Persistence of Biologic Therapies for the Treatment of Psoriasis – A National Longitudinal Observational Population Study in Sweden

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Disclosures

- Natalia M. Stelmaszuk-Zadykowicz and Jonatan Freilich are employees of Parexel International, which was contracted by LEO Pharma A/S
- Eydna Apol and Jes B. Hansen are employees of LEO Pharma A/S
- The study was funded by LEO Pharma A/S who also participated in the interpretation of data, review and approval of the presentation

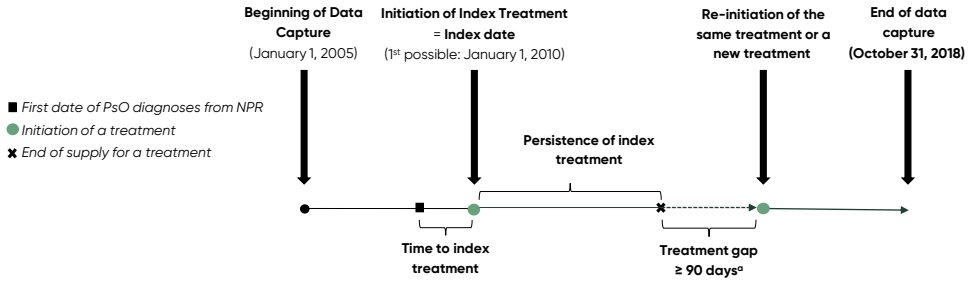
Background

- PsO is characterized by chronic inflammation of the skin, and manifests clinically as well-defined, erythematous, pruritic plaques[1]
- Topical medications, phototherapy and traditional systemic drugs have been the mainstay of PsO management;[2] however, biological agents targeting specific cytokines associated with plaque formation have demonstrated high response rates, low toxicity and quality-of-life benefits compared with traditional therapies[3,4]
- Recent observational studies suggest that the efficacy of biologic therapies in PsO in real-world clinical practice differs from what is observed in clinical trials[5]
- The objective of this study is to assess the persistence of biologic therapies for the treatment of PsO in clinical practice in Sweden

PsA, psoriatic arthritis; PsO, psoriasis.
1. Rendon A, Schäkel K. *Int J Mol Sci* 2019;203(6); 2. Menter A, et al. *J Am Acad Dermatol* 2011;65(1):137–174;
3. Menter A, et al. *J Am Acad Dermatol* 2019;80(4):1029–1072; 4. Rich S.J, et al. *J Manag Care Pharm* 2004;10(4):318–325; 5. Egeberg A, et al. *Br J Dermatol* 2018;178(2):509–519.

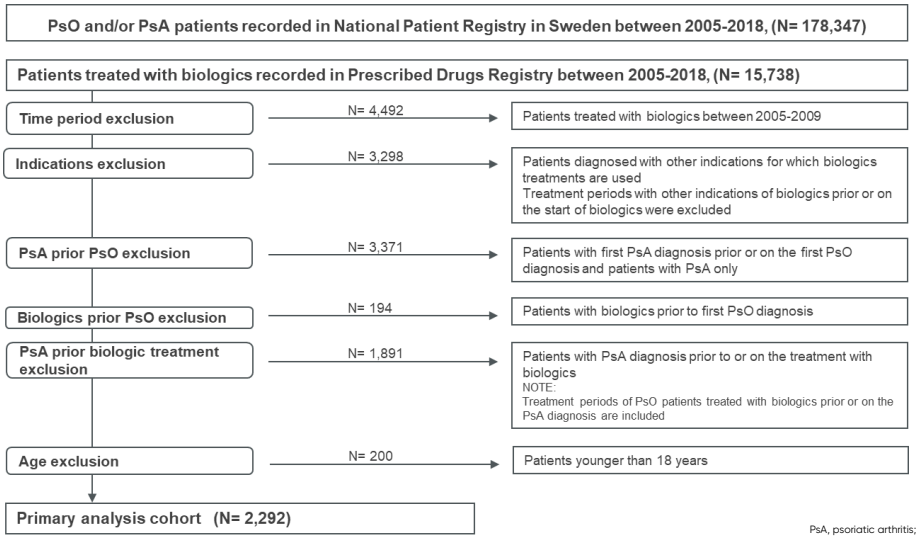
Methods: study design

- This was a longitudinal observational population study carried out using individual-level data from the Swedish National Patient Register (NPR), Prescribed Drug Register (PDR) and Cause-of-Death Register
- Patients were followed from January 1, 2005, until the latest available data at the time of extraction (October 31, 2018 [PDR] and December 31, 2017 [NPR])



NPR, National Patient Register; PDR, Prescribed Drug Register; PsO, psoriasis.
[a]Treatment breaks were defined as gaps between biologic dispensations that were ≤ 90 days. If a treatment was not dispensed for a period of > 90 days, it was assumed that the treatment had been discontinued

Methods: primary analysis cohort



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PsA, psoriatic arthritis; PsO, psoriasis. 5

Methods: analyses

- Subgroup analysis was conducted with biologic-naïve (bio-naïve) versus biologic-experienced (bio-experienced) patients
  - Biologic therapies with < 20 patients and biologics used off label were not reported
- Descriptive statistics including the frequency, mean, SD and 95% CI were used to analyze continuous variables
- Frequencies and percentages were used to analyze discrete variables
- Median treatment persistence and 1-year predicted persistence probabilities were estimated from Kaplan-Meier curves
- Persistence was defined as the duration of time from the initiation to the discontinuation of the therapy

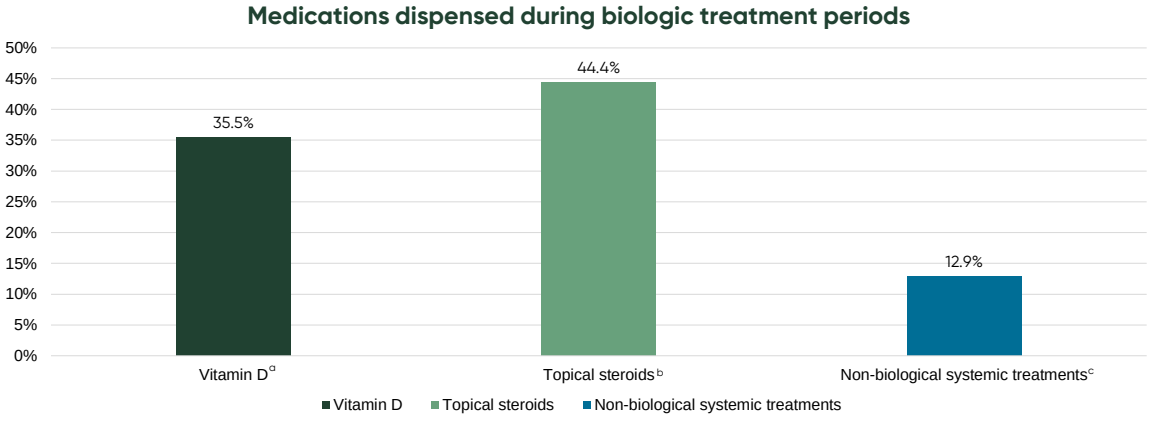
CI, confidence interval; SD, standard deviation. 6

Results: patient characteristics

- The overall persistence analysis included 3,050 treatment periods[a]
- Mean age at first PsO specialty visit was 42.1 (SD: 14.2) years
- 62.2% were male
- 78.7% received concomitant PsO medication during the treatment duration

PsO, psoriasis; SD, standard deviation
[a]Patients could use ≥ biologic treatment throughout their treatment course.

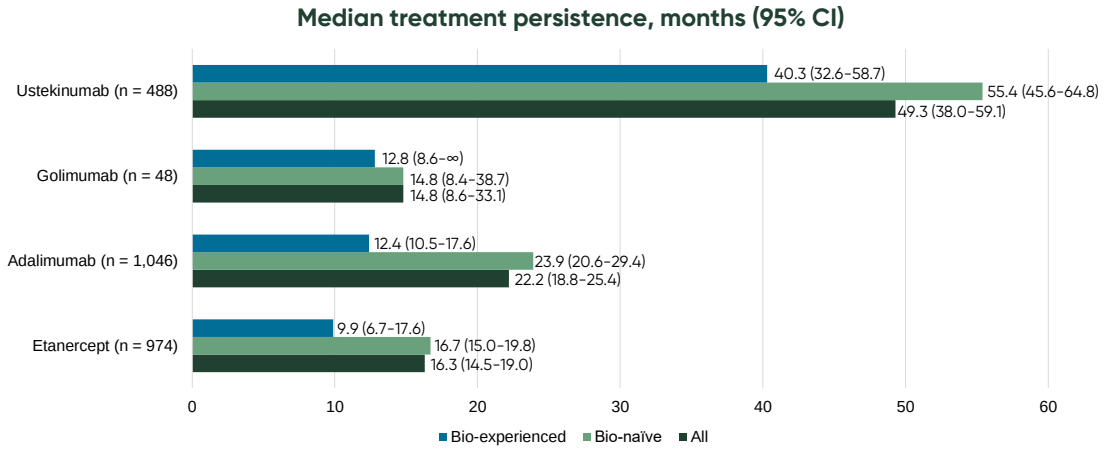
Results: concomitant medications



- Patients commonly received concomitant medications alongside their biologics treatments, primarily topical steroids

[a]calcipotriol and calcipotriol/betamethasone; [b]fluocinolone acetonide, mometasone furoate, fluticasone propionate, clobetasol propionate; [c]methotrexate, apremilast and cyclosporin

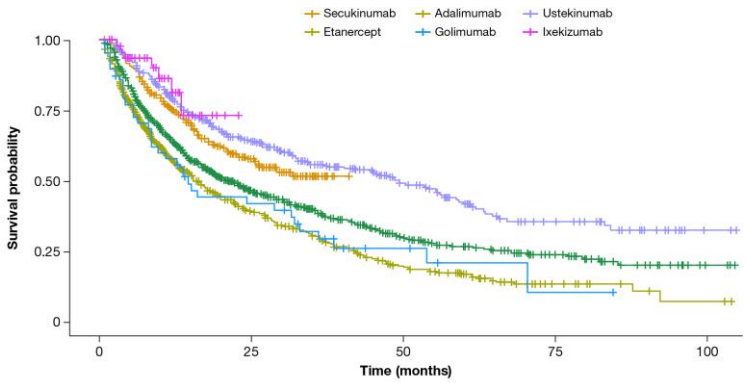
Results: biologic treatment persistence



CI, confidence interval.
Data are shown for biologics with > 40 treatment periods, and where data on median treatment persistence was available.
Golimumab has not been approved for the treatment of PsO.

9

Results: Kaplan-Meier plot of persistence for the overall cohort, by biologic treatment



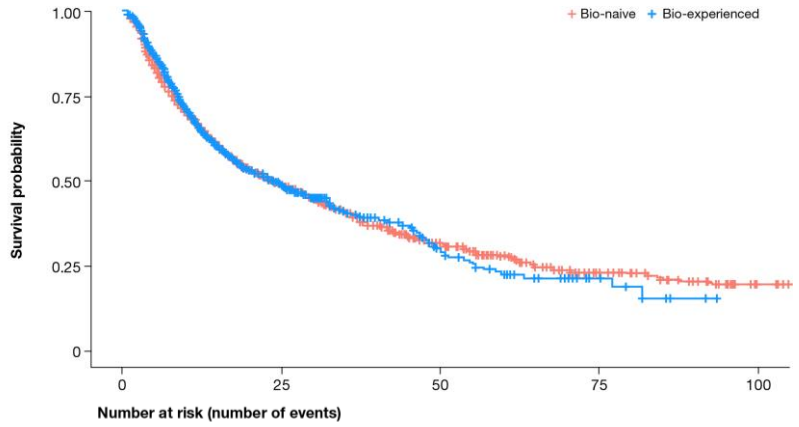
Number at risk (number of events)

Secukinumab	394 (0)	91 (129)	0 (136)	0 (136)	0 (136)
Etanercept	974 (0)	177 (453)	59 (530)	11 (545)	2 (547)
Adalimumab	1046 (0)	306 (482)	119 (571)	37 (589)	3 (593)
Golimumab	48 (0)	18 (27)	6 (33)	1 (35)	0 (35)
Ustekinumab	488 (0)	200 (149)	76 (183)	33 (200)	4 (202)
Ixekizumab	50 (0)	0 (7)	0 (7)	0 (7)	0 (7)

Data are shown for biologics with > 40 treatment periods

10

Results: Kaplan-Meier Plot for all biologic treatments combined in the biologic-naïve and biologic-experienced cohorts



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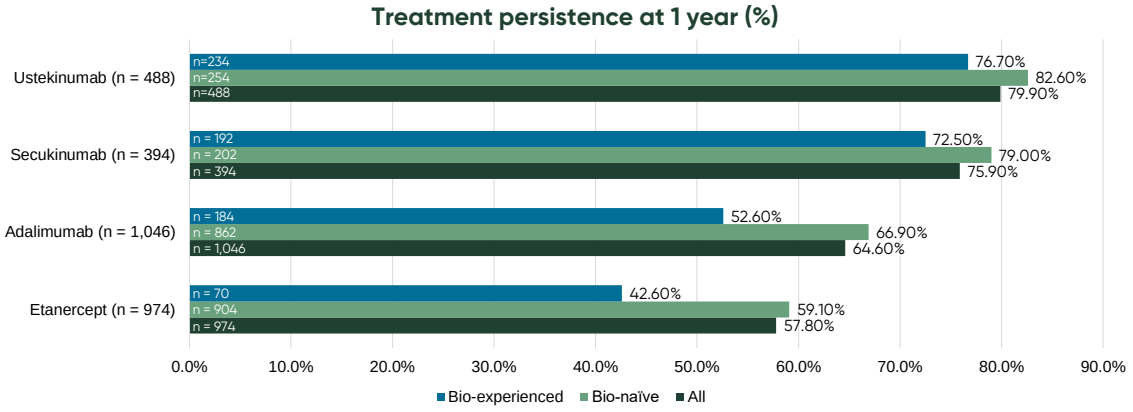
Results: biologic treatment persistence at 1 year



- Of the four most common biologics used during the study period, persistence at 1 year from treatment initiation was highest for ustekinumab
- Etanercept patients were the least persistent at 1 year
- Biologic-naïve patients had higher drug persistence than biologic-experienced patients

12

Conclusions

- Treatment persistence was higher for ustekinumab compared with golimumab, etanercept and adalimumab
- This suggests that anti-interleukin therapies may have higher persistence than traditional anti-TNFs; however, potential confounders need to be explored further
- Median treatment persistence was longer for biologic-naïve than for biologic-experienced patients
- Overall median treatment persistence for biologics used in PsO was approximately 2 years
- Further studies will examine the degree to which treatment persistence may vary over time for biologic treatments in PsO

PsO, psoriasis; TNF, tumor necrosis factor. 13