To investigate different parameters in SF of patients with systemic lupus erythematosus (SLE), rheumatoid arthritis (RA) and osteoarthritis (OA).

**Methods** We describe the evaluation of SF in 28 SLE, 41 RA, and 36 OA patients. SF is collected via arthrocentesis in heparinized or EDTA tubes. The diagnosis was established in all subjects prior to SF examination based on typical clinical and laboratory features. The clinical activity of the diseases at the time of joint aspiration varied.

**Results** The white blood cell (WBC) count in 28 SLE patients, ranging from 500 to 12,250 with an average count of 3,473 cells/μl with 55% polymorphic nuclear cells (PMNs), was significantly lower than in RA - 11,048 cells/μl with 75% PMNs. The WBC count in OA patients was significantly lower - 3718±2373 cells/μl. The highest protein levels were found in RA patients, followed by SLE and OA patients: total protein respectively 50.3±6.9 vs 45±7.3 vs 48.6±10.9 g/L and IgG concentration - 21.22±3.53 vs 9.53±4.27 vs 18±4.28 g/L. Circulating Immune Complexes were significantly higher in the RA group compared to SLE group and OA: 0.247 ±0.07 vs 0.193±0.05 vs 0.108±0.40 mg/ml.

**Conclusions** The analysis of the SF of lupus patients has been effective in detecting the specific ENA all in one day, resulting in improved workflow and significant labour and cost savings.

**Background and aims** The aim of this study was to investigate plasma ADAMTS-13 activity in proliferative lupus nephritis patients, and evaluate their correlations with clinical, laboratory and pathological features, especially the vascular lesions.

**Methods** Plasma samples from 163 biopsy-proven class III and IV lupus nephritis patients and 98 normal controls were collected. ADAMTS-13 activity was evaluated by residual collagen binding assay. IgG autoantibodies against ADAMTS-13 were detected by ELISA. Levels of vWF were evaluated by ELISA. Their associations with clinical, laboratory and pathological features were further assessed.

**Results** Plasma ADAMTS-13 activity in lupus nephritis patients was significantly lower than that in normal controls (84% ±21% vs 90%±13%, p=0.005). The plasma levels of vWF has shown elevated levels of WBCs, total protein and circulating immune complexes as a markers for the high SLE activity. Synovial fluid is a possibility to define the type of arthritis in different rheumatic diseases.

**Background and aims** An ANA and ENA testing algorithm was established at the immunology laboratory at Waitemata District Health Board (WDHB) in New Zealand. WDHB serves more than 500,000 people in central New Zealand. Due to the high demand for ANA testing, WDHB opted for an automated ANA EIA screening and Extractable Nuclear Antibodies (ENA) EIA reflex testing algorithm, with HEp-2 IFA as an option when there is a strong indication of false negative results.

**Methods** From January 2012 to April 2016, 8515 patient samples were tested with ANA Screening EIA kits, and 1624 samples were reflex tested with ENA EIA kits for detection of antibodies to SSA, SSB, Sm, Sm/RNP, Scl-70, Jo-1, dsDNA and centromere (Bio-Rad Laboratories, California, USA). The reflex testing is triggered when either the screening result was positive or requested by a clinician. ANA IFA tests were performed on request.

**Results** The general ANA screening positive rate was 18.5% (1585/8515) in the WDHB population. The positivity rate for each individual ENA is shown in Table 1. The overall positive rate for ENA testing was 54.8% (890/1624) indicating that the ANA screening has been effective in detecting the specific presence of ENAs.

**Conclusions** Using this ANA and ENA testing algorithm, WDHB was able to screen a large number of patient samples and quickly identify specific ENA all in one day, resulting in improved workflow and significant labour and cost savings.