European Respiratory Society
Annual Congress 2012

Abstract Number: 4326
Publication Number: P4426

Abstract Group: 8.1. Thoracic Surgery
Keyword 1: Surgery **Keyword 2:** Spirometry **Keyword 3:** Thoracic oncology

Title: Impact of pulmonary metastasectomy on lung function parameters

Mr. Thomas 25851 Schweiger thomas.schweiger@meduniwien.ac.at [1,2], Mr. Christoph 25852 Nikolowsky christoph.nikolowsky@meduniwien.ac.at [1,2], Mr. Lukas 25853 Lehmann lukas.lehmann@meduniwien.ac.at [1], Mr. Robert 25854 Wiebringhaus robert.wiebringhaus@meduniwien.ac.at [1], Prof. Dr Gyoergy 25855 Lang gyoergy.lang@meduniwien.ac.at MD [1], Prof. Dr Hendrik-Jan 25865 Ankersmit hendrik.ankersmit@meduniwien.ac.at MD [1,2], Prof. Dr Walter 25858 Klepetko walter.klepetko@meduniwien.ac.at MD [1] and Dr. Konrad 25876 Hoetzenecker konrad.hoetzenecker@meduniwien.ac.at MD [1,2]. [1] Department of Surgery - Division of Thoracic Surgery, Medical University of Vienna, Austria, 1090 and [2] Christian Doppler Laboratory for Cardiac and Thoracic Diagnosis and Regeneration, Medical University of Vienna, Austria, 1090 .

Body: The lung is a common site of secondary growth in malignant diseases. Surgical resection of pulmonary metastases has been shown to prolong survival in patients with various primary tumor types. Today, even repeated resections of recurrent pulmonary metastases are common practice in thoracic surgery. The impact of metastasectomy on respiratory function has become a relevant factor in the treatment algorithm of these patients. Since 2009, all metastasectomy patients at the Dept. of Thoracic Surgery, MUV, have been actively followed-up every three to six months after surgery. For 45 patients pre- and post-operative lung function data was obtained during the follow-up. In 19 patients metastases were removed by enucleation (laser=10; cautery=9), in 19 patients by wedge resection and 7 patients received lobectomy. Complete resection was obtained in all patients. We found no difference in loss of FEV1 per resected nodule between laser and cautery enucleation. However, a significant difference in FEV1 and VC was found when comparing enucleation/wedge/lobectomy patients (FEV1 3.1±0.5, 7.6±1.5, 13.4±2.9; VC: 1.5±1.7, 4.7±1.7, 16.3±3.3). These findings were confirmed by evaluating the volume of the resected tissue and did not correlate with size of metastases as determined by pre-operative CT evaluations. The surgical resection of pulmonary metastases is associated with a detectable but mild loss of lung function. Concerning the respiratory impairment, repeated resections of lung metastases should not be withhold from patients.