## Abstracts

### P33 CYTOKINE AND AUTOANTIBODY PROFILES DURING TREATMENT WITH BELIMUMAB IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

1Ioannis Paradis, 2Emil Åkerström, 3Christopher Sjöwall, 4Asta Sotnabian, 5Andreas Jönsson, 6Alvaro Gomez, 7Martina Frodlund, 8Agnete Zickert, 9Anders A Bengtsson, 10Johan Rönnelid, 11Iva Gunnarsson. 1Dept. of Medicine Solna, Karolinska Institute and Rheumatology, Karolinska University Hospital, Stockholm; 2Dept. of Clinical and Experimental Medicine, Linköping University, Linköping; 3Dept. of Immunology, Genetics and Pathology, Uppsala University, Uppsala; 4Dept. of Clinical Sciences Lund, Lund University, Lund, Sweden

**Background** Belimumab is approved for the treatment of systemic lupus erythematosus (SLE) since 2011. We investigated whether belimumab treatment impacts on levels of cytokines and autoantibodies of interest in SLE, as well as circulating immune complexes (ICs).

**Methods** Longitudinally collected serum samples from 78 belimumab-treated SLE patients from the Karolinska, Skåne and Linköping University Hospitals were analysed. Serum cytokine levels and nuclear antigen autoantibody specificities were determined using addressable laser bead immunoassay, and circulating C1q-binding ICs were measured using enzyme-linked immunosorbent assay.

**Results** In patients with detectable levels at baseline, serum IFN-α2 levels were lower at month 6 (median: 8.9; IQR: 2.8–6.3 pg/mL; P=0.018) and throughout the 24-month follow-up. Levels of anti-dsDNA (P<0.001), anti-Sm (P=0.002), anti-SmRNP (P=0.028), anti-U1-RNP (P<0.001) and anti-ribosomal P (P=0.012) antibodies decreased from month 3 and remained decreased over the follow-up. IC levels showed decreases at month 3 (P=0.028), 6 (P=0.009) and 12 (P=0.021). Anti-Sm antibody positivity was associated with higher probability and/or shorter time to achieve sustained SLE Responder Index-4 (HR: 2.52; 95% CI: 1.20–5.29; P=0.015), independently of disease activity and other potential confounding factors (figure 1).

**Conclusions** In our cohort, belimumab treatment lowered IFN-α2, IL-6, IL-10 and circulating IC levels, as well as levels of multiple autoantibodies against nuclear components. Interestingly, anti-Sm antibody positivity was associated with favourable treatment response.

### P34 URINARY PROTEOMICS IN LUPUS NEPHRITIS – PROSPECTIVE STUDY IN A TERTIARY CARE CENTER

1Ramesh Ramamoorthy, 2Ragavendra, 1Kumudha Manoharan, 1Balameena Kumar. 1Institute of Rheumatology, Madras Medical College, Chennai; 2Dept. of Rheumatology, Kilpauk Medical College, Chennai, India

**Background** Currently, major efforts have been undertaken to identify biomarkers that can predict impending lupus renal flare, development of chronic kidney disease or reflect renal histology at the time of the flare. So, this study aims to assess the correlation of urinary biomarkers MCP1 and NGAL with the disease activity in lupus nephritis (LN).

**Materials and Methods** This prospective study was conducted in a tertiary care center, for a period of 9 months. 60 patients with SLE were recruited. They were divided into 3 groups, 1st group with Active Lupus Nephritis (n=22), 2nd group with Inactive Lupus Nephritis (n=20) and 3rd group consisted of SLE patients with no renal involvement (n=18).

**Results** In patients with active LN, both UMCP1/Cr and UNGAL/Cr were significantly elevated (92.78, 76.11pg/ml in control and 24.3, 22.80pg/ml in SLE without renal involvement). In patients with inactive LN the values of UMCP1/Cr and UNGAL/Cr were observed to be significantly higher than control (44.18, 38.45pg/ml, p<0.005) and lower than those of active LN. Values of UMCP1/Cr and UNGAL/Cr were found to be in close correlation with mean rSLEDAI scores of active LN (10) and inactive LN (3.6).

**Conclusions** Levels of urinary biomarkers UMCP1 and UNGAL were significantly elevated in active lupus nephritis.