comparison with the HC. The latter PSD analysis resulted positively correlated with ESR ($p=0.01$; $r=0.5$) and CRP values ($p=0.001$; $r=0.4$). FP mean differential sensitivity and FP mean defect values were lower in PsA patients with respect to HC ($p<0.0001$ for both the comparisons, figure 1E-F) and resulted negatively correlated with the age ($p=0.03$ $r=-0.4$ for both the correlations, figure 1G-H). SD-OCT in the posterior pole (superior and inferior hemifields) did not reveal differences for the mean retinal thickness between PsA patients and HC.

Conclusions: Intriguingly, an impairment in quality of tear film in PsA patients was observed compared to HC. The correlation between ESR and dry eye tests may be explained with a potential relationship between systemic inflammation and sicca syndrome.

Interestingly, PsA patients showed a retinal functional impairment by reduced retinal sensitivity measured by MD, FP mean differential sensitivity and FP mean defect values.

To our knowledge this is the first study investigating eye function and morphology in PsA patients. Further studies are needed to confirm and explain these results.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4554

SAT0309 UNDERESTIMATION OF CARDIOVASCULAR EVENTS BY CARDIOVASCULAR RISK SCORES IN PSORIATIC ARTHRITIS PATIENTS

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Background: Compared with the general population, patients with Psoriatic Arthritis (PsA) have elevated risks of developing cardiovascular diseases (CVD). The performances of established CVD risk scores in PsA patients have not been fully evaluated yet. European League Against Rheumatism (EULAR) recommends a 1.5 multiplication factor to these CVD risk scores when it is applied in rheumatoid arthritis patients. Whether the same multiplication factor could improve the performance of the risk scores in PsA patients is unknown.

Objectives: To investigate the performances of various CVD risk scores and their EULAR modified versions for predicting CVD events in PsA patients

Methods: Prospectively collected data from the two Hong Kong PsA cohort was used. Discriminatory ability for CV risk prediction was estimated by the area under the receiver operating characteristic curve (AUC). Four different CVD risk scores namely Framingham risk score (FRS), QRISK II, HeartScore and American College of Cardiology and American Heart Association (ACC/AHA) 10 year atherosclerotic cardiovascular disease (ASCVD) and their EULAR modified versions were calculated at baseline. The primary outcome was first CVD events, including stable and unstable angina, myocardial infarction, ischaemic and haemorrhagic stroke, transient ischaemic attack, heart failure, coronary insufficiency, pericardial disease, peripheral arterial disease, thrombosis, percutaneous coronary intervention (angioplasty), coronary artery bypass graft, implantation of pacemaker or defibrillator and CVD death.

Results: 228 patients [48.9±11.8 years, male: 124 (54.4%)] were recruited between 2006 to 2016. Baseline data were available from 227, 226, 226 and 188 patients to calculate the FRS, QRISKII, HeartScore and ASCVD, respectively. After a mean follow up of 6.7±4.7 years, 30 patients (13.2%) experienced a CVD event (CVD +group). At baseline, the CVD +group was significantly older (57.8±12.0 vs 47.6±11.2 years; $p<0.001$), with a higher prevalence of diabetes (26% vs 12%; $p<0.021$), had higher systolic blood pressure (SBP: 142±22.0 vs 128

±19.6 mmHg; $p<0.001$) and higher triglycerides (TG: 1.9±1.3 vs 1.4±0.8 mmol/L, $p=0.027$). All CVD risk scores were significantly higher in the CVD +group (FRS: 18.3±13.1 vs 8.9±8.7, $p<0.001$; QRISKII: 11.9±8.6 vs 4.9±5.0, $p<0.001$; HeartScore: 2.3±2.1 vs 0.9±1.3, $p=0.001$; ASCVD: 14.5±12.8 vs 4.8±5.2, $p=0.001$). AUC for FRS, QRISKII, HeartScore and ASCVD were 0.74 (0.64–0.83, $p<0.001$), 0.76 (0.66–0.86, $p<0.001$), 0.72 (0.62–0.83, $p<0.001$), and 0.77 (0.67–0.86, $p<0.001$), respectively. In total, 76 (33.5%), 9(4.0%), 7 (3.1%) and 47 (25.0%) patients were classified as high CVD risk according to FRS >10%, QRISK II>20%, HeartScore >5% and ASCVD >7.5% respectively. In the CVD +group, those identified as high risk were only 63% (by FRS), 20% (by QRISK2), 13.3% (by HeartScore) and 46% (by ASCVD) (figure1a). By applying the EULAR multiplication factor, 80%, 36%, 26.67% and 56.7% of the patients with CVD +were reclassified as high risk (figure1b).

Abstract SAT0309 – Figure 1

Conclusions: All CVD risk scores significantly underestimated CVD risks among PsA patients. This study demonstrated for the first time that adaptation of the EULAR recommendation only improved the accuracy of FRS to a moderate level.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6074

SAT0310 THE ASSOCIATIONS OF SERUM IL18 AND OSTEOPROTEGERIN (OPG) LEVELS WITH THE LIPID PROFILE IN PSORIATIC ARTHRITIS (PSA) PATIENTS

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Background: We have previously found that IL-18 and OPG serum concentrations are correlated with cardiovascular (CV) risk in psoriatic arthritis but not in ankylosing spondylitis (AS) patients.¹

Objectives: To investigate whether in PsA patients the association of OPG and IL-18 with CV risk is mediated by an impact of these cytokines on lipid profile changes.

Methods: 49 patients with PsA (25 M/24 F) with (n=10) and without (n=39) coronary heart disease (CHD), and 25 sex and age matched (mean age 44.4 vs 43.4 years) patients with AS were enrolled. Disease activity was measured by DAPSA (25,17±19.9) in PsA group and by BASDAI (5,37±2) and ASDAS- CRP (3,18±1) in AS group. The lipid profile (triglycerides – TG, total cholesterol – tChol, low- and high-density lipoprotein – LDL and HDL, respectively), systemic inflammation markers and cytokines (OPG, IL-18) were measured in patients serum samples. Atherogenic index (AI=tChol/HDL) was calculated. Statistical analysis was performed using Mann-Whitney U-test and Spearman's Rank test. Data are expressed as mean values.

Results: Patients with PsA presented more atherogenic lipid profile than AS patients because of their higher TG levels (153 vs 126.6 mg/dl; $p=0.05$) and AI values (3.83 vs 3.24; $p=0.05$) while lower HDL concentrations (51.6 vs 61.4 mg/

dl; $p=0.04$). Compared to AS group, PsA patients were characterised by higher IL-18 (235 vs 208 pg/ml; $p<0.05$) but lower OPG (815 vs 1660 pg/ml; $p<0.05$) serum levels. In PsA patients without CHD, serum OPG positively but moderately correlated with LDL ($r=0.3$; $p=0.05$), TG ($r=0.43$; $p=0.007$) and AI ($r=0.45$; $p=0.004$). Moreover, in this PsA patients subgroup we confirmed previously observed¹ inverse correlation of IL-18 with HDL levels ($r=-0.34$; $p=0.05$) and positive correlation of this cytokine with both TG levels ($r=0.37$; $p=0.04$) and AI values ($r=0.53$; $p=0.002$). Interestingly, similar but stronger associations of IL-18 with HDL levels ($r=-0.88$; $p=0.004$) and AI values ($r=0.88$; $p=0.004$) were presently found in PsA patients with accompanied CHD. Consistently with our previous report,¹ we failed to find any correlations between CV risk, lipid profile, and tested cytokines serum concentrations in patients with AS.

Conclusions: We report that in PsA, but not AS, patients serum IL-18 and OPG concentrations are correlated with an altered and pro-atherogenic lipid profile. These associations are stronger in patients with concomitant CHD. Thus, present results explain partially the way by which these cytokine contribute to CV complications in PsA.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4647

SAT0311

PREVALENCE AND FACTORS RELATED TO INAPPROPRIATELY HIGH LEFT VENTRICULAR MASS IN PATIENTS WITH PSORIATIC ARTHRITIS WITHOUT OVERT CARDIAC DISEASE

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Background: Early cardiovascular (CV) involvement has been found in patients with psoriatic arthritis (PsA). These patients may have a high prevalence of sub-clinical left ventricular (LV) dysfunction, even without established CV disease and in the absence of traditional CV risk factors. However, currently, the factors associated with LV dysfunction in PsA are unknown. Patients with inflammatory disorders are exposed to the development of excessive left ventricular mass disproportionate to the need to compensate left ventricular load, a condition named 'inappropriately high left ventricular mass' (iLVM). Previously, we have shown that iLVM is associated with unfavourable prognosis in patients with rheumatoid arthritis independent of traditional CV risk factors.

Objectives: In this cross-sectional study, we assessed the prevalence and factors associated with iLVM in a cohort of patients with PsA and tested the hypothesis that PsA is *per se* related to iLVM.

Methods: We evaluated 101 non-institutionalised patients >18 years of age diagnosed with PsA according to CASPAR criteria and consecutively recruited between March 2014 and December 2016. All PsA patients were free of symptoms or signs of cardiovascular disease. Patients with PsA were compared with 101 controls matched for age, sex, BMI, prevalence of hypertension and diabetes. Left ventricular chamber dimensions and wall thicknesses were measured according to the American Society of Echocardiography guidelines and predicted LVM was calculated using a validated equation considering height, sex and left ventricular work. iLVM was defined as measured/predicted LVM ratio above the 95% percentile of a reference population of healthy controls.¹

Abstract SAT0311 – Table 1. Variables significantly related to iLVM in the entire study population (101 patients with PsA and 101 matched controls).

Predictors	OR	95% CI	P value
Psoriatic arthritis	6.91	2.80–17.06	<0.001
Waist circumference	1.04	1.00–1.07	0.047
Dyslipidemia	0.85	0.39–1.89	0.696
Hypertension	1.29	0.56–2.96	0.547
Diabetes mellitus	2.42	0.60–9.79	0.214
Age	1.02	0.98–1.07	0.291
Sex (male)	1.27	0.57–2.84	0.559

Results: iLVM was detected in 58% of patients with PsA and 18% of controls ($p<0.001$). In multivariable logistic regression analysis considering only patients with PsA, the variables independently associated with iLVM were left ventricular

systolic dysfunction (LVSD) measured as mid-wall shortening and concentric left ventricular geometry. In multiple regression analyses considering the entire study population (patients with PsA and matched controls), the diagnosis of PsA was significantly associated with iLVM independent of traditional cardiovascular risk factors (OR 6.91, 95% CI 2.80–17.06, $p<0.001$; table 1).

Conclusions: More than 50% of patients with PsA have a disproportionate increase in their LVM. An inappropriately high LVM in PsA is associated with LV systolic dysfunction and LV concentric geometry.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2953

SAT0312

INCIDENCE OF INFECTIONS IN CLINICAL TRIALS OF TILDRAKIZUMAB FOR MODERATE TO SEVERE CHRONIC PLAQUE PSORIASIS

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Background: Risk of infections is a concern with cytokine inhibitor treatments.

Objectives: This analysis assessed infections during phase 2 and 3 trials of tildrakizumab (TIL), a high-affinity, humanised, immunoglobulin G1/κ monoclonal antibody against IL-23p19 under development for moderate to severe chronic plaque psoriasis.

Methods: Patients were randomised in P05495 (phase 2; NCT01225731), reSURFACE 1 (phase 3; NCT01722331), and reSURFACE 2 (phase 3; NCT01729754). In Part 1 (Weeks 1–16) of P05495, patients received subcutaneous (SC) TIL 5, 25, 100, or 200 mg or placebo (PBO) at Weeks 0 and 4 and were rerandomized to various TIL doses in Part 2 (Weeks 16–52). In Part 1 (Weeks 1–12) of reSURFACE 1 and 2, patients received SC TIL 200 mg, TIL 100 mg, or PBO at Weeks 0 and 4. Patients were rerandomized in Part 2 (Weeks 12–28) and Part 3 (Weeks 28–64 or –52 in reSURFACE 1 and 2, respectively). Etanercept (ETN) 50 mg was an active control in Parts 1–2 of reSURFACE 2. Treatment-emergent adverse event (AE) data pools (n=2081) for the PBO-controlled and full trial periods (52 weeks for P05495/reSURFACE 2; 64 weeks for reSURFACE 1) were analysed. Severe infections met the regulatory definition of a serious AE or required intravenous antibiotics.

Results: In the PBO-controlled period, incidences of infections were comparable for TIL 100 mg and 200 mg (23% and 22%, respectively) and PBO (23%); all were comparable with ETN (24%). Incidences of severe infections were low for all treatment groups (range, 0.0%–0.3%; $TIL \geq 0.6$ vs PBO). In the full trial period, exposure-adjusted rates (patients/100 patient-years) for infections with TIL 100 mg and 200 mg (48.9 and 52.6, respectively) were lower than with PBO and ETN (79.5 and 86.0, respectively). Exposure adjusted rates for severe infections were 1.10, 1.61, 1.96, and 0.91 for TIL 100 mg, TIL 200 mg, ETN, and PBO, respectively. In total, 33 severe infections were identified (respiratory: TIL 100 mg, 4 events; TIL 200 mg, 2 events; ETN and PBO, 0 events; skin: TIL 100 mg, 3 events; TIL 200 mg, 6 events; ETN, 2 events; PBO, 3 events; gastrointestinal: TIL 100 mg, 4 events; TIL 200 mg, 5 events; ETN and PBO, 0 events; urinary tract: TIL 200 mg, 1 event; ETN, 1 event; TIL 100 mg and PBO, 0 events). One patient had bone tuberculosis (TIL 200 mg; original purified protein derivative test was negative); 1 sepsis event (TIL 200 mg) occurred months after ending TIL treatment.

Conclusions: Infection rates with TIL treatment were low and comparable to PBO and ETN during the PBO-controlled period. By Weeks 52/64, exposure-adjusted rates remained low for all groups.

Acknowledgements: This study was funded by Merck and Co., Inc. Editorial support for abstract submission was provided by Fishawack Communications and funded by Sun Pharmaceutical Industries, Inc. Analyses were presented at the American Academy of Dermatology. Annual Meeting, San Diego, California, USA, 2018

Disclosure of Interest: J. Crowley Grant/research support from: Abbvie, Amgen, Sun Pharma, Lilly, Novartis, Janssen, Regeneron, Sanofi, Merck, Pfizer, Sandoz, MC2 Therapeutics, Verrica, Consultant for: Abbvie, Sun Pharma, Dermira, Lilly, Novartis, Celgene, Speakers bureau: Abbvie, Lilly, Novartis, Regeneron, Sanofi, C. Leonardi Grant/research support from: AbbVie, Actavis, Amgen, Boehringer Ingelheim, Celgene, Coherus, Corrona, Dermira, Janssen, Eli Lilly