First symptom of onset was Raynaud phenomena 91.3% of the cases, followed by skin changes (56.5%), puffy fingers (52.2%), gastrointestinal and musculoarticular symptoms (23.9% each).

The medium duration between the first symptom and a medical consult was 6 (63.5) months. The first medical consult was done by a internal medicine specialist -38.3%, by a rheumatologist-29.8%, a gastroenterologist-12.8%, a dermatologist-8.5%, a nephrologist and a pneumologist-4.2% and neurologist 2.1%

The first suspected diagnosis was SSc in 14 cases, Raynaud syndrome in 8, connective tissue disease in 5, rheumatoid arthritis in 4, cancer, autoimmune hepatitis, idiopathic pulmonary fibrosis each in 2 cases and none in 10 cases.

The medium number of consults until final diagnosis was 3.4 (1.7). The medium duration from the first symptom until the correct diagnosis was 39.2 (74) months. The first investigations recommended were blood tests in almost all of the patients (95.7%), but only a third of them included specific scleroderma autoantibodies. Capillaroscopy was performed as an initial diagnostic test in only 6 patients (12.8%). The mean interval from disease onset until the patient was referred to the first capillaroscopy was 13.5 (28.8) months, to specific autoantibodies was 40.17 (61.3) month, to echocardiography was 36.38 (54) months, to lung function tests and lung CT – 41.76 (65.8) months.

There were no significant statistical differences between patients coming from rural environment and those coming from urban environment. The only significant statistical difference between diffuse and limited subset was the time the patient was referred to echocardiography (19.8 (47.6) months for the diffuse subset, 66.8 (94.6) months for the limited subset, $p=0.04$).

The only statistical difference between males and females was related to the interval that capillaroscopy was performed (14 (20.5)months in females, 4.8 (5) months in males, $p=0.02$).

Conclusions: Scleroderma is a less well-known disease. This lack of awareness contributes to delayed diagnosis and delayed onset of therapy. Often such diagnostic uncertainty and frustration takes a huge toll on the psychological well-being of these patients, who describe their journey to diagnosis as being one of the most difficult part of their illness. One of our missions as rheumatologist is to increase recognition of this disorder.

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AB0648 DISEASE-RELATED AUTOANTIBODY PROFILE IN SYSTEMIC SCLEROSIS IN GREECE

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Background: Autoantibodies (autoAbs) help in diagnosis and predicting clinical phenotypes in systemic sclerosis (SSc).

Objectives: To determine the clinical utility of 13 SSc-related autoAbs in SSc patients in Greece.

Methods: 131 consecutive patients with SSc (111 female, mean age 58.1±14 years; 49 with diffused cutaneous SSc [dcSSc] and 82 with limited cutaneous SSc [lcSSc]) were analyzed by a multiplex line immunoassay (Euroimmun) for autoAbs against 13 SSc-related antigens. Twenty two patients with primary Raynaud phenomenon (RP), and 22 healthy controls were also analyzed

Results: ANA by indirect immunofluorescence was present in 128 (97.7%) patients with SSc. Excluding anti-Ro52, 113 (89.3%) SSc patients were positive for at least one autoAb: anti-Topo I abs in 54 (41.2%), anti-CENPA in 37 (28.2%), all reactive with CENPB), anti-RNA polymerase III (RP11) in 19 (14.5%), anti-RNA polymerase III (RP155) in 13 (9.9%), anti-fibrillarin in 4 (3.1%), anti-Ku in 6 (4.6%), anti-NOR90 in 8 (6.1%), anti-PM/Scl100 in 2 (1.5%), and anti-PM/Scl75 in 4 (3.1%). There was no immunoreactivity for Th/To or PDGFR. Overall, 102 (77.9%) SSc patients had autoAbs against Topo I, CENPA or CENPB, RP11 or RP155. Anti-Topo I abs were strongly associated with dcSSc, interstitial lung disease (ILD) ($p<0.001$), and pulmonary arterial hypertension (PAH) ($p=0.019$). Anti-CENB abs were associated with lcSSc, and negatively associated with ILD. Anti-RP11 and anti-NOR90 abs were associated with male gender, and anti-NOR90 associated with ILD. In PR individuals and healthy individuals anti-Ro52 immunoreactivity was found in 9.1% and 13.6%, respectively, but no other immunoreactivity was detected.

Conclusions: Anti-Scl70, anti-CENP and anti-RNA pol III are the most prevalent autoAbs in SSc. Anti-Topo I and anti-NOR90 abs are associated with ILD and/or PAH.

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AB0649 SYSTEMIC SCLEROSIS IN ARGENTINA: EVALUATION OF A SINGLE CENTER COHORT AND COMPARISON WITH INTERNATIONAL SERIES

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Background: Systemic sclerosis (SS) is an autoimmune disease with generalized vascular dysfunction and a myriad of clinical and laboratory manifestations. Spreading of thickening of the skin, serological characteristics and the pattern of compromise of the internal organs help to classify them as diffuse scleroderma, localized sclerosis and systemic sinus scleroderma. Reports of Latin American cohorts published to date are scarce.

Objectives: To describe the clinical and serological data for a single center cohort and to compare those with national and international cohorts.

Methods: Descriptive, observational, cross-sectional study. We analyzed our SS database. Patients were evaluated since 01/15 to 05/2016 and fulfilled SS classification criteria (ACR 1980/ACR-EULAR 2013). Patients were classified according to Le Roy criteria in Limited Systemic Sclerosis (ISS), Diffuse Systemic Sclerosis (dSS), Systemic Sclerosis sine scleroderma (SsnS) and pre-systemic sclerosis (pSS). Organic compromise was defined as follows: Gastrointestinal (GI): esophageal dysmotility by manometry or esophagitis by endoscopy; Lung: Pulmonary hypertension (PH): PSAP>25 mmHg by right heart catheterization; Interstitial Lung Disease (ILD): compatible HRCT or <70% predicted FVC or <80% predicted DLCO; Heart: Left ventricle dysfunction without PH or arterial hypertension, pericardial effusion; Digital ulcers and pitting scars; History of sclerodermic renal crisis (RSC); calcinosis. Anti-Scl-70 was determined by ELISA and anti-Centromere (ACA) by IIF.

Results: 123 patients were included. 74% with ISS, 24% dSS and 2% SsnS; age at diagnosis (years): 49.7 (18–79 DS: 12.27) and 48.7 (27–79 DS: 13.01) in ISS and dSS respectively. Raynaud's phenomenon previous to diagnosis (years) 7.7 (0–54 DS: 12.81) in ISS and 4.03 (0–22 DS: 5.5) in dSS. 49.5% ISS were ACA positive vs 17% in dSS as well also 41.4% had Scl-70 positive ($p<0.05$). Lung: 58.6% of dSS presented ILD and 3.4% RSC, according to published reports. No statistically significant differences were found about the presence of calcinosis, digital tip ulcers or PH between dSS and ISS. GI: was studied in only 39/123 patients with 84.6% affected among those.

Table 1. Comparison of main variables among different cohorts

	Diffuse				Limited systemic sclerosis					
	US, n		EUSTAR, n		Spain, n		Germany, n		Argentina ^a , n	
	119	128	2838	4481	243	568	484	674	29	91
Oesophageal										
dysmotility (%)	67	67	70	66	71	57	69	59	31.5	38.5
ILD (%)	63	37	52	11	70	39	56	21	59	22
PH (%)	2	31	6	ND	14	9	19	15	3.4	3.3
RSC (%)	17	2	4	1	8	1	16	9	3	0
Digital ulcers (%)	ND	ND	20	33	64	39	34	24	10.3	5.5
Calcinosis (%)	23	42	ND	ND	24	20	ND	ND	14	19

*HCJSM.

Conclusions: Our data showed similar results to the local and european cohorts. We found fewer calcinosis and digital tip ulcers in both ISS and dSS than international cohorts. A lower prevalence of PH was reported in ISS respect to other series, and it might be attributed to the method with it was measured. (right heart catheterism).

Disclosure of Interest: None declared

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AB0650 ANTI-TOPOISOMERASE POSITIVE SYSTEMIC SCLEROSIS PROGNOSIS INFRAST?

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Background: Anti-topoisomerase antibodies (ATA) in systemic sclerosis (SSc) have been associated with poorer prognosis including diffuse skin involvement, pulmonary fibrosis, cardiac involvement and increased mortality. However, 30–60% of ATA-positive SSc patients demonstrate only limited skin involvement and some have only mild disease course. In SSc, optimal risk stratification is of utmost importance for tailored clinical management at the patient level.

Objectives: We aimed to determine the prevalence of mild disease among ATA positive patients and to investigate which readily available clinical parameters best identify patients with highest disease severity.

Methods: Clinical baseline data from SSc patients included in the Combined Care In Systemic Sclerosis (CCIS) cohort of the Leiden University Medical Center were extracted. Patients fulfilling ACR 2013 criteria and ATA positive were included. Descriptive statistics were used to summarize sociodemographic, clinical and serological features. Patients with grade 3 or 4 disease on any of the Medsger severity subscales were considered to be severely diseased. We compared presence of diffuse cutaneous involvement, Raynaud's, pitting scars, calcinosis, proximal muscle weakness, >10% weight loss, interstitial lung disease and pro-BNP between the severity groups and corrected for confounding by disease duration (time since non-Raynaud) by stratifying into quartiles.

Results: Of 422 SSc patients in the database, 344 patients had SSc meeting ACR criteria. 89 patients were exclusively ATA-positive, of which n=42 with mild disease and n=47 with severe disease. Patients with severe disease appeared to be younger (mean age 50 vs 55 yr), more often non-caucasian (51 vs 12%), with a longer time since non-Raynaud (median 4 vs 2 yr) and more often diffuse skin involvement (dcSSc; 62 vs 41%), calcinosis (6 vs 0%) and weight loss (23 vs 7%). Stratification by disease duration, however revealed there are no real differences between mild and severe disease. Overall 47% of ATA+ patients in our cohort presented with mild SSc. When stratifying patients according to time of non-Raynaud, 55% of ATA+ patients presented with mild disease in the first disease duration quartile (median follow-up 0.5 years, range 0–0.8 years). In the fourth disease duration quartile, according non-Raynaud time (median follow-up 12.7 years, range 8.2–44.1) the percentage with mild disease was still 27% (Figure 1).

Figure 1. Medsger scores of ATA patients stratified by duration non-Raynaud

Conclusions: In our cohort, 47% of ATA-positive patients presented with mild systemic sclerosis, which could not be explained by disease duration. This suggests that solely the presence of ATA is of limited clinical relevance. Readily available sociodemographic and clinical parameters including type of skin involvement seem to have only limited value in identifying ATA patients with more severe SSc. More complex serological findings as antibody titers and fine-specificity of ATA should be defined for optimal serological subsetting.

Disclosure of Interest: None declared

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AB0651 THE EFFECT OF CYCLOPHOSPHAMIDE ON PULMONARY FUNCTION AND DEPENDENCE ON DISEASE ACTIVITY OF INTERSTITIAL LUNG DISEASE ASSOCIATED WITH SYSTEMIC SCLEROSIS

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Background: The pathogenesis of interstitial lung disease associated with systemic sclerosis (SSc-ILD) is not completely elucidated, although it is believed that chronic alveolar inflammation leads to increasing fibrosis. Treatment strategies using cyclophosphamide (CYC) have been focusing on the inflammatory pathway of SSc-ILD. We hypothesized that CYC is more effective in patients that are in the early, inflammatory phase.

Objectives: The objectives of this study are to analyze the effects of intravenously CYC pulses (750mg/m²) on pulmonary function (FVC, DLCO) in SSc-ILD after 12, 24 and 36 months, and whether this effect is dependent on the extent of ILD, the proportion of ground glass compared to fibrosis, SSc disease duration or baseline DLCO <60%.

Methods: Patients with SSc-ILD receiving CYC pulses between 2003 and 2015 were classified by the Goh (2008) criteria in either limited or extensive ILD, using HRCT at baseline independently judged by two raters. Pulmonary function tests were performed at 0, 6, 12, 24 and 36 months. Missing outcome data due to drop-out were replaced by last observation carried forward, except in case of death.

Results: Seventy-five patients were included, 33 with limited ILD, 42 with extensive ILD. There were no baseline differences in age, gender, SSc subtype classification, disease duration or autoantibody status. Mean FVC and DLCO were stable after 12, 24 and 36 months of follow-up (figure 1).

There was no effect in the degree of change in mean FVC and DLCO for the different effect modifiers (table 2): the extent of ILD, proportion of ground glass compared to fibrosis, short SSc disease duration or baseline DLCO <60%.

Conclusions: Mean FVC and DLCO in SSc-related ILD was stable during 36 months of follow-up after cyclophosphamide pulse therapy. The extent of ILD, proportion of ground glass, SSc disease duration and baseline DLCO <60% did not influence the effect of CYC on pulmonary function. CYC did not appear to be more effective in the early phase of SSc-ILD.

Disclosure of Interest: None declared

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AB0652 EARLY ORGAN INVOLVEMENT, SURVIVAL AND CAUSES OF DEATH IN AN UNSELECTED COHORT OF DUTCH PATIENTS WITH SYSTEMIC SCLEROSIS

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Background: Systemic sclerosis (SSc) patients are at risk for organ involvement and premature death. The occurrence of organ involvement that is reported differs widely between various long term cohort studies; ILD 25–90%, PAH 8–32%, CI 5–30%, and SRC 4–12%. Differences in findings also apply to survival, the 5- and 10-year survival rates between studies vary from 80% to 90% and from 60% to 85% respectively (1–3).

Objectives: To assess the occurrence of organ involvement and death in a large, unselected cohort of Dutch SSc patients at the moment of diagnosis and during 5 years of follow-up, stratified by disease subtype and auto-antibodies.

Methods: Up to 2015, 690 SSc patients were included in the Nijmegen SSc cohort. Occurrence of interstitial lung disease (ILD), pulmonary arterial hypertension (PAH), cardiac involvement (CI), scleroderma renal crisis (SRC) and occurrence of death were determined using survival analysis, stratified by disease subtype (limited cutaneous SSc and diffuse cutaneous SSc) and auto-antibodies (ACA, ATA, anti-RNP).

Results: Organ involvement was already present at SSc diagnosis in 32% of patients. In 25%, organ involvement developed during follow-up, mostly ILD (22%). Significant differences between lcSSc and dcSSc were found in SRC at baseline and ILD, PAH and SRC during follow-up. Between the autoantibody subgroups, the occurrence of ILD, PAH and SRC at baseline and ILD during follow-up differed. There were no differences in survival between subtypes and auto-antibodies. The overall 5-year survival rate was 89%. Patients without organ involvement at SSc diagnosis had a better 5-year survival rate than patients with organ involvement at SSc diagnosis: 95% versus 73% respectively ($p < 0.001$). (figure 1)

Conclusions: In many SSc patients, organ involvement is already present at diagnosis or develops in the first 5 years after diagnosis.

Survival is significantly worse in patients who already have involvement at the moment of SSc diagnosis.

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AB0653 EFFICACY OF AN INTENSIVE 24-WEEK PHYSIOTHERAPY PROGRAMME IN MYOSITIS PATIENTS - PRELIMINARY DATA FROM A SINGLE-CENTER CONTROLLED STUDY

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Background: Involvement of musculoskeletal system (inflammation, atrophy and permanent damage to the muscle) in idiopathic inflammatory myopathies (IIM) leads to impaired function and reduced muscle strength, endurance, aerobic capacity and decreased quality of life. Data on efficacy of non-pharmacologic care in IIM is very limited due to variety in studied interventions/outcomes.

Objectives: To address the limitations of existing studies, and evaluate the effect of a controlled, long-term (24-week intervention, 24-week follow-up), intensive (1h physiotherapy twice weekly, and home-exercise for 1h 5x weekly), tailored physiotherapy program to improve muscle strength, endurance and deep stabilizer system, and quality of life/disability in cohorts with a substantial number of IIM patients.

Methods: All patients fulfilled the Bohan and Peter 1975 diagnostic criteria for dermatomyositis (DM) or polymyositis (PM), had skeletal muscle involvement, and were consecutively recruited from 2014 to 2016 at the Institute of Rheumatology in Prague. Both groups received educational materials and instructions for home exercise at baseline, however, only intervention group underwent the intensive physiotherapy programme. At months 0,3,6,12 all patients were assessed by a physician [physical examination, Myositis intention to treat index (MITAX), Myositis disease activity assessment visual analogue scale (MYOACT)], and Myositis damage index (MDI)], and a physiotherapist blinded to intervention [standardized tests evaluating the level of muscle strength [Manual muscle test-8 (MMT-8)], and endurance [Functional index-2 (FI-2)], patients filled out patient reported outcomes (PRO)/questionnaires [HAQ, SF-36, Beck's depression inventory-II