involved in the procedure. Overall diagnostic yields were calculated for trainers compared to trainees for both manoeuvring the bronchoscope and needling. Diagnostic rates according to year of EBUS-TBNA for trainers vs trainees were also calculated. Mann-Whitney U test was used to check for differences in hit-rates for trainers vs trainees between the two components of the procedure, whilst Kruskal Wallis test was used to assess difference in diagnostic yield between 2011–2016.

Results 1083 patients underwent EBUS-TBNA with mean age 61 years (SD =/−14), 464 (43%) were female. The overall diagnostic rate was 88%, with 479 (44%) malignant, 212 (20%) granulomatous, 262 (24%) benign and 130 (12%) non-diagnostic. Trainees manoeuvred the bronchoscope for 577 (53%) and needleed for 461 (43%) patients. There were no differences in diagnostic yields between trainers compared to trainees for manoeuvring [88% vs 88% (p =0.81)] nor for needleing [88% vs 88% (p=0.84). There were also no significant differences in diagnostic yield between years (figure1).

Conclusion In our institution we can teach multiple trainees whilst maintaining high diagnostic yield in two operator EBUS-TBNA for both manoeuvring the bronchoscope and needling when one operator is fully trained.

REFERENCE
carcinoid. In all of LC diagnosed by EBUS-TBNA, staging was achieved in the same procedure (8.1% N0, 5.4% N1, 67.6% N2 and 18.9% N3). EBUS-TBNA showed a sensitivity of 86%, specificity of 88.9%, PPV of 97.4% and PNV of 57.1% for simultaneous diagnosis and staging in our setting.

**Conclusions** In our study EBUS-TBNA was useful to simplify the diagnosis and staging of LC, allowing both simultaneously in 77.1% of the patients and may be the preferred method for the initial approach after CT or PET/CT scan in this group of patients, in order to achieve faster diagnosis.

**REFERENCES**


**P39 THE ROLE OF EBUS-TBNA IN ISOLATED INTRATHORACIC LYMPHADENOPATHY IN NON-NEOPLASTIC PATIENTS – A COMMON DILEMMA IN CLINICAL PRACTICE**

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2. Respiratory Endoscopy Service, Pulmonary Division of Heart Institute (InCor), Hospital das Clínicas, Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil

**Background** Malignant or benign diseases can cause isolated intrathoracic lymphadenopathy (ITLN), a common dilemma in clinical practice. Our aim was to analyse diagnostic isolation of isolated ITLN in patients undergoing EBUS-TBNA and to calculate its sensitivity, specificity, positive predictive value (PPV) and negative predictive value (PNV).

**Methods** Retrospective study of patients with isolated ITLN undergoing EBUS-TBNA for diagnosis, from August 2011 to April 2017. For non-specified granuloma, reactive or inconclusive LN by EBUS-TBNA, a definite diagnosis was established by other procedures or clinical, laboratorial and radiological follow-up of 18 months. Exclusion criteria: suspicion or history of cancer.

**Results** We included 58 patients with mean age of 53 years (SD=15), mostly female (56.9%). EBUS-TBNA diagnosed 21 (36.2%) granulomatosis, 15 (25.9%) reactive LN, 8 (13.8%) cancer and 4 (6.9%) other diseases. 17.2% (n=10) of cases were inconclusive by EBUS-TBNA and definite diagnosis was established by surgical biopsy (60%) and other bronchoscopic methods (40%). In granulomatous disease, EBUS-TBNA diagnosed mycobacteriosis in 23.8%, sarcoidosis in 4.7%, silicosis in 4.7% and 66.6% remained as non-specified granuloma. The definite diagnosis of these granulomas was made by other bronchoscopic methods (42.9%), surgical methods (21.4%) and clinical follow-up (35.7%). 73.3% of reactive LN (n=11) were subsequently confirmed by follow-up (91%) or mediastinoscopy (9%). 26.7% (n=4) of reactive LN resulted in tuberculosis (6.7%), sarcoidosis (6.7%) and neoplasia (13.3%) by others procedures or follow-up. EBUS-TBNA showed a sensitivity of 74%, 66.7% and 92.3%, specificity of 94.7%, 100% and 91.1%, PPV of 95.2%, 100% and 75%, and PNV of 84.4%, 92.6% and 97.6% for granulomatosis, neoplasia and reactive LN diagnosis, respectively.

**Conclusions** Isolated ITLN were mostly benign and reactive LN was the second most frequent cause. More than 70% of reactive LN by EBUS-TBNA were confirmed and the majority had no need for more invasive procedures. EBUS-TBNA showed to be a useful diagnostic procedure in isolated ITLN, with a great PPV, and its accuracy can be optimised by follow-up or minimal invasive procedures.

**REFERENCE**


**P40 PREDICTORS FOR PNEUMOTHORAX FOLLOWING CT GUIDED BIOPSY (CTGB) FOR LUNG MASSES**


10.1136/thoraxjnl-2017-210983.182

**Background** CTGB is widely used to sample lung masses. One of the important complications is pneumothorax which could potentially lead to a prolonged hospital stay. The aim of the study was to examine the prevalence and potential predictors associated with pneumothorax following CTGB.

**Methods** We retrospectively reviewed CTGB data over a two year period (August 2014 to July 2016) for all patients who underwent CTGB. The data collected included age, sex, comorbidities, smoking history, spirometry, performance status, presence of emphysema, thickness, depth of the needle, size of the lesion and lobe of the lesion.

**Results** 227 patients underwent CTGB with an overall diagnostic yield of 93.8% (213/227). The incidence of pneumothorax was 61/227 (26.9%). Of the patients with pneumothorax, 8/61 (13.1%) needed chest drain insertion with a median hospital stay of 4.5±2.1 days. There was no difference in diagnostic yield between both pneumothorax and the no pneumothorax group. Overall 89.2% (190/213) of the patients had a chest drain inserted for their pneumothorax. While the lesion as a determinant of developing pneumothorax was 26.9% but only 3.5% of all patients undergoing CTGB had a chest drain inserted for their pneumothorax.

**Conclusion** The incidence of pneumothorax following CTGB was 26.9% but only 3.5% of all patients undergoing CTGB had a chest drain inserted for their pneumothorax. While CTGB is a safe procedure with a good diagnostic yield one

**Abstract P40 Table 1**

<table>
<thead>
<tr>
<th></th>
<th>No pneumothorax</th>
<th>Pneumothorax</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=166)</td>
<td>(n=61)</td>
<td></td>
</tr>
<tr>
<td>Age (mean±SD)</td>
<td>71.3±9.8</td>
<td>69.2±10.3</td>
</tr>
<tr>
<td>FEV1% predicted</td>
<td>69.5±22.3</td>
<td>71.5±22.8</td>
</tr>
<tr>
<td>Smokers</td>
<td>145 (87.3%)</td>
<td>52 (85.2%)</td>
</tr>
<tr>
<td>Emphysema on CT</td>
<td>80 (48.2%)</td>
<td>32 (52.5%)</td>
</tr>
<tr>
<td>Needle depth (median±SEM)</td>
<td>8±1.9</td>
<td>11±1.9</td>
</tr>
<tr>
<td>Gauge of needle (median)</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>