to express severity of psoriasis (Ps) and percentage of affected area. Leeds enthesitis index (LEI) comprised assessment of lateral epicondyles of humerus, medial condyles of femur, and the insertion of the Achilles tendon. Madrid Sonographic Enthesitis Index (MASEI) was applied to quantify the extent of sonographic enthesal abnormalities. MASEI-inflammatory, MASEI-damage and as a sum of these MASEI-total scores were recorded. NVC was performed on eight fingers in each subject.

Results: We enrolled 34 patients with PsA (median age=47.74 years, median disease duration=6.91 years) and 22 HC (median age=46.77 years). There were no significant differences between two groups concerning age, gender distribution and body mass index. Ps and PsA disease duration in terms of years were not correlated with MASEI and NVC scores. PASI score associated with MASEI-inflammatory score ($r=0.40$, $p=0.01$). There were significant correlation between the NVC score and MASEI-inflammatory ($r=0.53$, $p=0.001$) and MASEI-total scores ($r=0.35$, $p=0.04$) (Table 1). No association was found between LEI and NVC scores ($p=0.34$). MASEI enthesitis and NVC scores were significantly higher in the patient group ($p=0.00$).

Table 1. Correlation between the capillaroscopy findings and MASEI-inflammatory and MASEI-total scores in patients with psoriatic arthritis

MASEI	Capillaroscopy	
	PsA	HC
MASEI-inflammatory		
<i>r</i>	0.53**	0.7
<i>p</i>	0.001	0.75
MASEI-total		
<i>r</i>	0.35*	0.19
<i>p</i>	0.04	0.38

Spearman's Correlation Coefficient; ** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

$p < 0.05$ statistic significance

MASEI: Madrid Sonographic Enthesitis Index, PsA: psoriatic arthritis, HC: healthy controls

Conclusion: NVC may objectively reflect the peripheral enthesopathy severity and give opportunity for early diagnosis of PsA.

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SAT0407

FOLLOW-UP EXAMINATION FOR THE DETECTION OF POTENTIAL PSORIATIC ARTHRITIS BY FLUORESCENCE OPTICAL IMAGING – IN COMPARISON TO MUSCULOSKELETAL ULTRASOUND

J. Büttner¹, A. M. Glimm¹, G. Kokolakis², M. Erdmann-Keding², G. R. Burmester¹, J. Klotsche^{3,4}, S. Ohrndorf¹. ¹Charité - Universitätsmedizin Berlin, Department of Rheumatology and Clinical Immunology, Berlin, Germany; ²Charité - Universitätsmedizin Berlin, Department of Dermatology, Venerology and Allergology, Berlin, Germany; ³German Rheumatism Research Centre (DRFZ) Berlin, Berlin, Germany; ⁴Charité - Universitätsmedizin Berlin, Institute for Social Medicine, Epidemiology and Health Economics, Berlin, Germany

Background: Up to 30% of all plaque-type psoriasis patients develop psoriatic arthritis (PsA) (1). Early diagnosis of PsA can be difficult due to its heterogeneous manifestation and the lack of disease-specific biomarkers, but it is crucial for disease outcome. Recently, our group has shown that fluorescence optical imaging (FOI) can be a helpful diagnostic tool for early PsA diagnosis since it can differentiate between patients with confirmed PsA and suspected PsA (2).

Objectives: To follow-up patients by FOI with confirmed and suspected PsA with special focus on the group of patients in which PsA could be confirmed between baseline and follow-up – and to compare with the findings of musculoskeletal ultrasound (US).

Methods: Patients included in our previous study (1) were re-evaluated by FOI of both hands in a standardized manner using the predefined phases 1-3 (p1-p3) and the PrimaVistaMode (PVM). US in greyscale (GS) and power Doppler (PD) were performed of the clinically dominant hand (for tenderness and/or swelling)

SAT0406

THE ASSOCIATION BETWEEN PERIPHERAL ENTHESITIS SCORES AND NAILFOLD VIDEOCAPILLAROSCOPY FINDINGS IN PATIENTS WITH PSORIATIC ARTHRITIS

P. Bora Karsli¹, N. Guven¹, I. Sunar², Ş. Ataman¹. ¹Ankara University, Department of Rheumatology, Department of PMR, Ankara, Turkey; ²Aydın, Ataturk Public Hospital, Department of Rheumatology, Department of PMR, Aydın, Turkey

Background: Enthesitis is one of the key feature of psoriatic arthritis (PsA), it is usually overlooked in the asymptomatic patients. Nail disease often precedes PsA and nailfold videocapillaroscopy (NVC) is a useful technique for evaluating changes in microcirculation of nail that is considered to play an important role for early detection of enthesitis and PsA [1-4].

Objectives: To investigate the link between NVC findings and severity of peripheral enthesitis scores in patients with PsA.

Methods: In this cross-sectional single center study, 34 consecutive PsA patients and as control group (healthy controls - HC), 22 subjects without rheumatic diseases were involved. Psoriasis area severity index (PASI) was used

in the dorsal and palmar view at wrist, MCP, PIP and DIP 2-5 joint levels for synovitis and tenosynovitis.

Subsequently, a comparison of the findings in the affected joints was performed using US as the reference method. Furthermore, AUC was calculated to show the extent to which a new joint inflammation was associated with a change in diagnosis.

Results: Of the 60 patients initially examined (1), 30 patients (dropout rate 50%) were followed-up approximately 3 years later. The patients were newly divided into 3 groups: Diagnosed PsA (n=14, Group I), still suspected PsA, (n=6, Group II) and in-between diagnosed PsA (n=10, Group III). Patients with a change in the diagnosis from suspected to diagnosed PsA (Group III) showed a significantly increased prevalence of joints with pathological findings in FOI (46% at baseline, 88% at follow-up; $p=0.046$), with an unchanged joint distribution pattern, i.e. with a dominant involvement of the DIP joints. Compared to baseline, patients of group III were three times more common to show enrichment in p3 in FOI at follow-up (1.7% vs. 7.0%; $p=n.s.$). Newly detected pathologic joints by FOI (PVM, p2) and US at follow-up were positively associated with the change of diagnosis from suspected PsA to confirmed PsA (FOI: AUC 0.78; GSUS: AUC 0.77). Using US in greyscale as reference, inflammatory changes in the joints were diagnosed in all 3 cohorts by means of FOI in P1 and P3 with high specificity (Group III: 90.6%, Group II: 97.5%, Group I: 94.2%) and low sensitivity (Group III: 24.4%, Group II: 20.3%, Group I: 19.8%).

Conclusion: FOI appears to be helpful to differentiate between acute and chronic disease stages. Furthermore, it is specific for detecting inflammatory changes in the joints of the hands in PsA – in comparison to US. FOI could thereby become a helpful tool as a “dermatological-screening” method to select psoriasis patients with indication for further rheumatological evaluation.

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SAT0408

UTILITY OF CAROTID ULTRASOUND AND FRAMINGHAM RISK SCORE ON DISCRIMINATING CORONARY ARTERY DISEASE IN PATIENTS WITH PSORIATIC ARTHRITIS (PSA)

I.T. Cheng¹, K. T. Wong², E. Li¹, P. C. Wong², B. T. L. Lai³, C. W. Yim³, S. K. Y. Ying⁴, K. Y. Kwok⁵, M. Li¹, T. K. Li¹, J. J. W. Lee¹, A. P. W. Lee¹, L. S. Tam¹.

¹The Chinese University of Hong Kong, Hong Kong, Hong Kong (SAR); ²Prince of Wales Hospital, Hong Kong, Hong Kong (SAR); ³Tseung Kwan O Hospital, Hong Kong, Hong Kong (SAR); ⁴Princess Margaret Hospital, Hong Kong, Hong Kong (SAR); ⁵Queen Elizabeth Hospital, Hong Kong, Hong Kong (SAR)

Background: While carotid ultrasound (US) has been advocated for cardiovascular (CV) risk screening in patients with rheumatoid arthritis as various traditional scores underestimate CV risk, whether subclinical carotid atherosclerosis (SCA) is associated with coronary atherosclerosis on coronary computed tomography angiography (CCTA) in patients with psoriatic arthritis (PsA) remains uncertain.

Objectives: This study aimed to identify carotid US parameters which can discriminate PsA patients with coronary artery disease (CAD) and obstructive CAD (O-CAD), and determine the utility in combination with Framingham Risk Score (FRS).

Methods: Ninety-one PsA patients (56 males; age: 50±11years, disease duration: 9.4±9.2years) without overt CV diseases were recruited. Carotid intima-media thickness (cIMT), presence of plaque and total plaque area (TPA) were determined by high-resolution US. CAD was defined as the presence of any coronary plaque on CCTA. O-CAD was defined as >50% stenosis of the lumen. FRS <10% indicates low CV risk, 10-19% indicates intermediate risk while ≥20% indicates high risk (1).

Results: Thirty-five (38%) patient had carotid plaque. Fifty-five (60%) patients had CAD and 9 (10%) patients had O-CAD. 53 (58%), 25 (17%) and 13 (14%) were classified as low, moderate and high CV risk according to the FRS respectively. FRS underestimated the CV risk as only 11/55 (20%) of subjects with CAD were correctly identified as having high CV risk by FRS (Figure 1). Fifteen patients out of 53 (28%) with low CV risk based on FRS were reclassified as high CV risk by the presence of carotid plaque. Nine out of these 15 (60%) had CAD and 1/15 (6.7%) had O-CAD. Concerning the carotid ultrasound parameters, cIMT (mean and maximum) and TPA were increased in both the CAD+ and O-CAD+ group compared to those without CAD or O-CAD (Table 1). Multivariate

logistic regression analysis revealed that mean cIMT (OR=1.06, 95% CI:1.01-1.11, $p=0.013$) was an independent explanatory variables associated with CAD. Meanwhile, mean cIMT (OR=1.06, 95%CI: 1.01-1.11, $p=0.013$) maximum cIMT (OR=1.06, 95%CI: 1.00-1.13, $p=0.043$), and TPA (OR=1.55, 95%CI: 1.01-2.36, $p=0.043$) were independent explanatory variables associated with O-CAD after adjusting for covariates. Based on Receiver Operating Curve (ROC) analysis, an optimal cut off for FRS at 5% and mean cIMT at 0.62mm yield 63% sensitivity and 73% specificity for the presence of CAD (AUC: 0.71, $p=0.001$).

Table 1. Relationship between carotid ultrasound parameters and the presence and extent of coronary artery disease on coronary computed tomography angiography.

	Coronary artery disease						<i>p</i>
	No (n=37)			Yes (n=54)			
Mean carotid IMT, mm	0.63	±	0.12	0.69	±	0.1	0.017
Maximum carotid IMT, mm	0.77	±	0.17	0.84	±	0.14	0.040
Carotid Plaque, n, %							
Absence	26		46.4%	30		53.6%	0.156
Presence	11		31.4%	24		68.6%	
Total plaque area, mm ²	0.0		[0,6]	0.0		[0, 10.8]	0.059

	Obstructive coronary artery disease						<i>p</i>
	No (n=82)			Yes (n=9)			
Mean carotid IMT, mm	0.65	±	0.12	0.76	±	0.07	0.011
Maximum carotid IMT, mm	0.80	±	0.16	0.93	±	0.14	0.020
Carotid Plaque, n, %							
Absence	53		93.0%	4		7.0%	0.235
Presence	29		85.3%	5		14.7%	
Total plaque area, mm ²	0.0		[0, 7.0]	6.0		[0, 15.3]	0.103

IMT-intima media thickness; coronary computed tomography angiography.

Conclusion: Increased cIMT and TPA were associated with CAD and O-CAD in PsA patients while the presence of carotid plaque alone was insufficient to discriminate patient with or without CAD. A combination of US parameters should be considered for CV risk stratification in patients with PsA.

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Figure 1.

CV Risk classification based on Framingham risk score (FRS) (A&C) (high CV risk: FRS ≥20%; intermediate CV risk: FRS 10-19%; low CV risk: FRS <10%) and CV Risk classification based on the presence of carotid plaque (high CV risk) and absence of carotid plaque (low CV risk) (B&D) in patient with or without CAD/O-CAD

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SAT0409

BIOLOGIC TREATMENT IN PSORIATIC ARTHRITIS AND AXIAL SPONDYLOPATHY REDUCES SICKNOTES ISSUED BY GPS, DESPITE DELAYS IN DIAGNOSIS: A REAL-LIFE STUDY IN WALES.

E. Choy¹, S. Brophy², R. Cooksey², L. Hanson³, A. Halliday⁴. ¹Cardiff University, CREATE Centre, Section of Rheumatology, Cardiff, United Kingdom; ²Swansea University, Swansea, United Kingdom; ³Novartis Pharmaceuticals UK Limited,