quantitative variables, but the highest accuracy was found with the SUVMAX/SUVLIVER ratio. At a cut-off of 1.5 for the SUVMAX/SUVLIVER ratio, the sensitivity and specificity to detect malignant LN invasion was 82% and 93% respectively.

**Conclusion:** Integrated FDG-PET/CT has an accuracy which is too low to avoid invasive intrathoracic LN staging in patients with NSCLC. Moreover, the visual interpretation of the fusion images of the integrated FDG-PET/CT can be confidently replaced by the quantitative variable SUVMAX/SUVLIVER, without loss of accuracy for intrathoracic LN staging.

**PD1-2-6** EUS and PET-CT in Lung Cancer Staging, Mon, 16:00 - 17:30

Transoesophageal endoscopic ultrasound with fine needle aspiration (EUS-FNA) in lung cancer staging: does lymph node size matter?

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**Background and Objectives:** Transoesophageal endoscopic ultrasound with real-time guided fine-needle aspiration (EUS-FNA) qualifies as the staging procedure of choice to demonstrate immediate irresectability in patients with lung cancer presenting with enlarged mediastinal lymph nodes (MLN). This study compared the diagnostic performance of EUS-FNA in lung cancer patients presenting with either enlarged or small MLN.

**Design and Patients:** A prospective series in unselected lung cancer patients referred for EUS-FNA because of suspicion for MLN invasion based on the available imaging. Patients were categorized according to the transversal diameter of their MLN on CT-scan: group A (all MLN <10mm) and group B (at least 1 MLN ≥10mm). A small MLN was considered suspicious when either FDG-avid or when lying closely to the primary tumor. All patients underwent surgical-pathologic verification when EUS-FNA did not demonstrate malignant MLN invasion. Diagnostic performance was compared between both groups at the patient level (c2-test).

**Results:** We studied 150 consecutive lung cancer patients (121 men, median 65 years), with presumed malignant MLN invasion. In 108 (72%), there was at least one enlarged MLN, while in 42 (28%), only small MLN were found. The sensitivity (with 95% confidence interval) to detect malignancy was 98 (92-99)% and 92 (73-99)% for enlarged and small MLN, respectively (p=N.S.). The negative predictive value of EUS-FNA was 82 (48-97)% and 90 (66-98)% for enlarged and small MLN (p=N.S.). EUS-FNA prevented a surgical intervention in 90% of EUS-FNA was 82 (48-97)% and 90 (66-98)% for enlarged and small MLN, respectively (p=N.S.). The negative predictive value to detect malignancy was 98 (92-99)% and 92 (73-99)% for enlarged

**Conclusion:** Lung cancer patients with suspicious MLN after imaging should first be staged by EUS-FNA, regardless the size of the MLN. However, the moderate negative predictive value of EUS-FNA makes surgical-pathologic verification still compulsory.

**PD1-2-7** EUS and PET-CT in Lung Cancer Staging, Mon, 16:00 - 17:30

Differences in high-resolution computed tomography (HRCT) Findings between mucinous and non-mucinous Bronchioloalveolar Carcinoma (BAC) less than 3 cm

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**Background:** Bronchioloalveolar carcinoma (BAC) histologically shows a unique replacing growth pattern of tumor cells along the alveolar wall. In 1999, the World Health Organization (WHO) classification defined BAC as a form of adenocarcinoma with a pure bronchioloalveolar growth pattern and no evidence of stromal, vascular, or pleural invasion. To date, ground-glass opacity (GGO) on high-resolution computed tomography (HRCT) was well known as one of the characteristic findings of BAC. The other hand, although BAC is histologically subclassified into mucinous type and non-mucinous type, the differences in HRCT findings between two subtypes of BAC have never been studied. In this study, we evaluated the differences in HRCT findings between mucinous and non-mucinous BAC.

**Methods:** Forty-nine patients with BAC less than 3 cm resected between September 2002 and December 2006 at Shizuoka Cancer Center were included. Among 49 BACs, 33 (67%) were subclassified to non-mucinous BAC and 16 (33%) were subclassified to mucinous BAC. HRCT findings in each subtype of BAC were evaluated.

**Results:** Table 1 shows HRCT findings according to subtype of BAC. The HRCT findings included ill-defined margin, consolidation, and pseudocavitation were seen more frequently in mucinous BAC compared with non-mucinous BAC (P<0.01). Non-mucinous BAC mainly consisted of GGO on HRCT. In contrast, mucinous BAC mainly consisted of consolidation on HRCT and the ratio of GGO was less than 25% in all cases. Typical HRCT appearance of mucinous BAC is shown in Figure 1.

**Conclusions:** The HRCT finding of mucinous BAC was clearly distinguished from non-mucinous BAC. Our present study demonstrated that non-mucinous BAC showed heterogeneous HRCT appearance, but mucinous BAC showed homogeneous appearance that was ill-defined subpleural consolidation with pseudocavitation or air bronchogram surrounded by slight GGO. When these findings are shown on HRCT, mucinous BAC should be considered as one of the differential diagnoses.