Lung function as measured by FVC on median PRO scores and the correlation of PROs in reflecting different lung functional stages is a relevant issue in SSc. Our aim was to evaluate the performance of Patient Reported Outcomes (PROs) commonly used in SSc (Scleroderma-Health Assessment Questionnaire (SHAQ), Cochin Hand Function Scale (CHFS) and Borg dyspnoea scale) and PROs related to the specific lung disease (FVC%-predicted (%pFVC), DLCO%-predicted (%pDLCO); SHAQ score calculated as the mean value of HAQ (0-3) with the average of the 7-VAS (score 1-10) were 1: pain, 2: general function, 3: arthritis, 4: gastrointestinal, 5: dyspnoea, 6: Raynaud Phenomena, 7: digital ulcers. The correlation of FVC with distinct PROs, and the inter-PRO correlation, were analysed through the non-parametric Spearman test.

**Results:** Complete data were available from 182 visits of 87 SSc patients (41 with diffuse and 46 with limited cutaneous involvement), Mean %pFVC was 95.16±24.93 (median 95) and mean %pDLCO was 59.31±16.51 (median 59). Overall, FVC and DLCO showed a moderate correlation with SHAQ (r=0.36, p<0.001 and r=0.24, p=0.001 respectively), while Borg score showed a stronger negative correlation with FVC and DLCO (r=-0.42 and r=-0.38, p<0.001 for both). In a sub-analysis of patients grouped by FVC, patients with FVC 50-70% showed a significantly lower correlation with FVC with SHAQ (r=0.47, p=0.012), which was not present in patients with FVC 70-90% (r=-0.23, p=0.13). VAS-5 dyspnoea and Borg were not associated with FVC in these two subgroups of patients.

Inter PROs analysis showed that CHFS score had a stronger correlation with SHAQ than Borg dyspnoea score in the overall population (r=0.86 vs. r=0.57, both p<0.001).

**Conclusion:** The analysis of a single centre prospective cohort of SSc patients, suggests a small inference of lung function in the overall SHAQ. The stronger correlation of SHAQ with CHFS, than with Borg score, suggests a higher weight of hand function on SHAQ in this population with relatively preserved lung function. In patients with %pFVC <70%, the correlation with SHAQ was stronger than in patients with %pFVC >70%, suggesting that mild reductions in FVC might not be perceived by the patients, or at least they might not modify HRoQ as measured by SHAQ.

**REFERENCES:**