Sixty-five patients out of 223, for which deepness and duration of neutropenia were available, were compared with patients without neutropenia. Moderate and severe neutropenias were again statistically associated with lymphopenia (OR 11.25 (2.60–48.61), $p=0.0468$) and thrombopenia (OR 8.1 (3.28–19.99), $p=0.0014$). There was again no association with susceptibility to infections or with treatment at sampling. In this group, using multivariate analysis, chronic neutropenia was statistically associated with lymphopenia (OR 9.48 (2.83–31.71), $p=0.0177$), low C3 (OR 3.81 (1.59–9.14), $p=0.0053$), anti-SSA antibodies (OR 2.40 (1.07–5.39), $p=0.0042$) and Sjögren syndrome (2.56 (0.93–7.03), $p=0.0435$).

Conclusions: The large LBBR cohort allows an approach of neutropenia prevalence and characteristics in SLE. Neutropenia concerns about 20% of SLE patients. Considering multivariate analysis, it is not directly linked to treatment and appears separated from infections occurrence, even when severe. Neutropenia in SLE is significantly associated with thrombopenia and lymphopenia, defining a subtype of SLE patients with haematological features and suggesting possible common pathophysiology.

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FRI0347

PERFORMANCE OF POTENTIAL DEFINITIONS OF REMISSION IN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) VERSUS QUALITY OF LIFE OVER 5 YEARS IN SWEDISH PATIENTS WITH RECENT-ONSET SLE

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Background: Remission constitutes a desirable goal in the management and treatment of patients with systemic lupus erythematosus (SLE), but no universally accepted definition exists. Based on established disease activity measures (e.g. clinical SLE Disease Activity Index [cSLEDAI], physician's global assessment [PhGA] and British Isles Lupus Assessment Group [BILAG] index), serology (anti-double-stranded DNA antibodies and low complement) and ongoing therapy, an international task force recently suggested four preliminary definitions of remission in SLE (DORIS).¹ However, the definitions did not include any patient-reported outcome measures (PROMs).

Objectives: Using data from well-characterised Swedish patients with recent-onset SLE included in the KLURING (*Clinical Lupus Register In Northeastern Gothia*) cohort, we aimed to describe the performance of the four definitions over 5 years in relation to PROMs and quality of life (QoL) as defined by EuroQoL-5 Dimensions (EQ-5D).

Methods: Patients with SLE who met the 1982 ACR and/or the 2012 Systemic Lupus International Collaborating Clinics (SLICC) classification criteria were included and followed prospectively from the time point of SLE diagnosis. Patients were (at least) seen by a rheumatologist at Months 0 (inclusion), 6, 12, 24, 36, 48 and 60, with collection of disease activity measures, damage accrual, serology, therapy and PROMs such as fatigue, pain intensity, well-being (all visual analogue scale) and QoL (EQ-5D). Definitions of remission were: **DORIS 1A:** cSLEDAI 0, PhGA <0.5; **DORIS 1B:** cSLEDAI 0, PhGA <0.5, serology normal; **DORIS 2A:** PhGA <0.5, BILAG D/E only; **DORIS 2B:** PhGA <0.5, serology normal, BILAG D/E only. Each definition could be reached either on or off treatment (maintenance with antimalarials only was allowed).¹ The effect on QoL of achieving versus not achieving remission was assessed using multilevel regression modelling.

Results: A total of 41 patients were included in the study: median (interquartile range) age at baseline 39 years, (18–77) 33/41 (81%) female, 35/41 (85%) white and 18/41 (44%) former/current tobacco smokers. The median number of fulfilled 1982 ACR criteria was 4 (range 3–9) and 15/41 (37%) had lupus nephritis. Using DORIS 1A or 2A, patients with SLE achieving versus not achieving remission had higher QoL ($p=0.01$), whether on or off treatment (figure 1). This association remained significant after adjusting for sex, tobacco smoking and treatment in multivariable analysis. Achieving remission according to DORIS 1B ($p=0.93$) or 2B ($p=0.86$) was not significantly decisive for QoL (figure 1).

Abstract FRI0347 – Figure 1. Months Since SLE Diagnosis

Bars represent % pts attaining remission (on vs off treatment) and lines represent mean EQ-5D (QoL) for pts (meeting vs not the definition of remission) at each time point since SLE onset

Conclusions: This pilot study demonstrates the first real-life performance of the suggested preliminary definitions of remission in SLE. Higher QoL was associated with achieving remission as defined by DORIS 1A or 2A. However, further evaluation of the accuracy of DORIS in larger longitudinal studies of recent-onset SLE is required before introduction in routine clinical practice.

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FRI0348

MBL2 GENE POLYMORPHISMS AND ITS ASSOCIATION WITH INFECTION IN BRAZILIAN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS: A 10-YEAR STUDY

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Background: Systemic lupus erythematosus (SLE) is a multifactorial disease and *MBL2* genetics variants potentially affect its etiology and increase infection risk in this population. Systemic lupus erythematosus (SLE) is a multifactorial disease and *MBL2* genetics variants potentially affect its etiology and increase infection risk in this population.

Objectives: To evaluate the relation of *MBL2* gene polymorphisms of the coding and promoter region and their respective haplotypes on hospitalisation, number of admissions and days of admission for major infection causes in Brazilian SLE patients.

Methods: Three hundred and twenty-five SLE patients from a southern Brazilian outpatient SLE clinic were genotyped in 2006 for *MBL2* gene polymorphisms from coding and promoter region (rs1800450, rs1800451, rs5030737, rs11003125, and rs7096206) and followed until 2016. Clinical and laboratory data from each patient was obtained and information regarding the need for hospitalisation, the number of admissions and amount of days admitted for infection treatment were compiled and compared with *MBL2* gene polymorphisms and haplotypes. A linear regression analysis was constructed considering the variables of bivariate which demonstrated an association ($p<0.05$) and variables which had a theoretical basement.

Results: No difference was found in polymorphism prevalence when comparing the group that was admitted for infection treatment and the group who did not. Allele C, and haplotypes LY and HY correlated with more infection hospitalizations (normal homozygosity for C: 2 (IQR 1–3), heterozygosity for C: 3 (IQR 2–6) $p=0.038$; LY 2 (IQR 1–3) $p=0.049$; HY 2 (IQR 1–3) $p=0.005$) and haplotype HY staid fewer days in hospital for infection treatment: 18 (IQR 10–38) $p=0.041$. The table 1 shows the results after regression model was applied.

Abstract FRI0348 – Table 1. Linear regression model for days admitted for infection and total admissions for infection treatment.

Variables ^a	Days admitted for infection ^b		Total admissions for infection ^b	
	Coef B (IC 95%) ^c	p-value ^d	Coef B (IC 95%) ^c	p-value ^d
Haplotype HY of MBL2 gene	-18.11 (-33.48– -2.75)	0.021	-1.52 (-2.42– -0.62)	0.001
Haplotype LY of MBL2 gene			0.64 (-0.26–1.55)	0.164
Allele C of MBL2 gene			1.22 (-0.15–2.60)	0.082
Serositis				
Haplotype HY regression model	14.00 (-0.006–28.02)	0.050	0.44 (-0.37–1.26)	0.280
Haplotype LY regression model			0.53 (-0.32–1.39)	0.221
Allele C regression model			0.55 (-0.28–1.39)	0.195
Nephritis				
Haplotype HY regression model	11.11 (-3.84–25.88)	0.138	-0.21 (-1.07–0.65)	0.629
Haplotype LY regression model			-0.01 (-0.91–0.88)	0.972
Allele C regression model			0.03 (-0.83–0.90)	0.937
Mycoplenolite				
Haplotype HY regression model	11.44 (-14.33–37.21)	0.380	0.44 (-1.05–1.95)	0.557
Haplotype LY regression model			0.34 (-1.23–1.93)	0.664
Allele C regression model			-0.02 (-1.62–1.58)	0.979
Corticoid need until 3 months before admission				
Haplotype HY regression model	13.07 (-4.22–30.36)	0.136	0.67 (0.33–1.88)	0.187
Haplotype LY regression model			0.62 (-0.44–1.68)	0.249
Allele C regression model			0.53 (-0.51–1.58)	0.312
Age at diagnose				
Haplotype HY regression model	-0.40 (-0.98–0.17)	0.166	-0.042 (-0.08– -0.01)	0.006
Haplotype LY regression model			-0.04 (-0.08– -0.01)	0.010
Allele C regression model			-0.04 (-0.07– -0.009)	0.013
SLECC				
Haplotype HY regression model	1.70 (-2.5–5.9)	0.422	-0.04 (-0.29–0.19)	0.692
Haplotype LY regression model			-0.02 (-0.27–0.23)	0.869
Allele C regression model			-0.02 (-0.28–0.22)	0.831

^aWere listed variables with p-value <0.05 in bivariate analyses besides age that were used to construct the multivariate model; ^bVariables with a p-value <0.05; ^ccoef B (IC 95%); coefficient B and confidence interval of 95%; ^dStatistical significance was considered with a p-value <0.05.

Conclusions: The presence of the HY promoter haplotype leads to fewer in hospital care for infection treatment probably due to higher MBL plasma levels. Also, HY haplotype and older age at SLE diagnosis is related to less admissions for infection. It is important to consider that infection is a very import cause of mortality in SLE patients and not only related to aggressive immunosuppressive treatment.

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FRI0349 LOW TITER ANTI-PHOSPHOLIPID ANTIBODIES CONVEY AN INCREASED OBSTETRIC RISK

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Background: Persistent positivity for anti-phospholipid antibodies (aPL) at medium-high titres is required to diagnose anti-phospholipid syndrome (APS), an

autoimmune condition characterised by thrombosis and/or pregnancy morbidity (PM). However, increasing evidence points towards the clinical relevance of low titre aPL in obstetric APS.

Objectives: This study investigated the association of low titre aPL with PM assessing the efficacy of low-dose aspirin (LDASA) and low-molecular weight heparin (LMWH).

Methods: Data on pregnancies in women with persistent aPL positivity at any titre were retrospectively collected at a single centre. An association model for repeated measures was applied to quantify the obstetric risk conveyed by low titre and criteria aPL, allowing to: i) evaluate pregnancy outcomes over time using available longitudinal data; ii) account that pregnancies of the same woman are not independent events; iii) consider that women had a different number of pregnancies; iv) estimate the role of several confounders and predictors. The association model envisaged as dependent variable pregnancy outcome as a binary outcome, defined for each pregnancy as “obstetric complication yes versus no” (pregnancy loss before 10 weeks, pregnancy loss after 10 weeks, premature birth before 34 weeks, according to updated APS classification criteria [Miyakis et al]).

Results: One hundred eleven women were recruited in this study: 160 pregnancies in women with low titer aPL and 178 pregnancies in women with criteria aPL. According to the association model, women with low titre aPL had a probability of PM of 63% (odds 1.72, 95% CI 1.05–2.80) in case of single positivity and of 79% (odds 3.78, 95% CI 1.96–7.30) in case of double positivity. Criteria aPL conveyed a 2.2-fold higher risk: the probability of PM was 79% in case of single positivity (odds 3.82, 95% CI 2.15–6.80), raising to 89% (8.41, 95% CI 3.99–17.73) for multiple aPL.

LDASA-treated women with single low titer aPL positivity had a 16% probability of experiencing an adverse outcome (odds 0.19, 95%CI 0.08–0.44) while LDASA did not significantly affect the probability of in patients with low titre double aPL positivity (odds 0.42, 95%CI 0.17–1.02). Similarly, LDASA significantly reduced PM among women with single, but not multiple, criteria aPL positivity (odds 0.42, 95% CI 0.19–0.94; odds 0.93, 95% CI 0.39–2.21). Among women treated with LDASA +LMWH, the probability of PM was 14% in case of single low titre aPL positivity (odds 0.17, 95%CI 0.08–0.37) and 28% in case of two low titre aPL (odds 0.38, 95%CI 0.18–0.80). Among women with aPL criteria, treatment with LDASA +LMWH reduced the probability of PM to 28% (odds 0.38, 95%CI 0.21–0.70) in case of a single positive test and, not significantly, to 45% (odds 0.84, 95%CI 0.45–1.55) in case of multiple positivities.

Parameter	Estimate	SE	z-value	OR [95%CI]	P
β_0 Intercept	0.54	0.25	2.17	1.72 [1.05–2.80]	0.030
Covariates					
β_1 =Criteria aPL vs low aPL	0.80	0.31	2.55	2.23 [1.20–4.13]	0.011
β_2 =Multiple vs single aPL	0.79	0.29	2.74	2.20 [1.25–3.86]	0.006
β_3 =LDASA vs no LDASA	-2.20	0.40	-5.54	0.11 [0.05–0.24]	<0.001
β_4 =LMWH vs no LMWH	-1.85	0.77	-2.41	0.16 [0.03–0.71]	0.016
Confounders					
β_5 =LDASA*LMWH	1.74	0.86	2.01		0.044
β_6 =Age $\geq$ 35 vs age<35	0.19	0.26	0.73		0.466
β_7 =HCQ vs no HCQ	-0.22	0.43	-0.52		0.600
τ	1.07	0.04	25.88		

Conclusions: Low titre aPL are associated with PM; the association treatment with LDASA and LMWH is effective even among women with low titre aPL. The risk of PM and the response to treatment depend upon aPL profile, suggesting the importance of a tailored treatment.

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