Results: Of the 21 patients, 5 (24%) had mediastinal nodal involvement in different areas on PET compared to CT. In three patients, there were less nodal stations involved on PET vs. CT (station 10, 5, 7, 4R and 4L, respectively); in two patients, PET identified CT-negative mediastinal stations (station 5 and 7, respectively). PET based planning thus resulted in an increased nodal GTV in 2 patients and a decrease in 3 patients. Taken all patients together, however, there were no significant differences in GTV, lung, and esophageal parameters between CT and PET-based plans. For CT vs. PET: V20 25.6±2.4 vs. 25.6±12.3 % (p=1.00); MLD: 13.7±5.6 vs. 13.7±5.6 Gy (p=0.89); MED: 24.4±8.6 vs. 24.1±8.5 Gy (p=0.50); Dmax: 45.8±2.9 vs. 45.7±2.9 Gy (p=0.32).

For the three patients in whom the nodal GTV decreased with PET, the V20 decreased from 25.5±4.9 to 22.0±7.1 % (p=0.10); MLD: 13.2±2.5 vs. 11.6±3.3 Gy (p=0.10); MED: 25.0±8.5 vs. 21.0±5.7 Gy (p=0.10); Dmax: 46.2±0.11 vs. 45.5±0.71 Gy (p=0.32).

Conclusions: Incorporating 18-FDG-PET information in radiotherapy planning in patients with LD-SCLC changed the treatment plan in 24% of patients compared to CT. Both increases and decreases of the GTV were observed, theoretically leading to the avoidance of respectively geographical miss or a decrease of radiation exposure of normal tissues. Based on these findings, a phase II trial, evaluating PET-scan based selective nodal irradiation is ongoing in our department.

PD6-2-1  Mesothelioma and Other Thoracic Malignancy, Mon, 16:00 - 17:30
Surgery of pulmonary metastases as a part of multimodality concept
Trakhtenberg, Alexander C.1 Parshin, Vladimir D.2 Pikin, Oleg V.1
1 Hertzen Research Institute of Oncology, Dept. of Thoracic Surgery, Moscow, Russia; 2 Russian Research Center of Surgery, Dept. of Thoracic Surgery, Moscow, Russia

Introduction: The role of surgery in treatment of pulmonary metastases remains controversial. The treatment strategy depends on localization and histology of the primary tumor, its differentiation degree and number of metastases. Selective group of patients can benefit from curative pulmonary metastasectomy. The purpose of our study was to evaluate the role of aggressive pulmonary metastasectomy as a part of multimodality approach.

Material and Methods: 412 consecutive patients with pulmonary metastases of different origin were operated on in our clinic. The histology of the primary tumor: cancer of different origin - 268, sarcoma - 117 and melanoma - 27. Solitary metastases were diagnosed in 236, 2-3 metastases - in 80 and multiple - in 87 patients. Selection criteria for surgery were: local control of the primary tumor, metastases located in the lungs, except colorectal cancer patients, resistance to conservative therapy.

Results: We performed 487 operations in 412 patients. Wedge resection was performed in 225 (54.7%), lobectomy - in 118 (28.6%), precision technique - in 36 (8.7%), segmentectomy - in 10 (2.4%), pneumonectomy - in 23 (5.6%) patients. Thoracotomy approach was used in 389, sternotomy - in 3, thoracoscopic resection - in 20 patients. Postoperative mortality was 1.2%. Conservative therapy was administered in all patients with poor prognosis. Overall survivals at 5 years were 34.9% of patients with solitary metastases, 21.7% of patients with 2-3 nodules and 14.7% of patients with multiple pulmonary metastases. Better 5-year survival was achieved after surgery of gynecological cancer (45.5%), renal cancer (40.2%), head and neck cancer (38.4%) and colorectal cancer (33.4%). The results decreases in breast cancer (31.6%) and soft-tissue sarcomas (32.5%). No one survived more than 5 years after surgery for metastatic melanoma. Overall 5-year survival was 52.4% of patients with DFI>36 months versus 22.6% with DFI<36 months. Five-year survival with negative lymph nodes was 36.2%, while with positive lymph nodes - 0%.

Conclusion: Surgery as a component of multimodality treatment is justified, because it helps to achieve 5-year survival in that complex group of patients. Localization and histology of the primary tumor, number of metastases, DFI and status of intrathoracic lymph nodes are the most important prognostic factors.

PD6-2-2  Mesothelioma and Other Thoracic Malignancy, Mon, 16:00 - 17:30
Genomic profiling of malignant pleural mesothelioma with array-based comparative genomic hybridization
Taniguchi, Tesuo1 Karnan, Sivasundaram1 Fukui, Takayuki2 Yokoyama, Toshitoko3 Tagawa, Hiroyuki1 Yokoi, Kohei1 Ueda, Yuichi1 Mitsudomi, Tetsuya2 Horio, Yoshishugu1 Hida, Toyokazu2 Yatabe, Yasushi1 Seto, Masao Sekido, Yoshitaka1
1 Aichi Cancer Center Research Institute, Nagoya, Japan; 2 Aichi Cancer Center Hospital, Nagoya, Japan; 3 Nagoya University Graduate School of Medicine, Nagoya, Japan

We performed genome-wide array-based comparative genomic hybridization (CGH) analysis of malignant pleural mesotheliomas (MPMs) to identify regions that display DNA copy number alterations. Seventeen primary tumors and 9 cell lines derived from 22 individuals were studied. Regions of genomic aberrations observed in > 20% of individuals included 1q, 5p, 7p, 8q24, and 20p of gains, and 1p36.33, 1p36.1, 1p21.3, 2p13.3, 4q12.1, 4q34, 6q25, 9p21.3, 10p, 13q32.1, 14q32.13, 18q, and 22q of losses. Two regions at 1p32.1 and 11q22 showed a high copy gain. The 1p32.1 region contained a protooncogene, JUN, and we further demonstrated overexpression of JUN with real-time polymerase chain reaction (PCR) analysis. Since JUN overexpression was observed in primary tumors but not in cell lines, our findings suggested that induction of JUN expression was involved in the development of MPM cells in vivo, which also might result in gene amplification in a subset of MPMs. We also analyzed the 11q21-23 amplification region and found that YAP1 was located in this region. Meanwhile, the most frequent alteration was the 9p21.3 deletion, which includes the p16INK4a/p14ARF locus. With PCR analysis, we determined the extent of the homozygous deletion regions of the p16INK4a/p14ARF locus in MPM cell lines, which indicated that the deletion regions varied among cell lines. Our results provide new insights into the genetic background of MPM, and also give some clues to manifest a new molecular target therapy for MPM.

PD6-2-3  Mesothelioma and Other Thoracic Malignancy, Mon, 16:00 - 17:30
The role of serum markers and differentiation between malignant mesothelioma and other thoracic malignancies
Baas, Paul; van den Heuvel, Michel; Korse, Tiny; Bonfrer, Hans
The Netherlands Cancer Institute, Amsterdam, The Netherlands

Background: Serum markers have been tested in patients with malignant effusions for their ability to differentiate malignant pleural mesothelioma from other causes. So far no single tumor marker has been identified that differentiates mesothelioma from other causes. We therefore combined three different serum markers and report our