Conclusion: The new axSpA-SQUASH resulted in improved content validity and measurement properties. It seems the most appropriate questionnaire and can be used to assess daily physical activity in patients with axSpA.

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Acknowledgments: We thank the ASAS for the research grant that supported this work.

Disclosure of Interests: Marlies Carbo: None declared, Davy Paap: None declared, Fiona Maas: None declared, Anna Jetske Baron: None declared, Laura van Overbeek: None declared, Mark Siderius: None declared, Freke Wink Consultant of: Abbvie, Janssen, Hendrika Bootsma Grant/research support from: Unrestricted grants from Bristol-Myers Squibb and Roche, Consultant of: Consultant for Bristol-Myers Squibb, Roche, Novartis, Medimmune, Union Chimique Belge, Speakers bureau: Speaker for Bristol-Myers Squibb and Novartis., Suzanne Arends Grant/research support from: Grant/research support from Pfizer, Anneke Spoorenberg: None declared

DOI: 10.1136/annrheumdis-2020-eular.1152

FRI0569

SERUM AMYLOID A: ASSESSMENT OF REFERENCE VALUE AND COMPARISON OF SERUM CONCENTRATION IN HEALTHY SUBJECTS AND PATIENTS WITH BEHÇET SYNDROME

T. Carbone¹, M. C. Padula¹, V. Pafundi², C. Schievano³, N. Lascaro¹, A. Padula¹, P. Leccese¹, S. D'angelo¹. ¹IREL - Rheumatology Institute of Lucania - San Carlo Hospital, Potenza, Italy; ²Immunopathology Laboratory - San Carlo Hospital, Potenza, Italy; ³Innovative Statistical Research, Padova, Italy

Background: Serum amyloid A (SAA) is a family of acute-phase reactants. The rise of SAA concentration in blood circulation is a clinical marker of active inflammation in several auto-inflammatory diseases, including Behçet syndrome (BS). Despite its practical and analytical advantages, SAA measurement by ELISA has been mainly used as a research tool rather than for the routine laboratory testing due to the lack of a robust reference data in the literature.

Objectives: Using the recommended procedures of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), we aimed to develop the SAA reference interval for a well-defined Italian healthy population (HC). Secondly, we compared the SAA serum concentration between HC and patients with BS.

Methods: Sera specimens were collected from adult healthy blood donors after rule out the exclusion criteria (inflammatory disorders, ongoing infections, pregnancy and breastfeeding, obesity, using oral contraceptives, use of any medication, or consumed of alcohol), and from unselected BS patients fulfilling the International Study Group (ISG) classification criteria. Serum SAA concentrations were detected and quantified with a commercial solid phase sandwich enzyme-linked immunosorbent assay (Human SAA ELISA kit, IBL International GmbH, Hamburg, Germany) used on automated analyzer (Immunomat, SERION Diagnostic, Alifax, Polverara (PD), Italy) according to the manufacturer's protocol. Statistical analysis and data normalization of HC SAA values were carried out to determine the reference cut off. In the second step of the study, HC and BS patients were stratified in two groups according to the cut-off value.

Results: We recruited 141 HC (84 M and 57 F; mean age, 44.5±13.2 years) and 63 BS patients (39 M and 24 F mean age, 45.3±13.2 years) assayed for SAA. The reference cut-off was calculated as 225 ng/ml. No statistically significant differences were found between males and females when SAA means were compared, suggesting that not gender-partitioned reference range is recommended for this analyte. After the stratification according to the cut-off value (group 1: < 225 ng/ml and group 2: > 225 ng/ml), we found 53/63 (84.1%) BS patients and 133/141 (94.3%) HC with concentration less than cut-off value, respectively. We identified 10/63 (15.9%) BS patients and 8/141 (5.7%) HC within the second group. The difference was statistically significant (p=0.0177; OR: 3.14, 95% CI: 1.17-3.38).

Conclusion: This study allowed to define a widely accepted reference cut-off for the SAA detected by ELISA, responding to an unmet need of laboratory medicine. We found a statistically significant higher frequency of BS patients compared with HC when SAA values is higher than cut-off (225 ng/ml). This preliminary data could add significant information for better clarify the role of SAA as biomarker of inflammation and in guidance of clinical practice. Further studies will be required to stratify SAA values in relation to disease activity of BS.

Disclosure of Interests: Teresa Carbone: None declared, Maria Carmela Padula: None declared, Vito Pafundi: None declared, Carlo Schievano: None declared, Nancy Lascaro: None declared, Angela Padula: None declared, Pietro Leccese:

None declared, Salvatore D'Angelo Consultant of: AbbVie, Biogen, BMS, Celgene, Eli Lilly, MSD, Novartis, and UCB, Speakers bureau: AbbVie, BMS, Celgene, Eli Lilly, Novartis, Pfizer, and Sanofi

DOI: 10.1136/annrheumdis-2020-eular.6357

FRI0570

IDENTIFICATION OF OSTEOPONTIN/SECRETED PHOSPHOPROTEIN 1 AS A BIOMARKER FOR PSORIATIC ARTHRITIS

F. Abji¹, R. Machhar¹, K. Liang², J. Ye¹, K. Oikonomopoulou¹, V. Chandran¹.

¹University Health Network, Toronto, Canada; ²University of Waterloo, Waterloo, Canada

Background: Early diagnosis of psoriatic arthritis (PsA) can be facilitated by appropriate referral of psoriasis patients to rheumatologists. Soluble biomarkers for PsA may help screen psoriasis patients for PsA.

Objectives: To identify novel biomarkers for PsA by investigating serum levels of candidate biomarkers identified through proteomic analysis of synovial fluid (SF) and skin biopsies and literature review.

Methods: We first (discovery phase) identified markers using: i) proteomic analysis of SF¹, ii) proteomic analysis of skin biopsies², and iii) literature review. In verification phase 1, we measured serum levels of the selected potential protein markers, using commercially available ELISA kits, to identify differentially expressed markers in healthy controls and patients with PsA (≥3 swollen joints, not treated with biologics) and psoriasis without PsA (PsC; matched with PsA patients on age, sex and psoriasis duration) (100 subjects each group). In verification phase 2, using less strict criteria (no restriction on pharmacotherapy or disease activity) and larger sample size, we confirmed the association with PsA of markers identified in phase 1 using samples from 200 patients each with PsA and PsC. Statistical methods used included descriptive statistics, t-tests and logistic regression.

Results: The discovery phase identified the following 31 markers for testing in verification phase 1- hsCRP, MMP3, CD5L, M2BP, MPO, ITGB5, DKK1, FGF23, IL-6, IL-1β, leptin, osteocalcin, OPG, OPN, SOST, TNFα, adiponectin, periostin, RANKL, YKL40, KLK6, KLK8, CS846, C2C, CPII, TNFSF14, COMP, ALP, CXCL10, S100A8/A9 and DEFA. The following 21 markers remained differentially upregulated in PsA after testing in verification phase 1- hsCRP, MMP-3, M2BP, ITGB5, leptin, OPG, OPN, SOST, TNFα, periostin, RANKL, YKL40, KLK8, C2C, CPII, TNFSF14, COMP, ALP, CXCL10, S100A8/A9 and DEFA. Univariate logistic regression analyses adjusted for age, sex, and disease duration confirmed the association between hsCRP, OPN, S100A8/A9, OPG and the ratio CPII/C2C in verification phase 2. Multivariate logistic regression demonstrated that hsCRP and OPN (both p<0.001) are independently associated with PsA.

Conclusion: OPN, a cytokine involved in enhancing production of IFNγ and IL-12, reducing production of IL-10 and promoting attachment of osteoclasts to mineralized bone matrix, is a potential biomarker of PsA.

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Disclosure of Interests: Fatima Abji: None declared, Rohan Machhar: None declared, Kun Liang: None declared, Justine Ye: None declared, Katerina Oikonomopoulou: None declared, Vinod Chandran Grant/research support from: Abbvie, Celgene, Consultant of: Abbvie, Amgen, Bristol-Myers Squibb, Celgene, Eli Lilly, Janssen, Novartis, Pfizer, UCB, Employee of: Spouse employed by Eli Lilly

DOI: 10.1136/annrheumdis-2020-eular.4536

FRI0571

THE DIAGNOSTIC VALUE OF KL-6 IN RHEUMATOID ARTHRITIS ASSOCIATED WITH INTERSTITIAL LUNG DISEASE IN XINJIANG OF CHINA

G. Chen¹, L. Wu¹. ¹People's Hospital of the Xinjiang Uygur Autonomous Region, Urumqi, China

Background: Rheumatoid arthritis (RA) is a systemic inflammatory disease. Many researchers have observed that extra articular organs were highly involved in RA patients. The most common extra-articular manifestations were pulmonary involvement. Serum levels of KL-6 have been reported to be elevated in various ILD such as idiopathic pulmonary fibrosis, collagen vascular disease associated interstitial pneumonias, and other interstitial lung disorders. However, little is known regarding