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% and 55% of the patients with enlarged or small MLN, respectively.

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 3cm

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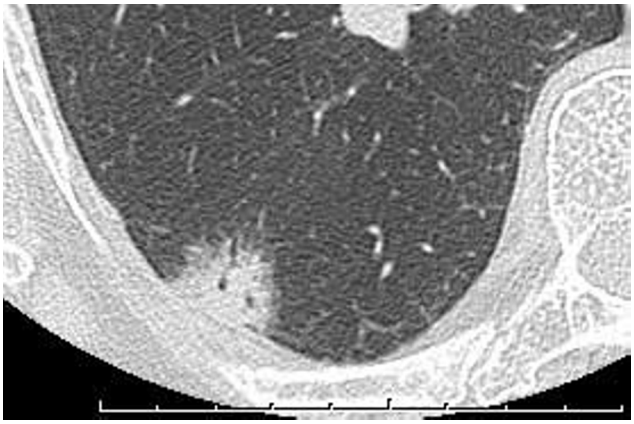
Background: Bronchioloalveolar carcinoma (BAC) histologically shows a unique replacing growth pattern of tumor cells along the alveolar wall. In 1999, the World Health Organization (WHO) classification defined BAC as a form of adenocarcinoma with a pure bronchioloalveolar growth pattern and no evidence 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. On 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.



	mucinous		non-mucinous		
	No.	%	No.	%	p-value
Margin					
@Well-defined	2	12.5	25	75.8	
Ill-defined	14	87.5	8	24.2	
Consolidation					
+	15	93.8	19	57.6	0.01
-	1	6.2	14	42.4	
GGO					
+	15	93.8	33	100	-
-	1	6.2			
The ratio of GGO					
0-25%	15	93.8			
26-50%	1	6.2	3	9.1	
51-75%			6	18.2	
76-100%			24	72.7	
Air bronchogram					
+	15	93.8	33	100	
-	1	6.2			
Pseudocavitaion					
+	13	81.3	8	24.2	
-	3	18.7	25	75.8	
Pleural tag					
+	3	18.7	10	30.3	0.39
-	13	81.3	23	69.7	

PD1-2-8 **EUS and PET-CT in Lung Cancer Staging, Mon, 16:00 - 17:30**

The role of PET-CT results in evaluating the aggressiveness of small solid lung cancers

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Background: Positron emission tomography (PET) findings can be used to predict survival after surgical resectioning for lung cancer, as the results of the PET scan might be correlated with pathological findings. Although small lung cancers with ground-glass attenuation have a favorable prognosis, CT evaluations of tumor aggressiveness in solid lung cancer may be difficult to carry out. Additionally, indications for limited resection for solid small lung cancers are controversial. This study was conducted to evaluate the relationship between PET-CT results and pathological findings in solid lung cancer cases where the tumors are ≤ 3 cm in size.

Methods: From June 2004 through December 2006, 81 clinical stage IA patients underwent lung cancer resections. Lung nodules were classified as solid or non-solid according to their CT findings. From this group, we reviewed the histories of 53 patients (65%) who had lung cancer with a solid tumor ≤ 3 cm in size, lymph node dissection and a preoperative PET-CT scan. Their ages ranged from 32 to 81, with an average of 65 years. There were 26 men and 27 women. The surgical procedures performed were lobectomy in 52 cases (98%) and segmentectomy in 1 (2%). Patients with non-solid nodules or who underwent wedge resections were excluded. Four patients (8%) received adjuvant chemotherapy after surgery. In their pathological findings, lung cancers that exhibited nodal, lymphovascular or pleural invasion were defined as invasive lung cancers. We analyzed the association between the pathological findings and the following preoperative clinical factors: age, sex, smoking history (+ or -), CEA ≤ 5.0 or > 5.0 ng/ml, tumor size and max SUV values.

Results: The pathological diagnoses were as follows: 45 (85%) adenocarcinomas, 5 (10%) squamous cell carcinoma, 1 (2%) adenosquamous carcinoma, 1 (2%) atypical carcinoid, and 1 (2%) small cell carcinoma. There were 15 (28%) invasive lung cancer cases. Multivariate analysis showed tumor size (P=0.02) and max SUV (P=0.003) to be independent predictive factors of invasive lung cancer. The proportion of patients with a max SUV value greater than 3.0 was significantly higher in invasive lung cancer cases. When the threshold value of max SUV was set at 3.0, the sensitivity for predicting an invasive lung cancer in solid lung nodules was 93% (14/15), with a specificity of 42% (16/38). The positive predictive value was 39% (14/36) and the negative predictive value was 94% (16/17). In the follow-up, 3 of 53 (6%) patients experienced a recurrence of the cancer within two years, and the preoperative max SUV value of all of these patients was greater than 8.0.

Conclusions: We found that PET-CT results were correlated with pathological severity in small solid lung cancers. In the preoperative assessment, solid lung cancers with high max SUV values were recommended for a standard resection.

PD1-3-1 **Pathology and Bronchoscopy, Mon, 16:00 - 17:30**

Endobronchial treatment in general anesthesia with jet ventilation is safe and useful procedure

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Background: The aim of our study is to evaluate the complications developing during or after the endobronchial electrosurgary and laser brocnhsocopy in general anesthesia with jet ventilation and investigate the safety of this procedures.

Methods: In this study from the years 2002-2006 158 patients underwent 217 endobronchial therapeutic procedures. All procedures were performed in general anesthesia with jet ventilantion though rigid bronchoscope. We wedged videobronchoscop through rigid bronchoscope. According The American Society of Anesthesiologists´(ASA) physical classification were 55% patients ASA III and 45% ASA IV. The therapeutic endobronchial procedure was done in 129 patinets with endobronchial NSCLC, in 12 patients with endobronchial SCLC, in 6 patients with endobronchial metastases of melanoma, in 3 with endobronchial metastasis of renal carcinoma, in 7 patients we started with endobronchial treatment before the morphological diagnosis. We started with the endobronchiasl treatment because of dyspnea in100% patients (in 55% patients was dyspnea at rest), in 57 %patients was cough, in 12% hemoptysis, in 2% pneumonia. During and after procedure we controlled oxymetry, electrocardiography, blood pressure.