Persistence and Disease Activity Control Among Patients with Psoriatic Arthritis in the CorEvitas Psoriatic Arthritis/Spondyloarthritis Registry Initiating a Third or Higher Line of Biologic or Targeted Synthetic Disease-Modifying Antirheumatic Drug Therapy

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Objective

To evaluate treatment persistence and change from baseline in disease activity measures and patient-reported outcomes (PROs) among patients with psoriatic arthritis (PsA) following initiation of a third-line or higher (3L+) biologic or targeted disease-modifying antirheumatic drug (b/tsDMARD).

Background

- PsA is a heterogeneous chronic inflammatory disease that affects the joints, skin, and other regions of the body, leading to impairments in quality of life.[1]
- While available advanced treatments for PsA have expanded, many patients exhibit suboptimal responses despite undergoing multiple lines of b/tsDMARDs.[2] Moreover, patients initiating a 3L+ therapy may experience increased disease burden.[3]

Methods

Population

- We conducted a longitudinal, retrospective cohort study using data from the PPD™ CorEvitas™ PsA/Spondyloarthritis Registry, a prospective, multicenter, observational US registry.
- Included patients were ≥18 years of age, had a PsA diagnosis, and initiated a b/tsDMARD between January 2016–December 2023 as their first eligible 3L+ therapy at or after entry into the registry (baseline).

Analysis

- The study design is summarized in **Figure 1**.
- Persistence was defined as the time from therapy initiation to discontinuation (with or without switch of therapy).
  - Patients were censored at the last available registry visit within 24 months of initiation or the end of the study period, whichever occurred first.
- Change from baseline in PsA disease activity and PRO measures were assessed after 6 months of b/tsDMARD treatment.
- Continuous variables were reported as mean (standard deviation [SD]) and median (interquartile range [IQR] or 95% confidence interval [CI]). Categorical variables were described with counts and percentages.

Results

Patient characteristics

- The registry included 7,044 b/tsDMARD initiations, with 2,550 (36.2%) being 3L+. This study included 1,210 patients initiating their first eligible 3L+ b/tsDMARD; of these, 637 had a 6-month follow-up (**Figure 2**).
- Patient baseline characteristics are summarized in **Table 1** (full baseline characteristics available via the **QR code**). Of the 1,210 patients included in this analysis, mean (SD) age was 54.2 (12.3) years and median (IQR) PsA duration was 7.0 (3.0, 12.0) years.
- At b/tsDMARD initiation, mean (SD) swollen joint count (SJC) was 2.7 (4.4) and tender joint count (TJC) was 7.7 (10.3).
- Baseline PROs indicated moderate-to-high disease severity.
  - Mean Health Assessment Questionnaire Disability Index (HAQ-DI) was 0.9 (0.7)
  - Mean pain and fatigue Visual Analog Scale (VAS)–100 scores were 54.0 (27.7) and 53.8 (28.0), respectively.

Treatment persistence

- Median (95% CI) treatment persistence was 13.4 (12.4, 15.2) months (**Figure 3**).
- Of the 1,210 patients included in this analysis, 76.0% (95% CI: 73.0, 78.0), 54.0% (95% CI: 51.0, 57.0), and 42.0% (95% CI: 39.0, 45.0) remained on therapy at 6, 12, and 18 months, respectively.

Treatment outcomes

- Among patients with a 6-month follow-up visit (n=637), improvements from baseline (where 95% CIs exclude the null value at α=0.05) occurred in most disease activity and PRO measures, however, the responses appeared to be suboptimal (**Table 2**).
- Improvements from baseline were not observed for HAQ-DI, EuroQol 5-dimensional, 3-level (EQ-5D-3L), and work productivity and activity impairment (WPAI) absenteeism.

Conclusions

Despite observing median treatment persistence greater than 1 year, suboptimal improvements were reflected across disease activity measures and quality of life-related PROs, suggesting that patients may experience insufficient disease control even after multiple lines of treatment. Therefore, earlier, more effective treatment options are needed.

Summary

Using data from the **CorEvitas PsA/Spondyloarthritis Registry**, we evaluated treatment persistence and outcomes among patients with PsA initiating **3L+ b/tsDMARD therapy.**

After 6 months of b/tsDMARD treatment:

Suboptimal improvements from baseline were observed in measures of:

Despite observing median treatment **persistence greater than 1 year**, suboptimal improvements were reflected across disease activity measures and PROs, suggesting that patients may experience **insufficient disease control** even after multiple lines of treatment.

Figure 1 Study design

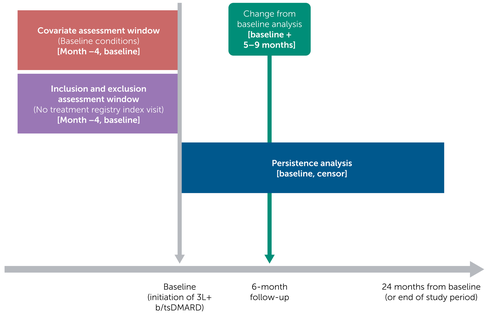
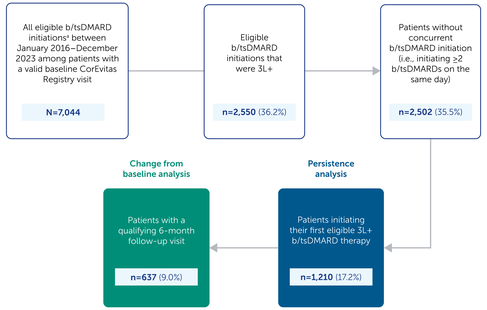
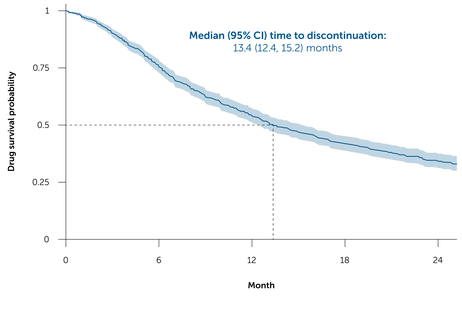


Figure 2 Selection of eligible 3L+ b/tsDMARD initiations



[a] Initiations included any line of therapy. Eligible bDMARDs included abatacept, adalimumab, bimekizumab, certolizumab pegol, etanercept, golimumab, guselkumab, infliximab, ixekizumab, risankizumab, secukinumab, and ustekinumab. Eligible tsDMARDs included tofacitinib and upadacitinib.

Figure 3 Kaplan-Meier curve of treatment persistence



Number at risk:	1,210	735	470	313	221

Time until discontinuation with or without switch. Shading indicates the 95% CI. Switching treatment to a bio-similar was not considered as a switch.

Table 1 Demographics, PsA disease activity, and PRO measures at baseline

	Results (total patients included, N=1,210)
Demographics	
Age, years, mean (SD)	54.2 (12.3)
Sex, female, n (%) [N]	721 (59.7) [1,207]
Concomitant csDMARD use[a], n (%)	328 (27.1)
PsA duration, years, median (IQR) [N]	7.0 (3.0, 12.0) [1,202]
Class of b/tsDMARD initiated as their first eligible 3L+ therapy[a], n (%)	
IL-17i	455 (37.6)
TNFi	338 (27.9)
IL-23i	169 (14.0)
JAKi	148 (12.2)
IL-12/23i	68 (5.6)
non-TNFi[b]	32 (2.6)
Disease activity, mean (SD) unless specified	
PGA of PsA and psoriasis (VAS-100), [N]	36.7 (23.9) [1,193]
BSA (% involvement), [N]	5.5 (10.5) [1,178]
cDAPSA (score: 0–154), [N]	20.6 (15.1) [1,149]
cDAPSA category, [N]	1,149
Remission (>0 to ≤4), n (%)	111 (9.7)
Low (>4 to ≤13), n (%)	284 (24.7)
Moderate (>13 to ≤27), n (%)	489 (42.6)
High (>27 to ≤154), n (%)	265 (23.1)
MDA[c], n (%) [N]	215 (17.9) [1,199]
VLDA[d], n (%) [N]	51 (4.2) [1,209]
SJC (of 66 joints), [N]	2.7 (4.4) [1,175]
TJC (of 68 joints), [N]	7.7 (10.3) [1,175]
Dactylitis count	0.4 (1.6)
LEI (score: 0–6), [N]	0.5 (1.1) [1,007]
LEI >0, n (%) [N]	239 (23.7) [1,007]
PROs, mean (SD)	
PtGA of arthritis and psoriasis (VAS-100), [N]	47.4 (26.6) [1,185]
HAQ-DI (score: 0–3), [N]	0.9 (0.7) [1,192]
Pain (VAS-100), [N]	54.0 (27.7) [1,201]
Fatigue (VAS-100), [N]	53.8 (28.0) [1,203]
EQ-5D-3L (score: 0–1), [N]	0.6 (0.2) [1,191]
FSS[f] (score: 0–31), [N]	10.4 (6.2) [570]
WPAI: absenteeism (score: 0–100%), [N]	7.2 (19.3) [644]
WPAI: presenteeism (score: 0–100%), [N]	30.4 (25.9) [689]
WPAI: work productivity loss (score: 0–100%), [N]	34.6 (28.8) [641]
WPAI: activity impairment (score: 0–100%), [N]	43.2 (29.5) [1,178]

[a] Hydroxychloroquine, leflunomide, methotrexate, and sulfasalazine; **[b]** Eligible bDMARDs included abatacept, adalimumab, bimekizumab, certolizumab pegol, etanercept, golimumab, guselkumab, infliximab, infliximab and biosimilars, risankizumab, secukinumab, ustekinumab. Eligible tsDMARDs included tofacitinib and upadacitinib; **[c]** Abatacept; **[d]** MDA was achieved if 5 out of the following 7 conditions were met: TJC68 ≤1, BSA ≤3%, pain (VAS-100) ≤15, PtGA of PsA and Psoriasis ≤20, LEI ≤1, and HAQ-DI ≤0.5; **[e]** VLDA was achieved if all of the following conditions were met: TJC68 ≤1, SJC66 ≤1, BSA ≤3%, pain (VAS-100) ≤15, PtGA of PsA and Psoriasis ≤20, and LEI ≤1; **[f]** Scored using the sum of the WPI and SSS.

Table 2 Change from baseline in disease activity and PRO measures following initiation of a 3L+ b/tsDMARD to 6-month follow-up[a]

	n	Mean CfB (Δ)[b] or achievement response rate (%)[c]	95% CI
Disease activity			
PGA of arthritis (VAS-100)	624	−10.0	**−12.4, −7.6**
PGA of PsA and psoriasis (VAS-100)	618	−12.5	**−15.0, −10.0**
BSA (% involvement)	599	−2.5	**−3.5, −1.4**
BSA[d] <3%	256	52.3%	**46.0%, 58.6%**
IGA 0/1[e]	329	46.2%	**40.7%, 51.8%**
cDAPSA (score: 0–154)	566	−4.8	**−6.5, −3.2**
cDAPSA: LDA[f]	368	37.8%	**32.8%, 43.0%**
cDAPSA: remission[g] (>0–≤4)	504	12.7%	**10.0%, 16.0%**
mPASDAS (score: 0–10)	281	−0.5	**−0.8, −0.3**
MDA[h]	447	22.8%	**19.1%, 27.0%**
VLDA[i]	520	8.3%	**6.1%, 11.1%**
BASDAI (VAS-10)	612	−0.7	**−0.9, −0.4**
Nail psoriasis (VAS-100)	593	−3.1	**−4.9, −1.2**
SJC (of 66 joints)	591	−1.1	**−1.6, −0.7**
TJC (of 68 joints)	591	−2.2	**−3.3, −1.0**
Dactylitis count	637	−0.15	**−0.30, −0.01**
PROs			
PtGA of arthritis and psoriasis (VAS-100)	618	−6.8	**−9.8, −3.8**
PtGA of PsA (VAS-100)	615	−6.7	**−9.7, −3.7**
HAQ-DI (score: 0–3)	619	−0.06	−0.13, 0.02
Pain in the last week (VAS-100)	628	−8.4	**−11.4, −5.3**
Fatigue in the last week (VAS-100)	630	−6.5	**−9.6, −3.5**
Spine pain in the last week (VAS-100)	623	−3.8	**−7.2, −0.5**
Morning stiffness in the last week (VAS-100)	630	−7.5	**−10.7, −4.2**
EQ-5D-3L[j] (score: 0–1)	627	0.022	−0.004, 0.048
FSS[k] (score: 0–31)	278	−1.2	**−2.1, −0.3**
WPAI: absenteeism (score: 0–100%)	293	−1.8%	−4.6%, 1.0%
WPAI: presenteeism (score: 0–100%)	332	−5.0%	**−8.6%, −1.4%**
WPAI: work productivity loss (score: 0–100%)	290	−6.5%	**−10.7%, −2.3%**
WPAI: activity impairment (score: 0–100%)	610	−6.6%	**−9.9%, −3.3%**

Bold in the 95% CI column indicates statistical significance at α=0.05, given the 95% CI excludes the null value. [a] N=1,210 patients initiating a 3L+ b/tsDMARD, of which n=637 had a 6-month follow-up. For all measurements except EQ-5D-3L, higher values indicated worse health state; thus, a negative change indicated improvement; **[b]** CfB= outcome$_{month-6}$ − outcome$_{baseline}$; **[c]** Categorical variables were assessed by evaluating response achievement in outcomes among patients who had not achieved response at baseline; **[d]** BSA <3% at follow-up among patients with BSA ≥3% at baseline; **[e]** IGA=0 or 1 at follow-up among patients with IGA >1 at baseline; **[f]** If cDAPSA ≤13 among patients with cDAPSA >13 at baseline; **[g]** If cDAPSA ≤4 among patients with cDAPSA >4 at baseline; **[h]** MDA was achieved if 5 out of the following 7 conditions were met: TJC68 ≤1, SJC66 ≤1, BSA ≤3%, pain (VAS-100) ≤15, PtGA of PsA and Psoriasis (VAS-100) ≤20, LEI ≤1, and HAQ-DI (score: 0–3) ≤0.5; **[i]** VLDA was achieved if all of the following conditions were met: TJC68 ≤1, SJC66 ≤1, BSA ≤3%, pain (VAS-100) ≤15, PtGA of PsA and Psoriasis ≤20, and LEI ≤1; **[j]** For EQ-5D-3L, lower values indicated worse health state; thus, a positive change indicated improvement; **[k]** Scored using the sum of the WPI and SSS.

3L+: third-line or higher; **BASDAI:** Bath Ankylosing Spondylitis Disease Activity Index; **BSA:** body surface area; **b/tsDMARD:** biologic/targeted synthetic disease-modifying antirheumatic drug; **cDAPSA:** Clinical Disease Activity Index for PsA; **CfB:** change from baseline; **CI:** confidence interval; **csDMARD:** conventional synthetic disease-modifying antirheumatic drug; **EQ-5D-3L:** EuroQol 5-dimensional, 3-level; **FSS:** Fibromyalgia Severity Scale; **HAQ-DI:** Health Assessment Questionnaire Disability Index; **IGA:** Investigator Global Assessment; **IL:** interleukin; **IQR:** interquartile range; JAKi: Janus kinase inhibitor; **LDA:** low disease activity; **LEI:** Leeds Enthesitis Index; **MDA:** minimal disease activity; **mPASDAS:** modified PsA Disease Activity Score; **PGA:** Physician Global Assessment; **PRO:** patient-reported outcome; **PtGA:** Patient Global Assessment; **PsA:** psoriatic arthritis; **SD:** standard deviation; **SJC:** swollen joint count; **SSS:** Symptom Severity Scale; **TJC:** tender joint count; **TNFi:** tumor necrosis factor inhibitor; **VAS:** Visual Analog Scale; **VLDA:** very low disease activity; **WPAI:** Work Productivity and Activity Impairment; **WPI:** Widespread Pain Index.

References: [1]Mease PJ. Drugs 2014;74:423–41; [2]Fagni F. Arthritis Rheumatol 2024;76:670–4; [3]Alp G. Clin Exp Rheumatol 2025;43:41–47. **Author Contributions:** Substantial contributions to study conception/design, or acquisition/analysis/interpretation of data: **PJM**, **NM**, **YMM**, **CS**, **ME**, **RL**, **AO**; Drafting of the publication, or reviewing it critically for important intellectual content: **PJM**, **NM**, **YMM**, **CS**, **ME**, **RL**, **AO**; Final approval of the publication: **PJM**, **NM**, **YMM**, **CS**, **ME**, **RL**, **AO**. **Author Disclosures: PJM;** Research grants from AbbVie, Acelyrin, Amgen, Bristol Myers Squibb, Eli Lilly and Company, Johnson & Johnson Innovative Medicine, Novartis, Pfizer, Inc., Sana, and UCB, consulting fees from AbbVie, Acelyrin, Amgen, Bristol Myers Squibb, Century, Cullinan, Eli Lilly and Company, Immagene, Johnson & Johnson Innovative Medicine, MoonLake Immunotherapeutics, Novartis, Pfizer, Inc., Spyre, Takeda, and UCB; speakers bureau fees from AbbVie, Amgen, Eli Lilly and Company, Johnson & Johnson Innovative Medicine, Novartis, Pfizer, Inc., and UCB. **NM, YMM, ME:** Employees of CorEvitas, LLC. **CS, RL:** Employees and shareholders of UCB. **AO:** Shareholder of Amgen, Novartis, and Pfizer, Inc., and has received grant/research support from AbbVie, Amgen, Bristol Myers Squibb, Celgene, CorEvitas, LLC, Eli Lilly and Company, Novartis, and Pfizer, Inc. **Acknowledgments:** The authors would like to thank all of the investigators, their clinical staff and the patients who participate in the CorEvitas PsA/Spondyloarthritis Registry. The CorEvitas Psoriasis Registry was developed in collaboration with the National Psoriasis Foundation. The authors acknowledge Tiffany Park, PharmD, the Publications Lead for US Medical Affairs Immunology of UCB, Smyrna, GA, USA for publication coordination, Shanna Bonanno, BS, Costello Medical, Boston, USA for medical writing and editorial assistance, and the Costello Medical Creative team for design support. This study was sponsored by CorEvitas, LLC, and funded by UCB. All costs associated with development of this poster were funded by UCB.

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