

ABSTRACT

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Title of diploma thesis: **Evaluation of spirometry and dynamometric parameters in advanced lung cancer.**

The aim of this thesis is to evaluate spirometry and dynamometric parameters of patients with non-small cell lung cancer in the third and fourth stage and compare them with physiological values or studies dealing with this issue.

In total we measured three performance namely: first measurement V1 was measured before first cycle of chemotherapy (0. Day), second examination V2 was measured before third cycle chemotherapy (6 weeks) and third measurement was measured three or four weeks after last cycle chemotherapy (12 weeks). Patients always came after a twelve-hour fasting. Among the evaluated patients there were 5 women and 14 men, of whom 9 men and 1 woman died. The average age of the patients was 64 years.

Not one parameter of dynamometry showed statistically significant differences during three monitoring periods. We found interrelationship between FVC and maximal value of hand grip. It shows that an improvement of dynamic lung capacity supports muscle power which leads to decrease of fatigue. FEV1 increased from the first measurement to the third measurement by 0,51 l and similarly FVC increased by 0,46 l. No of the spirometry parameters changed significantly during monitoring periods.

In terms of dynamometer and spirometric parameters, we can say that patients would benefit from chemotherapy. We agree with the view that dynamometry is a fast, simple and reliable method that could be used to patient's prognosis.