supplementation with omega-3 PUFAs might be beneficial. Omega-3 PUFAs can be metabolized to specialized pro-resolving mediators (SPM) in inflamed tissues. PUFAs, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), give rise to protectins and E-series and D-series resolvins, respectively. These SPMs help promote tissue repair and healing in addition to reducing neutrophil infiltration.

Objectives: To investigate (1) if SMPs can be measured in lupus patient blood and (2) whether EHA and DHA and SPMs were dysregulated in lupus patients compared to controls.

Methods: Blood samples were collected from 12 patients enrolled in the Autoimmune Disease Registry and Repository, a single center registry (1996-present) of patients meeting ACR SLE classification criteria. Samples were collected from 12 non-SLE-controls who were age (± 5 years) and race/ethnicity matched. Metabolomic profiling via tandem mass spectrometry (LC-MS-MS) was performed on serum and plasma to assess the PUFA and SPM levels.

Results: Levels of EPA and DHA were highly correlated in serum and plasma. Both EPA and DHA were significantly decreased in SLE patients compared to controls (Table 1). Neither plasma nor serum DHA or EPA levels was correlated with disease activity assessed by SLEDAI score. SPMs including PD1 and RvE1 as well as their precursors, 17-HDHA and 18-HEPE, were identified in plasma and serum samples from SLE patients. Plasma levels of 17-HDHA, as well as serum levels of PD1, 17-HDHA, and 18-HEPE tended to be reduced in SLE (Table 1). The SLE patients with a history of nephritis had significantly lower levels of DHA ($p=0.03$), EPA ($p=0.05$), 18-HEPE ($p=0.03$), and 17-HDHA ($p=0.04$) than SLE patients without nephritis.

Conclusion: SLE patients have lower levels of circulating EPA and DHA, the substrates for SPMs, relative to individuals without SLE. Lower levels of these PUFAs and some SPMs are associated with history of nephritis. Additionally, the levels of PD1, 17-HDHA, and 18-HEPE were measurable in SLE serum and plasma and tended to be reduced, especially in subjects with lupus nephritis. SPMs suppress the production of inflammatory mediators and promote resolution of inflammation. The lower levels of PUFAs and SPMs could contribute to the likelihood of developing lupus nephritis. Further evaluation of this relationship is warranted.

Abstract THU0279 – Table 1. Metabolipidomics of SLE and Control Serum

Metabolite (in serum mean, (SD))	Control (n=12)	SLE (n=12)	P Value
EPA	6779.7 (3985.2)	2822.9 (3082.9)	0.013
DHA	19584.0 (15785.1)	7664.0 (5613.3)	0.003
PD1	55.0 (128.6)	23.3 (57.1)	0.489
17-HDHA	47.4 (25.3)	15.7 (14.9)	<0.001
18-HEPE	20.8 (7.1)	17.3 (9.8)	0.195

Metabolite (in serum) mean, (SD) Control (n=12) SLE (n=12) P Value

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THU0280 SEXUAL FUNCTION IN WOMEN WITH SYSTEMIC LUPUS ERYTHEMATOSUS: A CASE-CONTROL STUDY

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Background: Normal sexual function consists in the transition, during sexual activity, through the phases of excitement to relaxation without problems, and with a feeling of pleasure, satisfaction and fulfillment (1). The effect of systemic lupus erythematosus (SLE) in sexual function has been one of the least studied areas, but it is thought that some disease-related characteristics could have a negative effect. There are few previous studies that investigate sexual function in SLE, general results indicate a negative impact (2).

Objectives: The main aim of this study is to determine if there is an altered sexual function in Mexican women with SLE and compare if it occurs in a greater proportion than in healthy women.

Methods: A case-control study with 102 Mexican women between 18 and 60 years, with SLE diagnosis (according to SLICC 2012 criteria) and a control group of healthy women (n=156) matched by age. Patients were excluded if they couldn't answer the questionnaires reliably and pregnant women. They were asked about the presence of active sexual life in the last month and the Female Sexual Function Index (FSFI) self-questionnaire was applied. Variables between groups were compared with Chi-square and Mann U Whitney test.

Results: Baseline demographic characteristics between groups are shown in table 1. Women with SLE had less sexual activity, during the last month, than controls (63.7% vs 77.5%, $p = 0.01$). Out of the total women included, the FSFI was applied only to those that had an active sexual life, 65 with SLE and 121 healthy women. Sexual dysfunction (<26.5 points) was found in 28% women with SLE and in 22% of controls, with no significant differences ($p=0.4$). In the SLE group, a worse total score was found, as well as alteration in the desire and excitation domains when compared to healthy women (Table 2). In the multivariate linear regression analysis (using FSFI as the variable), no relationship was found with any demographic or disease-related variables.

Abstract THU0280 – Table 1. Comparison of demographic variables between the SLE and control group.

	Control group (n=156)	SLE group (n=102)	p*
Age, years ($\pm$ SD)	33.2 ($\pm$ 10.8)	36.3 ($\pm$ 11.6)	0.030
Civil Status			0.977
Single, n (%)	56 (35.9)	38 (37.3)	
Married, n (%)	76 (48.7)	47 (46.1)	
Divorced, n (%)	8 (5.1)	6 (5.9)	
Domestic partnership, n (%)	16 (10.3)	11 (10.8)	
Widowed, n (%)	0 (0)	0 (0)	
Education			
< 10 Years, n (%)	91 (58.3)	58 (56.9)	0.815
Menopause, n (%)	21 (13.5)	23 (22.5)	0.058
Has children, n (%)	82 (52.6)	69 (67.6)	0.016

*-Mann U Whitney or Chi-Square test according to type of variable. SD – Standard Deviation.

Abstract THU0280 – Table 2. Female Sexual Function Index according to group.

Female Sexual Function Index	Control group (n=121)	SLE group (n=65)	p*
Sexual dysfunction, n (%)	27 (22)	18 (28)	0.414
Total, 2–36 points	30.5 (34.8)	29.3 (25.7)	0.017
Desire (1.2–6)	5.1 (6)	4.5 (4.8)	<0.001
Excitation (0–6)	5.2 (6)	4.8 (4.8)	0.046
Lubrication (0–6)	5.6 (6)	5.2 (4.8)	0.181
Orgasm (0–6)	4.2 (4.8)	4.2 (4.2)	0.254
Satisfaction (0.8–6)	5.4 (6)	5.4 (4.8)	0.409
Pain (0–6)	5.6 (6)	5.2 (4.8)	0.590

*-Mann U Whitney or Chi-square test according to type of variable.

Conclusion: Women with SLE, in this study, have less sexual activity than healthy women, but no greater sexual dysfunction. However, they have a worse performance in the desire and excitation areas. This alteration did not show a relation with demographic nor disease-related variables. The abnormality found could be explained by a psychosocial factor not evaluated in this study.

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THU0281 SALIVARY GLAND ULTRASOUND FINDINGS ARE ASSOCIATED WITH CLINICAL AND SEROLOGIC FEATURES IN PRIMARY SJÖGREN'S SYNDROME PATIENTS

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Background: Primary Sjögren's syndrome (pSS) is a multisystem immune-mediated disease characterized by hypofunction of salivary and lacrimal glands and possible multi-organ systemic manifestations. Over the past years, three sets of diagnostic criteria have been proposed, but none included salivary gland ultrasound (SGUS). However, SGUS has been recently applied for diagnosis and there are some reports regarding the correlation of SGUS findings with immunological and serological features in pSS patients (1, 2).

Objectives: To investigate the association of SGUS findings with clinical and analytical features of pSS patients.

Methods: A total of 54 patients diagnosed with pSS, fulfilling both the 2016 ACR/EULAR and 2002 AECG criteria for the disease, followed-up at our Rheumatology department, underwent SGUS evaluation. The parenchymal homogeneity of bilateral parotid and submandibular glands was graded using a score of 0 (normal) to 4 (gross inhomogeneity). Patients were classified into two groups according to the highest US score obtained. The grades 1 and 2 were considered to be normal and grades 3 and 4 to represent pathological SGUS findings. Demographics (age, sex and disease duration), European League Against Rheumatism Sjögren's Syndrome Disease Activity Index (ESSDAI) and laboratorial data (erythrocyte sedimentation rate, autoantibodies, rheumatoid factor, hypergammaglobulinemia, β 2-microglobulin and complement levels) were collected and compared between the two SGUS groups. The association between SGUS and these data was explored by multivariable analysis. Statistical significance was defined as $p < 0.05$.

Results: The mean age of patients was 57.5 ± 13.3 years and median disease duration was 5.0 [IQR (2.75-11.25)]. The majority of the study population were women (96%) and 35% (19/54) had pathological SGUS findings.

Differences between the group with pathological SGUS versus the group with normal SGUS are depicted in table 1.

Multivariate logistic regression revealed that anti-SSB ([OR] = 6.6, 95% [CI] 1.7 to 25.8, $p = 0.006$) was independently associated with the presence of pathological features in SGUS.

Table 1. Comparison of demographics, clinical and serologic features of pSS according to SGUS.

	Pathological SGUS (n=19)	Normal SGUS (n=35)	P value
Mean age, years	54.3 $\pm$ 12.6	59.2 $\pm$ 13.5	0.497
Mean disease duration, years	6.6 $\pm$ 6.1	7.7 $\pm$ 5.2	0.976
ESSDAI (IQR)	2.2 (0-5)	0.9 (0-1)	0.044
Mean Sedimentation rate, mm	36.3 $\pm$ 22.1	22.7 $\pm$ 15.8	0.160
Antinuclear antibody, n (%)	19 (100)	32 (91.4)	0.544
Anti-SSA, n (%)	18 (94.7)	27 (77.1)	0.137
Anti-SSB, n (%)	14 (73.7)	9 (25.7)	0.001
Rheumatoid factor, n (%)	14 (73.7)	14 (40.0)	0.018
Hypergammaglobulinemia, n (%)	12 (63.2)	14 (40)	0.104
Mean β 2-microglobulin, mg/L	2.9 $\pm$ 0.9	2.2 $\pm$ 0.7	0.378
Mean Complement 3, mg/dL	115.1 $\pm$ 28.9	120.7 $\pm$ 24.5	0.938
Mean Complement 4, mg/dL	21.6 $\pm$ 6.0	21.9 $\pm$ 8.1	0.165
Hydroxychloroquine treatment, n (%)	15 (78.9)	21 (60.0)	0.229

Conclusion: In our study, pathological US findings were associated with higher disease activity and positivity for rheumatoid factor and anti-SSB. Additionally, anti-SSB antibody was strongly and independently associated with pathological US findings in the salivary gland of pSS patients. Further and larger studies are necessary to support these findings and include SGUS as part of the diagnostic criteria for Sjögren's syndrome.

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THU0282 ULTRASOUND FINDINGS IN THE SALIVARY GLANDS IN A COHORT OF PATIENTS WITH SUSPECTED SJÖGREN'S SYNDROME

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Background: Ultrasound has been shown to be a promising tool in the evaluation of salivary glands for parenchyma changes with the potential to improve diagnosis. The changes range from mild inhomogeneity of the glandular tissue to large vesicular changes almost eliminating all normal glandular tissue. American-European Consensus Group (AECG) classification criteria for SS are often used diagnostically (1).

Objectives: To describe ultrasound findings in salivary glands (SGUS) in a cohort of patients with suspected Sjögren's syndrome (SS) and assess their positive and negative predictive value for the diagnosis.

Methods: 191 consecutive patients with suspected SS (ocular and/or oral dryness) referred to the department of Rheumatology between March 2017 and March 2018 were evaluated by SGUS as part of the initial evaluation. All had unstimulated sialometry, Schirmer's test and laboratory test done (including autoantibodies (ANA screening, Rheumatoid factor and anti-cyclic citrullinated peptide, anti-Ro/SSA and anti-La/SSB), and screenings test for hepatitis B+C). In doubtful cases, a minor salivary gland (MSG) biopsy was performed. SGUS was performed with a GE Logiq E9 equipped with a linear ML6-15 probe and included grey-scale evaluation of the submandibular and parotid gland bilaterally. SGUS was considered abnormal when moderate to severe inhomogeneity with anechoic or hypoechoic areas was present in at least one gland.

Results: 63 patients were diagnosed with SS according to the AECG classification criteria - 57 patients with primary SS, 6 with secondary SS. 128 patients with sicca symptoms did not fulfill AECG criteria for SS and none were diagnosed with SS based on other parameters. Demographic data for the cohort is shown in table 1. 55 patients had MSG biopsy performed. The SGUS examination and evaluation was performed in less than 15 min per patient. The sensitivity of SGUS is 0.51 and the specificity 0.88; the PPV for SGUS for the SS diagnosis was 0.68 and the NPV was 0.78.

The sensitivity of SGUS for positive MSG biopsy was 0.29 and the specificity 0.82 - the PPV was 0.50 and the NPV was 0.65; for abnormal sialometry the sensitivity of SGUS was 0.32 and the specificity 0.82 - the PPV for SGUS was 0.64 and NPV was 0.55.

Table 2 shows the association between SGUS and final diagnosis, MSG biopsy and sialometry, respectively.

Abstract THU0282 – Table 1.

Table 1	Primary SS	Secondary SS	Not fulfilling SS classification criteria
Female/male, n	55/5	6/0	101/27
Mean age, years (range)	56 (27-83)	56 (42-68)	56 (17-86)
Positive Schirmer's test, n(%)	26(46%)	2(33%)	6 (5%)
Positive Sialometry, n(%)	44(77%)	6 (100%)	45(35%)
Anti-RO/SSA, n(%)	48(84%)	1 (17%)	37(29%)
Anti-La/SSB, n(%)	18(32%)	0 (0%)	6(5%)

n= number, SS= Sjögren's Syndrome

Table 2	Fulfilling SS classification criteria n (%)	Not fulfilling SS classification criteria n (%)	Positive MSG biopsy	Negative MSG biopsy	Positive sialometry for SS	Negative sialometry for SS
Positive SGUS for SS n (%)	32 (51%)	15 (12%)	6 (29%)	6 (18%)	30 (32%)	17(18%)
Negative SGUS for SS n (%)	31 (49%)	113 (88%)	15 (71%)	28 (82%)	64 (68%)	80 (82%)

n= number, SS= Sjögren's Syndrome, MSG=minor salivary gland

Conclusion: SGUS has a high specificity but poor sensitivity for the SS diagnosis with a good NPV and a high specificity for positive MSG