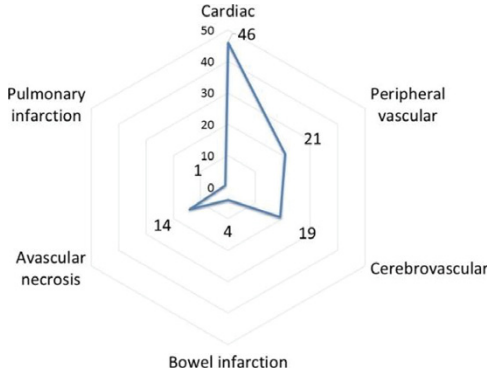
with cerebrovascular accident, 4/63 (6%) with bowel infarction, 14/63 (22%) with avascular necrosis and a single patient with pulmonary infarction (Figure 1). Patients with CVD had a higher disease duration at time of death compared to patients without CVD (12±8 vs. 7±6 years), as well as higher cumulative proportions of hematologic disorder (60/63 vs. 15/27), lymphopenia (48/63 vs. 10/27), pulmonary damage (19/63 vs. 1/27), fractures (25/63 vs. 2/27), higher overall damage (6.0±3.0 vs. 2.4±2.0) and a higher proportion of secondary antiphospholipid syndrome (14/63 vs. 1/27) ($p<0.05$). Conversely, patients with CVD had a lower proportion of discoid lupus at diagnosis (7/49 vs. 9/24) and a lower proportion of skin damage one year following diagnosis (2/63 vs. 5/27) ($p<0.05$). Parameters associated with cardiovascular damage in the multivariate model were cumulative fulfillment of lymphopenia as a classification criterion (odds ratio, OR 4.7 (95% confidence interval, CI 1.3–17.0)) and accrual of pulmonary damage (OR 13.1 (95% CI 2.2–76.3)).

Figure 1. Distribution of cardiovascular damage in the analyzed group (numbers represent frequencies of each subtype of cardiovascular damage)



Conclusions: More than two thirds of deceased patients accrued CVD over the disease course. Lymphopenia and pulmonary damage may be associated with CVD in deceased SLE patients.

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FRI0283 AN IMMUNOLOGICAL PROFILE COMBINING INNATE AND ADAPTATIVE IMMUNITY BIOMARKERS IDENTIFY RISK FOR EVOLUTION INTO SLE IN WOMEN WITH RECURRENT PREGNANCY LOSS

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Background: Autoantibodies, low complement levels and higher NK cell counts are present in a subset of women with recurrent pregnancy loss (RPL). The combination of these abnormalities might be a surrogate profile for the presence of a subclinical inflammatory or autoimmune condition.

Objectives: In a cohort of women with unexplained RPL we evaluated if an immunological profile combining innate and adaptive immunity mediators was associated with the presence of distinct clinical characteristics that are commonly observed in autoimmune diseases and if it was a risk factor for developing these diseases. In a small subset of women with the immunological profile we evaluated the activation status of CD4+ and CD8+ cells.

Methods: We evaluated 366 women with RPL defined as 2 or more pregnancy losses and 93 control women. We defined the immune profile as the presence of 2 or more of the following abnormalities: Peripheral blood NK cell percentages >15%, positive antiphospholipid antibodies, positive antinuclear antibodies, positive anti-thyroid antibodies, low complement C3 levels and low C4 complement levels. Evolution to autoimmune diseases was detected during follow-up. Lymphocyte subsets were evaluated by flow-cytometry. Statistics: Chi-square test. Logistic regression.

Results: The prevalence of women with 2 or more immunological abnormalities was 57 out of 366 women (15.6%) and was significantly higher than in control women. Demographic clinical characteristics were similar in women with 2 or more immunological abnormalities as compared with women with only one immunological alteration or no abnormalities. The presence of the immunological profile was significantly associated with the presence of the following clinical characteristics: Leucopenia (p=0.048), lymphopenia (p=0.007), livedo reticularis (p=0.01), cutaneous rash (p=0.009), and arthritis (p=0.001). During follow-up 17 patients (4.6%) developed an inflammatory or autoimmune disease that was not present at the time of the diagnose of RPL including SLE and lupus like disease. Women with the immunological profile were at higher risk for evolution into these diseases: OR 4.19, 95% confidence interval 1.52–11.51, p=0.0055. In 10 women with the immunological profile we observed significantly higher levels of CD4+DR+ and CD8+DR+ T-cells as compared with women without the immune profile.

Conclusions: A subgroup of women with unexplained RPL are at risk of developing clinical characteristics of an inflammatory or autoimmune disease. In this regard, the immunological evaluation of women with RPL might be necessary not only to identify a potential cause of abortion but also to identify women that could require a more careful clinical follow-up. Higher CD4+DR+ and CD8+DR+ T-cells might be a pathogenic pathway leading to development of autoimmune diseases in RPL women.

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FRI0284 PREDICTORS OF ARTERIAL VASCULAR EVENTS IN A COHORT OF SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Arterial vascular events (AVE) are among the major causes of morbidity and mortality in patients with Systemic Lupus Erythematosus (SLE). Several studies have been carried out to identify the main factors related to AVE in this population. The ankle brachial index (ABI) is one of the tools currently used to identify patients at greater risk of arterial events in the general population; however it has been scarcely studied in patients with SLE.

Objectives: The objectives of this prospective cohort study were to determine the predictive value of the ABI for occurrence of AVE in patients with SLE and to identify other possible factors associated with an increased risk of AVE.

Methods: 216 patients with SLE were evaluated using an ABI and followed up for 5 years. Pathological ABI is considered an ABI <0.9. Different potential vascular risk factors (traditional, non-traditional and related to SLE and/or the treatments used) were jointly evaluated. AVE: coronary events (angina pectoris, acute myocardial infarction, coronary revascularization by angioplasty or surgery), cerebrovascular events (transient ischemic attack, cerebrovascular accident), peripheral arterial disease (symptomatic intermittent claudication, distal ischemia, revascularization by angioplasty or surgery), and death related to vascular disease. Survival analysis was performed using a competitive risk regression approach, considering non-vascular death as a competitive event, to identify the predictive value of ABI and other factors studied. The Ethical Committee for Clinical Research at Cruces University Hospital approved the study protocol in accordance with the Declaration of Helsinki (CEIC E09/07). All patients signed an informed consent at the time of entry into the study.

Results: During follow-up, 4/216 (1.8%) patients were lost to follow-up. 18 AVE were identified in 17 patients, with one patient having 2 episodes of angina requiring angioplasty (4 coronary events, 11 cerebrovascular events, 2 peripheral arterial disease events and 1 sudden death) and 14 deaths (6 per AVE or their sequelae, 4 due to neoplasias and 4 due to cardio-respiratory pathology). In the competitive risk regression analysis, independent predictors of higher risk of AVE were identified: pathological ABI (subhazard ratio (SHR) 3.51, 95% confidence interval 0.96–12.79, p=0.057), family history of AVE (SHR 6.3, 95% CI 1.97–20.21, p=0.002), cumulative total prednisone (grams) (SHR 1.02, 95% CI 1.01–1.04, p=0.004) and a history of arterial thrombosis (SHR 4.60, 95% CI 1.45–14,59, p=0.010).Female gender was a protective factor for the occurrence of AVE (SHR 0.12, 95% CI 0.04–0.40, $p<0.0001$).

Conclusions: Being male, having a higher cumulative dose of prednisone, having a family history of early vascular disease and having suffered previous arterial thrombosis are independent risk predictors of an AVE in patients with SLE. Having abnormal ABI, even without statistical significance, showed a marked tendency to increase this risk despite the low number of events recorded in the studied cohort.

Disclosure of Interest: None declared

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FRI0285 LUPUS NEPHRITIS IS ASSOCIATED WITH INCREASED RATES OF HOSPITALIZATION AND IN-HOSPITAL MORTALITY COMPARED WITH NON-RENAL LUPUS AND MATCHED CONTROLS: AN ANALYSIS OF INSURANCE CLAIMS DATA

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Background: Systemic lupus erythematosus (SLE) is heterogeneous in its clinical presentation, course, and prognosis and lupus nephritis (LN) continues

to be a major cause of morbidity and mortality among children and adults with SLE. Up to 60% of adult and 80% of pediatric SLE patients (pts) will eventually develop overt renal disease [1]. To date the excess burden of comorbidities, risk of inpatient hospitalization, and in-hospital death associated with SLE and LN remains incompletely understood.

Objectives: To identify differences in comorbidities, hospitalizations, and in-hospital mortality of SLE and LN cohorts compared to: 1) each other; 2) reference populations of pts without an autoimmune condition (non-AI) matched on gender and age. Reference populations were allowed to have claims for non-autoimmune conditions.

Methods: We conducted a retrospective cohort study using the Truven Healthcare MarketScan® Commercial Claims and Encounters and Medicare Supplemental and Coordination of Benefits database, which together comprise 65 million insured US lives between 1999 and 2014. Cohort identification is based on validated algorithms [2, 3] for identification of pts with either LN or SLE without renal involvement using claims data. Pts were matched on age and gender at index date. All eligible participants had 365 days of enrollment prior to and after the index date. End of study for post-index follow-up was captured as whichever of the following occurred first: 1) end of enrollment; 2) end of database; 3) date of death. Results are presented separately for pediatric and adult pts.

Results: 54,813 SLE pts without renal involvement and 8,839 LN pts were identified and matched to reference non AI populations. Compared to the non-renal SLE cohort, pts in the LN cohort were older (49.9±16.6 vs. 48.6±14.3 years) with a higher proportion of males (15.4% vs. 11.2%). Pts with LN had the highest scores on the Charlson Comorbidity Index modified to exclude renal involvement (Table 1). Additionally, adults with LN had higher rates of hospitalizations and longer hospitalizations compared with adults with non-renal SLE, who already had higher rates of hospitalizations and longer hospitalizations than matched controls (Table 2). This pattern of findings was consistent for children. Rates of in-hospital mortality were highest among those with LN but also increased among those with SLE compared with matched controls (Figure 1).

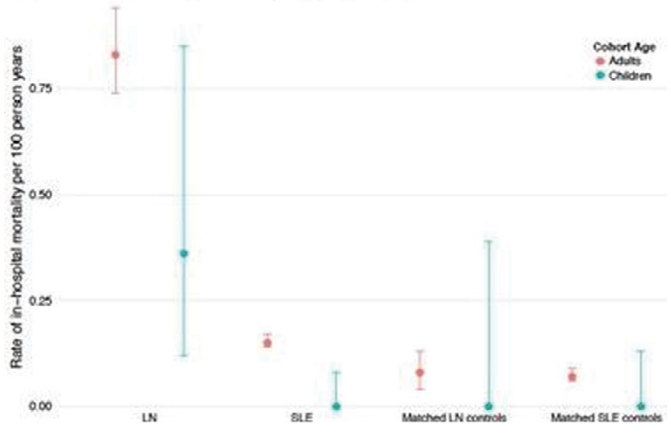
Table 1. Comorbidities on the Charlson Comorbidity Index.

	LN N=8466		non-renal SLE N=53597		non-AI matched controls (LN) N=8466		non-AI matched controls (non-renal SLE) N=53597	
	Mean (Std)	Median (IQR)	Mean (Std)	Median (IQR)	Mean (Std)	Median (IQR)	Mean (Std)	Median (IQR)
Enrollment Duration (days)	1709.5 (887.11)	1442 (1076)	1715.1 (926.53)	1422 (1101)	1195.5 (650.23)	979 (437)	1224.9 (692.48)	988 (464)
Charlson Comorbidity Index								
Baseline	1.5 (1.54)	1 (2)	0.8 (1.24)	0 (1)	0.3 (0.87)	0 (0)	0.3 (0.80)	0 (0)
Follow-Up	5.0 (2.68)	4 (3)	2.6 (2.16)	2 (2)	0.6 (1.34)	0 (1)	0.5 (1.21)	0 (1)
Charlson Comorbidity Index Excluding Renal Diseases								
Baseline	1.3 (1.46)	1 (2)	0.8 (1.19)	0 (1)	0.3 (0.83)	0 (0)	0.3 (0.77)	0 (0)
Follow-Up	3.8 (2.64)	3 (3)	2.5 (2.03)	2 (2)	0.6 (1.27)	0 (0)	0.5 (1.16)	0 (1)

Table 2. Hospitalizations and mortality by age and patient population.

		Children (<18)				Adults (>18)			
		LN N=573	non-renal SLE N=1216	non-AI matched controls (LN) N=573	non-AI matched controls (non-renal SLE) N=1216	LN N=8466	non-renal SLE N=53597	non-AI matched controls (LN) N=8466	non-AI matched controls (non renal SLE) N=53597
Overall risk of hospitalization	Number of patients hospitalized; n(%)	268 (71.85%)	335 (27.55%)	14 (3.75%)	53 (4.36%)	5645 (66.68%)	19172 (35.77%)	1030 (12.17%)	6326 (11.80%)
	Sum of Person-Years for Hospitalization	483.69	3493.28	918.96	2867.38	14761.14	142359.65	17569.43	115370.4
	Incidence Rate (Per 100 Person-Years) for Hospitalization (95% CI)	55.41 (48.97, 62.45)	9.59 (8.69, 10.67)	1.52 (0.83, 2.56)	1.85 (1.39, 2.42)	38.24 (37.25, 39.25)	13.47 (13.28, 13.66)	5.86 (5.51, 6.23)	5.48 (5.35, 5.62)
Total days in hospital	Mean (SD)	19.9 (28.20)	11.1 (18.36)	5.2 (7.24)	5.4 (6.42)	23.0 (35.97)	10.1 (16.15)	5.3 (7.54)	5.0 (6.42)
	Median (IQR)	10 (18)	5 (9)	3 (4)	3 (3)	11 (21)	5 (8)	3 (3)	3 (3)
	Min - Max	1 - 214	1 - 142	1 - 29	1 - 53	1 - 880	1 - 626	1 - 104	1 - 153
Overall risk of mortality	Number of patients with in-hospital mortality; n (%)	5 (1.34%)	0	0	0	260 (3.07%)	304 (0.57%)	15 (0.18%)	88 (0.16%)
	Sum of Person-Years for in-hospital mortality	1380.44	4409.72	942.64	2950.59	31192.18	198473.39	19192.98	126335.39
	Incidence Rate (Per 100 Person-Years) for in- hospital Mortality (95% CI)	0.36 (0.12, 0.85)	0 (, 0.08)	0 (, 0.39)	0 (, 0.13)	0.83 (0.74, 0.94)	0.15 (0.14, 0.17)	0.08 (0.04, 0.13)	0.07 (0.06, 0.09)

Figure 1: Rates of in−hospital mortality by group and age



Conclusions: An SLE diagnosis was associated with a higher burden of comorbidities and higher rates of hospitalizations and in-hospital mortality than non-AI matched controls. Pts with LN had the highest burden of comorbidities and rates of hospitalizations and in-hospital mortality. SLE and LN impose a high burden of morbidity and mortality and the medical need for safe and effective treatments of LN and SLE remains unmet. Clinicians should consider these factors in their assessment and treatment of pts with SLE and LN. The retrospective, claims-based results do not permit pt-level assessment of the relative contributions of disease, treatment, and potential confounders to these findings.

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FRI0286 SEROLOGICAL EVOLUTION IN PATIENTS WITH THROMBOTIC ANTIPHOSPHOLIPID SYNDROME

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Background: Antiphospholipid syndrome (APS) is an autoinmune disease characterized by the presence of antiphospholipid antibodies (aPL) and at least one clinical event (thrombosis and /or pregnancy morbidities). The titers of aPL can fluctuate and eventually become negative. This negativization, particularly if persistent, may be associated with a lower frequency of clinical events.

Objectives: To describe the clinical and serological course of patients with thrombotic APS as well as the factors related with the aPL negativization

Methods: We performed a retrospective study including patients attended at the Rheumatology clinic from a tertiary hospital in Northern Spain. We included 94 patients with thrombotic APS according to Sidney criteria of 2006. They were classified according to the serological evolution as persistently negative aPL, transiently positive, and persistently positive aPL according to previously established criteria.

Results: After a mean follow-up of 145±56 months, 48.9% of patients presented a persistently negative serology, whereas in 12.8% it was transiently positive, and persistently positive in 38.3%. When analyzing potential factors related to the negativization (table 1), we found that patients with positive lupus anticoagulant tended to have a persistently negative serology during follow-up, but it did not reach statistical significance (OR 2.7; 95% CI 0.8–9.4; p=0.145). We found no association between traditional cardiovascular risk factors or previous treatments and the serological evolution.

Variable	Total	Persistently negative (n=46)	Persistently positive and transiently positive (n=48)	P
Age	45±16	44±14	47±17	0.33
Male sex, n (%)	19 (21)	8 (18)	11 (24)	0.61
SLE, n (%)	25 (27)	12 (26)	13 (27)	1
Load of antibodies, n (%)		0.94		
1	29 (31)	15 (33)	14 (29)	
2	40 (43)	19 (41)	21 (44)	
3	25 (27)	12 (26)	13 (27)	
Anticardiolipin antibodies, n (%)	76 (81)	36 (78)	40 (83)	0.60
Antiβ2-GlycoproteinI antibodies, n (%)	59 (63)	27 (59)	32 (67)	0.52
Lupus anticoagulant, n (%)	35 (66)	18 (78)	17 (57)	0.14
Family history of thrombosis, n (%)	17 (31)	10 (40)	7 (24)	0.25
Tobacco use, n (%)	41 (44)	21 (46)	20 (42)	0.83
Hypertension, n (%)	45 (48)	21 (46)	24 (50)	0.69
Dyslipidemia, n (%)	43 (46)	21 (46)	22 (46)	1
Diabetes, n (%)	4 (4)	2 (4)	2 (4)	1
Antimalarials, n (%)	34 (36)	16 (35)	18 (37)	0.83
Heparin, n (%)	34 (36)	16 (35)	18 (37)	0.83
Oral anticoagulants, n (%)	68 (72)	33 (72)	35 (73)	1
Antiplatelets, n (%)	71 (76)	33 (73)	38 (79)	0.63
Corticosteroids, n (%)	5 (5)	2 (4)	3 (6)	1
Immunosuppressants, n (%)	4 (4)	1 (2)	3 (6)	0.36

Conclusions: After a mean follow-up of 12 years, 49% of thrombotic APS patients presented a persistently negative serology. We found no significant association between immunological, traditional cardiovascular risk factors or previous treatments and the persistently negative serology.

Disclosure of Interest: None declared

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FRI0287 INCIDENCE OF LUPUS NEPHRITIS AND 18-MONTH FOLLOW UP IN COLOMBIAN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Lupus nephritis (LN) is one of the major indicators of poor prognosis in patients with systemic lupus erythematosus (SLE). Multiple studies with Latin-