One year persistence and effectiveness of guselkumab or TNFi as second-line treatment after receiving a TNFi as first-line therapy to treat active psoriatic arthritis: MANHATTAN study

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INTRODUCTION

Psoriatic Arthritis (PsA) is a heterogeneous and inflammatory condition. In Spain, **tumor necrosis factor inhibitors (TNFis) are the most commonly used drugs in the first-line of biological treatment**. Nevertheless, there is limited data on the sequencing of biological therapies in terms of treatment effectiveness and drug persistence.

AIM

The objective of the MANHATTAN study was to **evaluate the persistence, effectiveness, and tolerability of guselkumab (GUS)**, an anti-IL-23 agent, **compared to a second TNFi** in adults with PsA who had failed to a prior TNFi as first-line therapy.

METHODS

MANHATTAN (CNTO1959PSA4009) is an ongoing ambispective, observational study across 35 Spanish hospitals.

- It included patients with PsA who had previously used a TNFi and switched to GUS or another TNFi as second-line therapy (Figure 1).
- Of the 144 patients enrolled, **139 were analyzed: 77 on GUS and 62 on TNFi**. Baseline characteristics, prior first-line treatments, and concomitant medications were recorded.

Study endpoints included:

- Treatment persistence analyzed by Kaplan-Meier curves
- The percentage of patients achieving minimal disease activity (MDA)
- The description of the psoriatic body surface area (BSA)
- The mean change in tender joint count (TJC) and swollen joint count (SJC)

Interim results up to week 52 are presented

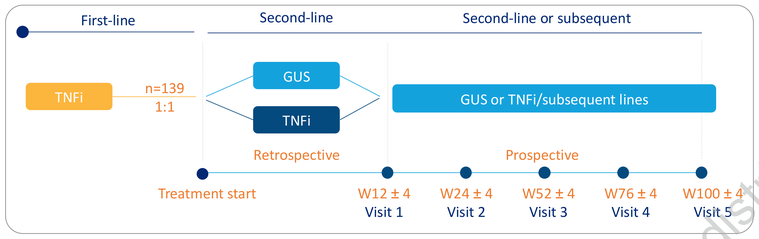

Figure 1. Study design and scheme of the visits.

CONCLUSIONS

Second-line GUS showed higher persistence at week 52 than second-line TNFi. **Second-line GUS also demonstrated effectiveness in reducing PsA disease activity, with higher proportion of patients achieving MDA and improvements in BSA**. These findings suggest that GUS is an effective and durable alternative for second-line PsA treatment.

RESULTS

- Demographic characteristics were comparable among GUS and TNFi groups (Table 1).
- The most common first-line TNFi was adalimumab (69.8%), followed by etanercept (22.3%), and certolizumab (5.0%). Regarding second-line TNFi, the most predominant was etanercept (46.8%), followed by adalimumab (25.8%). Concomitant conventional disease-modifying antirheumatic drugs were used in 41.6% of second-line GUS patients and 41.9% of second-line TNFi patients.
- Up to week 52, the **persistence was longer in patients on GUS than those on TNFi (85.3% and 73.5%,** Figure 2).
- The overall percentage of patients who achieved MDA gradually increased over time **with a slightly higher proportion of patients in the GUS group achieving MDA at weeks 12, 24 and 52** (Figure 3).

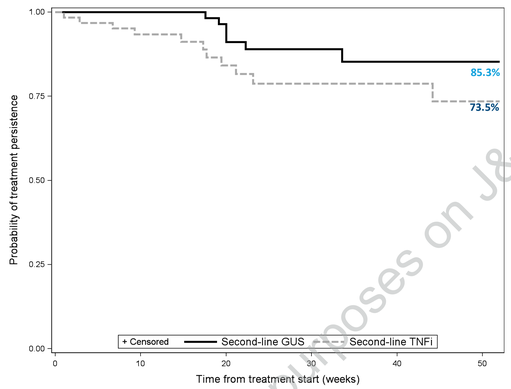

Figure 2. Kaplan-Meier plot of second-line treatment (GUS or TNFi) persistence up to week 52.

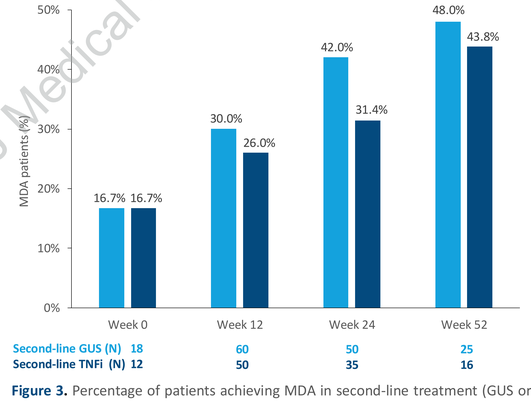

Figure 3. Percentage of patients achieving MDA in second-line treatment (GUS or TNFi) at week 0, week 12, 24 and 52. MDA was achieved if 5 of 7 criteria were met. The N corresponds to the total number of patients with MDA evaluation in each week.

- **Improvements in BSA were noted in the GUS group** and a **minor decrease** was observed for those with second-line TNFi (Figure 4).
- TJC decreased over time in both groups showing an absolute mean change of **-2.7 at week 12, -3.3 at week 24, and -3.2 at week 52 for GUS; and -2.2, -3.5, and -3.8; at weeks 12, 24, and 52, respectively for TNFi**. A similar decrease was observed in the SJCs for **GUS (-2.0, -1.9, and -2.2; at weeks 12, 24, and 52, respectively)** and for **TNFi (-1.6, -2.4, and -3.1; at weeks 12, 24, and 52, respectively)**. See joint count in Figure 5.

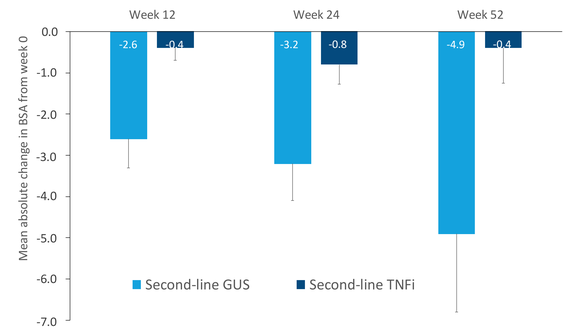

Figure 4. Mean absolute change in BSA from week 0 in patients treated with GUS or TNFi in second-line therapy.

Table 1. Demographic characteristics

	Second-line GUS	Second-line TNFi
Sex, n (%)		
Male	31 (40.3)	31 (50.0)
Female	46 (59.7)	31 (50.0)
Age at PsA diagnosis (years), mean (SD)	43.9 (11.9)	44.7 (11.9)
BMI (kg/m²), mean (SD)	28.2 (6.6)	27.3 (5.7)
Comorbidities[1]		
Arterial hypertension	16 (33.3%)	18 (43.9%)
Diabetes	12 (25.0%)	5 (12.2%)
Anxiety/drepression	10 (20.8%)	4 (9.8%)
Heart disease	5 (10.4%)	4 (9.8%)
PsA characteristics, n (%)		
Polyarticular PsA	48 (62.3%)	41 (66.1%)
Oligoarticular PsA*	24 (31.6%)	18 (29.5%)
Axial affectation*	18 (23.7%)	15 (24.6%)
Active psoriasis	51 (66.2%)	29 (47.5%)
Nail psoriasis*	29 (38.2%)	22 (36.1%)
Dactylitis*	12 (15.8%)	11 (18.0%)
Enthesitis*	16 (21.1%)	23 (37.1%)
Distal interphalangeal arthritis*	10 (13.2%)	13 (21.3%)
TJC**, mean (SD)	6.0 (6.1)	5.5 (5.8)
SJC**, mean (SD)	3.5 (4.8)	2.9 (4.0)
DAPSA*, mean (SD)**	23.0 (13.2)	21.2 (12.3)
BSA, mean (SD)	4.0 (5.2)	1.9 (4.1)

[1]Based on n=89 patients (64.0%) with any comorbidity; * Of a total of 76 patients in the GUS group and 61 in the TNFi group; ** Of a total of 60 patients in the GUS group and 50 patients in the TNFi group; *** Of a total of 51 patients in the GUS group and 39 patients in the TNFi group; **** Of a total of 44 patients in the GUS group and 29 patients in the TNFi group.

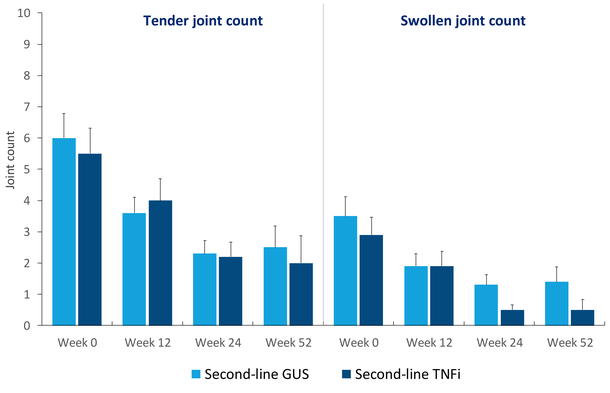

Figure 5. TJC and SJC in second-line treatment (GUS or TNFi) at baseline, and at weeks 12, 24, and 52. The data are presented as mean values with standard deviation (SD).

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