

Real-world, long-term persistence of guselkumab versus interleukin-17 inhibitors in patients with psoriasis: evidence through up to 6.5 years

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Objective

- To explore real-world time on therapy, as well as rates and reasons for discontinuation for guselkumab (GUS) and interleukin (IL)-17 inhibitor (IL-17i) incident cohorts, and subgroups of bionäive patients.

Background

- The Psoriasis Longitudinal Assessment and Registry (PSOLAR; NCT00508547) study is a large, international, prospective, disease-based registry of patients with psoriasis (PsO) who are receiving, or are candidates for, systemic therapy.^{1,2}
- PSOLAR was initiated in 2007 and expanded in 2018 (PSOLAR-2) to include patients receiving GUS (a selective p19 subunit-targeted IL-23 inhibitor), or an IL-17i according to standard clinical practice.^{3,4}

Methods

Patient cohorts

- Patients eligible for enrolment in PSOLAR-2 had a diagnosis of PsO and were not participating in clinical trials for investigational treatments. All patients provided informed consent and were willing to participate in regular follow-up visits.
- Patients were grouped into those receiving GUS or an IL-17i, and incident or prevalent user cohorts. The bionäive user subgroups were subsets of the incident user cohorts who had not received any prior biologic therapy (**Figure 1**).
- Data were collected at enrolment and approximately every 6 months thereafter.

Data analyses

- Analyses presented here (data cut-off: 12 July 2025) only use data for the incident user cohort through up to 6.5 years of follow-up. Patients were followed until treatment discontinuation (including switching to another treatment) or censored at the last recorded visit if treatment was not discontinued.
- Time on therapy was summarised using descriptive statistics.
- Kaplan-Meier (KM) curves, which account for patient censoring and varying durations of follow-up, were generated for time to treatment discontinuation. Observed cumulative percentages of patients discontinuing treatment and reasons for discontinuation were described by treatment group.
- Analyses were repeated for the bionäive subgroups.

Results

- Overall, 3501 patients (GUS: n=2049; IL-17i: n=1449; **Figure 1**) were enrolled across 17 countries. The incident user cohort included 1712 patients, seven of which were excluded from this analysis due to data quality. Of the remaining 1705 patients, 1029 were treated with GUS and 676 were treated with an IL-17i (**Table 1**).
- The bionäive subgroup included 806 patients; 515 were treated with GUS and 291 were treated with an IL-17i (**Table 1**).
- Baseline characteristics were generally balanced between groups; however, the IL-17i cohort included higher proportions of patients with PsA or a history of cardiovascular disease than the GUS cohort (**Table 2**).

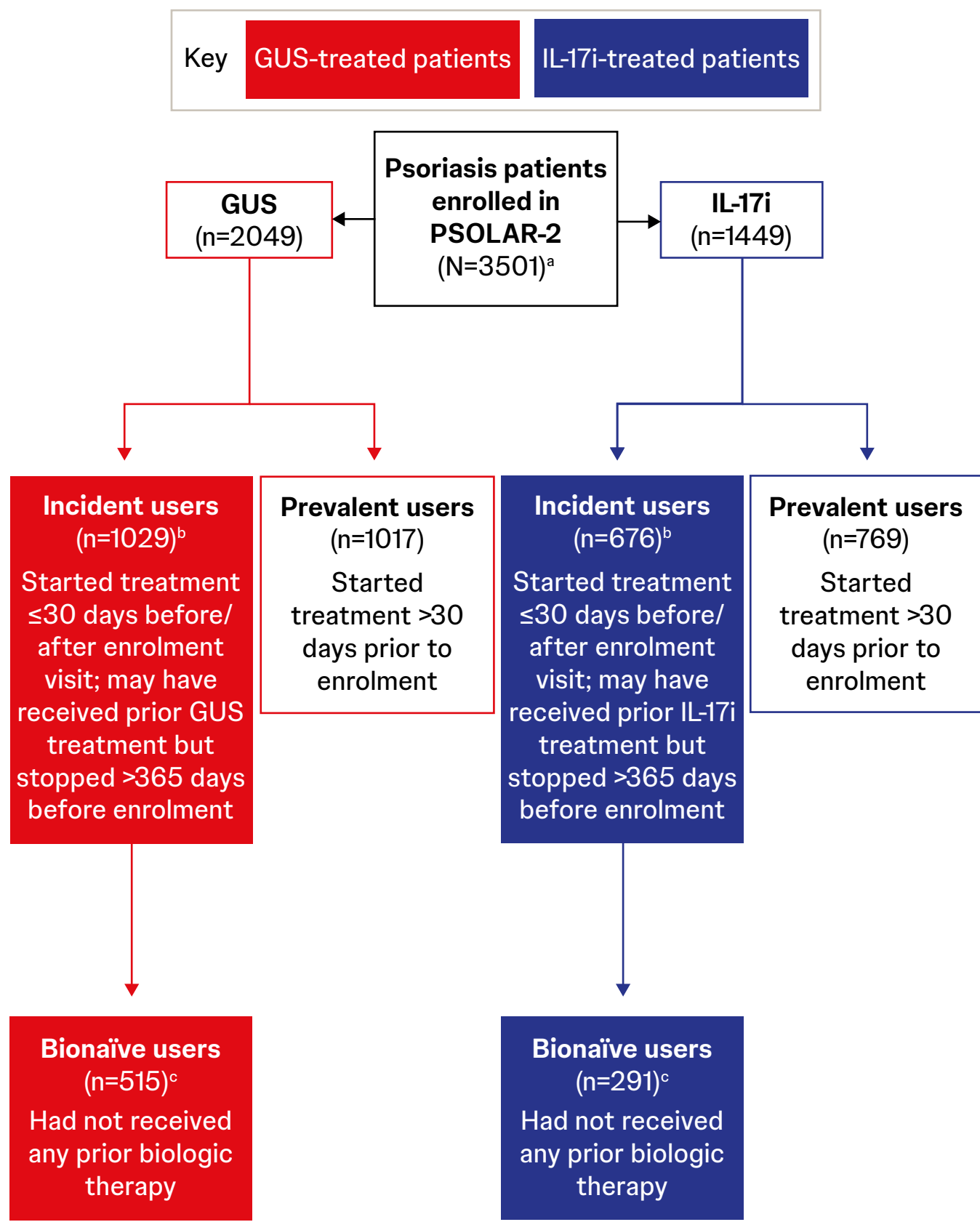
Incident user cohort

- Mean (standard deviation [SD]) time on therapy was 3.3 (1.4) years for the GUS cohort and 2.6 (1.5) years for the IL-17i cohort.
- 178/1029 (17.3%) patients treated with GUS stopped/switched therapy compared to 229/676 (33.9%) patients treated with an IL-17i.
- KM curves showed a higher probability of remaining on treatment over time among GUS-treated patients compared to IL-17i-treated patients (**Figure 2A**).
- The observed cumulative percentage of patients discontinuing treatment was lower for the GUS cohort compared to the IL-17i cohort at all time points assessed (**Table 3**).
- Of the reasons for discontinuation provided, loss/lack of efficacy was the most common reason given for both treatment cohorts. The second most common reasons were patient choice for the GUS cohort and adverse events for the IL-17i cohort (**Table 4**).

Bionäive subgroup

- Results were consistent with those observed in the incident user cohort.
- Mean (SD) time on therapy was 3.4 (1.3) years for the GUS subgroup and 2.7 (1.4) years for the IL-17i subgroup.
- A lower proportion of bionäive subgroup patients treated with GUS (66/515 [12.8%]) stopped/switched treatment compared with those treated with an IL-17i (78/291 [26.8%]).
- KM analysis demonstrated greater treatment persistence, with a higher probability of remaining on therapy over time among GUS-treated bionäive patients compared with IL-17i-treated bionäive patients (**Figure 2B**).
- The observed cumulative percentage of patients discontinuing treatment was lower for the bionäive subgroup treated with GUS than for the bionäive subgroup treated with an IL-17i at all time points assessed (**Table 3**).
- Loss/lack of efficacy was the most common reason for discontinuation in both bionäive treatment subgroups. The second most common reasons were patient choice and 'other' for the GUS subgroup and adverse events for the IL-17i subgroup (**Table 4**).

Figure 1. PSOLAR-2 cohorts and subgroups



As of 12 July 2025, 3501 patients were enrolled at sites in 17 countries. Solid coloured boxes indicate treatment groups included in these analyses. *Three enrolled patients were receiving biologic therapies other than GUS or IL-17i, and are not included in the treatment cohorts shown here. *Three patients in the GUS incident user cohort and four patients in the IL-17i incident user cohort were excluded because they had the same start and end date (n=5) or because the start date was missing (n=2). *Two patients in the GUS bionäive subgroup and three patients in the IL-17i bionäive subgroup were excluded due to data quality issues.

Table 1. Breakdown of treatments in each cohort

n (%) of treatment group	Incident user cohort	Bionäive subgroup
GUS	1029 (100.0)	515 (100.0)
IL-17i	676 (100.0)	291 (100.0)
IXE	302 (44.7)	123 (42.3)
SEC	217 (32.1)	102 (35.1)
BRODA	102 (15.1)	49 (16.8)
BKZ	55 (8.1)	17 (5.8)

Table 2. Baseline characteristics of patients included in the analyses

	Incident user cohort (N=1705)		Bionäive subgroup (N=806)	
	GUS-treated patients (n=1029)	IL-17i-treated patients (n=676)	GUS-treated patients (n=515)	IL-17i-treated patients (n=291)
Age, years, mean (SD)	48.9 (13.6)	49.8 (14.1)	47.8 (13.8)	47.7 (14.9)
Gender, male, n (%)	599 (58.2)	389 (57.5)	291 (56.5)	170 (58.4)
Body mass index (kg/m ²), mean (SD)	30.4 (7.2)	31.3 (7.8)	30.1 (7.4)	30.7 (7.7)
Obesity class, n with data	1009	664	508	286
Normal (18.5–24.9 kg/m ²), n (%)	188 (18.6)	110 (16.6)	105 (20.7)	60 (21.0)
Overweight (25.0–29.9 kg/m ²), n (%)	344 (34.1)	218 (32.8)	161 (31.7)	87 (30.4)
Obese (≥30.0 kg/m ²), n (%)	460 (45.6)	331 (49.8)	230 (45.3)	135 (47.2)
Patients with PsA, n (%)	229 (22.3)	278 (41.1)	68 (13.2)	93 (32.0)
Patients with history of CV disease, n (%)	395 (38.4)	307 (45.4)	190 (36.9)	135 (46.4)
Baseline BSA, mean (SD) [n]	14.2 (14.2) [997]	13.0 (14.8) [665]	14.8 (13.2) [499]	15.9 (15.3) [288]
Baseline PASI score, mean (SD) [n]	10.3 (7.4) [935]	9.4 (8.1) [574]	11.8 (7.4) [470]	12.0 (8.4) [235]
Prior non-biologic PsO medication, n (%)				
Topical therapy	967 (94.0)	646 (95.6)	487 (94.6)	276 (94.8)
Systemic steroids	114 (11.1)	74 (10.9)	50 (9.7)	23 (7.9)
Immunomodulators	509 (49.5)	316 (46.7)	199 (38.6)	108 (37.1)
NSAIDs	79 (7.7)	95 (14.1)	25 (4.9)	32 (11.0)
Concomitant non-biologic PsO medication, n with data	995	643	498	273
Topical therapy, n (%)	508 (51.1)	330 (51.3)	240 (48.2)	150 (54.9)
Phototherapy, n (%)	15 (1.5)	10 (1.6)	3 (0.6)	4 (1.5)
Systemic steroids, n (%)	39 (3.9)	16 (2.5)	19 (3.8)	3 (1.1)
Immunomodulators, n (%)	41 (4.1)	43 (6.7)	14 (2.8)	8 (2.9)
NSAIDs, n (%) [n with data]	86 (8.8) [977]	86 (14.8) [582]	27 (5.5) [494]	28 (11.0) [254]

Table 3. Observed cumulative percentages of patients discontinuing treatment

Time on therapy (years), n (%)	Incident user cohort N=1705		Bionäive subgroup N=806	
	GUS-treated patients (n=1029)	IL-17i-treated patients (n=676)	GUS-treated patients (n=515)	IL-17i-treated patients (n=291)
0.5	22 (2.1)	50 (7.4)	3 (0.6)	17 (5.8)
1.0	60 (5.8)	108 (16.0)	16 (3.1)	33 (11.3)
1.5	89 (8.6)	142 (21.0)	28 (5.4)	48 (16.5)
2.0	116 (11.3)	172 (25.4)	41 (8.0)	57 (19.6)
2.5	136 (13.2)	193 (28.6)	50 (9.7)	66 (22.7)
3.0	152 (14.8)	210 (31.1)	56 (10.9)	71 (24.4)
Up to 6.5	178 (17.3)	229 (33.9)	66 (12.8)	78 (26.8)

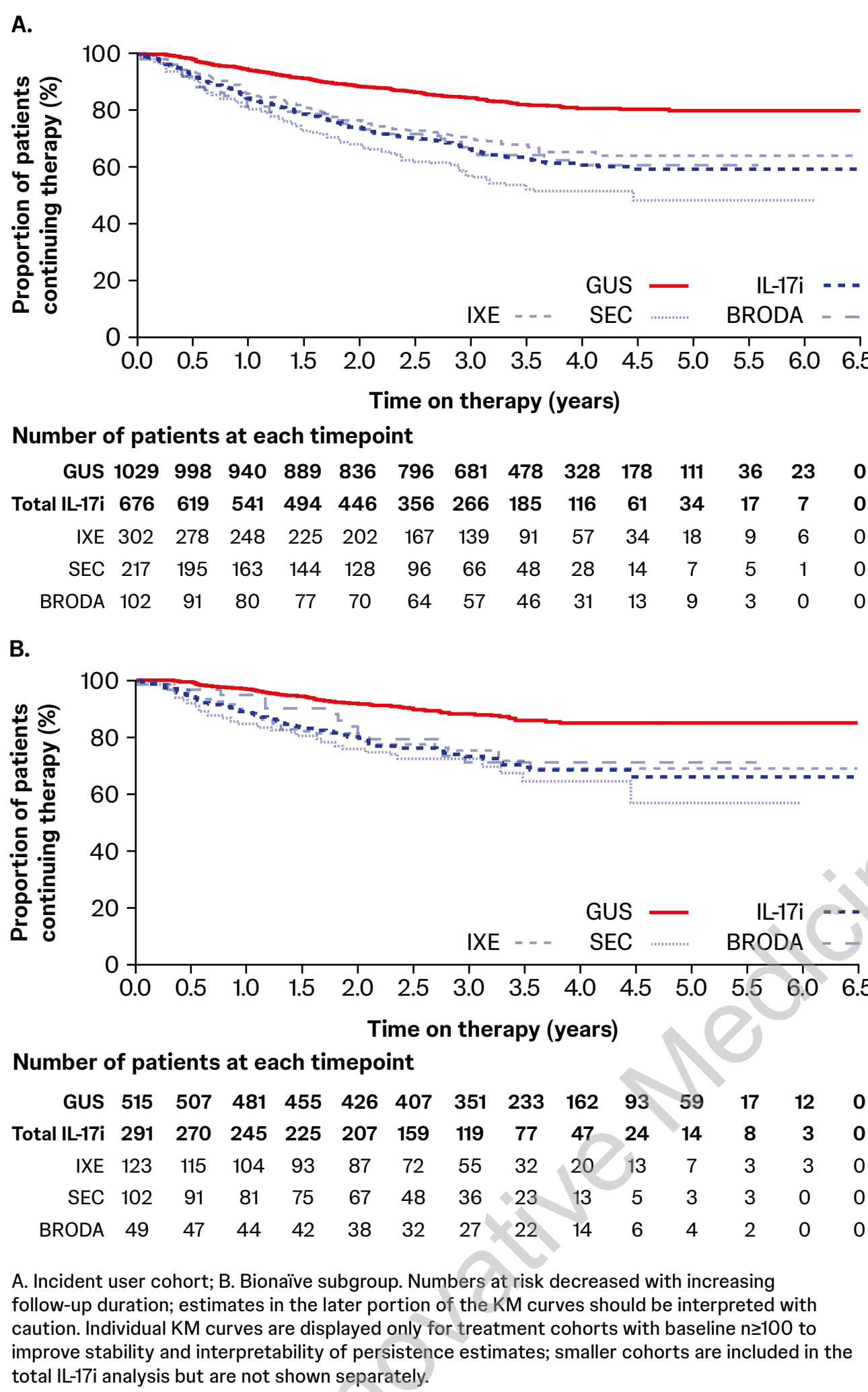
Observed cumulative discontinuation percentage is calculated as the proportion of all treated patients who discontinued therapy on or before each time point.

Table 4. Reasons for discontinuation of therapy

Discontinuation reason, n (%)	Incident user cohort N=1705		Bionäive subgroup N=806	
	GUS-treated patients n=1029	IL-17i-treated patients n=676	GUS-treated patients n=515	IL-17i-treated patients n=291
Insurance/reimbursement issue	14 (8.9)	16 (7.7)	6 (10.3)	4 (5.6)
Loss/lack of efficacy	90 (57.0)	136 (65.4)	28 (48.3)	45 (63.4)
Adverse events	11 (7.0)	19 (9.1)	5 (8.6)	9 (12.7)
Patient choice	23 (14.6)	15 (7.2)	8 (13.8)	4 (5.6)
Unknown	6 (3.8)	6 (2.9)	3 (5.2)	2 (2.8)
Other	14 (8.9)	16 (7.7)	8 (13.8)	7 (9.9)

Bold text indicates the two most common reasons for discontinuation for each treatment group.

Figure 2. Kaplan-Meier curves for time to treatment discontinuation



Key takeaways

- Results from the KM analyses were consistent with the observed cumulative discontinuation percentages, demonstrating lower discontinuation and greater treatment persistence among PsO patients treated with GUS than those treated with an IL-17i.
- Loss/lack of efficacy was the most frequently reported reason for discontinuation in both treatment groups.
- These findings were consistent across patients in this analysis, regardless of whether they had previously been treated with a biologic or not.

Conclusion

- In this real-world analysis with up to 6.5 years of follow-up, GUS demonstrated consistently longer treatment persistence and lower discontinuation rates than IL-17i treatments throughout the follow-up period in both the incident user and bionäive cohorts.

Abbreviations

BRODA: brodalumab
BSA: body surface area
BKZ: bimekizumab
CV: cardiovascular
GUS: guselkumab
IL: interleukin
IL-17i: interleukin-17 inhibitor
IXE: ixekizumab
KM: Kaplan-Meier
NSAIDs: non-steroidal anti-inflammatory drugs
PASI: Psoriasis Area and Severity Index
PsA: psoriatic arthritis
PsO: psoriasis
PSOLAR: Psoriasis Longitudinal Assessment and Registry
SD: standard deviation
SEC: secukinumab

Acknowledgements

This study was funded by Johnson & Johnson. We thank the patients and their caregivers in addition to the investigators and their teams who contributed to this study. The authors acknowledge Emma Phillips, PhD, Costello Medical, Edinburgh, UK and Thea Guy, PhD, Costello Medical, London, UK for medical writing and editorial assistance and the Costello Medical Creative team for graphic design assistance. All costs associated with development of this poster were funded by Johnson & Johnson.

Author contributions

Substantial contributions to study conception/design, or acquisition/analysis/interpretation of data: **LN, AA, SF, FI, YKa, YKr, KPL, RL, YT, MZ, BS**; drafting of the publication, or reviewing it critically for important intellectual content: **LN, AA, SF, FI, YKa, YKr, KPL, RL, YT, MZ, BS**; final approval of the publication: **LN, AA, SF, FI, YKa, YKr, KPL, RL, YT, MZ, BS**.

Disclosures

LN: No conflicts of interest; **AA, SF, FI, YKa, YKr, KPL, RL, MZ:** Employees of, and may own stocks or stock options in, Johnson & Johnson; **YT:** Received research grants, collaborative research funding, and speaker fees from AbbVie GK, Amgen K.K., Bristol Myers Squibb K.K., Eli Lilly Japan K.K., Johnson & Johnson K.K., Kyowa Kirin Co., Ltd., Maruho Co., Ltd., Nippon Boehringer Ingelheim Co., Ltd., Sun Pharma Japan Limited, Torii Pharmaceuticals Co., Ltd., and UCB Japan Co., Ltd.; and served as a consultant for Johnson & Johnson; **BS:** Consultant (honoraria) for AbbVie, Almirall, Alumis, Amgen, Apogee, Arcutis, Bristol Myers Squibb, CorEvitas, Dimagi, Eli Lilly, Immunovant, Johnson & Johnson, LEO Pharma, Meiji Seika Pharma, Neurocrine, Novartis, Oruka, Pfizer, Protagonist, Regeneron, Sanofi Genzyme, selectiON, Takeda, and UCB Pharma; Stock Options for Mindera Health, and selectiON; Speaker for AbbVie, Arcutis, Eli Lilly, Incyte, Johnson & Johnson, Regeneron, and Sanofi Genzyme; Scientific Co-Director (consulting fee) for CorEvitas Psoriasis Registry; Investigator for CorEvitas Psoriasis and GPP Registries, Incyte, and Oruka.

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