Abstract AB0748 – Table 1

	TOTAL	ISOLATED SSC	PAI	p
Raynaud's Phenomenon	1826	1005 (55%)	821 (45%)	1.000
Digital ulcers	745	408 (55%)	337 (45%)	0.888
Calcinosis	322	142 (44%)	180 (56%)	<0.001
Arthritis	270	128 (47%)	142 (53%)	0.064
Myositis	172	37 (22%)	135 (78%)	<0.001
Gastrointestinal involvement	1222	632 (52%)	590 (48%)	<0.001
ILD	795	399 (50.2%)	396 (49.8%)	<0.001
PH confirmed by right heart catheterisation	148	66 (45%)	82 (55%)	0.438
Heart involvement	409	196 (48%)	213 (52%)	0.001
Scleroderma renal crisis	43	27 (63%)	16 (37%)	0.353

We found no significant differences concerning capillaroscopy patterns, or causes of death, neither SSC-related nor non-SSc-related. Finally, a multivariate analysis with logistic regression was performed to evaluate the risk factors for PAI, which are shown on the table 2.

Abstract AB0748 – Table 2

Variables	Multivariate analysis OR (95% I.C.)	p value
Gender	2,72 ^{1,87-3,98}	<0001
Age at dianosis	1,01 ^{1,00-1,02}	0012
Calcinosis	1,63 ^{1,23-2,16}	<0001
ILD	1,37 ^{1,08-1,73}	<0001
Gastrointestinal involvement	1,32 ^{1,05-1,66}	0019
Centromere Ab	1,41 ^{1,12-1,77}	<0001
Ro Ab	1,61 ^{1,18-2,18}	<0001

Conclusions: PAI in SSc is a frequent condition that special attention in these patients. We found a rather higher prevalence compared with those published in the literature, even though the distribution of those associated disorders was similar. In our cohort, there were no remarkable differences between both groups concerning clinical manifestations (although not always statistically significant). Finally, certain circumstances should make us aware of a possible associated condition to SSc.

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AB0749 DON'T FORGET THE CAREGIVERS OF PATIENTS WITH SYSTEMIC SCLEROSIS

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Background: Systemic sclerosis (SSc) is a disease with considerable physical and psychosocial impact. Previous studies among partners of patients with other chronic diseases, such as Parkinson's and stroke, showed that 6%–25% of caregivers experience high levels of stress related to caregiving. To our knowledge, the burden experienced by caregivers of patients with SSc has not been determined so far.

Objectives: To evaluate perceived strain, quality of life and health care needs among SSc caregivers.

Methods: During a patient information meeting, companions of SSc patients were invited to complete 3 questionnaires: 1. The Caregiver Strain Index questionnaire (CSI), in which a score ≥ 7 indicates high care burden, 2. Short Form-36 (SF-36): a measure of self-reported Quality of Life (QoL) and 3. a self-designed questionnaire on the needs and preferences for caregiving support. Caregivers with and without high care burden were compared regarding their general characteristics and QoL.

Results: Thirty-six SSc caregiver filled out questionnaires (n=31 completed the CSI questionnaire). Respondents were mostly men (64%), on average 62 years old (SD 14), 35% (n=11) had a paid job, and 50% (n=18) suffered from chronic disease. The majority was in a spousal relationship (75%) with the SSc patient and 56% of patients had been diagnosed with SSc more than 5 years ago. Nineteen percent of patients (n=7) needed daily personal caregiving and 25% (n=9) was

transport-dependent. Median CSI was 2 (range 0 to 5), and 6/31 (19%) perceived high care burden(CSI ≥ 7). Caregivers with high care burden were significantly more often involved in daily personal caregiving of the patients (3/6 vs. 2/25). Although not statistically significant, all caregivers perceiving a high burden were spouses, while the remaining caregivers had varying relationships with SSc patients. SF-36 summary scale scores were similar in both groups (table 1). Regarding needs and preferences of caregivers, 15% (n=5) reported a need for additional individual information, and 21% (n=7) a need for contact with fellow caregivers of patients, preferably during information meetings.

Abstract AB0749 – Table 1. Characteristics of caregivers of SSc patients with and without high care burden (CSI ≥ 7).

	Total (n=36)	CSI<7 (n=25)	CSI ≥ 7 (n=6)	p-value
CSI, median (IQR)	2.0 (0.0–5.0)**	2.0 (0.0–4.0)	8.0 (7.0–8.0)	n.a.
Gender, n (% female)	13 (36)	10 (40)	1 (17)	0.383 ¹
Age (years, median (IQR))	65.5 (53.8–72.0)	66.0 (51.0–73.0)	63.5 (56.8–66.0)	0.448 ²
Relationship (%)				
Partner	27 (75)	18 (72)	6 (100)	0.293 ¹
Father/mother	2 (6)	2 (8)	0 (0)	
Friend	2 (6)	1 (4)	0 (0)	
Son/daughter	4 (11)	4 (16)	0 (0)	
Involved in daily personal caregiving patient SSc (%)	7 (19)*	2 (8)	3 (50)	0.038 ¹
Transport dependency patient SSc (%)	9 (25)*	5 (20)	2 (33)	0.596 ¹
SF –36 (mean $\pm$ SD)				
Physical component score	50.9 $\pm$ 7.2***	51.2 $\pm$ 7.0****	53.6 $\pm$ 3.4	
Mental component score	43.7 $\pm$ 6.8***	43.4 $\pm$ 7.8****	42.9 $\pm$ 3.8	

¹ Fisher's exact ² Mann-Withney U *n=35, **n=31, ***n=28, ****n=19
Conclusions: Within a small group of SSc caregivers, 19% experienced high care burden. In particular caregivers involved in personal caregiving seem to be at risk for increased strain related to caregiving. The results of the current study can direct clinical practice aiming at support of the caregivers.
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AB0750 RHEUMATIC DISEASES WITH LUNG INVOLVMENT AND PSYCHOLOGICAL STATUS

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Objectives: assess the impact of psychological status indicators on lung function in patients with rheumatic diseases with lung lesions

Methods: A study of 30 patients with diagnoses of systemic sclerosis (SSD) – 14 patients, systemic vasculitis (CB) – 10, rheumatoid arthritis (RA) – 6 patients. The average age of the patients was 56.55 $\pm$ 10.59 (from 22 to 77 years). All patients had high activity of the underlying disease and received pathogenetic therapy in the form of pulse therapy for HA – 19 patients, high doses of HA (1 mg/kg) per os – 11 patients; were hospitalised in connexion with the first detected lung lesions or signs of progression of the existing lung injury (increased dyspnea, reduced exercise tolerance). Patients are consulted by a cardiologist to exclude the cardiac genesis of symptoms.

All patients underwent a standard clinical examination, in addition they performed: high-resolution RCT of lung (64-slice CT system Philips Diamond Select Brilliance), a 6 min walk test.

Evaluation of lung function was carried out using spirometry, bodipletizmography, diffusion "single breath".

The following scales were used to assess the psychological status: State-Trait Anxiety Inventory (STAI)personal and situational anxiety assessment, symptomatic questionnaire SCL-90-R (English Symptom Check List-90-Revised), anxiety and depression, the Toronto Alexitimic Scale (TAS)

Results: All patients according to RKT data had manifestations of IZL in the form of nonspecific interstitial pneumonia. Among the patients examined, the group with DV 1st. was 11 patients, DN 2 tbsp. – 14 patients, DN 3 tbsp. – 5 patients. A high level of situational anxiety was present in 11 patients (36.7%), personal – in 13 patients (43.3%). At the same time, the DLCO relationship to the alveolar volume was identified with the level of personal anxiety ($r=-0.526$, $p<0.05$) and situational ($r=-0.423$, $p<0.05$). In addition, the DV index has an average correlation with the level of anxiety ($r=0.513$, $p<0.05$). The symptomatic questionnaire revealed a significant degree of somatization in patients with IBD – in 14 patients

(46.7%), which is the somatic equivalent of depression and anxiety. TAS data indicate the presence of apparent alexithymia in 10 patients (33.3%), the "risk group" for alexithymia is 26.7%.

In addition, saturation after a 6 min walk was correlated with alexithymia ($r = -0.526$, $p < 0.05$).

Conclusions: The psychological status of patients with rheumatic diseases with lung involvement in the form of nonspecific interstitial pneumonia is characterised by depression, anxiety, alexithymia.

Disclosure of Interest: None declared

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AB0751 THE EPSTEIN-BARR VIRUS INFECTION IN SYSTEMIC SCLEROSIS

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Background: Epstein-Barr virus (EBV) infection has been considered trigger of various autoimmune diseases, including systemic sclerosis (SSc), mainly due to studies investigating cross-reactive responses amongst EBV and disease-specific antigens. Meticulous assessment of antibody reactivities to the most immunodominant EBV antigens in SSc has not been performed.

Objectives: To assess ab reactivity against EBV viral capsid antigens (VCA), early antigens (EA) and EBNA-1 in SSc, and investigate their clinical relevance.

Methods: Sera from 59 SSc patients, including 31 diffuse SSc (dcSSc) and 28 limited SSc (lcSSc), 43 matched multiple sclerosis (MS) as controls and 32 matched healthy controls (HC) were tested for IgG anti-EBV VCA, EA and EBNA-1 abs by immunoblotting, using EBV whole SDS extract as antigen substrate.

Results: Percentages of EA and EBNA-1 reactivities were significantly higher in SSc patients compared to HC (EA: 33.9% vs 3.1%, $p = 0.001$; EBNA-1: 89.8% vs 68.8%, $p = 0.012$), but were comparable between SSc and MS. These differences remained when SSc was divided in dcSSc and lcSSc (EA: 32.3% in dcSSc and 35.7% in lcSSc, $p_{dcSSc \text{ vs HC}} = 0.002$, $p_{lcSSc \text{ vs HC}} = 0.001$; EBNA-1: 92.9% in lcSSc, $p_{lcSSc \text{ vs HC}} = 0.020$). VCA positivity was comparable between SSc or its two subgroups and MS or HCs. Also, triple positivity for all three antigen categories was observed more frequently in SSc, dcSSc and lcSSc compared to HCs (32.2% in SSc, 29% in dcSSc and 35.7% in lcSSc vs 3.1% in HC, $p = 0.001$, $p = 0.004$ and $p = 0.001$, respectively). Anti- EA was present more frequently in SSc patients with calcinosis compared to those without (75% vs 27.5%, $p = 0.014$) and tended to be more frequent in patients with pulmonary fibrosis compared to those without (47.8% vs 25%, $p = 0.071$).

Conclusions: Antibodies against EBV appear to be more frequent in SSc than in healthy controls, and equally prevalent with MS, a disease known to be associated with anti-EBV antibody responses and a known risk factor for MS. Whether an EBV-specific response is also an initiating trigger of SSc remains to be investigated.

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AB0752 CLINICAL FEATURES OF SYSTEMIC SCLEROSIS ASSOCIATED TO ANTI RNA POLYMERASE III ANTIBODIES IN VALLD'HEBRON HOSPITAL

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Objectives: Systemic sclerosis (SSc) is an autoimmune disease whose clinical features are related closely with the specific autoantibody that is expressed. The main objective was to analyse the clinical characteristics of patients with positive anti-RNA polymerase III antibody (anti-RNAP III) and compare them with patients who were negative.

Methods: We analysed 221 patients with SSc who visited Vall d'Hebron Hospital from 1980 to 2016. 26 patients who were positive were compared with 195 who were negative. Different epidemiological, clinical, capillaroscopic and immunological variables were analysed.

Data from the Vall d'Hebron Hospital cohort were collected from patients diagnosed with ES since 1980. 24 patients with positive anti-RNAP III antibodies were

selected using the technique of immunoblot on paper or enzyme immunoassay and were compared with 151 who were negatives. Different epidemiological, clinical, capillaroscopic and immunological variables were analysed. Statistical analysis was performed using SPSS 20.0. Statistical significance was considered $p < 0.05$.

Results: 24 patients (13.7%) showed anti-RNAP III reactivity. Female sex (151, 86.3%) was the most frequent. There were no differences in the age at onset of the disease (40.3 ± 15.9) or in the age at diagnosis (46.6 ± 15.7). Diffuse cutaneous (Dc) subtype was more frequent in the anti-RNAP III group (70% vs 16.6% $p < 0.001$). Patients with positive anti-RNAP III met the ACR/EULAR 2013 diagnostic criteria more frequently (24, 100% vs. 118, 78.1% $p < 0.01$). Regarding the first manifestation, Raynaud's phenomenon was less frequent in the anti-RNAP III group (13, 54.2% vs. 121, 80.1% $p < 0.01$). Regarding to vascular features, there were no differences in digital ulcers (15, 62.5% vs. 66, 43.7%, $p = 0.08$), in the presence of Raynaud's phenomenon (24, 100% vs. 145, 96.7%) or telangiectasias (18, 75% vs. 102, 67.5%). There were no differences with respect to the overall digestive involvement (21, 87.5% vs. 124, 82.1%) No differences were found in cardiac involvement in both groups (9, 37.5% vs. 51, 47%). Scleroderma renal crisis (SRC) was significantly more frequent in patients with anti-RNAP III (3, 12.5% vs. 3, 1.9% $p = 0.03$). There were no differences in prevalence of cancer (4, 16.7% vs. 12, 7.9% $p = 0.24$). There were no differences in mortality (2, 8.3% vs. 16, 10.6%). The slow-type capillary pattern of Maricq was the most frequent in both groups (20, 83.3% vs. 132, 87.4%). Regarding the expression of other auto-antibodies, anti-Ro52 positivity was less frequent in patients with anti-RNAP III (2, 8.2% vs. 14, 9.3% $p = 0.03$).

Conclusions: Patients with ES who presented positivity for anti-RNA polymerase III antibodies had more frequent onset manifestations different from the Raynaud's phenomenon, more DcSSc subtype and higher frequency of SRC. Regarding positivity against other antibodies, they expressed less reactivity to anti-Ro 52 than patients without anti-RNA pol III antibodies.

Disclosure of Interest: None declared

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AB0753 COMPARATIVE STUDY OF SYSTEMIC SCLEROSIS WITH OTHER AUTOIMMUNE DISEASES FOR HEALTH-RELATED QUALITY OF LIFE

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Background: Systemic sclerosis (SSc) is a rare autoimmune disease characterised by fibrosis of the skin and multiple internal organ involvement. Previous studies reported a poorer health-related quality of life (HRQoL) in patients with SSc compared to the general population. However, very little is known about HRQoL of SSc as compared with other systemic autoimmune diseases, including rheumatoid arthritis (RA), systemic lupus erythematosus (SLE), and Sjogren's syndrome (SJS).

Objectives: To compare the HRQoL of patients with SSc and other systemic autoimmune disease and general population.

Methods: HRQoL was captured by the Korean short form-36 health survey version 2 (SF-36), short form-6D (SF-6D) and 3 level version of EuroQol five-dimensional (EQ-5D) descriptive system (EQ-5D-3L). Between March and July 2017, consecutive patients with SSc, and randomly chosen patients with RA, SLE and SJS were recruited from the outpatient rheumatology clinics of Seoul National University Hospital, and were asked to answer SF-36 and EQ-5D. Disease activity of RA was evaluated by Disease Activity Score 28-ESR (DAS 28-ESR), SLE by Systemic Lupus Erythematosus Disease Activity Index-2k (SLEDAI-2k), and SJS by EULAR Sjogren's syndrome disease activity index (ESSDAI). For patients with SSc, Korean version of Health Assessment Questionnaire Disability Index (HAQ-DI) and Systemic sclerosis HAQ-DI (SSc HAQ-DI) were also evaluated. Demographic, clinical, laboratory information were obtained through a medical chart review. Data on representative Korean healthy controls were obtained from a study of psychometric properties of the Korean SF-36 v2 for assessing the general population, which was performed on six hundred healthy Koreans.

Results: A total of 480 patients with SSc ($n = 120$), RA ($n = 120$), SLE ($n = 120$) and SJS ($n = 120$) and 600 healthy controls were included. The demographic features of patients were similar to the known features of each rheumatic disease group. Patients with rheumatic diseases had significantly lower SF-36 scores ($p < 0.001$ in all domains), SF-6D scores ($p < 0.001$), EQ-5D-3L index scores and EQ-VAS ($p < 0.001$) than the healthy controls; adjustments for age and sex did not change those results. Patients with SSc showed significantly lower scores in the mental component summary scores compared with patients with RA (age and sex-adjusted scores, 43.0 ± 0.9 vs 48.9 ± 0.9 ; $p < 0.001$). Specifically, domain of mental health was lower in SSc patients than RA patients (age and sex-adjusted scores, 61.3 ± 1.8 vs 71.7 ± 1.8 , $p < 0.001$). Among the physical domains scores, SSc