of smaller marker panels, we have developed anti-MVP into prototypic bead-based ELISA format.

**Results** Discovery and validation experiments using the Navigator SLE array showed that anti-MVP antibodies occurred with frequencies of 15%-30% in three different SLE cohorts at a specificity of 97%. Exploratory testing of multi-marker panels consisting of anti-MVP in combination with anti-dsDNA, anti-ribosomal P and anti-SmD yielded a 6% increase in sensitivity at 98% without loss of specificity. Multivariate data projection methods revealed that anti-MVP is detected in a subset of SLE patients with little overlap to established markers. A bead-based ELISA was developed for measuring anti-MVP antibodies and showed good correlation with Luminescex data (R=0.88) indicating successful platform transfer.

**Conclusions** Anti-MVP autoantibodies represent a useful marker in SLE and, in combination with established markers, optimises the strategy for autoantibody testing. Furthermore, although more studies are needed, our findings suggest a previously undescribed linkage of type I IFN and autoantibody targets in SLE.

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**Background and aims** Systemic Lupus Erythematosus (SLE) is known for its multifaceted clinical features and complex immune disturbance. Numerous studies have proven that certain autoantibodies are linked to specific clinical manifestations. However, the diversity of possible associations makes for the uniqueness of each case of SLE. The goal of our study was to analyse the link between clinical presentation and autoantibody titers in Romanian patients with SLE.

**Methods** We conducted an observational study of 48 adult patients with SLE hospitalised in the Rheumatology Department of the Clinical Rehabilitation Hospital. Venous blood samples were drawn to measure antinuclear antibody levels as well as anti-dsDNA, anti-ssDNA, anti-Sm, anti-U1RNP, anti-SSA, anti-SSB and anti-nucleosome antibody titers (ELISA). Clinical presentation, biochemical tests, SLEDAI score values and urinalysis were extracted from patients’ charts. Patient characteristics were included in a database and analysed using IBM SPSS Statistics v20.

**Results** We found statistically significant correlations (p<0.05) between cutaneous manifestations and anti-Sm, anti-U1RNP, anti-SSA, anti-SSB and anti-nucleosome antibodies. Kidney involvement correlated with anti-Sm, anti-U1RNP and anti-nucleosome antibodies (p<0.05). Joint involvement was strongly associated with the presence of anti-U1RNP antibodies (p=0.001). Haematological abnormalities were significantly correlated with anti-dsDNA, anti-U1RNP, anti-SSA and anti-SSB antibodies (p<0.05), while ESR and CRP levels were only associated with anti-U1RNP antibodies (p=0.03). Furthermore, SLEDAI scores correlated with anti-dsDNA and anti-nucleosome antibody titers (p<0.05).

**Conclusions** Our data support the relationship between autoantibody titers, disease activity and severity of clinical changes in Romanian patients with systemic lupus erythematosus.