(1.07–1.50), p=5.0×10–3). Rs1269852 (TNXB-ATF6B, OR 0.80 (0.66–0.98), p=2.7×10–2) and rs1132200 (TMEM39A, OR 0.72 (0.56–0.91), p=6.7×10–3) were negatively associated with SLICC-DI. Using a Kendall Tau correlation model, a positive correlation between the TNXB-ATF6B risk allele and the HLA DRB1*03:01 haplotype was observed (τ=0.91, p<1.0×10–15).

**Conclusion** In patients with SLE, a high genetic risk score is linked to increased organ damage and a younger age of disease onset. Further, the ATG5 and STAT4 risk alleles were associated with increased organ damage whereas the TNXB-ATF6B and TMEM39A risk alleles were associated with less organ damage. Consequently, genetic profiling of patients with SLE may provide a tool for predicting severity of the disease.

## S4A:6 A SIMPLE METHOD TO EVIDENCE SUBCLINICAL ATHEROSCLEROSIS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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**Background** Subclinical atherosclerosis is a major cause of morbidity and mortality in patients with systemic lupus erythematosus.[1,2]

**Objective** The goal of this study is to assess the subclinical atherosclerosis in patients suffering the above mentioned disease, by measuring the ankle-brachial index.

**Method** We have studied 97 female patients diagnosed with systemic lupus erythematosus, and a control group of other 64 female patients, not having the disease. For both groups we recorded the demographics, the medical history. We also performed several laboratory tests and the ankle-brachial index measurement.

**Results** The mean value of ankle-brachial index on patients with systemic lupus erythematosus was statistically lower compared to control group (0,91±0,29 vs 1,14±0,17, p=0,0001). The univariate analysis of specific risk factors, showed that only the length of disease (r=-0,201, p=0,049), and the age of disease diagnosis (r=-0,354, p=0,0001) is statistically correlated with the ankle-brachial index. The multivariate analysis revealed that, among the specific risk factors, only the disease duration (B=-0,647, p=0,001), the age at diagnosis (B=0,326, p=0,002) and the presence of anticardiolipin andibodies (B=-0,338, p=0,003) are statistically correlated with ankle-brachial index.

**Conclusions** In our study, the determined value of ankle-brachial index on patients with systemic lupus erythematosus, was statistically lower than on the control group, thus revealing the presence of subclinical atherosclerosis.

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## S4A:7 INCREASED RISK OF CARDIOVASCULAR DISEASE IN PATIENTS WITH SLE WHO HAVE ASYMPTOMATIC PLAQUE ON VASCULAR ULTRASOUND – A FIVE-YEAR FOLLOW-UP STUDY

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Cardiovascular disease (CVD) causes a quarter of deaths in patients with SLE and imaging studies show that patients with SLE have a higher prevalence of asymptomatic atherosclerotic plaques than age and sex-matched controls. It is not yet clear how strongly presence of these plaques influences the risk of developing CVD subsequently in patients with SLE.

Between 2011–2013, we carried out vascular ultrasound studies of 100 SLE patients, who had no known history of previous CVD. 95% were women and the mean age was 45.2 years. Thirty-six patients had plaque which included 14 with only carotid plaque, 7 with only femoral plaque and 15 with both. This follow-up study describes subsequent onset of CVD in these 100 patients.

The medical records of all 100 scanned patients were reviewed. CVD event were defined as coronary artery disease, peripheral vascular disease and cerebrovascular disease. Where CVD was diagnosed, it was corroborated by relevant blood tests and imaging. We carried out statistical analysis of associations between baseline variables at the time of the scan and risk of developing CVD subsequently.

From the 100 patients scanned, 7 patients were subsequently found to have CVD. Demographic information of these patients is shown in table 1. All the events occurred within a 4 year period from the initial scans. CVD occurred in 6/36 patients with plaque compared to 1/64 without plaque (p=0.002). The average number of plaque sites was 2.4 (CVD patients) compared to 0.7 (p=0.02) in those without CVD. CVD was also significantly associated with age at scan (p=0.02) and mean intima-media thickness (p=0.01). There were no significant associations with gender (p=0.5), ethnicity

**Abstract S4A:7 Table 1**

| Patient | Gender | Age at event | Ethnicity | Event | Smoker | CVS risk factors |
|---|---|---|---|---|---|---|
| 1 | F | 51 | Caucasian | Angina | Previous | |
| 2 | F | 61 | Caucasian | NSTEMI | Never | Hypertension |
| 3 | F | 60 | Caucasian | CABG | Never | Hypercholesterolemia, Hypertension |
| 4 | F | 54 | Asian | CABG | Never | PVD |
| 5 | F | 66 | Caucasian | IHD | Never | Hypertension |
| 6 | F | 53 | Caucasian | NSTEMI | Previous | |
| *7 | F | 42 | Asian | Stroke | Never | Hypercholesterolemia, Hypertension |

*Non-plaque patient

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