Results: Patients with pSS showed a significantly higher SGUS score than controls [median (IQR): 24.5 (13.0) vs 6 (3.75), $p<0.001$]. An SGUS cut-off of ≥ 14 had a sensitivity of 80.9% and a specificity of 95.5% for the diagnosis of pSS. There were no significant differences in the measured volumes and PDS between pSS patients and controls. The SGUS score correlated with unstimulated salivary flow rate (USFR), serum rheumatoid factor and IgG. Double seropositivity with anti-Ro/SS-A and anti-La/SS-B ($\beta=6.060$, $p=0.001$) and USFR ($\beta=-1.913$, $p<0.001$) were independently associated with the SGUS score.

Conclusions: The SGUS scoring system is a valuable diagnostic method for pSS. Double seropositivity of anti-Ro/SS-A and La/SS-B is an independent predictive factor for structural damage of the salivary glands.

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SAT0444

INCIDENCE AND PREDICTORS OF IMMUNOSUPPRESSANT DISCONTINUATION AND RISK OF SUBSEQUENT FLARE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Prolonged treatment with immunosuppressants (IS) has been associated with long-term complications in Systemic Lupus Erythematosus (SLE); however, few data on IS discontinuation in remitted patients are available to date.

Objectives: We conducted an observational study to describe the proportion of SLE patients who discontinued IS and to assess the potential predictors of a subsequent flare.

Methods: We used data from Padua Cohort, which includes 454 SLE patients followed up from 1990 to 2017. Patients treated with IS over the disease course who discontinued IS and seen at least once in 2017 were studied. Reasons for discontinuation were: remission (defined by clinical SLE disease activity Index=0) or poor compliance/intolerance. Flares were defined according to SLEDAI Flare

Index. Predictors of a subsequent flare were analysed by multivariate logistic regression analysis.

Results: Eligible patients who were ever treated with IS were 297. IS were discontinued in 106 patients (35.7%): mycophenolate (50, 47.2%), azathioprine (27, 25.5%), cyclophosphamide (11, 10.4%), methotrexate (10, 9.4%), cyclosporine (8, 7.5%). Mean $\pm$ SD follow-up duration after IS withdrawal was 82 ± 64 months (range 6–320).

83 out of 106 patients (78.4%) discontinued IS due to remission (mean remission duration at IS discontinuation 39 ± 28 months), and 23 (21.6%) due to poor compliance/intolerance. Among remitted patients, 18 (78.3%) experienced a flare after IS discontinuation (9/55 patients with nephritis, 5/10 with arthritis, 2/9 with skin involvement, 1/3 with neuroSLE, 1/4 with haematological involvement) after a mean of 65 ± 52 months (range 6–180). Conversely, in patients with poor compliance/intolerance, 17 relapsed (73.9%) after a mean of 22 ± 16 months. Flare-free 10 year-survival rate was higher in patients who discontinued IS due to remission than to poor compliance/intolerance ($p<0.001$, figure 1).

In patients who discontinued IS due to remission, a shorter duration of remission at IS discontinuation was associated with disease relapse ($p=0.006$). Patients who were on IS due to nephritis had a lower risk of flare after IS discontinuation compared with patients with other manifestations (16.4% vs 32.1%, OR 0.58, 95% CI 0.32–0.98, $p=0.049$); patients with arthritis were those who were more likely to flare (OR 4.61, 95% CI 1.16–18.29, $p=0.035$). Positive anti-SSA/SSB (OR 0.45, 95% CI 0.26–0.78, $p=0.012$) and antimalarials intake after IS discontinuation (OR 0.22, 95% CI 0.07–0.73, $p=0.015$) were associated with a lower risk of flare. No clinical features over the disease course were associated with flare occurrence.

At multivariate analysis, antimalarial use was the strongest protective factor against flares after IS discontinuation (OR 0.22, 95% CI 0.05–0.85, $p=0.029$).

Abstract SAT0444 – Figure 1. Free-flare 10 year survival in the cohort.

Conclusions: In our cohort, one third of patients treated with IS discontinued the drug during the follow-up, in most cases due to a prolonged remission. Patients who discontinued IS due to remission had a higher free-survival rate than those who discontinued these drugs due to poor compliance/intolerance. The use of antimalarials after IS discontinuation was independently associated with a significant decrease in the risk of flare. IS discontinuation in patients with arthritis requires particular caution.

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SAT0445

THE CORRELATION BETWEEN THE TYPE OF CELLS IN MINOR SALIVARY GLANDS INFILTRATES AND THE SELECTED IMMUNOLOGICAL, CLINICAL AND LABORATORY PARAMETERS, IN PRIMARY SJOGREN'S SYNDROME PATIENTS WITH HISTORY OF EPSTEIN – BARR VIRUS INFECTION

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Background: The number of inflammatory mononuclear cell foci is crucial in primary Sjogren's syndrome (pSS) diagnosis, with their cellular composition changing in subsequent inflammation stages. The Epstein -Barr virus (EBV) infection is believed to play a role in the pathogenesis of pSS.

Objectives: Establishing the correlation of selected clinical, immunological and laboratory parameters with cellular composition of minor salivary glands infiltrations.

Methods: 41 pSS patients, 34 female (83%), 7 men (17%), average age 52 y.o, SD=15, with history of EBV infection, divided into two age groups (45<:≥45). The diagnostics: white blood count (WBC), rheumatoid factor (RF), erythrocyte sedimentation rate (ESR), CRP, serum concentration of γ -globulins, antinuclear antibodies ANA(IF); anti-SS-A and anti-SS-B antibodies (semi-quantitative immunoblotting evaluation), standard ELISA assays of serum cytokines levels (BAFF, APRIL, FLT-3L, LT- α , IL-21), minor salivary gland biopsy with the histopathological evaluation (focus score-FS), immunochemistry assessment of the CD3 +, CD4 +, CD19 +, CD21 +, CD35 +cells presence, ocular tests: Schirmer's test and ocular staining score (OSS); ELISA assay of antibodies against EBV specific proteins (viral capsid antigen, early antigen and Epstein-Barr nuclear antigen), ESSDAI evaluation. The Bioethics Committee approval was obtained. Statistic: U Mann-Whitney test and Spearman correlation coefficient with statistical significance set at $p<0.05$.

Results: In infiltrates CD3 +, CD4 +and CD19+cells dominated, WBC negatively correlated with CD 35+cells ($\rho=-0.323$). CD3 +and CD4+absolute cell count correlated positively with anti-SS-A antibodies, but not with ANAs and anti-SS-B antibodies. The CD19 +, CD3 +and CD4+absolute cell count correlated positively with the serum LT- α concentration (respectively $\rho=0.349$, 0.488, 0.483) and moderately negatively with Schirmer test, but not with OSS. There were no differences in FS grade between age groups. In the younger group all cell types were found, including CD21 + ($p=0.042$) and CD35 + ($p=0.036$); the older subgroup lacked dendritic cell markers. The ESSDAI positively correlated with CD3 +, CD4 +, CD19 +and CD21+cells (respectively $\rho=0.320$, 0.329, 0.28, 0.241).

Conclusions: a) Leukopenia may be associated with the dendritic cells (CD35 +) presence in the disease subsequent stage. b) The positive correlation of mononuclear cells with LT- α confirms the LT- α effect on the immune response in peripheral lymphatic organs and on T and B lymphocytes. c) The presence of CD21 +and CD 35+cells observed in younger group, may indicate an active and early phase of inflammation and the activity of both T and B-lymphocytes and dendritic cells. d) The positive correlation ESSDAI with all studied cell types confirms the observation, that organ-related complications correlate with inflammatory activity expressed in mononuclear cell infiltrates. e) The effect of EBV reactivation/previous infection on FS, CD3 +, CD4 +, CD19 +, CD21 +, CD35 +was not demonstrated.

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SAT0446

SERUM CONCENTRATIONS OF 25-HYDROXYVITAMIN D AND METABOLIC SYNDROME AND ITS COMPONENTS IN NONDIABETIC SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Increasing evidence has suggested a protective role of vitamin D in the metabolic syndrome (MetS). However, studies addressing this issue are limited in systemic lupus erythematosus (SLE).

Objectives: We examined the relationship between serum 25-hydroxyvitamin D (25(OH)D) status and MetS in nondiabetic SLE patients.

Methods: Cross-sectional analyses of the relationship between concentrations of 25(OH)D, MetS, and its components were made in 160 nondiabetic SLE women. MetS was defined according to the NCEP-ATP III criteria. Serum 25(OH)D was measured by chemiluminescent immunoassay. Serum 25(OH)D levels were categorised into quartiles (<16.6, 16.6–21.1, 21.2–26.3, ≥26.4 ng/ml).

Results: A total of 79 (49.3%) of SLE women had MetS. Without adjusting for BMI or smoking, the odds of having MetS decreased according to increasing quartiles of vitamin D levels (P for trend=0.036). The odds ratio (OR) of having MetS was 0.39 (95% confidence interval: 0.16–0.97, $p=0.043$) for the highest vs. the lowest quartile of vitamin D levels when adjusted by age. The crude OR of having elevated hypertriglyceridemia decreased according to increasing quartiles of

vitamin D levels (P for trend=0.036). However, further adjustments for BMI and smoking removed the inverse association between vitamin D status and MetS and its individual components (Table).

Table. Multivariable-adjusted OR (95%) for metabolic syndrome according to categories of serum 25(OH)D

	Quartiles of 25(OH) ng/ml				P value
	Q1	Q2	Q3	Q4	
Number of subjects	40	41	38	41	
Median 25 (OH) ng/ml	14.9	19.2	23.3	29.2	
Metabolic syndrome	24 (60)	21 (51.2)	18 (47.3)	16 (39.0)	
Crude OR (95% CI)	1.0	0.57 (0.23–1.38)	0.54 (0.21–1.33)	0.38 (0.15–0.94)	0.036
Adjusted OR (95% CI)*	1.0	0.56 (0.23–1.38)	0.53 (0.21–1.38)	0.39 (0.16–0.97)	0.043
Adjusted OR (95% CI)†	1.0	0.59 (0.22–1.60)	0.69 (0.25–1.91)	0.49 (0.17–1.34)	0.162
Adjusted OR (95% CI) ‡	1.0	0.59 (0.22–1.60)	0.69 (0.25–1.91)	0.49 (0.17–1.34)	0.163
Triglycerides≥150 mg/dl (n,%)	25 (62.5)	25 (60.9)	18 (47.3)	16 (39.0)	
Crude OR (95% CI)	1.0	0.93 (0.38–2.69)	0.48 (0.19–1.20)	0.38 (0.15–0.94)	0.036
Adjusted OR (95% CI)*	1.0	0.92 (0.37–2.29)	0.46 (0.18–1.16)	0.40 (0.16–1.00)	0.050
Adjusted OR (95% CI) †	1.0	1.06 (0.40–2.82)	0.57 (0.21–1.54)	0.49 (0.18–1.32)	0.161
Adjusted OR (95% CI) ‡	1.0	1.07 (0.40–2.85)	0.58 (0.21–1.58)	0.49 (0.18–1.32)	0.492

* Adjusted by age, † Adjusted by age and BMI, ‡ Adjusted by age, BMI and smoking

Conclusions: In nondiabetic SLE women with mild activity, the potential inverse relationship between vitamin D status and MetS may be attributable to the joint effects of individual obesity and smoking. Prospective studies are necessary to better determine the role of 25(OH)D in the incidence of MetS in SLE patients.

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SAT0447

VALIDATION OF THE 2017 ACR/EULAR CLASSIFICATION CRITERIA OF SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Two major classification criteria have been used in the clinical trials of systemic lupus erythematosus (SLE). One is American College of Rheumatology (ACR) criteria first developed in 1982 and revised in 1997 (1997 criteria)¹, and the other is Systemic Lupus International Collaborating Clinics (SLICC) criteria developed in 2012 (2012 criteria)². In the ACR annual meeting on November 2017, the new classification criteria of SLE (2017 criteria) were proposed, aiming for better specificity and sensitivity. They were made based on the agreement of expert panel³, and have not been validated in the real-world practice.

Objectives: The objective of the study is to evaluate the sensitivity of 2017 criteria when applied to real SLE cases.

Methods: We retrospectively reviewed the electronic medical record of the consecutive 100 patients who visited St. Luke's International Hospital, a tertiary care centre in Tokyo, Japan, searching back from November 13, 2017. Patients were included if they are clinically diagnosed as having SLE with board-certified doctors, and excluded if they complicated with other autoimmune disease or if they