4.1%) and others (n=4, 2.0%). The prevalence of work disability was 35% (n=69) and the onset of WD was 4 (IQR:1 to 9) years after SLE diagnosis. WD was associated with older age, lower education level, more frequent disease flare, longer disease duration, higher SLICC ACR Damage Index, active disease (SLEDAI 2K and BILAG 2004 and had major organ involvement (lupus nephritis, haematological and neuropsychiatric), all $p<0.05$. Patients who received plasmapheresis, intravenous methylprednisolone, intravenous immunoglobulin, Mycophenolate Mofetil and calcineurin inhibitors were also associated with WD. Patients with work disability also had significantly impaired QOL with lower SF 36 scores. On multivariate logistic regression analysis, the independent predictors of WD were lower education level, being married and involvement of lupus nephritis, haematological and neuropsychiatric lupus (NPSLE).

Conclusions: More than one third of SLE patients had experienced work disability. Lower education level, being married and major organ involvement were the independent predictors for work disability. A larger prospective study is warranted to further delineate the risk factors.

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FRI0387 FACTORS ASSOCIATED WITH OSTEOPOROSIS AND FRACTURE IN PATIENTS WITH SJÖGREN PRIMARY SYNDROME

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Background: Primary Sjögren's syndrome (SSp) is a systemic autoimmune disease characterised by exocrine gland affection and multisystem involvement. In addition to the systemic inflammatory affection, patients with pSS have additional risk factors to develop osteoporosis (OP) and its major complication, osteoporotic fracture.

Objectives: The aim of the study is to determine the sociodemographic and clinical factors of pSS associated with the presence of OP and osteoporotic fracture in patients with pSS from the SJOGRENSER registry.

Methods: SJOGRENSER is a descriptive, cross-sectional and multicenter study of patients with pSS classified according to European-American consensus criteria. Patients attended in consultations of 33 Spanish rheumatology services were randomly included. Both the medical history and the medical interview were used to obtain the data. Epidemiological, clinical, serological and complications were collected. The continuous and categorical variables were analysed by means, medians and frequencies, with their respective deviations and interquartile ranges (p25-p75). Bivariate and multivariate analyses were carried out using a binomial logistic regression to study the factors associated with osteoporosis and osteoporotic fracture in pSS.

Results: In the SJOGRENSER registry, 437 patients were included (95% women, with a median age of 58.63 (50.02–67.98) years). The prevalence of OP in the cohort was 18.54% (81 patients). The prevalence of OP in men (n=21) was 19%, 2 men in the age group of 51–64 years and 2 in the group of >64 years. Three hundred of the women in the registry were menopausal (76.4%); a total of 67/300 women with menopause had OP (15%). A total of 37 osteoporotic fractures (8.5%) were recorded in the cohort. Factors associated with OP in women with SSp in the bivariate analysis were: age (60.5% in the group of >64 years, 28% in the group of 51–64 years and 2.6% in the group ≤50 years, $p<0.001$), the time course of the disease (11.35 (SD 7.95) vs 7.8 (SD 6.14), $p<0.001$), the age of menopause (47 (SD 7.29) vs 48.11 (SD 5.67), $p=0.020$), the ESSDAI (6 (DS 7) vs 4 (DS 5), $p=0.020$), and presence of anti-La (77.6% vs 64.7%, $p=0.030$). In the multivariate analysis, there was an association between OP and age in the 51–64 age group, OR 9.993 (95% CI, 2.301–43.399, $p=0.002$), age >64 years, OR 20.610 (CI 95% 4.679–90.774, $p<0.001$) and time course of the disease, OR 1.046 (95% CI 1.008–1.085, $p=0.017$). Similarly, an association was found between the fracture and age in the 51–64 age group, OR 5.068 (95% CI, 1.117–22.995, $p=0.035$), age >64 years, OR 7.674 (95% CI 1.675–35.151, $p<0.009$), the time course of the

disease, OR 1.049 (95% CI 1.003–1.097, $p<0.036$) and the ESSDAI score, OR 1.080 (95% CI, 1.029–1.134, $p=0.002$).

Conclusions: Patients with pSS have a considerable prevalence of osteoporosis and osteoporotic fracture. Age and time of evolution were factors associated with the development of OP, and similarly, age, time of evolution of the disease and ESSDAI were factors associated with the development of fracture in patients with pSS.

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FRI0388 RISK OF PREVENTABLE ADMISSIONS AMONG PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS PRIOR AND SUBSEQUENT DIAGNOSIS

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Background: Preventable hospitalizations for specific conditions are considered preventable because appropriate outpatient care should potentially avoid hospitalisation for these conditions. Although not all of the hospitalizations can be prevented, to identify the rate of preventable hospitalizations among patients with systemic lupus erythematosus (SLE) can help us to understand the excess potential preventable hospitalizations and to provide an action to the SLE patients.

Objectives: To investigate the risk of preventable hospitalisation in patients with SLE before and after initial diagnosis of the disease.

Methods: We identified 4483 adult patients with incident SLE between 2005 and 2009 using the Taiwan National Health Insurance Database. Each SLE patients were matched to five controls without SLE during the same study period, by age and sex. The index date was the first date of SLE diagnosis and their matched controls. We estimated the incidence and incidence rate ratios (IRR) of preventable hospitalisation by conditional Poisson regression, adjusted for age, sex, Elixhauser Comorbidity Index, number of outpatient visits and hospitalizations 1-y prior to index date, residence urbanisation, income levels, occupation and the number of physicians at the patients' residence.

Results: The overall incidence of preventable hospitalisation was 1.88 (95% CI, 1.74 to 2.03) per 1000 person-months among SLE patients and 0.53 (95% CI, 0.49 to 0.56) per 1000 person-months among controls, giving an adjusted IRR of 3.57 (95% CI, 3.25 to 3.93). The IRRs especially higher in heart failure, bacterial pneumonia and urinary tract infection and the respective estimates were 2.85 (95% CI, 2.14 to 3.80), 4.67 (95% CI, 4.03 to 5.42) and 3.84 (95% CI, 3.35 to 4.41).

Conclusions: Risk of preventable hospitalisation is higher in patients with SLE.

Disclosure of Interest: None declared

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FRI0389 BIOMARKERS AS DISEASE ACTIVITY INDICANTS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: In recent years, the search has been going on for the biomarkers potentially useful in the follow-up of patients with systemic lupus erythematosus (SLE).

Objectives: The aim of our study was to establish the importance of various immunological and biological parameters as disease activity indicants in SLE.

Methods: The study involved 85 SLE patients in whom disease activity assessment was performed using the Systemic Lupus Erythematosus Disease Activity Index (SLEDAI). In addition to standard anti-dsDNA antibodies and C3 complement component, anti-nucleosome and anti-C1q antibodies and monocyte chemoattractant protein-1 (MCP-1) were determined in the serum and urine. The antibodies were determined using the ELISA test, while serum and urine MCP1 was determined using the sandwich enzyme immunosorbent assay in accordance with the instructions by the manufacturer, R and D Systems, Inc. Minneapolis (USA).

Results: The studied group consisted of 78 women and 7 men, with the mean age of 45.27±9.71 years and average disease duration of 10.37±7.99 years. Univariate linear regression analysis showed that all of the examined parameters with the exception of C3 complement demonstrated a statistically significant impact on the SLEDAI values (for anti-dsDNA $p=0.033$, anti-nucleosome $p=0.002$, anti-C1q antibodies $p=0.005$, serum MCP1 $p=0.006$, urinary MCP1

$p < 0.001$). The SLEDAI value rose with increasing values of all the parameters except C3 complement. Using the standard multiple regression analysis, the impact of anti-dsDNA, anti-nukleosome, anti-C1q antibodies, complement C3, and serum and urinary MCP1 on SLEDAI was evaluated. The studied model was able to explain 26.60% of disease activity index variance (corrected $r^2 = 0.246$, $F = 4.755$, $p < 0.001$). As the statistically significant risk factors, serum MCP1 (Beta=0.257, $p = 0.040$) and urinary MCP1 (Beta=0.326, $p = 0.008$) could be singled out. Serum MCP1 increased SLEDAI values and explains their variance with 4.80%. The impact of urinary MCP1 was stronger. SLEDAI values increased with elevated urinary MCP1. This parameter was able to explain 8.10% of SLEDAI variance.

Conclusions: The study showed that anti-dsDNA, anti-nukleosome and anti-C1q antibodies were associated with SLE disease activity, but the association was strongest with serum and urinary MCP1.

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FRI0390 IMPAIRED OVARIAN RESERVE IN PATIENTS AFFECTED BY SYSTEMIC LUPUS ERYTHEMATOSUS: A CASE-CONTROL STUDY

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Background: Systemic lupus erythematosus (SLE) is an autoimmune disease showing a strong predilection for reproductive age women (female/male ratio 9:1). This is in part due to the effects exerted by sexual hormones on immune system. The term ovarian reserve has been used traditionally to describe the number and quality of oocytes in women. This is assessed by detection of FSH, AMH and Estradiol (E2) and by ultrasonographic (US) evaluation of antral follicular bilateral count (AFC), as recommended by the Society of Reproductive Medicine. The evaluation of AFC should be conducted in the early follicular phase of the menstrual cycle. An AFC lower than 3–4 follicles is highly specific (73%–97%) of poor ovarian function. Data from the literature about ovarian reserve in SLE showed contrasting results.

Objectives: We aimed at assessing ovarian reserve in a SLE cohort, by US determination of AFC and by analysing serum levels of AMH, FSH, E2.

Methods: In this case control study, we enrolled consecutive SLE patients in reproductive age (<45 years), fulfilled the 1997 ACR revised criteria, not treated by gonadotoxic chemotherapy agents. Moreover, we enrolled age-matched healthy women (HS). Clinical and laboratory data were collected in a standardised, computerised and electronically filled form, including demographics, past medical history with date of diagnosis, autoantibody profile, comorbidities, previous and concomitant treatments. We assessed the disease activity and chronic damage by using SLEDAI-2K and SDI, respectively. In order to assess AFC, patients and HS underwent to transvaginal US evaluation by a single operator (Samsung Elite USS-WS8EL4U/WR) between the 2nd and 7th day of the menstrual cycle. At the same day of the US assessment, we obtained sample of peripheral venous blood from patients and HS to evaluate FSH, AMH and E2 dosages (ELISA kit CLOUD-CLONE Corp., My Bioscience, USA).

Results: Nineteen SLE patients (median age 35 years, IQR 6.0; mean disease duration $\pm$ SD 12.2 $\pm$ 7.7 months) and 8 HS were evaluated. A mean $\pm$ SD SLEDAI-2K of 2.5 $\pm$ 1.5 was registered; 3 patients had a chronic damage (SDI=1). FSH values were significantly higher in SLE patients compared with HS [SLE: median (IQR) 35;⁵ HS: median (IQR) 3 (1.5); $p = 0.01$]. Concerning the AFC, we found significantly lower values in SLE patients than in HS [SLE: median (IQR) 13;¹¹ HS: median (IQR) 22.5 (10.5); $p = 0.03$]. The Spearman analysis demonstrated a negative correlation between AFC and BMI ($r = -0.5$, $p = 0.02$), FSH ($r = -0.5$, $p = 0.04$) and age ($r = -0.5$, $p = 0.02$) (figure 1).

AFC: antral follicular bilateral count; BMI: body mass index; FSH: follicle-stimulating hormone

Abstract FRI0390 – Figure 1

AFC: antral follicular bilateral count; **BMI:** body mass index; **FSH:** follicle-stimulating hormone

Conclusions: The preservation of fertility is a crucial point in SLE patients and the evaluation of ovarian reserve should be included in the patients' management in order to assess ovarian function. Moving from these premises, in the present study we demonstrated an impaired ovarian reserve in SLE patients in terms of AFC values and a negative correlation with hormonal and some demographic features.

Disclosure of Interest: None declared

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FRI0391 THE RELATIONSHIP BETWEEN OESTROGEN RECEPTORS AND HYPERURICEMIA IN YOUNG FEMALE SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: We have found that the incidence of hyperuricemia of young female systemic lupus erythematosus (SLE) patients was higher than that of healthy young women^[1]. Why the high level of oestrogen didn't show protection in uric acid (UA) level of fertile female SLE patients? There few reports yet.

Objectives: To investigate the relationship between UA level and the levels of oestrogen, oestrogen receptors, antibodies to oestrogen receptors.

Methods: This was a cross-sectional study of 62 fertile female SLE patients that were divided into two groups including a high UA group (n=27) and a normal UA group (n=35). Serum UA levels, kidney index, SLE disease indicators and levels of oestrogen, oestrogen receptors, antibodies to oestrogen receptors were determined. Multiple linear regression analysis was applied to analyse the associations of UA levels with clinical features and levels of oestrogen, oestrogen receptors and antibodies to oestrogen receptors.

Results: 1. The mean ages of the two groups were (28.62 $\pm$ 7.89) years and (28.82 $\pm$ 8.28) years respectively, with no significantly different ($t = 0.096$, $p = 0.924$). There was no SLE patients manifested renal failure (CRE level higher than 120 μ mol/l). All the SLE patients were at the onset of disease.

2. The mean UA levels of the high UA group and the normal UA group were (531.74 $\pm$ 134.05) μ mol/L and (238.86 $\pm$ 61.32) μ mol/L respectively, with significant difference ($t = -11.48$, $p < 0.001$).

3. In the high UA group, the levels of CRE, LDL, cystatin, urine protein and were dramatically higher than those were found in the normal UA group ($t = -3.617$, -3.319 , -2.782 , -2.979 , and $p = 0.001$, 0.002 , 0.007 , 0.004 , respectively), and oestrogen receptor β level were significantly lower than that of the normal group ($t = 2.138$, $p = 0.037$). The positive rate of urine blood of the high UA group were significantly higher than that of the normal UA subgroup ($\chi^2 = 6.213$, $p = 0.012$).

4. Multiple linear regression analysis revealed there were significant relationships between UA level and CRE, oestrogen receptor β , and urine protein, urine blood.