# Disease severity and implementation of Belgian T2T guidelines in moderate-to-severe plaque psoriasis: results from the Belgian REDISCOVER study

T. Hillary,[1] L.F.E. Ghys,[2] F. Willaert,[3] S. Swimberghe,[4] M. Lecuyer,[5]
P.-D. Ghislain,[6] J. Morrens,[2] J.L.W. Lambert[7]

*[1]Dermatology, University hospital Leuven, Leuven, Belgium; [2] Abbvie sa/nv, Wavre, Belgium; [3] Dermatology, Erasme Hospital, Université Libre de Bruxelles, Brussels, Belgium; [4] Private Practice, Antwerp, Belgium; [5] Private Practice, Thuin, Belgium; [6] Dermatology, Cliniques Saint-Luc, Université Catholique de Louvain, Brussels, Belgium; [7] Dermatology, Ghent University Hospital, Ghent, Belgium*

## OBJECTIVE

Characterize the current disease state of Belgian Moderate-to-severe psoriasis patients continuously treated with systemic therapy for at least 24 weeks

## CONCLUSIONS

- Most of the Belgian moderate-to-severe psoriasis patients are treated according to the new treatment goals
- HCP assessment of adequacy of treatment is lower than the overall patient satisfaction, and remains the determining factor for treatment change
- Despite the low mean absolute PASI and DLQI, simultaneous achievement of two dimensions of the Belgian T2T guidelines seems difficult

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## INTRODUCTION

- The DISCOVER study, conducted between 2011-2012, reported a significant undertreatment of moderate-to severe psoriasis patients in Belgian practice.[1]
- In the last decade, new therapies − such as interleukin-17 and -23 inhibitors − have been introduced, leading to more stringent treatment goals such as[2,3]
  - Disease control: psoriasis area severity index (PASI) 90 and 100 instead of PASI 75
  - Well-being: dermatology life quality index (DLQI) equal to or below 1[4]
- The Belgian treat-to-target (T2T) guidelines defined 2 extra dimensions in T2T besides disease control and well-being, ie burden of treatment and 'beyond skin' (comorbidities).[4]
- In addition, the focus has shifted away from percentage reduction and towards a targeted final outcome (e.g. PASI ≤2, DLQI < 2).[5,6]

* Following data were collected: sociodemographic (including age and gender) and anthropometric characteristics, current smoking habits and alcohol intake, current disease state by absolute PASI, pruritus visual analog scale (VAS) and absence of psoriasis on difficult-to-treat areas (scalp, face, nails, genitals, and palms/soles), difficult locations (i.e. locations that disturb the patient), disease improvement with Δ PASI and clinical characteristics, comorbidities, current treatment for psoriasis, physician's assessment of adequacy of treatment, next treatment steps and patient-reported outcomes (in terms of health related quality of life (HRQoL), work productivity and activity impairment, itch level, incapacity daily functioning and patient satisfaction with treatment)

## STUDY DESIGN AND ANALYSIS

- REDISCOVER was a an observational, single-country, multicentre, cross-sectional, and retrospective chart review with single-visit data collection*, conducted between June 2021 and February 2022.

  At inclusion, adult moderate-to-severe psoriasis patients should have been continuously treated for at least 24 weeks with the conventional systemic agent methotrexate, all commercially available biologics, or the oral small-molecule inhibitor of phosphodiesterase-4 (PDE4)
- For all patients and broken down by current systemic treatment, descriptive statistics for continuous (Mean, SD, range, N), and categorical variables (%,N) were provided for clinical characteristics and therapy-related factors at baseline.
- We employed a mixed analysis of covariance (ANCOVA), with change in treatment as the dependent variable and potential prognostic factors as the independent variables (ie absolute PASI at enrolment, patient satisfaction and HCP assessment of adequacy) to evaluate the potential relationship between both.

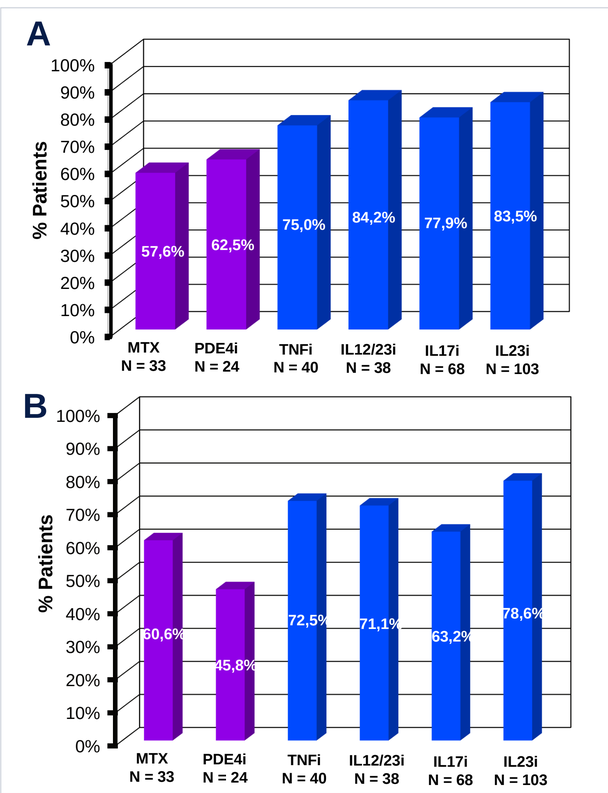
## RESULTS

### Table 1. Demographics and baseline characteristics

| | Whole population (N = 306) |
|---|---|
| **Demographics** | |
| Age (Years), Mean (SD; [range]) | 51.2 (13.7; [18-75]) |
| Sex (male), n (%) | 193 (63.1) |
| BMI (kg/m²), Mean (SD) | 27.2 (5.5) |
| **Disease characteristics** | |
| BSA (%), Mean (SD) | 1.9 (3.7) |
| PASI, Mean (SD) | 1.8 (3.7) |
| DLQI, Mean (SD) | 1.9 (3.5) |
| Comorbidities, n (%) | 126 (41.2) |
| Psoriatic arthritis, n (%) | 60 (19.6) |
| **Treatment characteristics** | |
| MTX only, n (%) | 33 (10.8) |
| PDE4 inhibitor, n (%) | 24 (7.8) |
| TNFi, n (%) | 40 (13.1) |
| IL-12/23i, n (%) | 38 (12.4) |
| IL-17i, n (%) | 68 (22.2) |
| IL-23i, n (%) | 103 (33.7) |

BMI, body mass indew; BSA, body surface area; DLQI, dermatology life quality index; IL, interleukin; IL-12/23i, IL-12/23 inhibitors; IL-17i, IL-17 inhibitors; IL-23i, IL-23 inhibitors; MTX, methotrexate; PASI, psoriasis area severity index; PDE4, phosphodiesterase 4; SD, standard deviation; TNFi, tumor necrosis factor-α inhibitors

### Figure 1. More patients treated with biologicals achieve PASI ≤ 2 (A) and DLQI ≤ 1 (B) compared to MTX/PDE4i after 24 weeks of continuous treatment




### Demographics and baseline characteristics

- 306 patients were enrolled from 18 Belgian centers (10 Flemish, 8 Walloon or Brussels centers). Five university centers enrolled 85 (27.8%) patients and 13 private practices 221 (72.2%) patients.
- Mean (SD) disease duration was 19.58 (12.39) years, with a mean (SD; [range]) treatment duration on the current systemic drug of 3.8 (3.2; [0.5-13.7]) years.
- At treatment initiation, both BSA and PASI had been determined in 115 (37.6%) of the patients whereas BSA only and PASI only had been determined in 29 (9.5%) and 70 (22.9%) patients respectively. DLQI had been evaluated in 12 (3.9%) patients.
  - Mean (SD) BSA at initiation was 21.5 (21.1)
  - Mean (SD) PASI at initiation** was 17.7 (6.8)
  - Mean (SD) DLQI at initiation was 14.7 (3.4)
- 249 (81.8%) patients were treated with biologicals, compared to 57 (18.2%) patients treated with MTX/PDE4i.

*** HCPs were asked to enter the highest PASI score recorded before systemic treatment initiation*

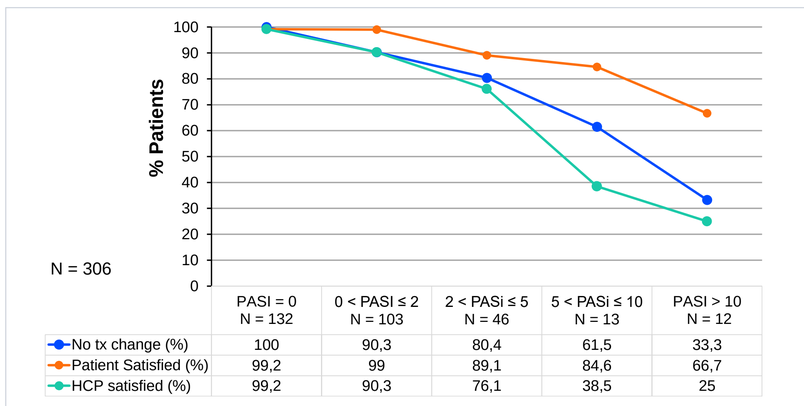
### PASI and DLQI per treatment group

- Mean (SD) PASI was 1.4 (3.0) in the biologicals group (n = 249) compared to 3.6 (5.6) in the conventional systemics group (n = 57).
- Mean (SD) DLQI was 1.6 (3.1) in the biologicals group (n = 249) compared to 3.3 (4.5) in the conventional systemics group (n = 57).
- PASI ≤ 2 was achieved in 80% of the patients treated with biologicals, compared to 60% treated with MTX/PDE4i. **(Figure 1a)**
- DLQI ≤ 1 was achieved in 86% of the patients treated with biologicals, compared to 54% of the patients treated with MTX/PDE4i. **(Figure 1b)**

### Treatment satisfaction

- 293 (96.1%) patients reported to be satisfied with their treatment, whereas 4 (1.3%) patients were neither satisfied nor dissatisfied, and 8 (2.6%) were dissatisfied.
- For 267 (87.3%) patients, the physician assessed the treatment as adequate.
- For 274 (89.5%) patients, the physician recorded no intended change in psoriasis treatment, while for 32 patients (10.5%) there was either dose increase, switch to a new treatment, additional treatment, or a different next treatment step.
- **Figure 2** shows the relation between patient satisfaction, HCP assessment of adequacy of treatment and planned treatment changes.
- Interestingly, for patients with a PASI > 10 (n = 12), 8 (67%) patients reported to be satisfied. In 9 (75%) patients, the HCPs assessed the treatment as not being adequate, resulting in a treatment change in 8 (67%) patients. This was confirmed by an ANCOVA model, showing that treatment change only correlated significantly (p < 0.001) with HCP assessment of adequacy of treatment, and not with PASI or patient satisfaction.

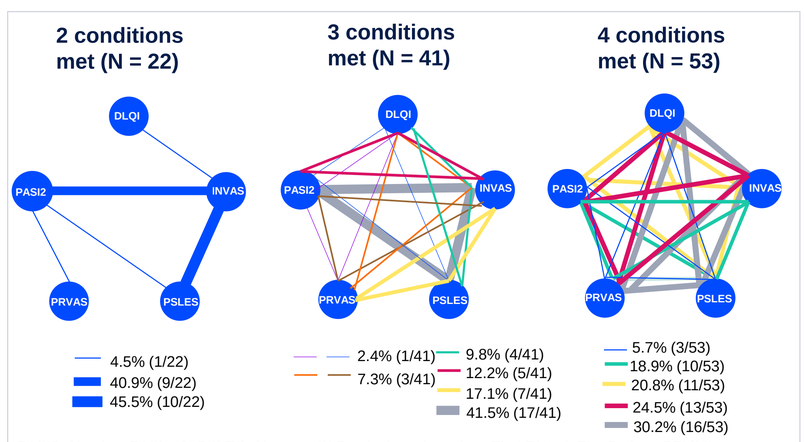
### Figure 2. More patients are satisfied with their treatment, compared to their HCP assessment of adequacy of treatment




### Belgian T2T guidelines

- Given that only 70 (22.9%) patients had PASI values recorded at baseline, PASI 90 in the T2T guidelines[4] was replaced by PASI ≤ 2.
- The simultaneous achievement of the two dimensions (disease control and well-being) of the adapted Belgian T2T guidelines were obtained in 157 (51.4%) patients − 56% within the biologicals group compared to 28% within MTX/PDE4i group.
- Overview of combinations of the different criteria of disease control and well-being of the Belgian T2T guidelines are presented in **figure 3**.
- Every criterion separately was achieved by more than 68% of the patients
  - PASI ≤ 2 in 235 (76.8%) patients
  - Puritus VAS ≤ 10 mm in 235 (76.8%) patients
  - Absence of psoriasis on locations that disturb the patients in 241 (78.8%) patients
  - DLQI ≤ 1 in 211 (69.0%) patients
  - Incapacity daily functioning VAS ≤ 10 mm in 272 (88.9%) patients

### Figure 3. Not reaching Pruritus VAS ≤10 mm or DLQI ≤1 are most often responsible for not reaching the two Belgian T2T guidelines dimensions




PASI2, Absolute PASI ≤ 2; PSLES, Absence Of Psoriasis on Locations That Disturb The Patient; PRVAS, Pruritus VAS ≤ 10 mm (0-100 mm scale); DLQI, Dermatology Quality Of Life Index ≤ 1; INVAS: Incapacity Daily Functioning VAS ≤ 10 mm (0-100 mm scale)

STUDY LOGO