Real-World Characteristics of Patients Initiating Advanced Therapy for Plaque Psoriasis in United States Specialty Dermatology Networks

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Key Takeaways

- **Patients initiating different advanced therapies for plaque psoriasis in US specialty dermatology networks show distinct clinical and demographic profiles.**
- **Guselkumab initiators generally exhibited more severe underlying disease activity, whereas deucravacitinib initiators had the highest proportion of prior apremilast use.**
- **Heterogeneity among advanced treatment initiators underscores the importance of individualized treatment strategies.**

Background

Plaque psoriasis (PsO) is a chronic, immune-mediated inflammatory skin disease characterized by erythematous, scaly plaques and is associated with substantial impact on quality of life, work productivity, and psychosocial well-being. PsO affects approximately 2-3% of the United States (US) population.[1,2]

Advanced systemic therapies, including biologics and targeted oral agents, have transformed PsO management by offering highly effective options for skin clearance and symptom improvement; however, treatment initiation decisions are influenced by factors such as disease severity, presence of comorbidities, patient preferences, and prior therapy history.[3,4]

Real-world evidence is critical to understanding how advanced PsO treatments are used outside of clinical trials, as patient populations in routine practice are more heterogeneous, may have higher comorbidity burden, and may differ in disease activity and prior treatment exposure compared to those in randomized controlled trials.[5]

Objectives

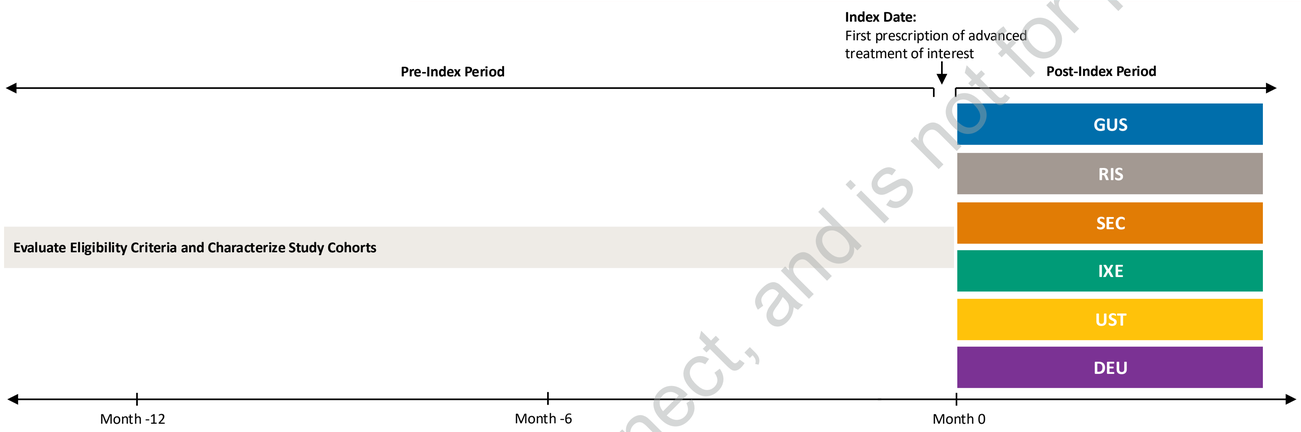
To provide insights into the profiles of patients receiving advanced therapies for the management of PsO in routine clinical practice by examining patient demographics, disease activity, and medical treatment history.

Methods

- Linked electronic health record and claims data from US-based specialty dermatology networks in the OMNY Health real-world data platform from 2017 to 2024 were analyzed.
- Patients ≥ 18 years of age were indexed at the time of initiation of guselkumab (GUS), risankizumab (RIS), secukinumab (SEC), ixekizumab (IXE), ustekinumab (UST), or deucravacitinib (DEU) for treatment of PsO.
- Patients with disease activity data within 30 days before to 7 days after the index encounter were included in each treatment cohort, provided they had no prior experience with other cohort-defining treatments in the OMNY Health real-world data platform.
- Descriptive statistics were used to summarize patient characteristics by cohort as of the index date.

Study Design

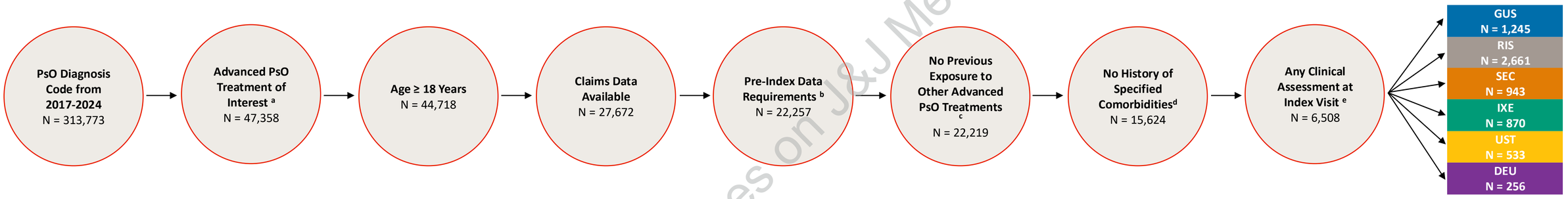
- Patients were indexed at the time of their first prescription of an advanced therapy of interest.
- Study cohorts were defined by the specific treatment at index.
- Patients with ≥ 1 advanced treatments of interest were considered based on their first treatment (mutually exclusive).
- The pre-index period was used to apply eligibility criteria and characterize study cohorts.



*Footnotes: **DEU**=deucravacitinib, **GUS**=guselkumab, **IXE**=ixekizumab, **RIS**=risankizumab, **SEC**=secukinumab, **UST**=ustekinumab.*

Results

Patient Disposition



*Footnotes: [a]Comprises treatments represented by study cohorts. [b]Had data available more than 1 year before the index date and within 1 year before the index date. [c]Comprises any of the treatments that define the study cohorts. [d]Comprises the following: ankylosing spondylitis, psoriatic arthritis, Behçet's disease, rheumatoid arthritis, inflammatory bowel disease (including Crohn's disease and ulcerative colitis), hidradenitis suppurativa, juvenile idiopathic arthritis, and uveitis. [e]BSA, PGA, and/or itch NRS within 30 days before and 7 days after the index date. **BSA**=body surface area, **DEU**=deucravacitinib, **GUS**=guselkumab, **IXE**=ixekizumab, **NRS**=Numerical Rating Scale, **PGA**=physician global assessment, **PsO**=plaque psoriasis, **RIS**=risankizumab, **SEC**=secukinumab, **UST**=ustekinumab.*

Baseline Characteristics of Study Cohorts

Baseline Characteristics	GUS (N = 1,245)	RIS (N = 2,661)	SEC (N = 943)	IXE (N = 870)	UST (N = 533)	DEU (N = 256)
Demographics at Index Date						
Age, yrs	49.9 (15.6)	51.3 (16.1)	51.9 (15.5)	49.9 (15.1)	51.2 (16.6)	54.4 (16.0)
Female	51.5%	50.9%	53.0%	51.0%	51.8%	62.9%
Race, Asian/Black/Other/White	4.3/6.0/6.9/82.8%	4.6/5.7/4.7/85.1%	3.0/4.8/6.2/86.0%	3.4/4.5/5.4/86.6%	1.2/4.6/4.1/90.0%	3.4/4.5/9.1/83.0%
BMI, kg/m^2	30.6 (6.4)	31.1 (7.3)	31.2 (7.5)	31.3 (8.0)	31.2 (9.0)	28.5 (6.9)
Disease Characteristics						
PsO disease duration in OMNY data[a], yrs	1.7 (1.8)	2.0 (1.9)	1.5 (1.5)	1.6 (1.7)	1.5 (1.5)	2.6 (2.4)
% BSA with PsO, mean (SD); median	22.0 (21.5); 15	19.4 (19.5); 12	20.8 (21.0); 14	18.4 (21.2); 10	16.9 (18.2); 10	16.3 (15.2); 10
PGA score, Clear-Mild (0-2)/Moderate (3)/Severe (4)	20.3/56.2/23.5%	21.0/55.5/23.5%	31.1/53.7/15.2%	36.4/47.7/15.9%	36.4/52.5/11.1%	14.7/70.6/14.7%
Itch NRS (0-10), mean (SD); median	5.9 (3.0); 6	5.4 (3.0); 6	5.5 (3.1); 6	5.7 (3.1); 6	4.4 (3.6); 5	5.6 (2.8); 6
Medical History/Comorbidities						
Cardiovascular disease	45.1%	47.9%	48.8%	45.6%	46.3%	46.1%
Type 2 diabetes	17.9%	16.9%	18.8%	15.2%	15.4%	11.7%
Cancer	10.0%	12.4%	8.8%	8.3%	8.6%	18.8%
Asthma	10.2%	9.6%	12.0%	11.5%	9.9%	9.0%
Allergic rhinitis	12.6%	13.9%	14.4%	13.3%	12.8%	16.0%
Anxiety or depression	28.4%	30.1%	30.4%	27.2%	27.8%	27.7%
Charlson comorbidity index	2.0 (2.6)	2.2 (2.7)	2.2 (2.6)	1.8 (2.2)	2.1 (2.5)	2.4 (2.7)
Prior Treatments						
Topical steroids	87.8%	89.9%	83.6%	85.2%	78.8%	94.1%
Nonsteroidal topical agents[b]	56.6%	55.7%	49.1%	51.8%	41.1%	61.7%
Oral steroids[c]	24.7%	26.4%	21.2%	24.7%	20.8%	26.2%
Systemic agents/DMARDs[d]	25.8%	28.9%	27.9%	28.9%	22.0%	43.0%
Apremilast	19.5%	21.6%	16.6%	21.1%	14.8%	35.9%
Methotrexate	6.9%	7.5%	12.3%	7.7%	7.7%	8.6%
Other systemic agents/DMARDs[e]	1.1%	0.9%	1.2%	1.3%	1.4%	1.6%
Biologics[d]	13.5%	16.3%	20.3%	19.3%	17.1%	4.3%
Number of biologics among bio-experienced	1.1 (0.2)	1.1 (0.2)	1.1 (0.2)	1.0 (0.2)	1.1 (0.2)	1.1 (0.3)
Opioids	21.4%	20.1%	19.6%	20.5%	20.1%	19.9%

*Footnotes: Data shown are mean (SD) unless otherwise noted. All summary statistics are based on non-missing data. [a]Time from initial PsO diagnosis code to index visit and may not represent full disease duration. [b]Comprises the following: ketoconazole, anthralin, calcipotriene, calcitriol, pimecrolimus, tacrolimus, tazarotene. [c]Comprises the following: dexamethasone, methylprednisolone, prednisone, prednisolone. [d]Subcategories are not mutually exclusive and may not sum to total. [e]Comprises the following: apremilast, deucravacitinib, acitretin, tofacitinib, methotrexate, cyclosporine, chloroquine/hydroxychloroquine, sulfasalazine. [d]Comprises biologics that do not define the study cohorts. **BMI**=body mass index, **BSA**=body surface area, **DEU**=deucravacitinib, **DMARD**=disease-modifying antirheumatic drug, **GUS**=guselkumab, **IXE**=ixekizumab, **kg**=kilograms, **m**=meters, **NRS**=Numerical Rating Scale, **PGA**=physician global assessment, **PsO**=plaque psoriasis, **RIS**=risankizumab, **SEC**=secukinumab, **UST**=ustekinumab, **yrs**=years.*

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