

Effect of physicians' prescribing choices of first- or second-line Tumor Necrosis Factor inhibitor biologics versus non-Tumor Necrosis Factor inhibitor biologic therapies on psoriatic arthritis patient-reported outcomes measures

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BACKGROUND & OBJECTIVE

Psoriatic arthritis (PsA) is a chronic immune-mediated disease characterised by joint inflammation and skin lesions. There are a variety of treatment options available to patients with PsA.

Tumor Necrosis Factor inhibitors (TNFi) are the most common biologic therapies prescribed to patients with PsA. However, within the last decade biologics that target other metabolic pathways have become increasingly popular among physicians; these include interleukin inhibitors, phosphodiesterase inhibitors and Janus kinase inhibitors.

The current American College of Rheumatology and National Psoriasis Foundation guidelines for the treatment of PsA suggest that TNFis should be prescribed as a first-line therapy where they are available; TNFi-naïve patients who are switching should switch to a TNFi².

Patient-reported outcome measures (PROMs) allow us to ascertain the impact of PsA on different aspects of the patient's life³. Understanding how physician prescribing practices influence patient outcomes is important for improving the treatment of PsA.

The objective of this study was to evaluate how physicians' first- or second-line prescribing preferences for TNFi versus non-TNFi biologics affect the PROMs of their patients with PsA. Does having a physician who adheres to the guidance versus a physician who's more likely to prescribe novel therapies have an impact on the patient's health related quality of life (HRQoL)?

METHODS

- Data were collected via the Adelphi PsA Disease Specific Programme (DSP)TM; a cross-sectional survey of rheumatologists, dermatologists, and their consulting patients in the United States and Europe (France, Germany, Italy, Spain and United Kingdom); conducted in 2021.
- Rheumatologists and dermatologists were eligible to participate in this study provided that they had 3-30 years' experience treating patients with PsA.
- Patients were eligible if they consulted a participating physician, had a confirmed diagnosis of PsA, were aged ≥18 years, provided informed consent and not involved in a clinical trial at data collection.
- Rheumatologists and dermatologists completed patient record forms reporting on patient demographics and disease characteristics.
- Physicians provided data on their first- and second-line PsA treatment preferences. Patients independently completed PROMs.
- Linear regression analyses were used for the EuroQoL 5-Dimension 5-Level Quality of Life Survey (EQ-5D-5L), Work Productivity and Activity Impairment Questionnaire (WPAI) and Psoriatic Arthritis Impact of Disease (PsAID12).
- Logistic regressions were used for individual EQ-5D-5L domains. Advanced therapies were categorised into TNFi and non-TNFi therapies.

CONCLUSIONS

- Physician preferences for first-line TNFis in patients with PsA were associated with a significant negative impact on PROMs, including decreased HRQoL, and increased activity impairment, likelihood of pain and issues with mobility and self-care.
- These findings suggest that patients with PsA may observe improvements in PROMs from the use of non-TNFi (i.e. interleukin-23 or interleukin-17 inhibitor) biologics versus TNFi biologics as first-line biologic therapy.
- The reduction in PROM scores associated with a physicians preference for TNFis as a first-line therapy could suggest that physicians' attitudes towards treatment options can impact on PROMs. Physicians who were more likely to stick to the status quo and prescribe TNFis as a first-line therapy may see less improvement in a patient's HRQoL than a physician who will readily prescribe novel therapies.

RESULTS

Demographics
 The population was made up of:

- 351 rheumatologists and 169 dermatologists
- 2113 patients
- 50.4% male patients
- 88.5% white patients
- Mean age of patients was 47.2 (12.6 SD) years

- Results**
 In patients of physicians who preferred to prescribe TNFis at first line, we observed:
- A significant 0.052-point decrease in EQ-5D-5L, above the minimal clinically important difference (MCID)⁵ (p=0.044, Table 1) (Figure 1).
 - A 0.570-point increase in PsAID12, below the MCID⁷ (p=0.049, Table 1) (Figure 1).
 - A 1.94-fold increase in the odds that patients would experience problems with mobility (p=0.033)(Figure 2).
 - A 2.07-fold increase in the odds that they would have issues with self-care (p=0.036)(Figure 2).
 - A 2.27-fold increase in the odds that patients would have pain/discomfort (p=0.005)(Figure 2).

Physician preference for second-line TNFi versus non-TNFi biologics had no significant impact on patients' HRQoL.

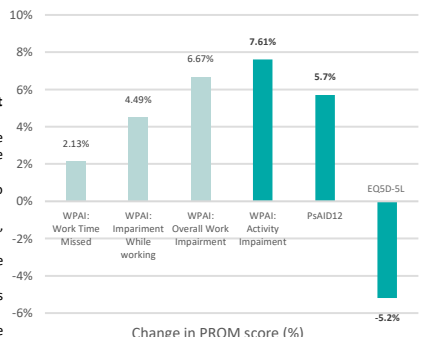


Figure 1. True percentage change in PROM score in the population that had a physician who prefers TNFis as a first-line treatment. Significant changes are shaded in dark green while insignificant changes are shaded in light green. Higher WPAI scores indicate a greater impact on the patient's activity or work and a higher PsAID12 score indicates a greater impact of PsA on the patient's life. A lower EQ5D-5L score indicates a lower HRQoL. See table 1 for p values.

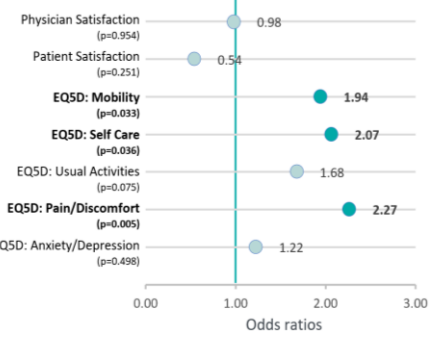


Figure 2. Odds ratio that each EQ5D-5L domain and physician/patient satisfaction was impacted by having a physician who prefers TNFis as a first line treatment. Significant odds ratios are shaded in dark green while insignificant odds ratios are shaded in light green.

	First-line TNFi	p-value
Linear Regressions	Coefficient [95% Confidence Interval]	
EQ-5D-5L Utility (n=220)	-0.052 (MCID<0.050)	0.044
PsAID12 (n=208)	0.57 (MCID≥1.4)	0.049
WPAI: Activity Impairment (n=220)	7.61 (MCID≥20)	0.020
WPAI: Work Time Missed (n=220)	2.13 (MCID≥20)	0.467
WPAI: Impairment While Working (n=220)	4.49 (MCID≥15)	0.177
WPAI: Overall Work Impairment (n=220)	6.67 (MCID≥20)	0.100

Table 1: The difference in PROM scores in patients whose physician prefers to prescribe TNFis as a first line treatment compared to those whose physicians prefer to prescribe non-TNfIs as a first line treatment. Significant differences are shaded in darker green while insignificant differences are shaded in light green.

LIMITATIONS

- This sample is representative of the consulting patient population.
- Recall bias is a common limitation of surveys; however, data in the study were collected at the time of consultation to limit recall bias.

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