Characteristics and Treatment Patterns among Patients with Psoriatic Arthritis in the CorEvitas Psoriatic Arthritis/Spondyloarthritis Registry Initiating a Third or Higher Line of Biologic or Targeted Disease-Modifying Antirheumatic Drug Therapy

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Objective

To analyze the characteristics and treatment patterns of patients with psoriatic arthritis (PsA) initiating third-line or higher (3L+) biologic or targeted disease-modifying antirheumatic drug (b/tsDMARD) therapy.

Background

- PsA is a heterogeneous, chronic inflammatory disease that affects the joints, skin, and other regions of the body. PsA develops in approximately 30% of patients with psoriasis in the US and can lead to substantial impairments in quality of life.[1,2]
- While b/tsDMARDs, including interleukin (IL)-17, IL-23, IL-12/23, tumor necrosis factor (TNF), and Janus kinase (JAK) inhibitors (i), are effective in improving symptoms, patients may experience suboptimal or loss of response over time, particularly after multiple lines of treatment.[2,3]

Methods

- We conducted a 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+ advanced therapy at or after entry into the registry (baseline).
- Patient characteristics, treatment histories, and treatment patterns were assessed at baseline.
  - Continuous variables were reported as means with standard deviation (SD) or medians with interquartile range (IQR), while categorical variables were described with counts and percentages.

Results

Patient characteristics

- The CorEvitas registry included 7,044 initiations of b/tsDMARDs, with 2,550 (36.2%) being 3L+ initiations. This analysis included 1,210 patients initiating their first eligible 3L+ b/tsDMARD therapy (**Figure 1**).
- Patient characteristics at baseline are summarized in **Table 1**.
  - The mean (SD) age was 54.2 (12.3) years, 721 (59.7%) patients were female, and 1,105 (92.9%) patients were white
  - Two or more comorbidities were observed in 446 (36.9%) patients. The most common comorbidities were obesity, hypertension, and depression
  - Patients had a median (IQR) PsA duration of 7.0 (3.0, 12.0) years and symptom duration of 10.0 (5.0, 18.0) years
  - Most patients (65.6%) had moderate-to-high disease activity according to their cDAPSA score, and baseline patient-reported outcomes indicated moderate-to-severe disease burden.
- Treatment history at baseline is summarized in **Table 2**.
  - The median (IQR) time from first b/tsDMARD therapy to initiation of current therapy was 1.5 (0.7, 2.9) years
  - Patients frequently used two prior bDMARDs (700 [57.9%]), while 1,102 (91.1%) were tsDMARDs naive
  - In 813 patients (94.2%), active disease was reported as the reason for initiating 3L+ therapy in the form completed by the physician.

Treatment patterns

- Immediate prior and current treatment patterns are shown in **Figure 2**.
- Biologics most often used immediately prior to 3L+ therapy were TNFis (726 [68.5%]) or IL-17is (182 [17.2%]).
- In the total population (N=1,210), the most commonly initiated 3L+ b/tsDMARD class was IL-17is, used by 455 (37.6%) patients, followed by TNFis (338 [27.9%]), IL-23is (169 [14.0%]), JAKis (148 [12.2%]), IL-12/23is (68 [5.6%]), and non-TNFis (32 [2.6%]).

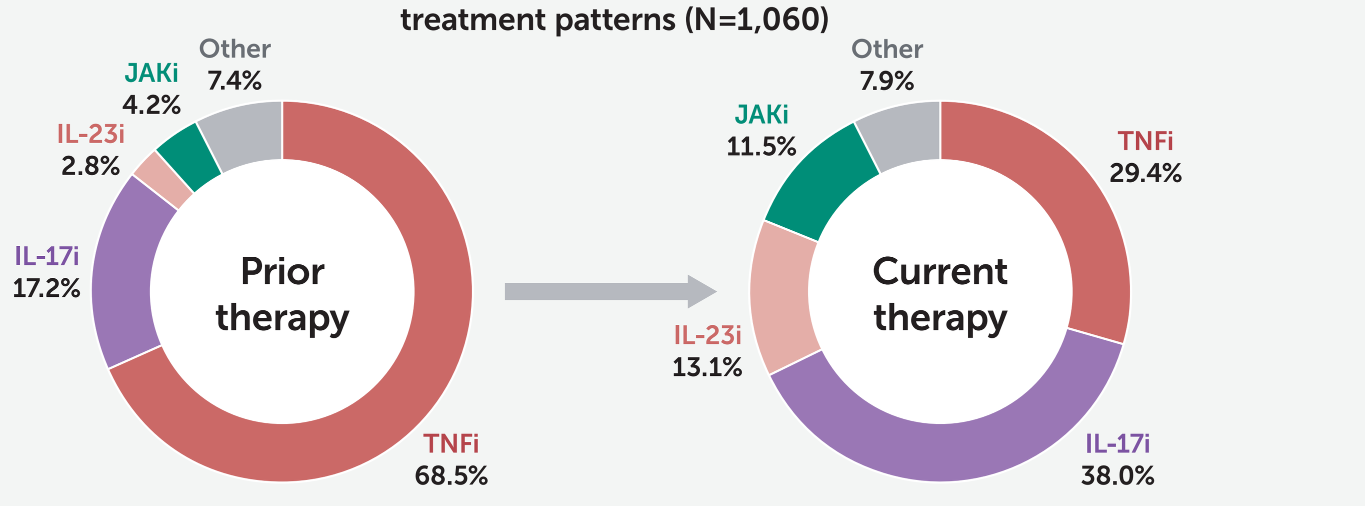
Conclusions

These findings highlight the disease burden in this heavily pre-treated population, underscoring the need for early, more effective PsA treatments that provide a sustained response.

Summary

We analyzed the characteristics and treatment patterns of patients with PsA in the **CorEvitas PsA/Spondyloarthritis Registry** initiating their first **3L+ b/ts DMARD therapy**.

Of the **1,210 patients** analyzed:



These findings highlight the disease burden in this heavily pre-treated population, underscoring the **need for early, more effective PsA treatments** that provide a sustained response.

Figure 1 Selection of eligible patients

All eligible b/tsDMARD initiations[a] between January 2016–December 2023 among patients with a valid baseline CorEvitas Registry visit	Eligible b/tsDMARD initiations[a] that were 3L+	Patients without concurrent b/tsDMARD initiation (i.e., initiating ≥2 b/tsDMARDs on the same day)	Patients initiating their first eligible 3L+ b/tsDMARD therapy
N=7,044	**n=2,550** (36.2%)	**n=2,502** (35.5%)	**n=1,210** (17.2%)

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

Table 1 Baseline characteristics and disease activity measures

	Total patients included (N=1,210)
Demographics	
Age, years, mean (SD)	54.2 (12.3)
Sex, female, n (%) [N]	721 (59.7) [1,207]
Race, white, n (%) [N]	1,105 (92.9) [1,190]
Number of comorbidities, n (%)	
0	388 (32.1)
1	376 (31.1)
2+	446 (36.9)
Comorbidities, n (%)	
Obesity, BMI ≥30, [N]	734 (61.6) [1,191]
Hypertension	484 (40.0)
Depression	262 (21.7)
Fibromyalgia	226 (18.7)
Diabetes	199 (16.4)
Cardiovascular disease	139 (11.5)
Anxiety	82 (6.8)
Malignancies	79 (6.5)
IBD	30 (2.5)
Uveitis	19 (1.6)
PsA disease characteristics, median (IQR)	
Duration of disease,[a] years, [N]	7.0 (3.0, 12.0) [1,202]
Duration of symptoms, years, [N]	10.0 (5.0, 18.0) [1,194]
PsA disease activity measures	
cDAPSA (moderate-to-high), >13-154, n (%) [N]	754 (65.6) [1,149]
MDA,[b] n (%) [N]	215 (17.9) [1,199]
VLDA,[c] n (%) [N]	51 (4.2) [1,209]
SJC (of 66 joints), mean (SD) [N]	2.7 (4.4) [1,175]
TJC (of 68 joints), mean (SD) [N]	7.7 (10.3) [1,175]
Dactylitis count, mean (SD)	0.4 (1.6)
LEI, mean (SD) [N]	0.5 (1.1) [1,007]
LEI >0, mean (SD) [N]	239 (23.7) [1,007]
PGA of arthritis (VAS-100), mean (SD) [N]	31.7 (23.4) [1,196]
PGA of PsA and psoriasis (VAS-100), mean (SD) [N]	36.7 (23.9) [1,193]
BSA (% involvement), mean (SD) [N]	5.5 (10.5) [1,178]
Nail psoriasis (VAS-100), mean (SD) [N]	8.0 (17.5) [1,163]
Patient-reported outcomes, mean (SD)	
PtGA of arthritis (VAS-100), [N]	47.2 (26.3) [1,187]
PtGA of arthritis and psoriasis (VAS-100), [N]	47.4 (26.6) [1,185]
EQ-5D-3L (score: 0–1), [N]	0.6 (0.2) [1,191]
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]

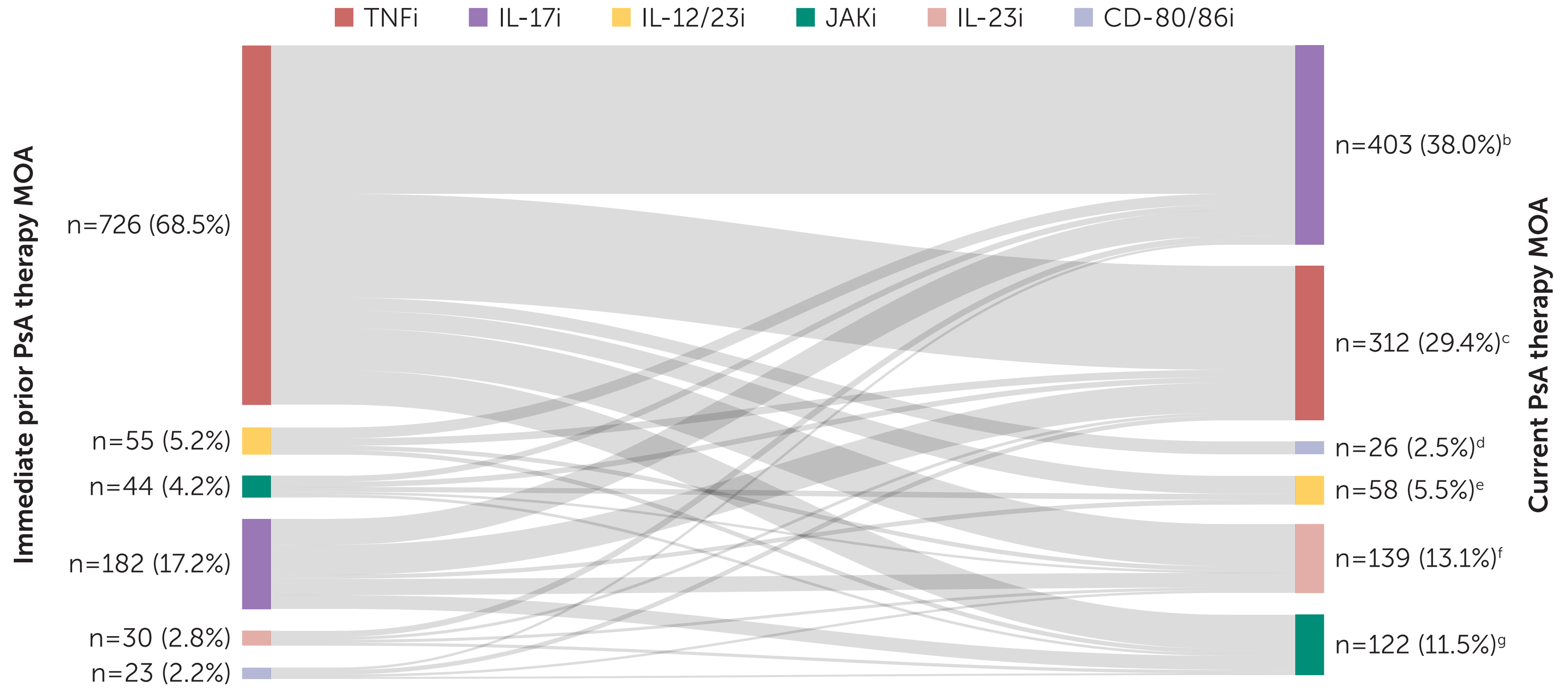
[a] Defined as time from the date of PsA diagnosis; [b] MDA was achieved if 5 out of the following 7 conditions were met: TJC68 ≤1, SJC66 ≤1, BSA ≤3%, pain (VAS-100) ≤15, PtGA of PsA and Psoriasis (VAS-100) ≤20, LEI ≤1, and HAQ-DI (score: 0–3) ≤0.5; [c] VLDA was achieved if all of the following conditions were met: TJC68 ≤1, SJC66 ≤1, BSA ≤3%, pain (VAS-100) ≤15, PtGA of PsA and Psoriasis (VAS-100) ≤20, LEI ≤1.

Table 2 Baseline treatment history

	Total patients included (N=1,210)
Time from first b/tsDMARD to initiation of current therapy,[a] years, median (IQR) [N]	1.5 (0.7, 2.9) [649]
Prior csDMARDs, n (%)	
0	308 (25.5)
1	614 (50.7)
2+	288 (23.8)
Prior bDMARDs, n (%)	
0	5 (0.4)
1	104 (8.6)
2	700 (57.9)
3	246 (20.3)
4+	155 (12.8)
Prior tsDMARDs, n (%)	
0	1,102 (91.1)
1	104 (8.6)
2+	4 (0.3)
Prior prednisone use, n (%)	244 (20.2)
Prior arthrocentesis, n (%)	421 (34.8)
Prior NSAID use, n (%)	333 (27.5)
Current monotherapy,[b] n (%)	861 (71.2)
Reasons for initiating current therapy,[c] n (%) [N]	[863]
Active disease	813 (94.2)
Insurance	4 (0.5)
Safety	3 (0.3)
Lack of efficacy[d]	3 (0.3)
Other reasons	40 (4.6)

[a] Data reported only if available; [b] Concomitant use did not distinguish between bridging (temporarily use [<6 months] of another b/tsDMARD) and dual therapy (addition of another b/tsDMARD to main therapy). The main therapy was the first prescribed therapy, and if two therapies were started at the same time, the patient was excluded. This applied only to the concomitant use of b/tsDMARDs and not to the concomitant use of csDMARDs; [c] As reported by physician; [d] Defined as either failure to maintain or failure to reach adequate response from prior therapy.

Figure 2 Immediate prior and current treatment patterns[a]



N=1,060. [a] Cohorts were not mutually exclusive; [b] Bimekizumab, ixekizumab, and secukinumab; [c] Adalimumab, certolizumab pegol, etanercept, golimumab, and infliximab and its biosimilars; [d] Abatacept; [e] Ustekinumab; [f] Guselkumab and risankizumab; [g] Tofacitinib and upadacitinib.

3L+: third-line or higher; **b/tsDMARD:** biologic or targeted synthetic disease-modifying antirheumatic drug; **BSA:** body surface area; **cDAPSA:** Clinical Disease Activity Index for PsA; **CD:** cluster of differentiation; **csDMARD:** conventional synthetic disease-modifying antirheumatic drug; **HAQ-DI:** Health Assessment Questionnaire Disability Index; **i:** inhibitor; **IBD:** inflammatory bowel disease; **IL:** interleukin; **IQR:** interquartile range; **JAK:** janus kinase; **LEI:** Leeds Enthesitis Index; **MDA:** minimal disease activity; **MOA:** mechanism of action; **NSAID:** nonsteroidal anti-inflammatory drug; **PGA:** Physician Global Assessment; **PsA:** psoriatic arthritis; **PtGA:** Patient Global Assessment; **SD:** standard deviation; **SJC:** swollen joint count; **TJC:** tender joint count; **TNF:** tumor necrosis factor; **VAS:** Visual Analog Scale; **VLDA:** very low disease activity.

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