positive for ANCA (SLE, sclerosis, RA, RA/RV). This study shows that the PR3- and MPO-ANCA ELISA are highly specific (93.2%/94.2%) and sensitive (85.9%/85.9%) in the detection of ANCA to identify AAV or conditions known to be associated ANCA.

Conclusions: Our comparison of PR3- and MPO-ANCA ELISAs showed (i) a high diagnostic performance of these PR3- and MPO-ANCA ELISAs to discriminate AAV from disease controls. (ii) very good correlation between the other methods tested. In conclusion, these novel assays can be used as screening method for detection of ANCA-associated diseases.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6352

FRI0651 QUANTITATIVE CHEST CT PREDICTS 8-YEARS-MORTALITY AND COMORBIDITY IN SYSTEMIC SCLEROSIS

A. Ariani¹, M. Silva², E. Bravi³, M. Saracco⁴, S. Parisi⁵, F. De Gennaro⁶, L. Idolazzi⁷, M. De Santis⁸, F. Girelli⁹, F. Lumetti¹⁰, A. Volpe¹¹, D. Santilli¹, F. Mozzani¹, G. Lucchini¹, D. Giuggioli¹², V. Seletti¹³, E. Bacchini¹³, C. Benini⁷, E. Arrigoni³, F. C. Bodini¹⁴, G. Paolazzi¹¹, D. Imberti³, E. Fusaro⁵, C. A. Scirè¹⁵, N. Sverzellati¹⁶. ¹Department of Medicine, Internal Medicine and Rheumatology Unit, Azienda Ospedaliero-Universitaria di Parma, ²Department of Clinical Sciences, Section of Radiology, University of Parma, Parma, ³Department of Medicine, Internal Medicine and Rheumatology Unit, Ospedale G. Da Saliceto, Piacenza, ⁴Rheumatology Unit, Ospedale Mauriziano Umberto I di Torino, ⁵Rheumatology Department, Azienda Ospedaliera Città della Salute e della Scienza di Torino, Torino, ⁶Rheumatology Unit, Azienda Ospedaliera Istituti Ospitalieri di Cremona, Cremona, ⁷Rheumatology Section, Department of Medicine, University of Verona, Azienda Ospedaliero Universitaria Integrata, Verona, ⁸Rheumatology and Clinical Immunology, Humanitas Research Hospital, Milano, ⁹Rheumatology Unit, Internal Medicine Department, GB Morgagni – L. Pierantoni Hospital, Forlì, ¹⁰Rheumatology Unit, University of Modena and Reggio Emilia, Azienda Ospedaliero-Universitaria, Policlinico di Modena, Modena, ¹¹Rheumatology Unit, Santa Chiara Hospital, Trento, ¹²Rheumatology Unit, University of Modena and Reggio Emilia, Azienda Ospedaliero-Universitaria, Policlinico di Modena, Modena, ¹³Department of Clinical Sciences, Section of Radiology, University of Parma, Parma, ¹⁴Radiology Unit, Ospedale G. Da Saliceto, Piacenza, ¹⁵Department of Medical Sciences, Section of Rheumatology, University of Ferrara and AOU Sant'Anna, Ferrara, ¹⁶Department of Clinical Sciences, Section of Radiology, University of Parma, Parma, Italy

Background: Interstitial Lung Disease (ILD) is the main cause of death in Systemic Sclerosis (SSc). Serious lung involvement increase the hospitalization rate and sometimes oxygen therapy is required.

An prompt treatment in ILD-SSc patients is essential, but nowadays there is not a feasible method to identify patients with poor prognosis.

Although chest Computed Tomography (CT) is the gold standard to detect ILD, there is no standardized assessment of its severity. Quantitative CT (QCT) is an innovative and operator independent method to assess ILD-SSc extent and severity. An increasing number of evidences confirm that QCT is extremely useful for detecting SSc-ILD with the worst prognosis. However is not well established if QCT can predict death or comorbidity associated to ILD.

Objectives: The main aim of this study is to verify if QCT predict 8-years mortality or clinical worsening (i.e. hospitalization for respiratory complications or chronic oxygen therapy) in SSc.

Methods: Consecutive SSc patients (according to ACR/EULAR classification criteria) from ten different centers underwent a chest CT. Their clinical history was carefully recorded in the following 96 months. A rheumatologist post-analyzed every CT with an open source DICOM viewer in order to obtain QCT indexes. Patients were clustered in two subgroups: according to QCT indexes' cutoff previously found (see Ariani et al., 2017). The survival time of each patient was considered the time interval between the CT date and death, hospitalization related to lung worsening, beginning of chronic oxygen therapy or last medical examination

Results: We enrolled 342 patients; during the 8-years follow-up 15.5% (53/342) died and 4.4% (15/342) had a clinical worsening. The Kaplan-Meier survival analysis demonstrates a worse survival in patients with QCT indexes above or below the previously observed cutoffs. ($p < 0.01$). In particular the QCT index cutoff which the best performance was total lung kurtosis (tKurt) equal to 4.89 ($p < 0.0001$).

REFERENCES:

The QCT indexes' cutoffs previously found (see Ariani, et al., 2017) identify the SSc-ILD subjects with an high risk of 8-years mortality and comorbidity. These findings suggest that QCT could become a pivotal assessment in SSc management because its role in identifying patients with poor prognosis and who deserve an early aggressive treatment.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5709

FRI0652 THE DEVELOPMENT AND VALIDATION OF FAMILIAL MEDITERRANEAN FEVER QUALITY OF LIFE SCALE (FMF-QOL)

C. Unal¹, M. T. Duruo². ¹PMR Department, ²PMR Department, Rheumatology Division, Marmara University School of Medicine, Istanbul, Turkey

Background: Quality of life (QoL) was negatively affected in FMF patients. A QoL scale specific to FMF is not existing in the literature.

Objectives: To develop valid and reliable quality of life scale in familial Mediterranean fever (FMF).

Methods: The psychometric method was used to develop the FMF-QoL. In the first step, the question pool was formed by using existing QoL scales in the literature. Outpatients with FMF according to Livneh criteria were recruited. After patients' interviews, some identical and irrelevant questions eliminated and new ones were added by an expert committee. Cognitive debriefing interviews concerning QoL were done with another 20 FMF patients. Minor changes (few words) after these interviews were made. In the second step, the preFMF-QoL with 101 questions was formed and it was filled out by FMF patients. Confirmatory factor analysis (CFA) by varimax rotation, assessment of data' skewness and kurtosis, evaluation of invalid questions and participants were performed. After this, the internal consistency with Cronbach alpha was calculated. The face, content and construct validities were assessed. Convergent validity which was the relation of the FMF-QoL with functional parameters (Europe Health Impact Scale (EURO-HIS), Short Form 36 (SF36), Beck Depression Inventory for Primary Care (BDI-PC), Jenkins Sleep Scale (JSS), Health Assessment Questionnaire (HAQ) and the discriminant validity which was the relation of the FMF-QoL with nonfunctional parameters such as demographic and clinical characteristics were analyzed. The Mann Whitney U test, Kruskal-Wallis test and Spearman correlation coefficient (rho) were used to compare quantitative variables.

Results: In our study, the FMF-QoL was applied to 125 FMF patients however 123 (84 women) patients were designed to statistical analysis. It has been determined by the expert committee that the face and content validity of the FMF-QoL was good. According to the factor analysis the FMF-QoL were represented by 4 factor groups (eigenvalues >1) which were physical impact, social and recreational impact, psychological impact, and sleep impact factors. All question's factor loadings after Varimax rotation were bigger than 0.5 and the cumulative variance of the scale was 68.11%. The strongest correlation of the FMF-QoL was found with other QoL scales like EUROHIS (rho: -0.64, $p < 0.01$) and SF36-physical functioning subscale (rho: -0.63, $p < 0.01$). The correlations between the FMF-QoL and other functional parameters were found to be moderate [BDI-PC (rho: 0.46, $p < 0.01$), JSS (rho: 0.44, $p < 0.01$), HAQ (rho: 0.44, $p < 0.01$)]. This shows that the FMF-QoL has good convergent validity. In the discriminative validity, most of the parameters had not significant correlation with the FMF-QoL. Only the number of attacks in the previous year, age and education level were correlated moderately with the FMF-QoL. This shows the FMF-QoL has discriminative validity.

Conclusions: The FMF-QoL scale was developed with psychometric method. It is a valid and reliable disease specific scale which has 20 questions with 4 factors. It is already a practical, not time consuming that can be used in the clinical follow-up and the treatment evaluation.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6838

FRI0653 VALIDITY OF POLYMYALGIA RHEUMATICA DIAGNOSES, AND CLASSIFICATION CRITERIA, IN PRIMARY HEALTH CARE

C. Fors^{1,2}, U. Bergström^{1,2}, M. Willim^{2,3}, E. Pilman⁴, C. Turesson^{1,2}.

¹Rheumatology, Department of Clinical Sciences, Malmö, Lund University,

²Department of Rheumatology, Skåne University Hospital, Malmö, ³Rheumatology, Department of Clinical Sciences, Lund, Lund University, Lund, ⁴Landborgen Primary Health Care Centre, Helsingborg, Sweden

Background: Polymyalgia rheumatica (PMR) is an inflammatory disorder that mainly affects elderly women, and usually is diagnosed in primary health care (PHC). A number of classification criteria have been proposed, most recently the American College of Rheumatology (ACR)/ European League Against Rheumatism (EULAR) criteria from 2012 (1). The ACR/EULAR criteria were developed in a cohort of patients recruited from rheumatology clinics.

Objectives: To examine the validity of PMR diagnoses in primary care, and to validate the use of classification criteria for PMR in a retrospective survey of a PHC cohort.

Methods: Patients were recruited from two PHC centers. All patients with a registered diagnosis of PMR between 2000 and 2013 in the patient administrative system were identified. The electronic case records, including hospital records,

for all patients were reviewed through June 2015. Patients with a diagnosis of PMR prior to 2000, or at another care facility, and those with an incorrectly registered PMR diagnosis code, were excluded. In a structured review of the case records, information required for classification according to the ACR/EULAR criteria, the Bird criteria, the Healey criteria, the Chuang&Hunder criteria and the Jones&Hazelman criteria was extracted. For the ACR/EULAR criteria, a modified version, in which patients who had never been tested for rheumatoid factor (RF) and anti-citrullinated peptide antibodies (ACPA) only required 2 points to be classified as having PMR, was used. Furthermore, as duration of morning stiffness (MS) was usually not recorded, criteria components for MS were considered to be fulfilled whenever MS was mentioned in the records. The reference method was an independent review, with assessment of the long term disease course and differential diagnoses, by an experienced rheumatologist with access to all electronic records.

Results: A total of 305 patients with a registered diagnosis of PMR were reviewed. Of these, 117 were excluded. Among 188 with an incident PMR diagnosis at the study sites during the study period, 49 (26 %) fulfilled the modified ACR/EULAR criteria, whereas 145 (77 %) fulfilled the Bird criteria and 93 (49 %) fulfilled the Healey criteria. Patients could not be classified according to the Chuang&Hunder or the Jones&Hazelman criteria due to missing data in most patients for several components. RF and ACPA were tested in only 42 cases (4 positive) and 29 cases (none positive), respectively. The PMR diagnosis was verified using the reference method in 113 cases (60 % of total; 68 % female, mean age at diagnosis 75 years). Among those fulfilling the modified ACR/EULAR criteria, the diagnosis was verified in 84 % of the patients. The corresponding proportion for the Bird criteria was 66 %, and for the Healey criteria 74 %.

Conclusions: In this study of patients with PMR diagnosed in PHC, the diagnosis could be verified in 60 % of the patients. This underlines the heterogeneity of PMR patients and related diagnostic procedures in PHC. A modified version of the ACR/EULAR criteria can be used to identify patients with a valid PMR diagnosis in retrospective surveys, but does not capture all PMR patients. The modified ACR/EULAR criteria appear to be more stringent than some of the older criteria sets.

REFERENCE:

1. Dasgupta B, et al. Ann Rheum Dis 2012;71:484–92.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5790

FRI0654

IS THE PATIENT-ACCEPTABLE STATUS SIMILAR ACROSS 7 DOMAINS OF HEALTH IN PATIENTS WITH RHEUMATOID ARTHRITIS (RA)? POST-HOC ANALYSES FROM THE VALIDATION IN 549 PATIENTS OF THE RHEUMATOID ARTHRITIS IMPACT OF DISEASE (RAID) SCORE

C. Duarte^{1,2,*}, T. Kvien³, J. A. Pereira da Silva^{1,2}, L. Gossec⁴ on behalf of RAID Working Group EULAR. ¹Centro Hospitalar e Universitário de Coimbra, ²Faculdade de Medicina Universidade de Coimbra, Coimbra, Portugal, ³Diakonhjemmet Hospital, Oslo, Norway, ⁴Sorbonne Université, Paris, France

Background: Patient Acceptable Symptom State (PASS) is the highest acceptable level of symptoms which patients consider satisfactory. In the Rheumatoid Arthritis Impact Disease (RAID) questionnaire, seven domains of health of importance for RA patients are collected.¹. It is possible that levels judged acceptable by patients vary according to the domain of health.

Objectives: To explore the relationship between seven RA domains of health (collected in the RAID) and PASS, and to define their PASS cut-off values.

Methods: This is a *post-hoc* analysis of the cross-sectional study for RAID validation. Each of 7 domains (table 1) was evaluated through a Numeric Rating Scale from 0 (best) to 10 (worst). PASS was calculated using the anchored method based on patients' perspective. Disease activity was assessed based on the DAS28–3 values (joint counts and ESR). Comparison of patients in PASS or not was assessed through Mann-Whitney or Chi-square test, as adequate. Variables with $p < 0.05$ were included in multivariate logistic regression (Forward Conditional) analysis. The thresholds of PASS for each domain was calculated using the receiver-operating characteristic (ROC) curve and the optimal cut-off was determined through Youden Index. 75th percentile analyses were also performed (not shown).

Results: 549 patients [78% female, mean age 56.7 years, mean disease duration 12.3 years, mean (SD) DAS 28–3 2.7(1.2)] were analysed. The majority of patients (60.7%) considered themselves to be in PASS. Disease activity (DAS 28–3 mean 2.3 vs 3.4, $p < 0.01$) and all seven domains of health were significantly lower in patients in PASS versus not in PASS ($p < 0.001$). In multivariate analyses, lower disease activity (OR 0.72; 95%IC 0.56–0.92), lower pain (OR 0.75; 95%

IC:0.65–0.86) and better physical well-being (OR 0.74 95%; IC:0.65–0.85) were associated with being in PASS.

The cut-off for PASS was ≤ 4.2 for the total RAID score but varied across the seven domains (table 1), with Pain (≤ 5) and Fatigue (≤ 5) having the highest acceptability cut-offs. Sleep Disturbance and Coping were the domains with lowest thresholds compatible with PASS (≤ 3).

Table 1 Thresholds for Acceptable Status for each RAID domain, AUC: Area Under the Curve, and sensitivity and specificity versus PASS

Domain	Cut-off	AUC	Sensitivity (%)	Specificity (%)
Pain	≤ 5	0.84	80.5	72.9
Function	≤ 4	0.82	69.7	80.8
Fatigue	≤ 5	0.75	74.9	62.2
Sleep	≤ 3	0.70	64.2	67.4
Emotional Well-Being	≤ 4	0.76	75.0	64.5
Physical Well Being	≤ 4	0.81	69.3	77.1
Coping	≤ 3	0.79	65.5	77.1

Conclusions: Pain and physical well-being appeared as major drivers of PASS. The cut-offs defining PASS were not the same for all RAID domains, indicating that being in PASS doesn't mean the same acceptable severity for all domains of health. This observation suggests that individualised management, for each domain, should be considered.

REFERENCE:

- 1) Gossec L, et al. Ann Rheum Dis 2011;70:935–942.

Acknowledgements: RAID Study Group: Balanescu A, Boumpas DT, Carmona L, de Wit M, Dijkman BA, Dougados M, Englbrecht M, Gogus F, Heiberg T, Kirwan JR, Mola EM, Cerinic MM, Otsa K, Sokka T

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2997

FRI0655

TITLE: THE CONSISTENCY OF OUTCOMES REPORTED IN TRIALS OF SYSTEMIC SCLEROSIS. IMPROVING OVER TIME?

D. J. Sumpton^{1,2,3,*}, A. Bigot⁴, B. Sautenet⁵, J. C. Craig^{2,3}, G. Hassett⁶, V. Thakkar^{7,8}, P. Tugwell⁹, A. Tong^{2,3}. ¹Department of Rheumatology, Concord Repatriation General Hospital, ²Sydney School of Public Health, The University of Sydney, ³Centre for Kidney Research, The Children's Hospital Westmead, Sydney, Australia, ⁴Service de Médecine Interne, ⁵Service de Néphrologie, Hôpital Bretonneau, CHRU Tours, Tours, France, ⁶Department of Rheumatology, Liverpool Hospital, Sydney, ⁷Department of Rheumatology, Liverpool Hospital, ⁸School of Medicine, Western Sydney University, Sydney, Australia, ⁹Department of Medicine, University of Ottawa, Ottawa, Canada

Background: Standardisation of outcome domains and measures in trials in rheumatology has generally improved the consistency and relevance of outcomes reported in rheumatic conditions over the last two decades. The Outcome Measures in Rheumatology (OMERACT) 'core response set' for trials in Systemic Sclerosis (SSc) was developed in 2008 and comprises 11 domains and 31 measures¹.

Objectives: We aimed to assess the scope, and consistency of outcomes reported in trials of SSc, and the uptake of this core response set.

Methods: MEDLINE, Cochrane CENTRAL, Embase and clinicaltrials.gov were searched to identify randomised clinical trials published between 2000 and June 2016 in adults with SSc. Outcomes and measures were recorded for each trial and classified into domains. The scope and consistency of domains were compared between those trials published from 2000 to 2010 and 2011 to mid-2016 to determine whether has been uptake of the core domain and measurement set reported. A two-year lag between publication of the core set in 2008 and start of the second-time period was set to allow for core response set uptake.

Results: Overall 114 trials (4860 patients, median sample size of 33) were identified. The majority of trials were interventions for immunotherapeutic agents or vasodilators and included a total of 2736 measures (of 78 domains), with a mean of 24 measures per trial. The proportion of trials reporting any outcome from the each domain is listed: (% of 2000–2010 trials, % of 2011–2016 trials, change in %): health-related quality of life and function (42.6, 56.5, +13.9); skin (39.7, 47.8, +8.1); pulmonary (33.8, 43.5, +9.7); global health (14.7, 21.7, +7.0); gastrointestinal (4.4, 10.9, +6.5); ; cardiac (13.2, 15.2, +2); biomarkers of ESR/CRP (7.4, 8.7, +1.3%) musculoskeletal (5.9, 6.5, +0.6); Raynaud's phenomenon (20.6, 19.6, -1.0) renal (14.7, 10.9, -3.8); digital ulcers (23.5, 19.6, -3.9%). Six measures had a greater than 5% increase in reporting frequency across trial periods: HAQ-DI (from 38.2% to 47.8%), SF-36 (from 17.6% to 28.3%), Modified Rodnan Skin