observed genetic alterations. The ENB procedure was well-tolerated; 2.9% of subjects had procedure-related pneumothorax requiring hospitalization or intervention, lower than published rates for CT-guided core biopsy (25%) and CT-guided fine needle aspiration (19%). Subject-reported impact of ENB on daily activities was 0.9 out of 10 (0 = no impact). **Conclusion:** In the largest prospective, multicenter study to date, ENB aided in lesion biopsy in the middle and periphery of the lung and tissue collection for molecular testing, with a very low morbidity. ENB facilitates a multidimensional approach to lung biopsy and mediastinal/hilar staging, offering the opportunity for multiple sites/tissues to be safely sampled in one anesthetic event. **Keywords:** fiducial and pleural dye marking, Electromagnetic Navigation Bronchoscopy, molecular profiling