higher mRSS ($p=0.001$) and vasculopathic manifestations [late scleroderma pattern ($p=0.002$) and digital ulcers ($p=0.006$)] of the disease (Figure 1).

Conclusions: in clinical practice, different age-related or non-related RRI cut-offs must be used when looking for renal or extrarenal SSc-induced damages.

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AB0623 PROGNOSTIC VALUE OF RENAL RESISTIVE INDEX (RRI) IN SYSTEMIC SCLEROSIS: PRELIMINARY DATA FROM A SINGLE CENTRE

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Background: Renal Resistive Index (RRI- measured with Renal arteries Doppler ultrasound) is a useful technique to evaluate vascular and tubular-interstitial damage in both general and systemic sclerosis (SSc) population, where increased RRI values correlates with longer disease duration [1], lower glomerular filtration rate and more advanced nailfold-videocapillaroscopy pattern [2]. Moreover, higher RRI values were seen in SSc patients with new occurrence of digital ulcers [3].

Objectives: to test the prognostic value of RRI [absolute, ≥ 0.70 and SSc age-adjusted pathologic value (Table1)] and RRI delta change in predicting general and organ-specific worsening in scleroderma patients.

Methods: SSc patients classified according to ACR/EULAR 2013 criteria were enrolled. Demographics data and renal ultrasound data were collected. Data on clinical worsening had been collected as herewith specified: a) Skin worsening as an increase of mRSS ≥ 5 units, b) Peripheral vascular worsening as the appearance of new digital ulcers or the worsening of nailfold videocapillaroscopy scleroderma pattern, c) Lung worsening as decline of FVC $\geq 15\%$ or FVC $< 80\%$ with new detection of ILD on chest HRCT or worsening of HRCT-ILD extent, d) Cardiac worsening as new onset of left ventricular failure requiring treatments or new onset of PAH confirmed on RHC or detection of severe ventricular arrhythmias on 24h EKG, e) Renal worsening as a new scleroderma renal crisis or reduction of creatinine clearance ≤ 30 ml/min. General worsening was recorded in case of death due to SSc or for any of the above organ-specific worsening. Data were analysed as appropriate with SPSS vers. 20.0.

Results: 190 SSc patients (age 56.3 ± 15.0 yrs, 170 women, disease duration 6 ± 8 yrs, 65 with a follow up RRI measurement after 2.8 ± 0.9 years) were enrolled. After a mean clinical follow-up of 3.6 ± 2.6 years, 89 (46.8%) pts showed general worsening. Skin, peripheral vascular, cardiac, lung and renal worsening were detected in 14 (7.4%), 40 (21%), 32 (16.8%), 38 (20%) and 11 (5.8%) patients respectively. We registered 10 (5.2%) deaths and 43 (22.6%) patients with multiple organ worsening. Both absolute value of RRI and ≥ 0.70 RRI cut-off showed no significant association with organ or global clinical worsening. At the opposite, RRI cut-offs adjusted for age were associated with cardiac worsening ($p=0.065$ - Figure 1). When in 65 patients the pattern of delta RRI and clinical worsening were analysed (Table 1), wider RRI changes were associated with general worsening ($p=0.029$) and cardiac worsening ($p=0.006$). The significance of these associations increased when sub-analysis was repeated focused on patients with normal SSc age-adjusted RRI values at baseline evaluation ($p=0.017$ and $p<0.001$ respectively, Figure 1).

Age	Proposed SSc age-adjusted pathologic cutoff	
1st quartile, ≤ 48 years	$\geq 0,68$	
2nd quartile, 49–58 years	$\geq 0,69$	
3rd quartile, 59–67 years	$\geq 0,75$	
4th quartile, ≥ 68 years	$\geq 0,77$	

	RRI basal value (190 pts)		RRI $\geq 0,70$ (85 pts)		SSc age-adjusted pathologic (61 pts)		Δ RRI (available 65 pts)		Δ RRI in baseline SSc age-adjusted normal RRI (45 patients)	
	n (%)	p value	n (%)	p value	n (%)	p value	(n) mean $\pm$ SD	p value	(n) mean $\pm$ SD	p value
General Worsening	89 (46,8)	N.S.	37 (43,5)	N.S.	31 (50,8)	N.S.	(33) $+0,03 \pm 0,05$ vs (42) $0,00 \pm 0,04$	0,029	(24) $+0,04 \pm 0,04$ vs (21) $+0,01 \pm 0,03$	0,017
Cardiac Worsening	32 (16,8)	N.S.	16 (18,8)	N.S.	15 (24,5)	$p<0,001$	(13) $+0,05 \pm 0,05$ vs (52) $+0,01 \pm 0,04$	$p=0,006$	(7) $+0,08 \pm 0,03$ vs (38) $+0,02 \pm 0,04$	$p<0,001$

Conclusions: increase in RRI could be used as a sentinel sign for general and cardiac worsening in SSc patients, especially when age-related RRI variations are taken into account.

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AB0624 INTERSTITIAL LUNG DISEASE IN SCLERODERMA: SEVERITY ASSOCIATED FACTORS. OBJETIVES

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Background: Systemic sclerosis (SSc) can virtually affect any organ system (such as lungs, kidneys, gastrointestinal tract, and heart). However, it is the pulmonary manifestations that account for the majority of deaths, especially interstitial lung disease (ILD) and pulmonary arterial hypertension (PAH).

Objectives: Our aim was to assess the differences between severe and mild-to-moderate ILD in SSc.

Methods: A descriptive study was performed, using the available data from the Spanish Scleroderma Study Group (RESCLE). ILD was deemed as serious when forced vital capacity (FVC) was $< 50\%$. Patients were classified attending the modified classification criteria proposed by LeRoy and Medsger.

Results: Fourteen referral centers for SSc participated in the registry. By April 2014, 1374 patients with SSc had been enrolled, 541 of whom (39.4%) had ILD, which was severe in 72 of them (13.2%). There were no significant differences as far as sex and age at onset is concerned. Patients with diffuse SSc presented with severe ILD more frequently than those with limited SSc (57% vs. 35%, $p=0.002$), as well as those who had tested positive for ATA (51% vs. 33%, $p=0.005$). Additionally, prevalence of FVC $< 50\%$ was higher in patients with myopathy (32% vs. 15%, $p=0.002$). Mean FVC was 40.2 ± 6.4 in the severe ILD group, whilst it was 80.3 ± 18.9 in the mild-to-moderate one ($p<0.001$), and mean DLco was 36.7 ± 15.2 and 62.9 ± 34.5 , respectively ($p<0.001$). Likewise, DLco $< 70\%$ was also more frequent among patients with severe ILD (100% vs. 69%, $p<0.001$), as well as mean DLco/VA (56.2 ± 24.2 vs. 74.2 ± 42.0 , $p=0.002$). PAPs was equally higher when FVC $< 50\%$ (42.2 ± 18.2 vs. 35.1 ± 13.4 , $p=0.034$), and so was the frequency of PAPs > 40 mmHg (66% vs. 29%, $p<0.001$) and PAH by right heart catheterism (19% vs. 11%, $p=0.050$). Finally, by means of a multiple logistic regression, both ATA positivity [OR 0.17 (0.05–0.58), $p=0.005$] and low DLco [0.93 (0.91–0.95), $p=0.000$] were found to be related with FVC $< 50\%$.

Conclusions: Patients with ACA positivity and with a limited variant of SSc seem to be at lower risk of severe interstitial lung involvement. Furthermore, the presence of myopathy may contribute to explain the decrease of FVC in SSc patients.

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AB0625 AUTOANTIBODY PROFILE IN PATIENTS DIAGNOSED WITH IDIOPATHIC INFLAMMATORY MYOPATHY: MULTICENTER REGISTRY ON INFLAMMATORY MYOSITIS FROM THE RHEUMATOLOGY SOCIETY IN MADRID, SPAIN

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Background: Inflammatory myopathies (IIM) are a heterogeneous group of autoimmune rheumatic diseases characterized by muscle inflammation and progressive weakness. They include any kind of primary inflammatory muscle disease that is not otherwise better explained by metabolic, toxic, infectious, neurologic or inherited causes. The presence of autoantibodies (AA) in IIM is variable and they can recognize nuclear and cytoplasmic cellular components.

Objectives: To evaluate the AA profile in patients diagnosed with IIM.

Methods: We evaluated 479 patients that included 12 hospitals belonging to the IIM registry of the Rheumatology Society in Madrid (SORCOM-REMICA) with diagnosis from January 1980 to December 2014. All patients were diagnosed of IIM according to Bohan and Peter criteria. The AAs evaluated were ANA ($n=476$), anti-Jo1 ($n=457$), anti-RNP ($n=427$), anti-Mi2 ($n=159$) and ACA ($n=293$), according to the standard techniques in the respective laboratories. The presence of ANA was considered valid with at least two positive determinations. The AAs were compared according to the classification I) as dermatomyositis (primary

and secondary dermatomyositis (DM) and polymyositis (PM) including the rest of the patients. Also, IIM were classified (II) as primary polymyositis (PPM), primary dermatomyositis (PDM), overlap syndrome (OSd), juvenile myopathies (JM), cancer-associated myopathies (CAM), autoimmune necrotizing myopathy and inclusion body myositis (these were grouped as other myositis; OM).

Results: In the PM and DM groups 250 and 229 (52.2% and 47.8%) patients were included respectively. Positive ANA, anti-Jo1 and anti-RNP were higher in the PM than in the DM group (67, 22 and 19% vs. 56, 11 and 6%) ($p=0.21$, $p=0.002$, $p=0.0001$, respectively). The presence of anti-Mi2 was higher in the DM group ($p=0.024$), according to the classification II, we found statistically significant differences in ANA, anti-Jo1, anti-RNP and anti-ACA. The OSd group had the highest proportion of ANA, anti-RNP and ACA positive AA and the JM group had the lowest frequency of Anti-Jo1 (see Table 1).

Table 1. Autoantibodies profile in IIM according to classification II

AA	Comparison between groups		Frequency	P
ANA	OSd vs.	PPM	91% vs. 54%	0,0001
		PDM	91% vs. 63%	
		JM	91% vs. 40%	
		CAM	91% vs. 63%	
	PDM vs.	JM	63% vs. 54%	
Anti-Jo1	JM vs.	PPM	3% vs. 25%	0,0001
		PDM	3% vs. 19%	
		OM	3% vs. 36%	
Anti-RNP	OSd vs.	PPM	40% vs. 6%	0,0001
		PDM	40% vs. 3%	
		JM	40% vs. 7%	
		CAM	40% vs. 5%	
ACA	OSd vs.	PDM	18% vs. 3%	0,002

Conclusions: The AA associated with the IIM subtypes is consistent with published scientific evidence on other cohorts for ANA, anti-Jo1, anti-RNP and anti-Mi2, in spite of the small sample size. The OSd group showed higher ANA and anti-RNP frequencies which might be explained by the coexistence of SLE and MCTD patients. It could be interesting to follow up those PPM patients with positive AA because they could be in the future diagnosed with a connective tissue disease. Carrying out longitudinal studies that include a greater proportion of patients may help to evaluate and predict the clinical course of IIM.

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AB0626 EPIOTOPE PROFILING OF ANTI-RO52 ANTIBODIES IN PATIENTS WITH SYSTEMIC SCLEROSIS, SYSTEMIC SCLEROSIS-ASSOCIATED PRIMARY BILIARY CIRRHOSIS, AND PRIMARY BILIARY CIRRHOSIS ALONE

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Background: Anti-Ro52 antibodies are detected in patients with Sjogren's syndrome (SjS), systemic sclerosis (SSc) and other autoimmune rheumatic diseases. Epitope mapping studies of anti-Ro52 in autoimmune rheumatic diseases have failed to find any difference on epitope recognition suggesting a common stimulus for the loss of tolerance to Ro52. Such epitope differences, however, were noted between SjS and non-rheumatic diseases and in particular, SjS-associated primary biliary cirrhosis (SjS-PBC) or PBC alone (1).

Objectives: To assess whether or not the Ro52 epitope profile in anti-Ro52+ SSc patients differs from that of SSc-associated PBC (SSc-PBC) or PBC.

Methods: Serum samples were obtained from 63 anti-Ro52-positive (by ELISA) patients (33 SSc, 10 SSc-PBC, 20 PBC alone). Antibody reactivity to full length recombinant Ro52 and 5 baculovirus expressed Ro52 fragments spanning the whole sequence [Ro52-1 (aa 1–129), Ro52-2 (aa 125–268), Ro52-3 (aa 269–475), Ro52-4 (aa 57–180, partly overlapping with Ro52-1 and Ro52-2), and Ro52-5 (aa 181–320, partly overlapping with Ro52-2 and Ro52-3)] were tested by a line immunoassay.

Results: Reactivity was present to: full length Ro52 in all anti-Ro52 positive SSc, PBC-SSc, or PBC patients by line immunoassay; Ro52-1 in 6/33 (18.2%) SSc, 3/10 (30%) SSc-PBC, and 3/20 (15%) PBC; Ro52-2 in 33/33 (100%) SSc, 10/10 (100%) SSc-PBC and 20/20 (100%) PBC; Ro52-3 in 0/33 (0%) SSc, 0/10 (0%) SSc-PBC and 0/20 (0%) PBC; Ro52-4 in 4/33 (12.1%) SSc, 2/10 (20%) SSc-PBC, and 4/20 (20%) PBC and Ro52-5 in 11/33 (33.3%) SSc, 4/10 (40%) SSc-PBC, and 9/20 (45%) PBC respectively ($p>0.05$ for all epitopes amongst the 3 cohorts). No statistically significant correlation was found.

Conclusions: The major epitope of anti-Ro52 does not differ among SSc, PBC-SSc and PBC and is localized on aa125–268, the major epitopic region of anti-Ro52 antibodies in SjS and other rheumatic diseases. Our epitope mapping data suggest that the mechanisms responsible for the loss of tolerance to Ro52 is common amongst diseases.

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AB0627 RISE-SSC: A DOUBLE-BLIND, RANDOMISED STUDY EVALUATING THE EFFICACY AND SAFETY OF RIOCIQUAT FOR THE TREATMENT OF PATIENTS WITH DIFFUSE CUTANEOUS SYSTEMIC SCLEROSIS

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Background: Diffuse cutaneous systemic sclerosis (dcSSc) is a severe subtype of SSc, a rare, chronic autoimmune connective tissue disease associated with significant morbidity and mortality, and with reduced quality of life. Currently, there are no approved disease-modifying therapies to treat the vascular and fibrotic damage in patients with dcSSc. Soluble guanylate cyclase stimulators, such as riociguat, target the transforming growth factor beta pathway, inhibiting signalling through non-SMAD pathways. They have been shown to inhibit dermal fibrosis in several animal models and to ameliorate fibrosis of the skin and intestine in bleomycin-induced fibrosis and experimental chronic graft-versus-host disease.¹ These preclinical data suggest that riociguat has vascular and antifibrotic properties that may be beneficial in dcSSc, potentially delaying disease progression.

Objectives: RISE-SSc (NCT02283762) is an international, multicentre, randomised, double-blind, placebo-controlled, parallel-group, Phase II study to assess the efficacy and safety of treatment with riociguat versus placebo in patients with dcSSc. The primary efficacy endpoint is change in modified Rodnan skin score (mRSS) from baseline to Week 52.

Methods: Eligibility criteria include a disease duration of ≤ 18 months and mRSS of 10–22, parameters identified to be predictors of progression of skin fibrosis.² Patients were randomised (1:1) to treatment with riociguat (adjusted up to 2.5 mg tid over the first 10 weeks) or placebo for a total of 52 weeks. The double-blind phase will be followed by an open-label extension phase for up to 6 years where all patients receive riociguat.

Results: Study recruitment was completed on 30 Dec 2016 and 121 patients have been randomised. Mean $\pm$ SD age at inclusion was 50.7 $\pm$ 12.3 years (range 18–79) and 76% (n=92) were female. At baseline the mean $\pm$ SD mRSS was 16.8 $\pm$ 3.7 (range 10–22) and disease duration was 8.8 $\pm$ 5.5 months (range 0.5–18.5). Almost 70% of the patients tested positive for either anti-SCL-70 (43%) or anti-RNA polymerase III (25%) antibodies, while 32% of patients tested negative for these two antibodies. Swollen and tender joint counts were present in 38 (31.4%) and 51 (42.1%) patients, respectively, while 35 patients (28.9%) had tendon friction rubs. Digital ulcers were present in 15 patients (12.4%) at baseline.

Conclusions: RISE-SSc has a unique trial design with a cohort enriched for disease progressors,² which is reflected in the baseline characteristics of the randomised patients. Results of the RISE-SSc study will provide data to inform not only the efficacy, safety and tolerability of riociguat treatment in patients with dcSSc, but also the feasibility of a new trial design based on cohort enrichment.

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