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**Title:** TNF-alpha, IL-1 and IL-6 concentration in bronchoalveolar lavage fluid (BALF) of non-small cell lung cancer (NSCLC)

Prof. Dr Marina 28338 Petrovic drmarinapetrovic@yahoo.com MD , Dr. Ivan 28339 Cekerevac icekerevac@sbb.rs , Dr. Vojislav 28340 Cupurdija vcupurdija@sbb.rs , Dr. Vladimir 28341 Zdravkovic v\_zdravkovic@sbb.rs and Dr. Rada 28342 Vucic rada.vucic@gmail.com . <sup>1</sup> Pulmonary Department, Cliniac Centre, Kragujevac, Serbia, 34000 and <sup>2</sup> Medical Faculty, University of Kragujevac, Kragujevac, Serbia, 34000 .

**Body:** AIM: Fiberoptic bronchoscopy and bronchoalveolar lavage (BAL) provide facilities for biologically active substances directly produced by the tumor. In the present study we have investigated the concentration of the following cytokines: TNF-alpha, IL-2 and IL-6 in bronchoalveolar lavage fluid (BALF) of non-small cell lung cancer. METHODS: The study group consisted of 30 patients with NSCLC. The control group consisted of 24 patients with non-malignant lung disease. All patients underwent bronchoscopy followed by bronchoalveolar lavage (BAL). RESULTS: The mean TNF-alpha concentration in Gr. I was 1258 pg/ml/mg p. and was significantly higher than in sarcoidosis (8.9 pg/ml/ mg p.) and COPD (0.75 pg/ml/mg p.). We observed a correlation between TNF-alpha concentration and the stage of malignant disease. The highest concentration was in IIIb stage (2965 pg/ml/mg p.). IL-6 concentration in malignant patients was strongly correlated with TNF-alpha concentration and was significantly higher than in control (291.58 pg/ml/mg p. in cancer patients, in sarcoidosis: 31.56 pg/ml/mg p. and in COPD: 49.94 pg/ml/mg p.). It was the highest in stage IV (432 pg/ml/mg p.). IL-1 concentrations were not significantly higher in malignant patients (45.32 pg/ml/mg p., nor in IIIa stage (48.24) pg/ml/mg p. as compared with controls (26.64 pg/ml/mg p. in sarcoidosis and 34.52 pg/ml/mg p. in COPD). CONCLUSION: TNF-alpha and IL6 in BALF might be used as a marker for NSCLC. TNF-alpha and IL6 level might be an indicator for the stage of NSCLC.