strongly with JIA disease activity (table 2). Among parent proxy CATs, only anxiety correlated with disease activity ($r=0.71$); however the association was not statistically significant.

Table 1 Patient characteristics

Characteristic	N=26 patients
Age, years, median [IQ range]	12.7 [6.0, 14.5]
Male	8 (30.8%)
White or Caucasian	20 (76.9%)
Insurance	
Medicaid	6 (23.1%)
Device	
Smartphone	18 (69.2%)
iPad	3 (11.5%)
Location	
In hospital	8 (30.8%)
Remotely	18 (69.2%)

Table 2 Spearman correlation coefficients for PROMIS domains and JADAS71 score

PROMIS domain	JADAS71 score	Spearman correlation coefficient
PATIENT SCORES		
Fatigue T-score	0.488	
Pain Interference T-score	0.640	
Peer Relations T-score	-0.345	
Anxiety T-score	0.738	
Depressive Symptoms T-score	0.840	
Mobility T-score	-0.671	

Conclusions: Our results demonstrate that the PROMIS CATs are feasible to administer in an outpatient pediatric rheumatology setting. Anxiety, depressive symptoms, and pain interference were significantly correlated with disease activity, even though mean disease activity was relatively low. This underscores the negative effect on quality of life of even mild disease. Parent proxy CATs showed poor correlations with disease activity, suggesting parents are inaccurate in assessing important aspects of their child's health. Larger prospective studies are needed to evaluate the sensitivity of PROMIS CATs to change in disease activity over time.

Disclosure of Interest: None declared

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FRI0674 APPLICABILITY OF THE PSAID12 QUESTIONNAIRE AS A CORE OUTCOME MEASUREMENT IN PSA CLINICAL TRIALS: AN EVALUATION USING OMERACT FILTER 2.1 INSTRUMENT SELECTION CRITERIA

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Background: The Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA)–Outcome Measures in Rheumatology (OMERACT) Psoriatic Arthritis (PsA) Core Set working group is in the process of selecting core outcome measurements for PsA randomised trials, following OMERACT Filter 2.1 for instrument selection¹. The Psoriatic Arthritis Impact of Disease questionnaire (PsAid12) passed the first two steps (domain match and feasibility) at the GRAPPA 2017 annual meeting and is a candidate instrument to measure PsA specific health related quality of life (HRQOL)/Life impact.

Objectives: To conduct a systematic review (SR) of the PsAid literature to review the measurement properties in the OMERACT Filter 2.1, assess specifically construct validity (truth) and discrimination of the PsAid12 questionnaire based on available evidence, and to identify gaps in knowledge that need to be covered in order for PsAid12 to pass Filter 2.1.

Methods: A SR of PsA patient reported outcomes (PROs) was performed January 1 2017 and updated by hand search (22/11/2017). All articles assessing the measurement properties of the PsAid12 were reviewed. Strength of evidence was rated using COSMIN-OMERACT Good Methods checklist, and performance of measurement properties using the OMERACT standards¹. We extracted data on domain match (face and content validity), construct validity, test-retest reliability, longitudinal construct validity, clinical trials discrimination, and thresholds of meaning.

Results: We identified six studies (129–474 patients in each study) assessing the measurement properties of the PsAid12 in adults with PsA. Domain match: PsAid12 was developed with 12 patient research partners, 139 patients who ranked domain importance and cognitive interviews with 65 patients. Construct validity: Three studies assessed correlation of the PsAid12 with PROs and clinical outcomes, and one study with two PROs. There was strong correlation with measures of function ($n=3$ studies, $r>0.66$), participation (1, $r>0.69$), disease

activity (2, $r=0.64$ – 0.87), and measures of pain, fatigue and stiffness (1 each, $r>0.83$); moderate-strong with patient and physician global (3, $r=0.49$ – 0.84); and moderate with 66/68 joint counts (1, $r=0.4$ – 0.57) and dactylitis (1, $r=0.49$). Test-retest reliability was high (0.91 (95%CI 0.87–0.94) and 0.95 (0.92–0.96)). Longitudinal construct validity was good with moderate to large standardized response mean (SRM) 0.74 ($n=53$, changed therapy) and 0.91 ($n=71$, changed therapy and rated themselves improved). The patient acceptable symptom state (PASS) was 4 in a single study. The minimal clinically important improvement (MCII) varied between 3 (original PsAid development study) and 1.25 (subsequent UK study).

Conclusions: This review suggests there is evidence for excellent content validity and reliability and good construct validity and responsiveness of the PsAid12 questionnaire as a measure of HRQOL in PsA. MCII and discrimination in clinical trials need to be defined.

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FRI0675 RABIOFPRED, AN INNOVATIVE THERANOSTIC TOOL TO ASSIST CLINICIANS SELECT AN OPTIMAL ANTI-TNF ALPHA BIOLOGICAL THERAPY FOR RHEUMATOID ARTHRITIS PATIENTS

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Background: TNF alpha blockers form 2nd line treatment choice for Rheumatoid Arthritis (RA) patients. Up to 30% of RA patients do not respond to TNF alpha blockers for unknown reasons, causing a significant impact on patients' outcome and healthcare industry. Therefore, there is an unmet need for a tool to predict treatment response that could help clinicians to choose an optimal treatment for RA patients.

Objectives: By using Immuno-Detect, an innovative targeted gene sequencing panel of 2155 mRNA targets associated with immune-inflammatory pathways, we aimed to develop an algorithm, RABIOFPRED, that predicts non-response to TNF alpha blockers.

Methods: Paxgene samples obtained at baseline from 68 patients naïve to TNF alpha blockers were directly profiled without extraction with Immuno-Detect panel on HTG EdgeSeq platform, a combination of a nuclease protection assay & next generation sequencing (NGS). Patients were treated with Infliximab, Etanercept or Adalimumab and disease activity score was measured based on DAS28 score at 3 months. Response to treatment was assessed by categorizing the patients according to EULAR response criteria. Gene combinations were selected using variable importance score (VIS). Predictive modeling performance was evaluated using the area under the curve (AUC) and confusion matrix.

Results: Analytical validation of Immuno-Detect panel shows a very high reproducibility on Paxgene and extracted RNA samples with correlation factor of 0.975 and 0.96 respectively. In paxgene samples, among 2155 genes, 1172 mRNAs are significantly expressed with a mean CV of 9.77% (976 mRNAs and mean CV of 11.98% for RNA). Most expressed target represent only 5% of the total reads and only 20 targets are reaching 1% of total reads showing a very well balanced panel. Performance of our predictive model shows an AUC of 0.905 with 0.88 accuracy. Our algorithm predicts non-responders to TNF alpha blockers with the sensitivity of 0.78 and positive predictive value of 0.91. This algorithm will be further validated within the ongoing RABIOFPRED Proof-of-Performance study (ClinicalTrials.gov Identifier: NCT03016260) based on 720 patients treated by anti-TNF alpha drugs (5 originators & 3 biosimilars) launched in December 2016.

Conclusions: We are showing that Immuno-Detect panel accurately measures mRNA expression using HTG-EdgeSeq NGS platform. This panel can be further used to build signatures to predict TNF alpha blocker's non-response. The algorithm obtained in the current study will be later on validated in a multi-centric proof-of-performance clinical study.

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