**Suppl. Table 5.** Summary of results from studies on the measurement properties of patient-reported outcome measures

| Instrument (Acronym) | Study | Measurement Properties | | | | | | | | | |
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| | | Internal Consistency | Reliability (Sample size, time interval) | Content Validity | Structural Validity | Hypothesis Testing | Cross-Cultural Validity | Criterion Validity | Responsiveness | Total and Subgroup Score Distribution | MID |
| Children's Scalpdex in Psoriasis (CSP) | Oostveen et al. [17] | Cronbach's α, subscales: Symptoms = 0.69<br>Functioning = 0.74<br>Emotions = 0.91 | Not assessed | Items generated from Dutch translation of patient-reported outcome measure for adult scalp psoriasis, Scalpdex[a]<br><br>Final item selection by expert panel of 2 dermatologists, 1 pediatric dermatologist, and 1 psychiatrist. Expert panel translated Scalpdex items into Dutch, modified items to be comprehensive to children, and performed final item reduction | CFA (rotation not reported) showed acceptable fit for 3-factor model<br><br>Variance explained not reported | Spearman correlations (*r*) between CSP subscales scales and PaGA scalp:<br>Symptoms, *r* = 0.51<br>Functioning, *r* = 0.46<br>Emotions, *r* = 0.46<br>All *p* values <0.001<br><br>Spearman correlations (*r*) between CSP subscales and PhGA scalp:<br>Symptoms, *r* = 0.44<br>Functioning, *r* = 0.32<br>Emotions, *r* = 0.27<br>All *p* values <0.009 | Not assessed | Not assessed | Cohen's *d* (effect size), from baseline to 1–7 months, by subscale:<br>Symptoms = 0.44<br>Functioning = 0.58<br>Emotions = 0.51 | Baseline total score distribution of subscales per treatment response as measured by PaGA scalp, mean ± SD:<br><br>Worse (*n* = 10):<br>Symptoms, 21.7 ± 26.7<br>Functioning, 13.5 ± 23.6<br>Emotions 21.1 ± 22.3<br><br>Same (*n* = 16):<br>Symptoms, 29.7 ± 19.7<br>Functioning, 17.8 ± 16.9<br>Emotions 25.0 ± 16.2<br><br>Better (*n* = 27):<br>Symptoms, 36.1 ± 21.4<br>Functioning, 20.7 ± 15.6<br>Emotions 27.1 ± 18.3<br><br>Baseline total score distribution | Not reported |

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| | | | | | | | | | | of subscales per treatment response as measured by PhGA scalp, mean ± SD:<br><br>Worse (*n* = 12):<br>Symptoms, 22.9 ± 25.4<br>Functioning, 16.2 ± 22.4<br>Emotions 27.4 ± 22.2<br><br>Same (*n* = 15):<br>Symptoms, 30.6 ± 26.7<br>Functioning, 17.0 ± 17.7<br>Emotions 24.5 ± 19.7<br><br>Better (*n* = 26):<br>Symptoms, 35.9 ± 17.1<br>Functioning, 20.4 ± 15.4<br>Emotions 24.9 ± 16.0 | |
| Simplified Psoriasis Index (SPI) | Van Geel et al. [18] | Not assessed | Not assessed | Not assessed | Not assessed | Spearman correlations (*r*) between saSPI-s and:<br>CDLQI, *r* = 0.64<br>proSPI-s, *r* = 0.67<br><br>Spearman correlations (*r*) between | Not assessed | Spearman correlations (*r*) between:<br>saSPI-s and PASI, *r* = 0.69<br><br>SPI-p and CDLQI, *r* = 0.78<br><br>saSPI-s scores >30 | Not assessed | Median saSPI-s (range), 3.5 (0–30)<br><br>Median SPI-p (range), 3.0 (0–10)<br><br>Histogram of saSPI-s and SPI-p response distributions with frequency of each | Not reported |

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| | | | | | | SPI-p and:<br>PASI, *r* = 0.40<br>proSPI-s, *r* = 0.43<br><br>Spearman correlations (*r*) between saSPI-s and SPI-p, *r* = 0.68<br><br>All *p* values <0.01<br><br>saSPI-s scores >30 were not utilized | | were not utilized | | score presented in psychometric study | |
| Children's Life Quality Index (CDLQI) Dutch version | Oostveen et al. [21] | Not assessed | Not assessed | Not assessed | Not assessed | Pearson correlations (*r*) between CDLQI-Dutch version and PASI, *r* = 0.31 (*p* value = 0.001) | Not assessed | Not assessed | Pearson correlations (*r*) between ΔCDLQI and ΔPASI by treatment group:<br>All treatments, *r* = 0.48<br>Topical, *r* = 0.48<br>Dithranol, *r* = 0.46<br>Systemic, *r* = 0.55<br><br>All *p* values <0.05 | Baseline mean CDLQI ± SD (range), 7.5 ± 5.0 (0–25)<br><br>Baseline mean CDLQI scores by gender:<br>Boys, 7.5<br>Girls, 7.6<br>(*p* value = 0.89)<br><br>Baseline mean CDLQI ± SD scores by age group:<br>12 years and under (*n* = 68), 7.0 ± 4.5<br>12 years and above (*n* = 53), 8.2 ± 5.6<br>(*p* value = 0.173) | Not reported |

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| | | | | | | | | | Baseline mean CDLQI (95% CI) by treatment group:<br>All treatments, 7.5 (6.5–8.5)<br>Topical, 7.0 (5.8–8.2)<br>Dithranol, 8.4 (6.4–10.6)<br>Systemic, 9.0 (6.2–11.7) | |
| De Jager et al. [22] | Not assessed | Not assessed | Not assessed | Not assessed | Spearman correlations (*r*) between CDLQI-Dutch version and:<br>PASI, *r* = 0.47 (*p* value = 0.003)<br>PGA, *r* = 0.51 (*p* value = 0.001) | Not assessed | Not assessed | Not assessed | Median CDLQI (IQR),<br>6 (5–9) | Not reported |
| Van Geel et al. [23] | Not assessed | Not assessed | Not assessed | Not assessed | Spearman correlations (*r*) between CDLQI-Dutch version and DLQI,<br>*r* = 0.90 (*p* value <0.001) | Not assessed | Not assessed | Not assessed | Mean CDLQI ± SD, 6.61 ± 5.74<br><br>Percent study population with CDLQI score by severity band:<br>0–1 = 18%<br>2–6 = 43%<br>7–12 = 21%<br>13–18 = 14%<br>19–30 = 4% | Not reported |

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| Children's Life Quality Index (CDLQI) Swedish Version | Ganemo et al. [24] | Not assessed | Not assessed | Not assessed | Not assessed | Spearman correlations (*r*), by age group, between CDLQI Swedish version and:<br><br>DFI, 5–8 years old, *r* = 0.004 (*p* value <0.05)<br><br>DFI, 5–16 years old, *r* = 0.04 (*p* value <0.05)<br><br>DFI, 9–16 years old, *r* = 0.34 (*p* value >0.05) | Not assessed | Not assessed | Not assessed | Median CDLQI (range) by age group,<br>5–8 years old, 6 (2–11)<br>5–16 years old, 4 (0–24)<br>9–16 years old, 4 (0–24)<br><br>Mean CDLQI ± SD by age group,<br>5–8 years old, 6.4 ± 3.6<br>5–16 years old, 5.05 ± 5.0<br>9–16 years old, 4.7 ± 5.3<br><br>Median CDLQI (range) in children with joint complaints (*n* = 4, 9–16 years old), 12 (0–24) | Not reported |
| Children's Life Quality Index (CDLQI) English and cartoon versions | Langley et al. [25] | Not assessed | Not assessed | Not assessed | Not assessed | Not assessed | Not assessed | Not assessed | CDLQI English version mean percent (median percent) improvement from baseline to week 12 by treatment group:<br>Etanercept, 49.7 (66.7)<br>Placebo, 17.6 (23.5)<br><br>CDLQI cartoon version mean percent (median percent) improvement from baseline to week 12 | CDLQI (English and cartoon versions) mean ± SD score at baseline:<br>Etanercept group, 8.9 ± 6.0<br>Placebo group 10.0 ± 6.4<br><br>CDLQI (English and cartoon versions) median (range) score at baseline:<br>Etanercept group, 7.0 (0–26.0) | MID = 2.5<br><br>Mean ΔCDLQI score from baseline to week 12 above MID for both etanercept group (5.4) and placebo group (3.1). |

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| | | by treatment group: Etanercept, 55.7 (66.7)<br>Placebo, 17.5 (0)<br><br>CDLQI (English and cartoon versions) mean percent (median percent) improvement from baseline to week 2 by treatment group: Etanercept, 27.4 (33.3)<br>Placebo, 8.0 (15.5) (*p* value = 0.0333)<br><br>CDLQI (English and cartoon versions) mean percent (median percent) improvement from baseline to week 12 by treatment group: Etanercept, 52.3 (66.7)<br>Placebo, 17.5 (15.5)<br><br>CDLQI (English and Cartoon versions) mean ± SD (median) change from baseline to week 12 by treatment group: Etanercept, 5.4 ± 5.6 (4.0)<br>Placebo, 3.1 ± 5.1 (1.0)<br><br>CDLQI (English and Cartoon versions) mean % (median %) improvement from baseline to week 12 by PASI, | Placebo group, 9.5 (0–29.0)<br><br>CDLQI (English and cartoon versions) mean ± SD at 12 weeks, PASI 75 achieved, 9.7 ± 5.6<br>PASI 75 not achieved, 7.8 ± 6.4<br><br>CDLQI (English and cartoon versions) median (range) at 12 weeks, PASI 75 achieved, 9.0 (0–23.0)<br>PASI 75 not achieved, 5.5 (0–26.0) |

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| | | | | | | | | | PASI 75 achieved, 75.1 (81.2)<br>PASI 75 not achieved, 29.8 (46.4)<br>PASI 50 achieved, 64.2 (75.0)<br>PASI 50 not achieved, 26.5 (11.5)<br>PASI 90 achieved, 80.3 (85.4)<br>PASI 90 not achieved, 45.4 (60.8) | | |
| Pediatric Quality of Life Inventory (PedsQL) | Langley et al. [25] | Not assessed | Not assessed | Not assessed | Not assessed | Not assessed | Not assessed | Not assessed | PedsQL mean ± SD (median) change from baseline to week 12 by treatment group:<br>Etanercept, 6.8 ± 17.6 (3.3)<br>Placebo, 3.8 ± 10.1 (0)<br><br>PedsQL mean ± SD (median) change from baseline to week 12 by CDLQI response status for etanercept subgroup:<br><2.5 CDLQI change from baseline, 1.9 ± 8.3 (0)<br>≥2.5 CDLQI change from baseline, 10.3 ± 20.7 (7.6) | PedsQL mean ± SD score at baseline by treatment group:<br>Etanercept, 74.8 ± 17.8<br>Placebo, 76.1 ± 16.9<br><br>PedsQL median (range) score at baseline by treatment group:<br>Etanercept, 77.2 (5.4–100)<br>Placebo,79.9 (30.4–100)<br><br>PedsQL mean score at week 12 by treatment group:<br>Etanercept, 81.7<br>Placebo, 79.8<br><br>PedsQL mean ± SD at week 12 by PASI,<br>PASI 75 achieved, 74.7 ± 17.4 | MID = 4.4 (previously reported in separate study)[b]<br><br>Mean ΔPedsQL score from baseline to week 12 above MID for etanercept group (6.8) but below MID for placebo group (3.8) |

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