Acknowledgments: We thank the Coordination for the Improvement of Higher Level Personnel (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior—CAPES) institution, the Foundation for Research Support of the Rio Grande do Sul State (Fundação de Amparo à Pesquisa do Estado do Rio Grande do Sul—FAPERGS), the Research and Events Incentive Fund (Fundo de Incentivo à Pesquisa e Eventos—FIPE) of HCPA and Technological Development (Conselho Nacional de Desenvolvimento Científico e Tecnológico—CNPq).

Disclosure of Interests: Rafaela Cavalheiro do Espírito Santo: None declared, Leonardo Santos: None declared, Lidiane Filippin: None declared, Priscila Lora: None declared, Ricardo Xavier Consultant of: AbbVie, Pfizer, Novartis, Janssen, Eli Lilly, Roche
DOI: 10.1136/annrheumdis-2020-eular.2870

THU0611-HPR MEASUREMENT OF MINIMAL DISEASE ACTIVITY IN PSORIATIC ARTHRITIS USING PROMIS-PHYSICAL FUNCTION OR THE HEALTH ASSESSMENT QUESTIONNAIRE-DISABILITY INDEX

E. Chew¹, J. Perin², T. Grader-Beck¹, A. M. Orbai¹. ¹Johns Hopkins Hospital, Rheumatology, Baltimore, United States of America; ²Johns Hopkins University School of Public Health, Baltimore, United States of America

Background: Minimal disease activity (MDA) is a treat-to-target strategy (T2T) objective in psoriatic arthritis (PsA). MDA criteria, include physical function, traditionally assessed via the Health-Assessment Questionnaire Disability Index (HAQ-DI). It is of interest to assess the performance of more current physical function instruments such as the Patient-Reported Outcomes Measurement Information System-Physical Function Profile (PROMIS-PF).

Objectives: To assess the interchangeability of the HAQ-DI with the PROMIS-PF in the calculation of MDA in PsA.

Methods: Longitudinal PsA data were collected including HAQ-DI and PROMIS-PF in a PsA cohort. MDA definitions were built substituting the HAQ-DI criterion with the PROMIS-PF short form 4a (PROMIS-PF4a) or with the PROMIS-PF computer adaptive test (PROMIS-PF Bank). We assessed agreement/accuracy between HAQ-DI based and PROMIS-PF based MDA definitions at each visit and longitudinally through the kappa statistic/ROC curve analysis.

Results: One hundred participants contributed 352 observations with up to five visits. Mean (SD) age was 52 (12) years, 60% were female, and 43% were in MDA at baseline. Kappa statistic for PROMIS-PF based MDA reflected almost perfect agreement with HAQ-DI MDA: kappa=0.94 (95% CI 0.90-0.97) for MDA PROMIS-PF Bank, and kappa=0.90 (95% CI 0.80-0.95) for MDA PROMIS-PF4a. Higher longitudinal agreement was seen between MDA HAQ-DI and MDA PROMIS-PF Bank versus MDA PROMIS-PF4a between consecutive visits:

Table 1. Agreement between HAQ-DI based MDA and PROMIS-PF based MDA definitions at each visit and longitudinally

Agreement		Visit 1	Visit 2	Visit 3	Visit 4
MDA HAQ-DI and MDA PROMIS-PF4a	Kappa	0.91	0.93	0.92	0.83
	95% CI	(0.80-0.98)	(0.82-1.00)	(0.80-1.00)	(0.66-0.96)
	N	86	81	72	58
MDA HAQ-DI and MDA PROMIS-PF4a	Kappa	0.91	0.98	0.94	0.93
	95% CI	(0.81-0.98)	(0.90-1.00)	(0.84-1.00)	(0.82-1.00)
	N	86	82	73	58
Longitudinal agreement		Visit 1 to visit 2	Visit 2 to visit 3	Visit 3 to visit 4	N/A
MDA HAQ-DI state change with MDA PROMIS-PF4a state change	Kappa	0.75	0.84	0.72	N/A
	95% CI	(0.47-0.95)	(0.58-1.00)	(0.37-0.94)	
	N	71	67	51	
MDA HAQ-DI state change with MDA PROMIS-PF Bank state change	Kappa	0.81	0.94	0.84	N/A
	95% CI	(0.49-1.00)	(0.75-1.00)	(0.48-1.00)	
	N	72	68	52	

*Bias corrected 95% CI were calculated using bootstrapping with 2000 repetitions of individual patients.

^MDA state changes are defined as transitions in the respective MDA state between designated consecutive visits.

Abbreviations: CI confidence interval; N number of observations; HAQ-DI Health Assessment Questionnaire-Disability Index; PROMIS-PF4a Patient Reported Outcomes Measurement Information System Physical Function form 4a; PROMIS-PF Bank Patient Reported Outcomes Measurement Information System Physical Function Bank administered as a computer adaptive test; MDA HAQ-DI Minimal disease activity includes the HAQ-DI ≤ 0.5 criterion; MDA PROMIS-PF4a includes the PROMIS-PF4a ≥ 41.3 criterion; MDA PROMIS-PF Bank includes the PROMIS-PF CAT ≥ 41.3 criterion.

kappa ranged between 0.81-0.94 versus 0.72-0.84, respectively (Table 1). Area under ROC curve for predicting MDA HAQ-DI was 0.97 for MDA PROMIS-PF Bank and 0.95 for MDA PROMIS-PF4a (Figure 1).

Figure 1. Areas under receiver operative characteristic curve to predict HAQ-DI based MDA using MDA PROMIS-PF4a or MDA PROMIS-PF Bank at each visit and overall using all observations (from left to right: visit 1, 2, 3, 4, and overall across visits)

Conclusion: Excellent agreement was seen between HAQ-DI and PROMIS-based MDA definitions statically and longitudinally. The PROMIS-PF Bank and PROMIS-PF4a are accurate replacements for the HAQ-DI in calculating MDA state in PsA.

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[1] Schalet BD, et al. J Gen Intern Med 2015

Disclosure of Interests: Erin Chew: None declared, Jamie Perin: None declared, Thomas Grader-Beck Grant/research support from: Abbvie, Celgene, Consultant of: Novartis, Lilly, Ana-Maria Orbai Grant/research support from: Abbvie, Eli Lilly and Company, Celgene, Novartis, Janssen, Horizon, Consultant of: Eli Lilly; Janssen; Novartis; Pfizer; UCB. Ana-Maria Orbai was a private consultant or advisor for Sun Pharmaceutical Industries, Inc, not in her capacity as a Johns Hopkins faculty member and was not compensated for this service.

DOI: 10.1136/annrheumdis-2020-eular.212

THU0612-HPR DOES PAIN AND COMORBIDITY BURDEN PREDICT FRAILTY IN PATIENTS WITH KNEE-OSTEOARTHRITIS? FINDINGS FROM THE RESEARCH ON OSTEOARTHRITIS AGAINST FRAILTY (ROAF) STUDY.

F. Salaffi¹, M. Carotti², S. Farah¹, M. Di Carlo¹, A. Giovagnoni². ¹Hospital "Carlo Urbani", Università Politecnica delle Marche, Scienze Cliniche e Molecolari, Jesi, Italy; ²Ospedali Riuniti Torrette Di Ancona, Radiologia, Torrette, Ancona, Italy

Background: Pain and comorbidity burden has been suggested to act as a stressor during aging, potentially accelerating declines in health and functioning in patients with osteoarthritis of the knee (KNEE-OA) (1,2).

Objectives: The aims of the present research were to assess (i) the prevalence of frailty and (ii) its potential associated factors in a cohort of adult patients with KNEE-OA.

Methods: Patients fulfilling the clinical American College of Rheumatology knee-OA criteria were assessed according to the Survey of Health, Ageing and Retirement in Europe Frailty Instrument (SHARE-FI), and classified as frail, pre-frail, or non-frail. The clinical evaluation included the following items: Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) Pain subscale (3) and Medical Outcomes Study Short Form-36 (SF-36). Evaluation of the comorbidities burden was performed with the modified Rheumatic Disease Comorbidity Index (mRDCI). Radiographic knee OA was defined according to Kellgren/Lawrence (KL) grades. Chi-square, analysis of variance (ANOVA), and multinomial logistic regression analyses were used to test the prognostic value of frailty for the outcomes of interest.