

smokers ( $\beta=-3.7$ ,  $p=0.006$ ) while on average the DLCO/VA decreased from 78.1 (SD 18) to 76.5 (SD 17). Changes in FVC were however not associated with smoking behaviour ( $p=0.13$ ).

The mRSS changed between baseline and follow-up from an average of 7.6 (SD 7) to 7.3 (SD 7); on average, in smokers the mRSS improved faster than in never smokers ( $\beta=-0.65$ ,  $p=0.015$ ). The presence of DUs at follow-up was not associated with current smoking ( $p=0.9$ ).

Having previously smoked was not significantly associated with the progression of any of the assessed outcomes.

**Conclusions:** Although the adverse effects of smoking on bronchial airways that is known in the general population could be replicated in the SSc population, the lack of a measurable adverse effect of smoking on SSc organ manifestations argues against a major role of tobacco associated free radicals and vasoconstriction in the pathogenesis of SSc vasculopathy and fibrosis.

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#### SAT0367 CAPILLAROSCOPY PATTERNS AMONG SYSTEMIC SCLEROSIS PATIENTS WITH GASTROINTESTINAL INVOLVEMENT AND MALNUTRITION EVALUATED BY SELF-REPORTED QUESTIONNAIRES

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**Background:** Gastrointestinal system (GI) is commonly involved in systemic sclerosis (SSc) beginning after early stages of disease.

**Objectives:** We aimed to investigate capillaroscopic findings among the SSc patients with GI involvement and malnutrition.

**Methods:** GI involvement was evaluated by UCLA SCTC GIT 2.0 questionnaire (Khanna D.) (7 multi-item; reflux, distension, soilage, diarrhea, social functioning, emotional wellbeing and constipation) in SSc patients ACR/EULAR classification criteria (2013). To report the nutrition status of the patients "malnutrition universal screening tool (MUST)" (sum of the scores of body mass index, weight loss in last 3-6 months and acute disease effect) scores were calculated. Simultaneously, nail fold video-capillaroscopy (NVC) was performed in all patients to determine early, active late scleroderma patterns (Cutalo et al.).

**Results:** In 58 SSc patients (51 female); the mean age, duration of Raynaud's, non-Raynaud symptom (year) and follow-up (month) were  $46\pm13$ ,  $54\pm50$ ,  $10\pm9$  and  $7\pm7$ , respectively. Limited cutaneous form, positive ANA and anti-Scl70, telangiectases, dysphagia, digital ulcers, lung disease were found in 40 (71%), 48 (83%) and 21 (36%), 45 (78%), 39 (67%), 33 (57%), 23 (40%) in patients, respectively. Of the NVC patterns, early was found in 16 (28%), active was in 11 (19%), late was in 28 (48%) and normal in 3 (5%). The scores of disease activity, severity and GI were shown to be higher in patients with late NVC pattern (table-1). Of the patients with MUST score of  $>0$  ( $n=10$ ), 9 had late and 1 had early NVC pattern.

Table 1. The scores of disease activity and severity and UCLA SCTC GIT 2.0 in SSc patients

	NVC (early)	NVC (active)	NVC (late)	p
Modified Rodnan skin score	4,3±5,1	8,3±6,9	12,3±7,5	P=0,001*
Telangiectasia score (Shah)	2,3±2,4	4,6±1,9	6±3,5	P<0,001*
Disease activity score (Valentini)	0,9±0,9	1,1±1,2	1,9±1,2	P=0,014*
Disease severity score (Medsgger)	3,4±2	4,6±3	6,5±2,6	P=0,001*
UCLA SCTC GIT 2.0	0,063±0,111	0,259±0,288	0,353±0,327	P=0,002*
Reflux	0,263±0,415	0,500±0,509	0,874±0,667	P=0,002*
Distension	0,118±0,357	0,296±0,498	0,564±0,881	NS
Soilage	0±0	0±0	0,107±0,315	NS
Diarrhea	0±0	0,500±0,741	0,268±0,552	NS
Social functioning	0±0	0,105±0,237	0,184±0,406	NS
Emotional wellbeing	0,011±0,050	0,211±0,372	0,118±0,308	NS
Constipation	0,184±0,380	0,159±0,322	0,259±0,469	NS

\*Bonferroni, NS = not significant.

**Conclusions:** This SSc cohort predominantly had limited cutaneous disease and vascular manifestations. In patients with late scleroderma pattern, severity of GI was higher similar to disease activity and severity. Undernutrition was frequently seen in patients with late pattern. NVC might be useful to predict the severity of GI and malnutrition and allow to direct the patients to required procedures earlier.

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#### SAT0368 THE PREVALENCE OF OSTEOMYELITIS IN INFECTED DIGITAL ULCERS IN SYSTEMIC SCLEROSIS PATIENTS

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**Background:** Skin ulcers, particularly digital ulcers occur in at least 50% of systemic sclerosis (SSc) patients (pts) and cause significant morbidity. They are often complicated by local infection which can lead to contiguous osteomyelitis.

**Objectives:** Our aims were to evaluate the accuracy of clinical diagnosis of osteomyelitis and to assess whether there are clinical parameters that may improve the precision of the clinical diagnosis.

**Methods:** We retrospectively analyzed the clinical data of consecutive SSc patients hospitalized for skin ulcers in a tertiary referral center for SSc. Our cohort is part of the EUSTAR cohort. The patients were evaluated by rheumatologists skilled in managing SSc skin lesions. All the patients with infected ulcers and suspected for contiguous involvement of underlying bone had bone scans. All the positive scans were followed with 99m-Technetium-Tc-labeled white blood cells (WBC) scintigraphy, in order to differentiate true osteomyelitis from acro-osteolysis or soft tissue infection. We collected demographic data, disease type, extent and severity, routine lab data (CBC, C-reactive protein -CRP, erythrocyte sedimentation rate (ESR), alkaline phosphatase (ALKP), albumin) and wound culture. Each hospitalization was considered a separate event. Statistical analysis: descriptive, student's T test, Mann-Whitney test.

**Results:** During the years 2003-2016, 220 SSc pts with skin/digital ulcers were hospitalized in our department for ilomedin treatment (993 hospitalizations). Most of the pts were hospitalized several times due to recurrent ulcers. Tc bone scan was performed in 39 pts (59 admissions) with infected ulcers (32 females, mean (SD) age 48 (15), disease duration 9 (6.6) years, 25 with diffuse SSc, skin score (MRSS) 9.9 (8)). Osteomyelitis was confirmed in 18 pts on 23 occasions. Osteomyelitis occurred twice in 5 pts in different locations. No statistically significant differences were found between the group with positive scans and the group with negative scans regarding demographic, clinical and lab data. 9 pts had 25 admissions for infected ulcers, osteomyelitis was confirmed in 14 of the admissions. No statistically significant differences were found for CBC ESR CRP ALKP between the osteomyelitis events and superficial infected ulcer admissions in these pts. The causative infectious agents were similar between the 2 groups. Positive bone and WBC scans confirmed osteomyelitis in 39% of clinical suspected cases. WBC scans confirmed osteomyelitis in 75% of the patients with positive Tc bone scans.

**Conclusions:** The prevalence of osteomyelitis among our SSc pts admitted for digital ulcers was 10%. The prevalence of confirmed osteomyelitis by scintigraphy in clinically highly suspected cases was 39%. Even when contiguous osteomyelitis was suspected by highly skilled rheumatologists, bone scan ruled out the diagnosis in 61% of the cases, thus avoiding unnecessary prolonged antibiotic therapy. No clinical predictors to rule osteomyelitis in or out could be identified.

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#### SAT0369 HETEROGENEITY IN THE UNDERLINING PATHOGENESIS IN PATIENTS WITH CONNECTIVE TISSUE DISEASE-ASSOCIATED BORDERLINE MEAN PULMONARY ARTERIAL PRESSURE AND ITS DISTINCTIVE HEMODYNAMIC CHARACTERISTICS FROM THOSE WITH NORMAL PULMONARY ARTERIAL PRESSURE

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**Background:** Borderline mean pulmonary artery pressure (PAP) (21-24 mmHg) may comprise a transition phase from normal pulmonary hemodynamic condition to pulmonary arterial hypertension (PAH), which is one of the fatal complications in connective tissue diseases (CTD) [1]. The accumulated evidence is not enough to conclude that treatment for PAH in this stage may be associated with improving clinical outcomes. On the other hand, CTD-associated PH is caused by various cardiopulmonary comorbidities. It is possible that borderline mean PAP, like overt PH, is caused not only by pulmonary vasculopathy but also by cardiac and pulmonary complications [2].

**Objectives:** To clarify whether patients with borderline mean PAP associated with CTD have distinctive hemodynamic characteristics from those with normal mean PAP and its underlining pathogenesis is heterogeneous as those with manifest PH.

**Methods:** We retrospectively investigated 76 CTD patients who underwent right heart catheterization from 2008 through 2016. Of the 76 patients, 25 (33%) and 16 (21%) had manifest PH and borderline mean PAP, respectively. The rest of the 35 patients had normal mean PAP. Systemic sclerosis was the most common