Title: The role of magnetic resonance imaging in staging of NSCLC

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Body: Objective: MRI is used to T and N staging of non small cell lung cancer (NSCLC) as a non invasive tool. The role of the MRI in staging of NSCLC is not clear. We wanted to determine effect of the MRI in the T and N staging of NSCLC vs. CT. Methods: Between 2010 and 2013, 157 patients underwent operations for NSCLC. Mediastinoscopy was performed in 98 cases. MRI was carried out to 51 patients with NSCLC. We compared data received through MRI with data received in a group of NSCLC (n=106) patients, which we used only CT. In all cases the data received in pre-operative investigation was compared with data received during operation and morphological research of removed organs. During this comparison, local invasion of hilus and mediastinum (T-staging), and lymphatic metastases (N-staging) were payed special attention. Results: For T-staging sensitivity, specificity, false positivity, false negativity rates and accuracy of the MRT were calculated as 98%, 96%, 2%, 4%, 98% respectively. Whereas sensitivity specificity, false positivity, false negativity and accuracy rates of the CT for T-staging were 71%, 58%, 10%, 75% respectively. For N-staging specificity, false positivity, false negativity rates and accuracy of the CT and MRT were 64%, 53%, 14%, 55% and 75%, 64%, 40%, 26%, 63% respectively. Both of this methods were worse for N-staging then mediastinoscopy which sensitivity, specificity, false positivity, false negativity rates and accuracy were 85%, 98%, 26%, 0%, 62%. Conclusion: MRI is the method of choice for T-staging NSCLC. For N-staging MRI and CT yields to the invasive methods such as mediastinoscopy.