

THU0281

### DO IMPROVEMENTS IN HEALTH-RELATED QUALITY OF LIFE DURING DMARD TREATMENT DIFFER BETWEEN PSORIATIC AND RHEUMATOID ARTHRITIS PATIENTS? DATA FROM THE PROSPECTIVE OBSERVATIONAL NOR-DMARD STUDY, INCLUDING BASELINE COMPARISONS WITH NORWEGIAN GENERAL POPULATION CONTROLS

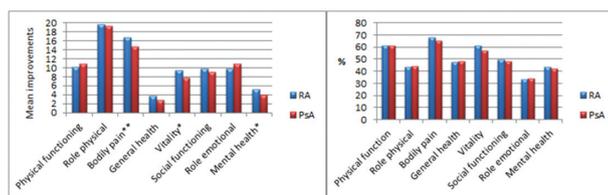
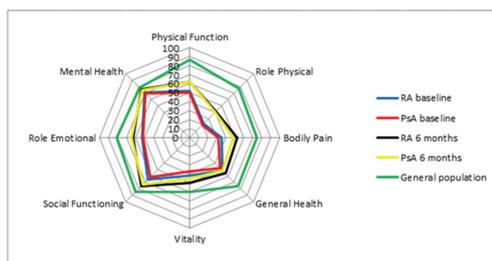
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**Background:** Only few longitudinal observational studies exist on the comparison of Health-related quality of life (HRQoL) between PsA and RA patients using the Medical Outcomes Survey Short Form-36 (SF-36), as well as with general population controls.

**Objectives:** The aims were 1) to explore if improvements in SF-36 scale scores differ between PsA and RA patients, 2) to compare proportions of PsA and RA patients achieving Minimum Clinically Important Improvements (MCII) in scale scores at 6 months follow-up<sup>1</sup>, 3) to compare HRQoL between RA, PsA patients and Norwegian general population controls.

**Methods:** We included first-time enrolled PsA and RA patients from the prospective observational multicenter NORwegian-Disease Modifying Anti-Rheumatic Drug (NOR-DMARD) study, starting conventional synthetic and/or biologic (cs/b) DMARDs between year 2000 and, 2012 as well as data from Norwegian general population controls.<sup>2</sup> Continuous variables were compared using independent t-test or Mann-Whitney U test as appropriate. Prespecified ANCOVA analyses adjusted for age and gender were performed to compare changes in scale scores from baseline to 6 months follow-up between PsA and RA patients. Radar diagram was made to visualise changes in scale scores (0 worst, 100 best) and bar charts to visualise improvements from baseline to 6 months as well as proportions of patients fulfilling MCII ( $\geq 5$ ) in scale scores at 6 months.

**Results:** A total of 1515 PsA and 3898 RA patients as well as 2323 Norwegian general population controls<sup>2</sup> were included (mean (SD) age 48.1 (12.6)/55.9 (31.6)/44.9 (16.5) years, 50.3%/71.4%/51.3% women, respectively; median (25th-75th percentile) disease duration RA; 2.0 (0.1–9.6), PsA: 1.9 (0.1–11.0) years). Mean (SD) DAS28 was lower in PsA vs. RA patients at baseline (4.2 (1.3)/4.9 (1.4)) and at 6 months ((3.1 (1.3)/3.5 (1.5)), as well as median (25th-75th percentile) 28 swollen joint count at baseline (2 (1–5)/6 (3–10)) and at 6 months (0 (0–2)/2 (0–4) follow-up, all  $p < 0.001$ . All scale scores were worse in PsA and RA compared with the general population ( $p \leq 0.001$ ), but improved during cs/bDMARD treatment (figure 1a). The improvements were marginally better in RA versus PsA patients for bodily pain, vitality and mental health (figure 1b). Similar percentages of RA and PsA patients achieved MCII  $\geq 5$  in scale scores from baseline until 6 months.



\* $p < 0.002$ ; \*\* $p < 0.005$

**Abstract THU0281 – Figure 1a.** Estimated marginal means of scale scores in RA and PsA patients as well as Norwegian general population controls, adjusted for age and gender. **Abstract THU0281 – Figure 1b.** Mean improvements in SF-36 scale scores from baseline to 6 months, adjusted for age, gender and the respective baseline values. **Abstract THU0281 – Figure 1c.** Similar proportions of RA and PsA patients achieved MCII  $\geq 5$  in scale scores from baseline to 6 months follow-up. \* $p < 0.002$ ; \*\* $p < 0.005$

**Conclusions:** These findings indicate that PsA patients have at least as high disease burden in terms of HRQoL as RA patients, in spite of higher levels of joint inflammation in the RA patients. Improvements during treatment were overall similar, except for somewhat larger improvements in bodily pain, vitality and mental health in RA patients. Similar proportions of PsA and RA patients achieved MCII at 6 months.

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THU0282

### THE IMPACT OF COMORBIDITIES ON PHYSICAL FUNCTION IN PATIENTS WITH ANKYLOSING SPONDYLITIS (AS) AND PSORIATIC ARTHRITIS (PSA) ATTENDING RHEUMATOLOGY CLINICS

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**Background:** Regardless of disease activity, functional status gets worse in patients with rheumatoid arthritis (RA) with comorbidities. However, the impact of comorbidities on physical function in ankylosing spondylitis (AS) and psoriatic arthritis (PsA) is less known.

**Objectives:** To assess the impact of comorbidities on physical function (PF) in patients with AS and PsA.

**Methods:** Analysis of the baseline visit from the ongoing multicentric, observational, prospective, CARMA study. Data from patients with AS and PsA were analysed. Two different adjusted multivariate models were performed, where PF was the dependent variable (BASFI in AS and HAQ in PsA) and the following independent variables: comorbidities, a proxy for the Charlson index (ChI) (minimum 0; maximum 11), sociodemographic, disease activity (ESR, CRP and BASDAI in AS; while SJC, TJC, CRP, ESR, DAS, dactylitis count and PASI in PsA) and duration, radiographic damage and treatments. Results are presented as  $\beta$  coefficients and p-values.

**Results:** 738 patients with AS and 721 with PsA included (mean age at inclusion  $48.1 \pm 11.7$  and  $51.8 \pm 12$  years, respectively). AS patients: median BASFI 3.1 [interquartile range (IQR): 1.3–5.2], BASDAI 3.5 [IQR: 1.7–5.3], mean ChI  $1.32 \pm 0.73$ . PsA patients: HAQ 0.4 [IQR: 0.0–0.9], DAS28 2.9 [IQR: 2.0–3.8], mean ChI  $1.30 \pm 0.66$ . A ChI  $> 1$  found in 21% of the patients. Hypertension in 25.7% and 29.5%; hypercholesterolemia in 27% and 35.6% and diabetes in 7.6% and 9.2% of the patients with AS and PsA, respectively. Cardiovascular events occurred in 7.6% AS and 7.2% PsA, in most cases after the rheumatic disease diagnosis. Only patients with PsA with higher ChI showed worse adjusted physical function ( $\beta$ : 0.09;  $p = 0.03$ ). Also female sex ( $\beta$ : 0.03;  $p = 0.001$ ), obesity ( $\beta$ : 0.09;  $p = 0.04$ ), disease duration ( $\beta$ : 0.01;  $p = 0.009$ ), NSAIDs ( $\beta$ : 0.1;  $p = 0.02$ ), corticosteroids ( $\beta$ : 0.12;  $p = 0.02$ ) and biologics ( $\beta$ : 0.15;  $p = 0.07$ ) were associated with worse function in patients with PsA. In contrast, a higher educational level was associated with less disability. In patients with AS, thyroid disease ( $\beta$ : 1.19,  $p = 0.002$ ) and raised ESR ( $\beta$ : 0.01,  $p = 0.010$ ) were independently associated with function.

**Conclusions:** The presence of comorbidities in patients with PsA is independently associated with worse physical function, similar to what happens in RA. Early detection and control may yield an integral management of the disease and better final outcomes.

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THU0283

### PATIENTS WITH PSORIATIC ARTHRITIS WHO ARE NOT ELIGIBLE FOR RANDOMISED CLINICAL TRIALS FOR TNF INHIBITORS HAVE SIMILAR TREATMENT RESPONSE AND DRUG SURVIVAL. RESULTS FROM THE ICEBIO REGISTRY

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**Background:** We have recently reported that a majority of patients with psoriatic arthritis who are being treated with TNF inhibitors in Iceland would not have been

eligible for the randomised clinical trials (RCTs) performed leading up to registration of the respective pharmaceutical product.<sup>1</sup>

**Objectives:** To determine whether patients with psoriatic arthritis who did not fulfil the inclusion criteria (group B) in RCTs receive similar benefits and drug survival from TNF inhibitors as those patients who would have fulfilled the inclusion criteria (group A).

**Methods:** All patients with rheumatic disorders who are treated with biologic DMARDs in Iceland are registered in ICEBIO. ICEBIO is based on the Danish Registry for biologic therapies in rheumatology<sup>2</sup> and has data about approximately 98% of all patients with psoriatic arthritis treated with biologic DMARDs in Iceland. On February 1st 2016 there was information on 1058 individuals in ICEBIO. 231 patients with psoriatic arthritis received their first-line treatment and could be classified according to inclusion criteria of respective pharmaceutical RCT.<sup>1</sup> Information on disease activity at baseline was collected and we estimate the treatment response at 6 and 18 months according to ACR20 and DAS28CRP and drug survival.

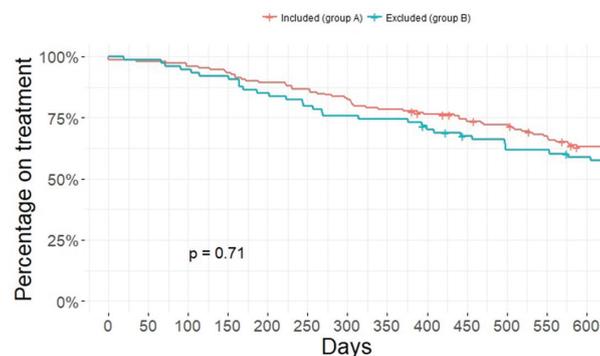
**Results:** The groups were similar at baseline (table 1), although Group A predictably had higher SJC (5.5 vs 3.8) and subsequently higher DAS28CRP (4.6 vs 4.2). Out of 231 patients we have sufficient data to determine ACR20 and DAS28CRP response in 92 and 91 patients respectively. Treatment response is outlined in table 2, with better response in group A in regards to HAQ and SJC. There was similar drug survival between the groups (figure 1).

	Group A	Group B	p value
VAS pain	65±17	64±22	0.705
VAS global	71±21	66±24	0.222
TJC	6.3±3.8	5.4±4.4	0.198
SJC	5.5±3.3	3.8±3.6	0.003
HAQ	1.2±0.69	1.0±0.65	0.114
DAS28CRP	4.6±0.8	4.2±0.9	0.012

**Abstract THU0283 – Table 1.** Group characteristics, mean values±SD.

Improvement in clinical parameters:	Included in RCTs	Not included in RCTs	p value
HAQ at 6 months	-0.8±0.7	-0.3±0.6	0.008
HAQ at 18 months	-0.6±0.7	-0.3±0.6	0.051
SJC at 6 months	-4.3±2.7	-2.2±2.7	0.001
SJC at 18 months	-4.4±3.4	-2.2±3.6	0.007
TJC at 6 months	-4.2±3.8	-2.8±5.1	0.163
TJC at 18 months	-4.0±4.9	-3.9±4.1	0.889
ACR20 at 6 months	77%	60%	0.207
ACR20 at 18 months	69%	59%	0.545
DAS28CRP at 6 months	77%	71%	0.749
DAS28CRP at 18 months	81%	67%	0.304

**Abstract THU0283 – Table 2.** Response to first-line TNF $\alpha$  inhibitors, mean values and percentage achieving response by ACR20 or decrease in disease activity by DAS28CRP.



**Abstract THU0283 – Figure 1.** First-line TNF inhibitor drug survival

**Conclusions:** Patients with psoriatic arthritis that would not have fulfilled the inclusion criteria in RCTs seem to respond to treatment effectively and have similar drug survival. Thus, treatment outcomes for psoriatic arthritis from RCTs may probably be applied to daily clinical practice, whether patients would have fulfilled RCT criterias or not. However, more detailed studies are needed.

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THU0284

## HAQ IN PSORIATIC ARTHRITIS IS DRIVEN BY GENDER, INFLAMMATION AND AGEING: OBSERVATIONAL DATA FROM COHORT STUDIES IN UK, DENMARK, ICELAND AND SWEDEN

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**Background:** Psoriatic arthritis (PsA) is a chronic inflammatory disorder associated with skin and joint involvement, pain and impaired function. HAQ has been widely used but components contributing to HAQ and changes thereof have been sparsely studied.

**Objectives:** The objective of this multinational population-based cohort study was to investigate factors associated with longitudinal changes in HAQ in patients with PsA in independent settings.

**Methods:** Data on PsA patient characteristics, disease activity components and HAQ was obtained from the DANBIO (Denmark), ICEBIO (Iceland), SSATG (southern Sweden) and BATH (UK) cohort registries. Farewell's linear increments model for missing data was used to fit each longitudinal response by regressing the observed increments onto lagged values of the response variables (HAQ, CRP and VAS pain) while also adjusting for other covariates (gender, age and disease duration). Due to homogeneity of the nature of registries, the Nordic data was pooled for patients initiating first course of biologics (anti-TNF therapy, secukinumab or ustekinumab), whereas UK data represents an ongoing cohort with different treatments.

**Results:** In the period 2006 through 2016, we identified 1473 patients from DANBIO, 168 from ICEBIO, 469 from BATH, and 716 from SSATG eligible for analyses. Mean age in years (SD) and percentage of females for the populations were 46 (SD ±12), 55% for DANBIO, 46 (SD ±12), 61% for ICEBIO, 47 (SD ±11), 51% for SSATG, and 58 (SD ±13) 49% for BATH; respectively. The figure displays observed HAQ values (solid lines) and Farewell modelled (broken lines) curves divided on gender for the development of HAQ after initiation of biologic therapy for pooled Nordic data (A) and for the ongoing UK cohort (B). It should be noted, that Farewell modelling inflates HAQ-values in the Nordic registries reflecting a correction for channelling bias due to drop out during biologic treatment. Whereas the modelled HAQ values for the BATH cohort are deflated possibly due to extra visits during flares in this ongoing observational cohort. At all time points and cohorts female HAQ values are higher than males (p<0.001). After initiation of biologic therapy there is a significant decline in the HAQ scores in the Nordic registers of 0.23 (95% CI 0.21–0.25) at 6 months. Changes in CRP, VAS-pain nor disease duration did not appear to affect HAQ during follow-up. However, ageing seemed to have a tendency to increase HAQ over time. The same consistent pattern was present when analyses were done separated by country (data not shown).