average of 65 years. There were 26 men and 27 women. The surgical
cancer with a solid tumor ≤ 3 cm in size, lymph node dissection and a

**Methods:**

From June 2004 through December 2006, 81 clinical stage

tumors are ≤ 3 cm in size. Although small lung cancers with ground-glass attenuation have

**Background:**

Positron emission tomography (PET) findings can be

**Methods:**

From June 2004 through December 2006, 81 clinical stage

**Results:**

The pathological diagnoses were as follows: 45 (85%) adeno-
carcinomas, 5 (10%) squamous cell carcinoma, 1 (2%) adenosquamous
carcinoma, 1 (2%) atypical carcinoid, and 1 (2%) small cell carcinoma.

- **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 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**

Škricková, Jana1 Stourac, Petr2 Hrazdirova, Anna3

1 University Hospital Brno, Bohunic, Department of Respiratory Diseases and TB, Brno, Czech Republic 2 Department of Anesthesiology and Intensive Care Medicine, University Hospital Brno, Bohunic, Brno, Czech Republic 3 Department of Respiratory Diseases and TB, University Hospital Brno, Bohunic, Brno, Czech Republic

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

**Methods:** In this study from the years 2002-2006 158 patients under-
went 217 endobronchial therapeutic procedures. All procedures were

performed in general anesthesia with jet ventilation though rigid bronchoscope. We wedged videobronchoscopy through rigid broncho-
scope. 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 patinetos

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 endobronchial 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 proce-
dure we controlled oxymetry, electrocardiography, blood pressure.

**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**

Shiono, Satoshi; Sato, Toru

Department of Thoracic Surgery, Yamagata Prefectural Central Hospi-
tal, Yamagata, Japan

**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 find-
ings. 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 clas-
sified 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 segment-
tectomy 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.

Those 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 predic-
tive 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 preop-
ervative 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 SUV values were recom-

mendated for a standard resection.

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![Table](attachment:table.png)
Results: During and after procedures we observed in 28% patients hypoxemia, in 23% hemorrhage 250 cm³ and more, in 10% arrhythmias, in 5% patients we observed hypertension and in 2% patients developed after procedure respiratory failure and both patients were 24 hours on invasive ventilation. Two patients died due complications after procedure. Any complications we observed in 40% of all procedures. The procedure leads to improvement of symptoms in 80% patients. The difference in number of complications in patients with ASA III and with ASA IV was not statistically significant (p=0.009).

Conclusions: Endobronchial treatment (electrosurgery and laser bronchoscopy) leads to improvement of symptoms in 80% patients. This treatment procedure in general anesthesia with jet ventilation is therapeutic procedure with acceptable rate of complications in patients with endobronchial growth of malignancies and in patients with ASA classification III and IV.

Flexible bronchoscopy in lung cancer
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Background: Bronchoscopy is usually performed under topical anesthesia with or without sedation to promote patient comfort and the ideal conditions for the physician to perform the examination. The objective of the study was to establish which anesthetic procedure used during flexible bronchoscopy for lung cancer diagnostic has the lowest index of complications.

Methods: This prospective randomized study analyzed 80 patients that underwent flexible bronchoscopy for lung cancer diagnostic. Patients were randomly assigned to four groups of 20 patients each according to the anesthetic combination used: 200 mg topical lidocaine (LID group); 200 mg topical lidocaine and 2 mg/kg propofol (PPF group); 200 mg topical lidocaine and 20 mcg/kg alfentanil (ALF group); or 200 mg topical lidocaine and 0.05 mg/kg midazolam (MID group). Scores were assigned to patients according to the different variables observed during the bronchoscopic procedure; the lower the score, the lower the complication index.

Results: Results of the composite score (mean and standard deviation) for the evaluation of the variables observed during flexible bronchoscopy were 4.6, 6.9 for the PPF group, 7.9, 6.6 for the ALF group, 10.0, 4.5 for the LID group, and 11.3, 5.8 for the MID group (p=0.001).

Conclusions: Results showed that the combination of propofol and topical lidocaine was a superior anesthetic method for flexible bronchoscopy than lidocaine alone or in association with midazolam or alfentanil.

Clinical Implications: The choice of an effective and low morbidity anesthetic method is basic for the success of a diagnostic flexible bronchoscopy. This study it demonstrated the superiority of the association of propofol and topical lidocaine in the anesthesia for flexible bronchoscopy in lung cancer patients.

Estrogen receptor overexpression in non-small cell lung cancer is associated with better survival in males.
Skov, Birgit G.¹ Fischer, Barbara M.² Pappot, Helle³
¹ KAS Herlev, Dept. of Pathology, Division Gentofte, Copenhagen, Denmark ² Department of Geriatric Medicine, Odense University Hospital, Denmark, Odense, Denmark ³ Department of Oncology, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark

Background: Adenocarcinoma of the lung is more frequent in females than in males and the association with smoking is less pronounced than for the other histological subtypes of lung cancer. Thus other factors than smoking may be involved in the carcinogenesis of lung cancer. Estrogen induction of cell proliferation has been found in for example breast adenocarcinoma and since estrogen receptors (ER) have been demonstrated in lung tumours, a similar role of estrogens in the development of lung cancer has been suggested.

Whereas ERα plays a key role in adenocarcinomas of the breast, several studies indicate a more predominant role of ERβ in lung cancer. We examined the expression of ERα, ERβ, and Progesterone in a well defined Danish cohort of patients with NSCLC with more than 15 years of follow up, and related the results to gender and survival.

Methods: Paraffin embedded, histological material was collected from 104 patients (71 men and 33 women), operated in the period 1989-1992 for NSCLC (56 squamous cell carcinomas, 40 adenocarcinomas and 8 large cell carcinomas). Sixtythree patients were in stage I, 14 patients in stage II, 24 patients in stage IIIA, and 3 patients in stage IIIB.

ERα (clone 1D5, DAKO), ERβ (clone PPG5/10, DAKO) and Progesterone (clone PgR 636, DAKO) were immunohistochemically analyzed. Staining frequency and intensity was scored semiquantitatively. A tumour was defined as positive when more than 10% of the tumour cells were positive with at least a weak nuclear staining. Kaplan-Meier survival curves were generated to evaluate the significance of ERα, ERβ, and Progesterone expression for the prognosis.

Results: ERβ positivity was demonstrated in 69% (72 of 104) of the tumours. There was no statistically significant correlation between ERβ positivity and age, sex, stage, or histology. After adjusting for sex, age, stage at diagnosis and histology there was no difference in survival between subjects with ERβ-positive and ERβ-negative tumours. Analysis was repeated after stratifying by sex. Women with ERβ-negative tumours had a non-significant (p=0.26) decrease in mortality compared with women with ERβ positive tumours. In contrast, men with ERβ positive tumours had a reduced mortality (p=0.03) compared to men with ERβ negative tumours (see Figure).