the patients with PsA (93%) had cutaneous disease and enthesitis and dactylitis were present in 45% and 31% respectively. 95% of patients with PsA had received prior treatment with Metotrexate. At 6, 12 and 18 months, there was a statistically significant decrease from baseline in TJC, SJC and DAPSA scores. The decrease in the MASES index and the levels of PCR were not statistically significant (Table 2). According to DAPSA, at 18 months follow-ups, clinical remission rate was 77.8%, and low activity rate was 22.2%. 55% of patients with psoriasis reached PASI-75 at 18 months. APR survival rates at 6, 12 and 18 months was 67.85 %, 56.45% and 50.2 % in patients with ApS and 74.8%, 70.4% and 65.1 % in patients with psoriasis.

Conclusion: APR is an effective drug for the treatment of psoriatic arthritis and psoriasis, reaching statistical significance according to DAPSA, and with a high survival rate after 18 months of treatment.

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Table 1. Disease characteristics in patients with PsA receiving APR

PATIENTS WITH PsA	Basal, mean±SD	6 Months, mean±SD	12 Months, mean±SD	18 Months, mean±SD	"p" value
TJC	3.3 ± 2.0	1.2 ± 2.3	1.1 ± 1.6	0.7 ± 1.1	*p=0.002
SJC	2.4 ± 1.6	0.4 ± 0.9	1.0 ± 2.0	0.3 ± 1.0	*p=0.001
CRP	6.8 ± 6.3	3.5 ± 3.8	3.4 ± 3.9	2.7 ± 4.1	p=0.062
DAPSA	21.1 ± 5.6	5.6 ± 7.2	6.5 ± 8.5	2.9 ± 4.1	*p=0.000
MASES	1 ± 1.4	0.1 ± 0.5	0 ± 0	0 ± 0	p=0.16

Table 2. Disease characteristics in patients with Psoriasis receiving APR

PATIENTS WITH PSORIASIS	Basal, mean±SD	6 Months, mean±SD	12 Months, mean±SD	18 Months, mean±SD	"p" value
PASI	9.5 ± 6.6	4.1 ± 4.7	2.2 ± 2.6	3.4 ± 3.8	p=0.072

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AB0735

SEVERITY OF NAIL PSORIASIS SCORE (SNAPS) DEMONSTRATES LONGITUDINAL CONSTRUCT VALIDITY AGAINST THE MODIFIED NAIL PSORIASIS SEVERITY INDEX (mNAPSI) IN AN OBSERVATIONAL COHORT OF PATIENTS WITH PSORIATIC ARTHRITIS

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Background: Longitudinal observational data on psoriatic nail dystrophy is scarce, in part due to the lack of a validated outcome measure that is feasible in routine care. The Severity of Nail Psoriasis Score (SNAPS; range 0-40: scored one point each for the presence of pitting, onycholysis, hyperkeratosis and/or severe nail disease[#] in each fingernail) has face validity and has recently demonstrated feasibility, reliability and cross-sectional construct validity against the modified Nail Psoriasis Severity Index (mNAPSI; range 0-130)¹.

Objectives: We aimed to assess the longitudinal construct validity of SNAPS against the mNAPSI and physician nail VAS (PhNVAS), and to determine the effect size and measurement error of these tools.

Methods: Consenting consecutive patients enrolled in the Bath Psoriatic Arthritis (PsA) longitudinal cohort underwent photography of their fingernails at baseline¹ and 6 months alongside routine clinical assessments. Dorsal images of individual fingernails were acquired using a tripod mounted DSLR camera. An angled mirror positioned distally aided identification of hyperkeratosis. Photographs were scored using SNAPS, mNAPSI and PhNVAS¹. Paired statistical analyses were conducted to assess for change in scores from baseline to follow-up. Pairwise correlations between change in SNAPS and change in mNAPSI and PhNVAS were assessed using Spearman's rho. Effect sizes and measurement error were calculated.

Results: Fifteen patients with a mean (±SD) age of 54.5 (±10.59) were assessed at 6 months. There was a significant reduction in both the mNAPSI and SNAPS scores (p<0.005), with improvements in the most frequently-observed

manifestations¹ i.e. pitting, onycholysis, hyperkeratosis and crumbling (Table 1). No other feature specific to mNAPSI improved over time. There was no significant change using the PhNVAS. There was a strong correlation between changes in SNAPS and the mNAPSI (Figure 1; rho = 0.838, p<0.001). The correlation between change in SNAPS and PhNVAS was not statistically significant (rho = 0.45, p=0.095) (Figure 1). The change in mNAPSI correlated moderately with the PhNVAS (rho = 0.540, p=0.038). mNAPSI was superior to SNAPS in most parameters of measurement error (Table 2). The mNAPSI and SNAPS had similar effect sizes as measured by the SRM (Table 2).

Conclusion: SNAPS demonstrates longitudinal construct validity against the mNAPSI in a small observational cohort of PsA patients as evidenced by a strong correlation between the measures, comparable effect sizes and sensitivity to change over time. Whilst measurement error parameters favored the mNAPSI, SNAPS may be a more feasible measure for studying nail disease in cohort studies.

References:

- [1] Antony A, Hart D, Cavill C, Korendowych E, McHugh N, Lovell C, Tillet W. The 'Severity of Nail Psoriasis Score' (SNAPS) Is Feasible, Reliable and Demonstrates Construct Validity Against the mNAPSI in an Observational Cohort of Patients with Psoriatic Arthritis [abstract]. *Arthritis Rheumatol*. 2019; 71 (suppl 10).

Table 1. Outcomes at Baseline and at Follow-Up:

Outcome	Mean (SD) or Median (IQR) N=15		t-test or Wilcoxon Sign Rank test (p-value)
	Baseline	Follow-up	
SNAPS	13.0 [8.00-21.00]	5.0 [2.00-11.00]	0.002*
mNAPSI	22.0 [12.00-35.00]	6.0 [4.00-15.00]	0.001*
Physician Nail VAS	23.3 (22.90)	15.8 (15.22)	0.147
Physician Global VAS	18.0 [10.75-32.75]	15.0 [10.00-30.00]	0.455

Table 2. Measurement error of SNAPS, mNAPSI, PtNVAS and PhNVAS

	SRM	SEM	SDC	SDC (% of total score)	SDD	SDD (% of total score)
SNAPS	1.15	1.71	6.72	16.79	3.36	8.40
mNAPSI	1.15	3.51	13.74	10.57	6.87	5.29
Physician Nail VAS	0.40	4.71	18.47	14.21	9.23	7.10

Figure 1. Correlation between changes in SNAPS and changes in mNAPSI

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AB0736

SEVERITY OF NAIL PSORIASIS SCORE (SNAPS) IS SENSITIVE TO CHANGE IN A COHORT OF PATIENTS WITH PSORIATIC ARTHRITIS TREATED WITH ETANERCEPT

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Background: The Severity of Nail Psoriasis Score (SNAPS; range 0-40: scored one point each for the presence of pitting, onycholysis, hyperkeratosis and/or severe nail disease¹ in each fingernail) has been utilised to collect data regarding psoriatic nail dystrophy in the Bath Psoriatic Arthritis (PsA) Longitudinal cohort for many years. SNAPS has construct validity in PsA with the modified Nail Psoriasis Severity Index (mNAPSI) as a comparator instrument and appears to be more feasible than mNAPSI with excellent reliability¹.

Objectives: We aimed to determine if SNAPS could demonstrate longitudinal sensitivity to change in a cohort of patients treated with biological disease modifying anti-rheumatic drugs (bDMARDs) and therefore be utilized prospectively in observational and clinical trial settings.

Methods: Patients enrolled in the Bath PsA longitudinal cohort routinely undergo clinical assessments including a 66/68 Swollen and Tender Joint Count (SJC/TJC), Psoriasis Area Severity Index (PASI), Patient Global Assessment (PtGA) and Physician Global Assessment (PhGA), as well as complete patient-reported outcome measures such as the Health Assessment Questionnaire (HAQ) and Dermatology Quality of Life (Derm-QoL). All patients who commenced treatment with Etanercept and had available outcome data at baseline, 3 months and 6 months were included in this retrospective analysis. Baseline demographics were recorded and paired t-tests were utilized to assess the change in SNAPS at 3 and 6 months. The effect size and measurement error of SNAPS in this cohort were measured. Correlations between SNAPS and other outcome measures were assessed using Pearson's r.

Results: Fifty-seven patients (32 male and 25 female) with available data were retrospectively analysed. The mean ($\pm$ SD) age of the cohort and duration of disease was 61.3 ($\pm$ 11.55) and 13.3 ($\pm$ 10.82) years respectively. The mean SNAPS at baseline was 3.7 ($\pm$ 6.13) and improved to 2.0 (3.74, $p=0.018$) at 3 months and 1.2 (2.40) at 6 months ($p=0.001$ for change from baseline and $p=0.039$ for change from month 3). The smallest detectable difference at 3 months for SNAPS in this cohort was 1.35, representing 3.37% of the range of the score (Table 2). The standardised response mean (SRM) was 0.32 at 3 months and 0.44 at 6 months. There was a modest correlation between the improvement in the SNAPS score and the improvement in PASI and Derm QoL at 3 months ($r = 0.511$ and 0.558 respectively, $p=0.001$) and 6 months ($r = 0.672$, $p<0.001$ and $r=0.510$, $p=0.003$ respectively).

Conclusion: SNAPS demonstrates sensitivity to change in response to treatment with a bDMARD and could be a potential outcome measure for the assessment of treatment efficacy in prospective studies.

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Table 1. Outcomes at Baseline, 3 months and 6 months

	Baseline	Mean (SD) or Median [IQR]	3 Months (p for change from baseline)	6 Months (p for change from baseline)
PASI (0-72)	3.0 (4.80)		1.6 (2.12) $p=0.01$	1.3 (1.6) $p=0.002$
SNAPS (0-40)	3.7 (6.13)		2.0 (3.73) $p=0.018$	1.2 (2.39) $p=0.001$
Derm-QoL (0-30)	5.7 (7.07)		1.95 (3.23) $p=0.001$ (n=33)	1.9(4.72) $p=0.037$ (n=31)

Table 2. Measurement Error for SNAPS in an Etanercept Cohort

Timeframe	Standardised Response Mean	Standard Error of Mean	Smallest Detectable Change	Smallest Detectable Change (% of total score)	Smallest Detectable Difference	Smallest Detectable Difference (%)
0-3 months	0.32	0.69	1.91	4.77	1.35	3.37
0-6 months	0.44	0.74	2.06	5.15	1.46	3.64

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AB0737

MEASUREMENT PROPERTIES OF RADIOGRAPHIC OUTCOME MEASURES IN PSORIATIC ARTHRITIS: A SYSTEMATIC REVIEW FROM THE GRAPPA-OMERACT INITIATIVE

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Background: Structural damage was identified as an important outcome domain in the Psoriatic Arthritis (PsA) Core Domain Set and should be assessed at least once in the development of a new therapeutic.

Objectives: To conduct a systematic literature review (SLR) to identify studies addressing the measurement properties (MPs) for ROIs and appraise the evidence through the OMERACT Filter 2.1 Framework Instrument Selection Algorithm (OFISA). [1]

Methods: An SLR was conducted in EMBASE and MEDLINE to identify full-text English studies developing or assessing MPs of ROIs in PsA. Determination of eligibility, data extraction and methodology assessment were performed by 2 reviewers. MPs were rated according to the 'Provisional Standards' and assigned a Red/Amber/White/Green (RAWG) rating (Figure 1). [1, 2]

Results: 3621 references were screened, 531 full-text articles reviewed, and 12 were included (Figure 2). Nine instruments assessing peripheral radiographs and six assessing axial radiographs were identified (Table 1). Three of the nine peripheral radiographic instruments had adequate evidence for reliability and some evidence for construct validity: the modified Steinbrocker, Ratingen, and modified Sharp van der Heijde scores. There was scant evidence for reliability, construct validity and responsiveness for the axial ROIs, compounded by the lack of a standardized definition of axial PsA.

Conclusion: This SLR summarizes the MPs of ROIs and identifies relevant knowledge gaps that need to be addressed prior to endorsement of an instrument for the PsA Core Domain Set.

References:

- [1] Richards P and De Wit M, editors. The OMERACT Handbook (March 2019)
[2] Mokkink LB and D'Agostino MA. Protocol for performing a systematic review on imaging techniques (unpublished)

Figure 1. Criteria for the RAWG Rating

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