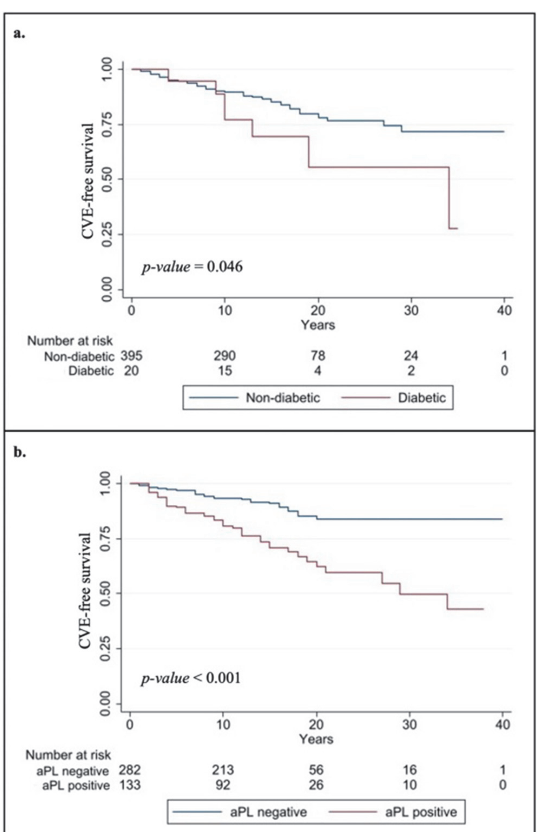
**Abstract PO.3.52 Table 1** Descriptive comparative analysis of demographic and disease features between patients who had and patients who did not have a cardiovascular event

| Variables | All patients (n=419) | Patients who did not have CVE (n=348) | Patients who had CVE (n=71) | *p-value* |
|---|---|---|---|---|
| Female sex (%) | 381 (91) | 319 (92) | 62 (87) | 0.246 |
| Caucasian ethnicity (%) | 239 (57) | 192 (55) | 47 (66) | 0.087 |
| Raised BMI (%) | 196 (47) | 160 (46) | 36 (51) | 0.462 |
| Ever smoker (%) | 123 (29) | 98 (28) | 25 (35) | 0.240 |
| Arterial hypertension (%) | 145 (35) | 117 (34) | 28 (39) | 0.306 |
| Hypercholesterolemia (%) | 128 (31) | 99 (28) | 29 (41) | **0.035** |
| Diabetes (%) | 20 (5) | 13 (4) | 7 (10) | **0.027** |
| SLE diagnosis before year 2000 (%) | 130 (31) | 95 (27) | 35 (49) | **<0.001** |
| Lupus nephritis (%) | 142 (34) | 115 (33) | 27 (38) | 0.428 |
| Lymphopenia (%) | 306 | 253 | 53 | 0.791 |
| adsDNA positivity (%) | 267 (64) | 220 (53) | 47 (66) | 0.653 |
| Decreased C3 (%) | 191 (47) | 157 (45) | 34 (48) | 0.714 |
| aPL positivity (%) | 134 (32) | 93 (27) | 41 (58) | **<0.001** |
| Use of hydroxychloroquine (%) | 366 (87) | 309 (89) | 57 (80) | **0.049** |

adsDNA, anti-double-stranded DNA antibodies; aPL, antiphospholipid antibodies; CVE, cardiovascular event; SLE, systemic lupus erythematosus.




**Abstract PO.3.52 Figure 1** Survival curves of categorial variables associated with cardiovascular events at log-rank test. aPL, antiphospholipid andibodies; CVE, cardiovascular events

14 (SD 8) years. While both diabetes and antiphospolipid antibodies positivity were associated with the outcome at univariable analysis (figure 1), multivariable analysis showed that only antiphospholipid predicted the occurrence of CVE (Hazard Ratio [HR] 2.95, 95% Confidence Interval [CI] 1.79 – 4.85, p-value < 0.001). Dedicated subanalyses showed that also cumulative dose of glucocorticoid (HR 1.0002, 95% CI 1.000003 – 1.000045, p-value=0.028) and Systemic Lupus International Collaborating Clinics Damage Index score (HR 1.47, 95% CI 1.15 – 1.88, p-value=0.002) were associated with CVE. While both venous thromboembolic events and strokes were predicted by antiphospholipid antibodies positivity (p-value < 0.001 and = 0.007, respectively), only male sex was associated with the specific diagnosis of coronary artery disease (p-value=0.002).

**Conclusions** Cardiovascular disease is highly prevalent in patients with SLE and is strongly associated with anti-phospholipid antibodies positivity, glucocorticoid therapy, and damage.

## PO.3.53 NO EVIDENCE OF A CORRELATION BETWEEN SERUM HCQ CONCENTRATIONS AND QTC IN SLE

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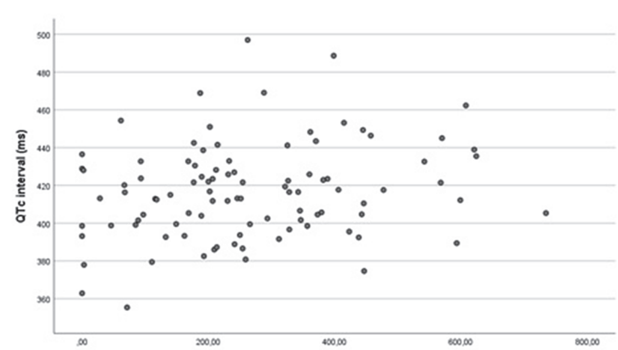
**Objective** The aim of this study was to investigate the relationship between the concentration of hydroxychloroquine (HCQ) in serum and adverse cardiac effects including prolonged QTc interval and cardiomyopathy in patients with systemic lupus erythematosus (SLE) undergoing long-term treatment with HCQ.

**Methods** The concentration of HCQ in serum from 96 SLE patients treated with HCQ was determined using liquid chromatography – high resolution mass spectrometry. QTc intervals at electrocardiograms were calculated using Bazett's formula. Cardiomyopathy was determined during follow-up in accordance with the SLICC/ACR-damage index definitions.

**Results** There were 83% women and the median (range) age at study was 47,5 (21–82) years. As a prerequisite, all 96 SLE patients included in the study were treated with Plaquenil, with 96% stating that they were taking a dose of 200 mg




**Abstract PO.3.53 Figure 1** QTc interval and hydroxychloroquine concentration in 96 SLE patients

daily. The median (range) duration of treatment was 165,5 (10–432) months. Median (range) HCQ concentrations in serum were 241 (0–734) ng/mL and mean (±2SD) QTc interval was 416,8 (±50,1) ms. In total, 16 patients had QTc ≥440 ms, including one man. Of these patients, five had QTc ≥460 ms. No patient had QTc >500 ms. We found no significant correlation between serum concentrations of HCQ and QTc intervals (r = 0,175, p = 0,088) (Figure 1). In the study group, only three patients had evidence of cardiomyopathy.
**Conclusion** In this study, we could not detect a correlation between serum concentrations of HCQ and prolonged QTc in SLE patients. Low dose HCQ treatment in SLE appears to be safe regarding development of cardiomyopathy.

## PO.3.54 ASSOCIATION OF LUPUS NEPHRITIS AND ECHOCARDIOGRAPHIC PARAMETERS

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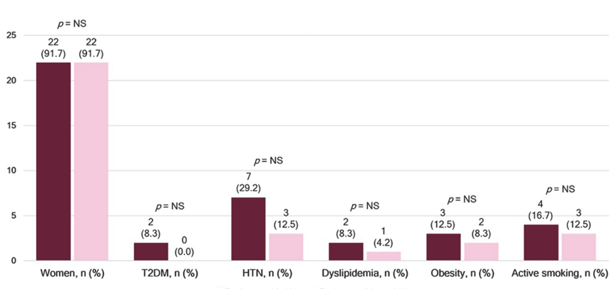
**Purpose** It is estimated that approximately 40% of systemic lupus erythematosus (SLE) patients develop lupus nephritis (LN) throughout the evolution of the disease. In a previous study, patients with LN had 8 times more risk of myocardial infarction and 4 times more risk of cardiovascular mortality than SLE patients without LN. Therefore, we aimed to compare the echocardiographic parameters between SLE patients with and without LN.
**Methods** This was a cross-sectional study nested of a SLE cohort. We recruited patients with SLE diagnosis according to the 2019 EULAR/ACR classification criteria, aged ≥ 18 years. A transthoracic echocardiogram was performed by two certified echocardiographers blinded to clinical information. Patients with LN were included and matched to patients without LN by age (± 5 years) and gender. Distribution was evaluated with the Kolmogorov-Smirnov test. Comparisons were done with Chi-square or Fisher's exact test for qualitative variables, and Student's T-test or Mann-Whitney's U-test for quantitative variables. A p-value < 0.05 was considered statistically significant.
**Results** A total of 48 SLE patients, 24 with LN and 24 without LN, were included. Mean age of patients with LN was 36.9 ± 10.4 years, compared to 36.5 ± 9.3 years in patients without LN, p = 0.873. There was a higher prevalence of hypertension in patients with lupus nephritis, however, the comparison was not significant. The demographic characteristics are shown in Figure 1. When comparing the echocardiographic parameters between groups, we found a significant difference in the left ventricular mass index, which was higher in LN patients (66.9 g/m2 vs 54.8 g/m2, p = 0.035). The comparisons of echocardiographic parameters between both groups are shown in Table 1.
**Conclusions** Patients with LN had higher left ventricular mass index than patients without LN. An increased left ventricular mass could lead to the development of ventricular hypertrophy and diastolic dysfunction, which are associated to higher cardiovascular mortality. The performance of a transthoracic echocardiogram should be considered as part of the cardiovascular evaluation of SLE patients, especially those with LN.




**Abstract PO.3.54 Figure 1** Comparison of demographic characteristics between SLE patients with and without LN

**Abstract PO.3.54 Table 1** Comparison of echocardiographic findings of SLE patients with and without LN

| Variables | Patients with LN (n=24) | Patients without LN (n=24) | *p*-value |
|---|---|---|---|
| LV mass index, g/m$^2$, mean ± SD | 66.9 ± 21.8 | 54.8 ± 16.1 | **0.035** |
| RWT, mean ± SD | 0.37 ± 0.08 | 0.34 ± 0.10 | 0.265 |
| LV geometry abnormality, n (%) | 7 (29.2) | 4 (16.7) | 0.303 |
| LAESVI, ml/m$^2$, mean ± SD | 29.72 ± 10.80 | 26.04 ± 8.76 | 0.208 |
| LVEF, %, mean ± SD | 58.16 ± 7.42 | 58.04 ± 7.04 | 0.953 |
| LVESV, ml, median (IQR) | 39.0 (26.0-54.5) | 32.5 (23.7-39.7) | 0.185 |
| LVEDV, ml, mean ± SD | 92.10 ± 25.09 | 81.57 ± 27.80 | 0.211 |

## PO.3.55 ESTIMATION OF CARDIOVASCULAR RISK AMONG SLE PATIENTS: ANALYSIS FROM A MONOCENTRIC COHORT

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**Purpose** Systemic Lupus Erythematosus (SLE) is an heterogeneous systemic autoimmune disease. Cardiovascular (CV) involvement is one of the most important, linked to an increased morbidity and mortality. Considering only the traditional CV risk factors and scores, the real risk of CV events is underestimated. There is a growing need to elaborate new CV scores and to identify subgroups of patients with a major CV risk1.
**Methods** We describe our population of SLE patients, in which we analyze the distribution of traditional CV risk factors and scores using V-Cramer and Fisher's exact test p value.

We have 43 patients with CV risk factors (38 female and 5 male), with mean age of 52.69 (± 14.42) years (from 18 to 76 years old) and mean disease duration of 13 years. 32.5% of patients have a renal involvement, 55.8% a cutaneous involvement, 72% an articular involvement and 11.6% with a known cardiac involvement.
**Results** In our cohort 48.8% of patients was a smoker. No correlation was found between smoke and organ involvement, but there is an inverse correlation with antiphospholipid (APL) immunity (v cramer 0.44, fisher's exact test p value 0.005): 75% of patients with APL immunity do not smoke. No correlation was found between dyslipidemia or hypertension and organ involvement, duration of steroid-therapy major of 5 years or CV events, instead there is a correlation between diabetes mellitus and cardiac involvement (V cramer 0.47, Fisher's exact test p-value 0.03). We also analyzed the distribution of Modified Framingham' score and QRisk3 score, but no correlation with organ involvement or CV events was found.