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Background: Scleroderma-associated interstitial lung disease (SSc-ILD) is often observed in patients with systemic scleroderma (SSc) and its diagnosis contributes to early treatment decisions[1,2].
Objectives: The present study aims to automatically quantify SSc-ILD from high-resolution chest-computed tomography (HRCT) and to evaluate the association between interstitial lung disease (ILD) extension and lung function impairment.
Methods: Ninety-four patients with SSc and 27 lung-healthy subjects matched for gender, weight, height, and age underwent HRCT, spirometry and carbon monoxide diffusion capacity (DL_{CO}). SSc-ILD was determined as the tissue mass present between -500 and +100 Hounsfield Units normalized by the total lung tissue mass (TLM). Cut off was the highest value obtained in the control group (25% of TLM). All data are presented as mean and standard deviations (Table I). An ANOVA test followed by Bonferroni post-hoc correction was used for comparisons among groups.
Results: From 94 patients with SSc, 64 were classified as having pulmonary involvement (SSc-ILD) and 30 as not having pulmonary involvement (SSc No-ILD). In SSc-ILD subjects, there was a significant reduction in forced vital capacity (FVC), carbon monoxide diffusion capacity (DL_{CO}) and carbon monoxide diffusion capacity normalized by alveolar ventilation (DL_{CO}/A) when compared with SSc No-ILD and control group.
Conclusion: The proposed method allows the automatic quantification of SSc-ILD from HRCT and ILD extent is associated with pulmonary function impairment.
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Table 1. Demographic variables, pulmonary function tests and densitovolumetry considering scleroderma patients with less or greater pulmonary involvement.

	Control Group N = 27	SSc No-ILD N = 30	SSc-ILD N = 64	p-value
Demographic Data				
Females	16 (59.2)	28 (93.3)	58 (90.1)	-
Age (years)	37.9 ± 14.8	51.2 ± 12.2	56 ± 14	**<0.011**[a,b]
BMI (kg/m^2)	26.7 ± 5.1	24.1 ± 5.0	25.9 ± 5.7	-
Lung Function				
FVC (% predicted)	100.2 ± 9.2	99.9 ± 19.8	69.8 ± 16.7	**<0.001**[b,c]
DLco (% predicted)	103 ± 13.3	83.8 ± 14.2	63.4 ± 20.3	**<0.002**[a,b,c]
DLco/A (% predicted)	112.7 ± 17.4	85.7 ± 12.9	79.2 ± 20.6	**<0.001**[a,b]
Densitovolumetry				
TLV mL	4675 ± 986	4471 ± 916	3492 ± 1120	**<0.001**[b,c]
Lung Tissue Mass (g)	793 ± 125	756 ± 159	731 ± 155	-
ILD Extent (% LTM)	17 ± 2	22.9 ± 1.2	32.6 ± 8	**<0.003**[a,b,c]

a: Statistically significant difference between No-ILD SSc and control group; b and c: Statistically significant difference between SSc-ILD vs control group and SSc No-ILD, respectively.

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AB0562 SLEEP HYGIENE: COULD IT BE A CONFOUNDING FACTOR FOR SLEEP QUALITY IN SYSTEMIC SCLEROSIS?

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Background: Sleep disturbances have been described in Systemic Sclerosis (SSc). Confounding factors related to sleep quality are also investigated. Although sleep hygiene plays an important role in sleep quality, as far as we know, there are not enough data to show the effect of sleep hygiene on sleep quality of SSc.
Objectives: To investigate sleep hygiene, its impact on sleep quality, and its association with demographic-clinical factors in patients with SSc, rheumatoid arthritis (RA), and healthy controls.
Methods: The study was designed as cross-sectional. Forty-nine patients with SSc who fulfilled the 2013 ACR/EULAR classification criteria for SSc, 66 patients with RA who fulfilled 1987 revised classification criteria, and 30 healthy controls were included in the study. All participants were female. Demographic and clinical variables were documented. Disease activity index of both SSc and RA was calculated. SSc patients were assessed by questionnaires including Short Form 36 (SF-36), The Health Assessment Questionnaire Disability Index (HAQ-DI), Beck Anxiety and Beck Depression Inventory, Pittsburg Sleep Quality Index (PSQI), Sleep Hygiene Index (SHI). Additionally, RA patients and healthy controls were estimated by HAQ-DI, Beck Anxiety and Beck Depression Inventory, PSQI, and SHI. Logistic regression analysis was used to determine the predictors of sleep quality.
Results: Preliminary results of the study were given. The baseline demographics were similar among groups. When comparing groups according to HAQ-DI, Beck Anxiety and Beck Depression Inventory, PSQI, and SHI, we found higher scores in SSc and RA rather than healthy controls (p<0.001, p=0.001, p=0.001, p<0.001, p=0.003; respectively). While depression and sleep hygiene were determined as the risk factors of sleep quality in SSc in univariate analysis, depression (OR=1.380, 95%CI: 1.065–1.784, p=0.015) and sleep hygiene (OR=1.201, 95%CI: 1.003–1.439, p=0.046) were also found in multivariate logistic model. In RA patients, while health status, depression, and anxiety were found as risk factors according to the univariate analysis, depression (OR=1.120, 95%CI: 1.006–1.245, p=0.038) was the only factor according to multivariate logistic model (Table).
Conclusion: Although depression is a well-known clinical variable impacting on sleep quality, sleep hygiene should also be kept in mind as a confounding factor.
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Table. Univariate logistic regression analysis of clinical variables to assess predictors of sleep quality

	Systemic sclerosis		Rheumatoid arthritis	
	OR (95% CI)	p	OR (95% CI)	p
HAQ-DI	1.019 (0.882–1.177)	0.801	1.089 (1.011–1.173)	**0.025**
BDI score	1.293 (1.082–1.547)	**0.005**	1.129 (1.036–1.230)	**0.006**
BAI score	1.080 (0.997–1.169)	0.059	1.122 (1.038–1.214)	**0.004**
SHI	1.200 (1.060–1.357)	**0.004**	1.048 (0.965–1.137)	0.264
Disease activity[a]	0.707 (0.439–1.138)	0.153	1.446 (0.839–2.492)	0.185

[a]Disease activity was calculated by Valentini disease activity index for SSc and DAS28-CRP for RA.

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AB0563 AORTIC ROOT DILATION IN ASSOCIATED WITH THE REDUCTION OF CAPILLARY DENSITY OBSERVED AT NAILFOLD CAPILLAROSCOPY IN SSC PATIENTS

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Background: Systemic sclerosis (SSc) in a chronic autoimmune disease characterized by endothelial dysfunction and diffuse microangiopathy, leading to tissue ischemia and inducing fibrosis of skin and visceral organs. Furthermore, it was demonstrated the impairment of wall elasticity of large-medium vessels, such as aorta and its branches (1). SSc-related microangiopathy of vasa vasorum of the aortic wall could also be supposed. However no data on this hypothesis are available in literature.
SSc microangiopathy may be easily studied at the nailfold by means of videocapillaroscopy. Indeed, capillaroscopic findings are representative of the microvascular damage caused by SSc troughout the body.
Objectives: we aimed to investigate the presence of aortic root dilation, classical sign of aortic wall damage, in a cohort of SSc patients, and to correlate these

findings with the capillaroscopic patterns (early, active, and late, according to Cutolo's classification (2)).
Methods: we recruited 125 SSc patients (M/F: 14/111, mean age 55+/-12.7 years, median disease duration 11 years) in 3 Rheumatology Centres in Sicily, Italy, from January to December 2019.
Transthoracic echocardiogram with aortic root diameter measurement was carried out in all patients. Moreover, videocapillaroscopy with identification of early, active, or late SSc patterns was performed in the whole case series. Patients with early SSc pattern formed the subgroup 1, while those with the active or late patterns (both characterized by the reduction of capillary density) the subgroup 2.
Results: we identified 8 (6.4%) SSc patients with aortic root dilation (diameter > 35 mm). Their age and their frequencies of cardiovascular risk factors were similar to the whole series. Moreover, videocapillaroscopy showed 62 (49.6%) early, 47 (37.6%) active, and 16 (12.8%) late SSc patterns.
Aortic root dilation was observed in only one patient in the subgroup 1 (1/62, 1.6%), and in 7 cases of the subgroup 2 (7/63, 11.1%); p=0.03.
Conclusion: in this multicentre study, we found that aortic root dilation is significantly associated with the reduction of capillary density at nailfold capillaroscopy (active or late SSc patterns). On the basis of these findings, we might argue that SSc-related microangiopathy of vasa vasorum could contribute to aortic wall damage, at least in a subset of SSc patients.
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AB0564 HEART VALVULAR ALTERATIONS IN A MULTICENTRE ITALIAN COHORT OF SSC PATIENTS

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Background: systemic sclerosis (SSc) in a chronic autoimmune disease characterized by endothelial dysfunction, diffuse microangiopathy, and fibrosis of skin and visceral organs. Typical cardiac involvement may includes microvascular ischemia, contraction band necrosis, and patchy fibrosis, leading mainly to arrythmias and conduction defects, diastolic dysfunction, or right ventricular failure (secondary to pulmonary arterial hypertension) [1]. Valvular diseases are poorly described and generally not considered a typical sign of SSc [2-4].
Objectives: we aimed to describe valvular alterations in a multicentre cohort of SSc patients.
Methods: we consecutively recruited 118 SSc patients (M/F: 14/104, mean age 56.7±12.4 years, median disease duration 10 years, limited/diffuse skin subsets: 95/23, anti-centromere/anti-Scl70/others autoantibodies: 35/37/46) in 3 Rheumatology Centres in Sicily, Italy, from January to December 2019.
Considering the cardiovascular risk factors, 40 (34%) patients were smokers, 7 (6%) diabetics, 12 (10%) showed hypercholesterolemia, 38 (32%) arterial hypertension, while none was obese. Transthoracic echocardiogram was carried out in all patients during their follow-up.
Results: valvular abnormalities were as follow: mitral valve: insufficiency 85 (72%) cases - mild in 77/85, stenosis 2 (2%) - mild in 25/28, sclerosis/tickening 36 (30%), and calcification 9 (8%) patients; aortic valve: insufficiency 28 (24%), stenosis 4 (3%), sclerosis 29 (25%), and calcification 7 (6%) patients; tricuspid valve: insufficiency 91 (77%) cases, no cases of stenosis, sclerosis 5 (4%), and calcification 1 (1%) patients; pulmonary valve: insufficiency in 13 (11%) patients.
As expected, tricuspid insufficiency (TI) was associated with pulmonary arterial hypertension (PAH) (moderate TI in 20% of patients with every TI and PAH vs. 4% of patients with TI without PAH, p=0.019).
Aortic sclerosis (AS) was associated with the presence of arthritis (AS in 35% of patients with arthritis vs. 16% of patients without, p=0.029).
No association was found with age, gender, disease duration, skin subset, autoantibodies, capillaroscopic patterns, presence of digital ulcers, lung, renal, or digestive involvements.
Conclusion: in this multicentre SSc cohort study, we found that cardiac valve alterations are very common, even though generally not clinically relevant. The presence of PAH was associated with more severe TI. Finally, AS was associated with arthritis that could be considered sign of chronic inflammatory state, which is often linked with accelerated atherosclerosis and remodeling process of aortic valve [5].
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AB0565 HOSPITALIZATION IN A COHORT OF PATIENTS WITH IDIOPATHIC INFLAMMATORY MYOPATHY: WHAT IS HAPPENING IN ARGENTINA?

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Background: Inflammatory myopathies are rare diseases that affect multiple organs and systems, with poor prognosis and high in-hospital mortality. [1,2] In Argentina there are few reported data regarding hospitalization and its outcomes in these patients.
Objectives: To analyze the characteristics of hospitalizations and the factors associated with poor outcome in adult patients with Idiopathic Inflammatory Myopathy (IIM).
Methods: Retrospective, analytical study. We included patients ≥ 18 years with IIM, according to Bohan and Peter and/or ACR / EULAR 2017 criteria, who were admitted in our hospital between 2003 and 2019 at least once. Sociodemographic and clinical data were recorded. We defined "unfavorable outcome" as the presence of one of the following events: death, mechanical respiratory assistance and/or critical care unit requirement. Continuous variables were compared by Student's or Mann Whitney's T test, and categorical variables by Chi^2 test or Fisher's exact test. Binary logistic regression was performed to identify independent factors associated with an unfavorable outcome.
Results: 61 hospitalizations of 40 patients with IIM were evaluated; 67.5% of the patients were female (27/40), with a mean age of 52.5 years (SD± 13). The most frequent reason of admission was for diagnosis (44.3%) followed by disease activity (31.1%). In 78.7% of hospitalizations (48/61) the diagnosis was dermatomyositis. The median of hospitalization days was 14 (IQR 8-30). In 21 out of 61 hospitalizations (34.4%), an unfavorable outcome was observed, of which 17 (80.9%) ended in death. Respiratory muscle involvement (p = 0.01), thrombocytopenia (p < 0.001), treatment with intravenous methylprednisolone pulses (p = 0.032), Intravenous Immunoglobulin (p = 0.001), longer hospitalization (p = 0.001) and severe infections (p = 0.001) were associated with adverse outcomes. In the multivariate analysis, serious infections (OR: 21.7; IC95 1.77 - 266; p = 0.016) and the requirement of Intravenous Immunoglobulin (IVIg) (OR: 54.5; IC95 1.4 - 214; p = 0.033) were found to be independently associated with an unfavorable outcome.
Conclusion: IIMs are diseases with high morbidity and mortality rate. In this cohort of hospitalized patients, we found a high percentage of unfavorable outcomes. Seriously ill patients received IVIg more frequently, and severe infections were associated with worse prognosis.