for FDG-PET, and were 81.3%, 55.1%, 72.4%, 84.1%, 41.5% respectively for CT. The sensitivity rate was 98% for CT plus FDG-PET.

**Conclusion:** PET is superior to CT in diagnosis of metastasis of MSCLC to mediastinal lymph nodes. PET+CT significantly increases the sensitivity in diagnosis Non-small cell lung cancer; Radioactive tracers; Tomography, emission-computed; Lymph nodes, mediastinal

**P1-104** Imaging and Staging Posters, Mon, Sept 3

**Sensitivity and specificity of TBNA in a large academic center**

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**Background:** Lung cancer is the leading cause of cancer death worldwide and determining involvement of the mediastinum is of vital importance to determine the prognosis and treatment plan. There are many mediastinal staging modalities, however, transbronchial needle aspirations (TBNA) is an optimal invasive procedure that remains underutilized. Several explanations have been suggested for this underutilization including level of training, fear of complications or a perception of low yield. This study evaluated the efficacy of transbronchial needle aspirations (TBNA) in a large academic center. The procedures were done by several endoscopists with varying levels of experience from novice to advanced.

**Methods:** Records were retrospectively reviewed of all patients that had mediastinal sampling using TBNA at the Mayo Clinic, Rochester from January 2004 to December 2006. Sensitivity, specificity and diagnostic accuracy of TBNA was calculated for those patients with known or suspected lung cancer and mediastinal or hilar adenopathy.

**Results:** Four hundred twenty-eight patients, with known or suspected lung cancer and mediastinal lymphadenopathy, had TBNA (180 females, 248 males, ages 32-95). The sensitivity of TBNA was 60.9%, specificity was 100.0%, and diagnostic accuracy was 65.7%. The sensitivity and diagnostic accuracy of station 7 was 63.3% and 69.8% respectively. The sensitivity and diagnostic accuracy for station 4R, 4L, ≥10R and ≥10L were as follows: 59.1% and 64.9%, 60.5% and 68.8%, 58.0% and 61.8%, and 51.9% and 62.9%. No complications were identified.

**Conclusion:** TBNA is effective in determining malignant involvement of mediastinum even in a teaching institution with both experienced and novice endoscopists. Among the invasive staging modalities, TBNA should be considered as one of first the procedures for sampling mediastinal lymph nodes.

**Mesothelioma and Other Thoracic Malignancy**

**P1-105** Mesothelioma and Other Thoracic Malignancy Posters, Mon, Sept 3

**Prevalence and pattern of lymph node metastasis in malignant pleural mesothelioma**

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**Introduction:** The incidence of malignant pleural mesothelioma (MPM) is increasing. Mediastinal nodal metastasis is usually associated with poor outcome after therapy. The incidence and pattern of lymph node metastases are not well understood.

**Patients and Methods:** A total of 53 patients with pathologically proven malignant pleural mesothelioma were included in a study between January 2002 - December 2006. The first 37 (group I) patients underwent combined modality treatment including primary surgery followed by chemo-radiotherapy, in this group no mediastinoscopy was done. The second group included 16 patients with pre-treatment mediastinoscopy. Patients with stage IIA and IIB disease and hilar metastasis were included in a tri modality treatment protocol, while those with positive mediastinoscopy, were excluded from this protocol.

**Results:** Among the studied patients, there were 33 males and 20 females. Right side was affected in 34 patients, the remaining 19 patients had left sided lesions, the mean age of the patients was 54 years. A total of 18 (34%) patients had positive lymph nodes. In group I, 12 patients had positive mediastinal lymph nodes of them only 2 had mediastinal lymphadenopathy on pre-operative CT. In group II, 4 patients had positive mediastinoscopy and 2 more had positive mediastinal nodes on final pathology out of reach of mediastinoscopy.

**Post-operatively,** lymph nodes size ranged between 0.3X0.3cm-2X2.5cm and the number of nodes dissected was between 5-34 with a mean of 14 nodes.

Post pleuropneumonectomy, 6 patients out of 14 had positive hilar lymph node metastases in addition to positive mediastinal lymph nodes. There was one patient with N1 disease only.

Of the 49 patients that had undergone surgery, only 7 patients had no lung invasion by pathologic evaluation, none of them had positive hilar nodes. The mechanism of spread of the disease to hilar lymph nodes may be through lung invasion first and not a direct spread of the disease from the pleura. This observation rise the possibility that mediastinal lymph nodes are considered the primary station in patients with MPM and hilar lymph node metastasis necessitate lung invasion first. Malignant pleural mesothelioma may also have unusual pattern of nodal metastases as we had 2 patients with positive para esophageal and an other 2 patients with positive diaphragmatic node within the group with mediastinal nodal metastases.

Mediastinal nodal metastases carries a dismal prognosis as no single patient with positive mediastinal nodes survived 3 years after tri modality treatment.