



THU0341 DIGITAL ARTERY VOLUME INDEX (DAVIX©) PREDICTS THE ONSET OF FUTURE DIGITAL ULCERS IN PATIENTS WITH SYSTEMIC SCLEROSIS K. Gjeloshi¹, F. Danzo¹, G. Lettieri², G. Abignano², M. Hinton³, A. M. Dean^{4,5}, G. Cuomo¹, O. Kubassova³, F. Del Galdo^{*4,5}. 1 University of Campania "Luigi Vanvitelli", Napoli, Italy; 2 Istituto Reumatologico Lucano (IReL), Azienda Ospedaliera Regionale San Carlo, Potenza, Italy; 3 IAG CEO, London, United Kingdom; 4 NIHR Leeds Biomedical Research Centre, Leeds Teaching Hospitals NHS Trust, Leeds, United Kingdom; 5 Leeds Institute of Rheumatic and Musculoskeletal Medicine, University of Leeds, Leeds, United Kingdom Background: Neointima proliferation is a key pathologic feature of Systemic Sclerosis (SSc), causing arterial vessel narrowing and being the recognised culprit pathological lesion in Digital Ulcers (DUs), pulmonary artery hypertension and renal crisis. Nevertheless, there are no validated imaging techniques to assess the severity of vascular involvement in SSc. Digital Artery Volume index (DAVIX ©) is an MRI Time of flight angiography based quantitative score of digital arteries flow, without the need to administer contrast. Objectives: To determine the value of DAVIX in predicting the onset of digital ulcers (DUs), the worsening of patient reported outcomes (PROs) and clinical parameters in SSc patients. Methods: We enrolled 91 consecutive patients affected by Raynaud's phenomenon, 63 of which fulfilled the 2013 ACR/EULAR classification criteria for SSc and 28 had a score with current DUs was 3-fold lower than DAVIX of patients without DUs (0.18 vs 0.63 p=0.0093). Further, DAVIX of patients with positive history of DUs was 50% lower than in patient with a negative history (median 0.34 vs 0.64, p=0.0052). In patients without current DUs, DAVIX of patients who developed new DUs within 12 months of follow-up was 3-fold lower than in patients who didn't develop DU (0.21 vs 0.65, p=0.0156). ROC curve analysis indicated that DAVIX threshold