

ABSTRACT

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Title of Thesis **Rating resting energy expenditure and substrate utilization in patients with advanced lung cancer**

Increased resting energy expenditure and a decreased energy intake related to energy expenditure contribute to weight loss in patients with lung cancer. The present study focused on patient with advanced non-small cell lung cancer (stage III and IV) undergoing chemotherapy.

The study included 16 patients (11 men, 5 women) with NSCLC undergoing chemotherapy (mean age 62,3 years \pm 7,98 years). Resting energy expenditure was measured at three time intervals (before, during and after chemotherapy) by using indirect calorimetry at a Department of Centre for Research and Development.

An increased resting energy expenditure was shown before chemotherapy alone, as well as throughout chemotherapy. To reduce REE occurred during chemotherapy. The average value of REE in the first measurement (% of predicted of HB) was 121,25 % \pm 20,41 %, in the second examination was mean value 115,46 % \pm 13,88 %, during the third measurement was recorded, this average value 110,8% \pm 15,82%.

This study confirms the increased resting energy expenditure in patients with non-small cell lung cancer, and the likely effect of cytostatic therapy, which it reduced.

Keywords: resting energy expenditure, non-small cell lung cancer, indirect calorimetry, Harris-Benedict equation