90.3% (140/155) in pSS, 92.3% (36/39) in MCTD, 93.4% (128/137) in PBC and 49.1% (28/57) in the AIH group. The positive rate of ANA in the health subjects was 11.5% (123/1073), see Figure 1. Totally, the positive rate of ANA in the AID group was 80.1% (2967/3704). The karyotypes were detected as homogeneous type (15.8% (586/3704)), nuclear particle type (49.7% (1840/3704)), cytoplasmic particle type (5.3% (196/3704)), mixed type (2.8% (91/3704)) which was mainly composed of nuclear membrane/cytoplasmic granules, more common in PBC. See Table 1. The karyotype of ANA in the health group was mainly homozygous (7.0% (75/1073)).

Group	n	ANA karyotypes							ANA negativity
		Homogeneous	particle	centromere	nuclear	cytoplasmic granular	nuclear membrane	mixed	
SLE	2034	337 (16.6)*	1328 (65.3)	23 (1.1)	28 (1.4)	86 (4.2)	9 (0.4)	23 (1.1)	190 (9.3)
RA	973	186 (19.1)	255 (26.2)	16 (1.6)	10 (1.0)	49 (5.0)	1 (0.1)	0 (0.0)	8 (0.8)
SS	309	34 (11.0)	181 (58.6)	13 (4.2)	8 (2.6)	15 (4.9)	3 (1.0)	10 (3.2)	3 (1.0)
PSS	155	22 (14.2)	27 (17.4)	28 (18.1)	42 (27.1)	8 (5.2)	2 (1.3)	9 (5.8)	2 (1.3)
MCTD	39	3 (7.7)	30 (76.9)	1 (2.6)	0 (0.0)	2 (5.1)	0 (0.0)	0 (0.0)	0 (0.0)
PBC	137	1 (0.7)	6 (4.4)	17 (12.4)	2 (1.5)	36 (26.3)	15 (10.9)	46 (33.6)	5 (3.6)
AIH	57	3 (5.3)	13 (22.8)	7 (12.3)	0 (0.0)	0 (0.0)	0 (0.0)	3 (5.3)	2 (3.5)
AID	3704	586 (15.8)	1840 (49.7)	105 (2.8)	90 (2.4)	196 (5.3)	30 (0.8)	91 (2.5)	30 (0.8)
Healthy subjects	1073	14 (1.3)	75 (7.0)	3 (0.3)	10 (0.9)	23 (2.2)	1 (0.1)	2 (0.2)	3 (0.3)

Note: The mixed type contains more than two karyotypes, and other types include spindle, centrosome, Golgi, cytoplasmic fiber, etc.* refers to number (percentage).

Figure 1 ANA positive rate in difference AID patients and healthy subjects

Conclusion: There are differences in ANA positive rates among patients with different AIDs. Some mixed karyotype analyses may provide important evidence for the diagnosis of PBC and AIH. Healthy subjects can have partial ANA positivity which is predominantly homogenous.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8381

THU0611

SERUM HIGHLY-SENSITIVE CARDIAC TROPONIN-I AND ANTI-BETA2-GLYCOPROTEIN-1 IGA ANTIBODIES AT BASELINE PREDICT CORONARY PLAQUE PROGRESSION IN RHEUMATOID ARTHRITIS

George Karpouzas¹, Sarah Ormseth¹, Elizabeth Hernandez¹, Joel Estis², John Todd², Matthew Budoff³. ¹Harbor UCLA Medical Center, Rheumatology, West Carson, United States of America; ²Singulex, Inc., Alameda, United States of America; ³Harbor UCLA Medical Center, Cardiology, West Carson, United States of America

Background: We recently reported that serum levels of highly-sensitive cardiac troponin-I (hs-cTnI)- a specific structural myocardial biomarker-associated with occult coronary plaque presence, burden and long-term cardiovascular events in patients with rheumatoid arthritis (RA). We further demonstrated that presence of IgA antibodies against beta2-glycoprotein-1 (a-b2GPI-IgA, an apolipoprotein readily expressed in human atherosclerotic plaque) associated with baseline coronary artery calcium (CAC) scores and independently predicted CAC progression in patients with RA.

Objectives: We here explored whether baseline evaluation of both hs-cTnI and a-b2GPI-IgA better predicts CAC progression than either of them in isolation.

Methods: Ninety five participants with a baseline plaque evaluation by coronary computed tomography angiography (CCTA) underwent follow-up assessment within 6.9±0.3 years. Coronary artery calcium (CAC) was quantified by the Agatston method. Hs-cTnI and a-b2GPI IgA Ab were assessed on the day of baseline CCTA; the latter were reconfirmed 12 weeks later, if positive. CAC change was evaluated with the MESA

method as the natural logarithm plus 25 difference [(ln CAC_(follow-up)+ 25) - (ln CAC_(baseline)+ 25)]. Generalized linear models evaluated the effect of hs-cTnI, a-b2GPI-IgA and their interaction on CAC change. Models were adjusted for age, hypertension, waist-to height ratio (obesity indicator), cumulative inflammatory burden (time-averaged C-Reactive protein), total prednisone dose and duration of statin exposure from baseline to follow-up scan.

Results: Baseline hs-cTnI was higher in a-b2GPI-IgA positive compared to negative patients [median (IQR) of 1.9 (1.6-2.6) vs. 1.4 (1.3-1.7) respectively, p=0.043]. Hs-cTnI alone did not independently predict CAC change (β=0.214, p=0.132) in the multivariable model whereas a-b2GPI-IgA presence did (β=0.454, p=0.003). There was a significant interaction between hs-cTnI and a-b2GPI-IgA on CAC progression (Wald Chi-square=4.19, p=0.041); high hs-cTnI (>1.5pg/ml) predicted significantly greater CAC change in a-b2GPI-IgA positive patients but not in negative ones [estimated marginal mean difference (IQR)=0.36 (0.12-0.59), p=0.003] and figure 1].

Conclusion: Baseline hs-cTnI in isolation is not predictive of CAC progression in patients with RA; however, in the context of a-b2GPI-IgA presence, high hs-cTnI independently predicts significant increase in coronary atherosclerosis burden.

Disclosure of Interests: George Karpouzas Grant/research support from: Pfizer, Consultant for: Sanofi-Genzyme-Regeneron, Janssen, Roche-Genentech, Pfizer, Speakers bureau: BMS, Sanofi-Genzyme-Regeneron, Janssen, Roche-Genentech, Sarah Ormseth: None declared, Elizabeth Hernandez: None declared, Joel Estis Employee of: Singulex, John Todd Employee of: Singulex, Matthew Budoff: None declared

DOI: 10.1136/annrheumdis-2019-eular.6767

THU0612

KNEE JOINT PAIN IN AN ELDERLY, HEALTHY POPULATION IS ASSOCIATED WITH INFLAMMATORY ARTICULAR AND ENTHESEAL CHANGES DETECTED BY ULTRASOUND

David Simon¹, Amd Kleyer¹, Antonella Adinolfi², Johann Willeit³, Stefan Kiechl³, Nina Gasper⁴, Georg Schett¹, Christian Dejaco⁴, Annamaria Iagnocco⁵, Maria-Antonietta D'agostino⁶. ¹Friedrich-Alexander University Erlangen-Nuremberg (FAU) and Universitätsklinikum Erlangen, Erlangen, Germany; ²University of Siena, Department of Rheumatology, Policlinico Le Scotte, Siena, Italy; ³Medical University of Innsbruck, Department of Neurology, Innsbruck, Austria; ⁴Department of Rheumatology, Hospital of Bruneck, Bruneck, Italy, Department of Rheumatology and Immunology, Medical University Graz, Graz, Austria, Graz, Austria; ⁵Università degli Studi di Torino, Dipartimento Scienze Cliniche e Biologiche, Torino, Italy; ⁶Hôpital Ambroise Paré, Boulogne-Billancourt, Department of Rheumatology, APHP, Paris, France

Background: Knee pain is highly prevalent in elderly and influences quality of life. Pathogenesis of knee pain in such population is commonly related to osteoarthritis (OA). It is yet unclear however, which pathological lesions in the knee contribute most to symptomatic disease.

Objectives: To define the articular and enthesal inflammatory and structural lesions that contribute to knee pain in an elderly healthy population using Power Doppler ultrasound (PDUS).

Methods: All subjects (≥65 years) were part of the prospective long-term population-based Bruneck Study (1) and received a clinical and ultrasound investigation of both knees. Ultrasound was performed by an independent investigator unaware of clinical symptoms. Knee entheses (quadriceps insertion, proximal and distal patella insertion) and joint cavity were assessed. Demographic variables were recorded in all individuals. Pain sensation during knee palpation was collected and participants were asked to complete a standardized pain questionnaire for knee joints (Knee injury and osteoarthritis outcome score [KOOS], question P1-P9) (2). Joint changes (synovial hypertrophy, power doppler (PD) signal, joint effusion, baker cysts, osteophytes) were assessed using a GE Logic E