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Title: LSC 2013 abstract - Volatile compounds of exhaled breath in lung cancer and lung inflammatory disease

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Body: Challenging approach is to try to diagnose lung diseases by analysis of exhaled breath that contains volatile organic compounds (VOCs). The aims: of this study was to compare the concentrations of VOCs in exhaled air of lung cancer patients and patients with inflammatory lung diseases and healthy controls. Materials and methods: four study groups were formed – 31 patients - lung cancer, 19 with COPD, 11 - pneumonia and 10 healthy volunteers. Before collection of exhaled air patients lungs were washed for 5 minutes with filtered air. Exhaled breath samples were collected on termodesorbition tubes and later analyzed on gas chromatograph / mass spectrometer. Results: Mean concentrations of VOCs are shown in the table.

p<0,05: * compared to healthy controls 95% CI – 95% confidence interval of mean value Conclusions: Exhaled air of lung cancer patients contain less amounts of light spirits and hydrocarbons, compared to controls. VOCs spectrum from patients with lung inflammatory diseases doesn't differ significantly from normal controls.