(TNF α) and interleukin 1 (IL1) have a critical role in the pathogenesis of RA. Biological treatment blocks pathological pathways in the actions of these proinflammatory cytokines. The aim of this study was to analyse concentrations of TNF α in blood serum and synovial fluid in patients with RA to identify patient groups most suitable for anti-TNF α treatment.

Methods Blood serum and synovial fluid from patients with RA and osteoarthritis (OA) at Pauls Stradins Clinical University Hospital Center of Rheumatology were selected for detection of TNF α from January 2005 to December 2007 by ELISA. Histiocyte/macrophage counts were detected in synovial fluid in the hospital laboratory. Statistical analyses were performed by the Student *t* test.

Results 29 patients with RA and 11 with OA participated in the study; 17 of the patients with RA had high disease activity (DAS >5.1) and 12 had medium disease activity (DAS $\leq$ 1). A statistically significant difference was detected in TNF α levels in the synovial fluid of the RA group and the OA group ($p=0.19$), and in serum from the RA group versus the OA group ($p=0.00154$); medium activity RA group vs OA group TNF α in blood serum and synovial fluid ($p=0.07$ and $p=0.02$) and high activity RA group vs OA group TNF α in blood serum and synovial fluid ($p<0.001$ and $p=0.001$). The difference between high and medium RA activity groups in TNF α levels in serum and synovial fluid was $p=0.162$ and $p=0.0037$. Histiocyte/macrophage count in synovial fluid differed in OA group vs RA medium disease activity group ($p=0.02$) and in OA vs RA high disease activity group ($p=0.004$), but in medium disease activity RA vs high disease activity RA group ($p=0.58$).

Conclusion Further studies are needed to detect cytokines in blood serum and synovial fluid for the use of one as a possible marker when choosing treatment for individual patients with RA.

A100 TUMOUR NECROSIS FACTOR α IN RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS PATIENTS IN BLOOD SERUM AND SYNOVIAL FLUID

I Bulina,^{1,2} D Andersone,^{1,2} A Sochnev,^{4,5} V Lavrentjevs,² J Aja,² I Astica,² E Sikora,² J Zepa,² I Jaunalksne,³ L Kovalchuk^{3,5} ¹Latvian University, ²Center of Rheumatology, Pauls Stradins Clinical University Hospital, Riga, Latvia ³Clinic of Clinical Immunology, Pauls Stradins Clinical University Hospital, Riga, Latvia ⁴Riga Stradins University, Riga, Latvia ⁵Riga Stradins University Institute of Immunology, Riga, Latvia

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Objective Rheumatoid arthritis (RA) is a chronic autoimmune disease of unknown cause which affects the ability of elderly people to work. There is strong evidence to suggest that inflammatory mediators such as tumour necrosis factor α