Enhanced Effectiveness of Guselkumab as First-Line Biologic Therapy in Psoriasis: Real-World Results Over 84 Weeks From the G-REAL Study

Sascha Gerdes,[1] Matthias Hoffmann,[2] Marc Hanno Segert,[3] Rolf Ostendorf,[4] Durdana Groß,[5] Friedemann Taut,[6] Lukas Scharfenberger,[7] Simmy Jacobsen,[7] Juliane Behrens,[7] Nikolas Spindler,[7] Ralph von Kiedrowski[8]

[1]Psoriasis Center, Department of Dermatology, University Medical Center Schleswig-Holstein Campus Kiel, Kiel, Germany; [2]Dermatological Practice Matthias Hoffmann, Witten, Germany; [3]Dermatological Practice Marc Hanno Segert, Mölln, Germany; [4]ZENTderma, Mönchengladbach, Germany; [5]Dermatology Practice Durdana Groß, Potsdam, Germany; [6]Taut Science and Service GmbH, Konstanz, Germany; [7]Johnson & Johnson, Neuss, Germany; [8]Dermatological Practice Ralph von Kiedrowski, Selters, Germany

Key Takeaways

✓ In the G-REAL study, GUS demonstrated robust long-term real-world effectiveness, high drug survival, and marked quality of life improvements through 84 weeks of treatment in patients with moderate-to-severe Pso, irrespective of prior biological treatment

✓ Bionaïve patients achieved higher PASI response and drug survival rates than patients previously exposed to biologics, highlighting the benefits of GUS as a first-line biologic

✓ Safety findings across all treatment lines were consistent with the well-established safety profile of GUS

Background

- Psoriasis (Pso) is a chronic, immune-mediated disease characterized by erythematous, scaly plaques, mainly driven by activation of the interleukin (IL)-23 pathway[1]
- Guselkumab (GUS), a selective p19 subunit-targeted IL-23 inhibitor, has demonstrated significant and durable efficacy in patients with moderate-to-severe Pso[2,3]
- G-REAL is a prospective, non-interventional, multicenter study evaluating the long-term effectiveness of GUS and secukinumab (SEC) and their impact on health-related quality of life in patients with moderate-to-severe Pso across different treatment lines in routine practice in Germany

Objective

- This analysis focused on the full GUS patient population of the G-REAL study and assessed effectiveness, patient-reported-outcomes (PROs), and drug survival with GUS over 84 weeks (W) across treatment lines

Study Design & Analyses

- The G-REAL study included adults with moderate-to-severe Pso and baseline PASI >5 treated with GUS Q8W or SEC Q4W per routine care (see P72716)
- Data were collected at W0, W4, W12, W20, W28, W52, and W84
- A total of 502 patients initiating GUS had analyzable data at baseline and ≥1 post-baseline visit; patients were stratified by biologic treatment history: bionaïve (N=259), 1 prior biologic (N=155), and ≥2 prior biologics (N=88)
- PASI/DLQI data were analyzed as observed
- Drug survival was analyzed using Kaplan-Meier methodology[a]

[a]In the absence of confirmation of treatment discontinuation (including patients lost to follow-up), the time to event was censored on the last documented study date.
DLQI=Dermatology Life Quality Index, **PASI**=Psoriasis Area and Severity Index, **Q4W**=every 4 weeks, **Q8W**=every 8 weeks.

Results

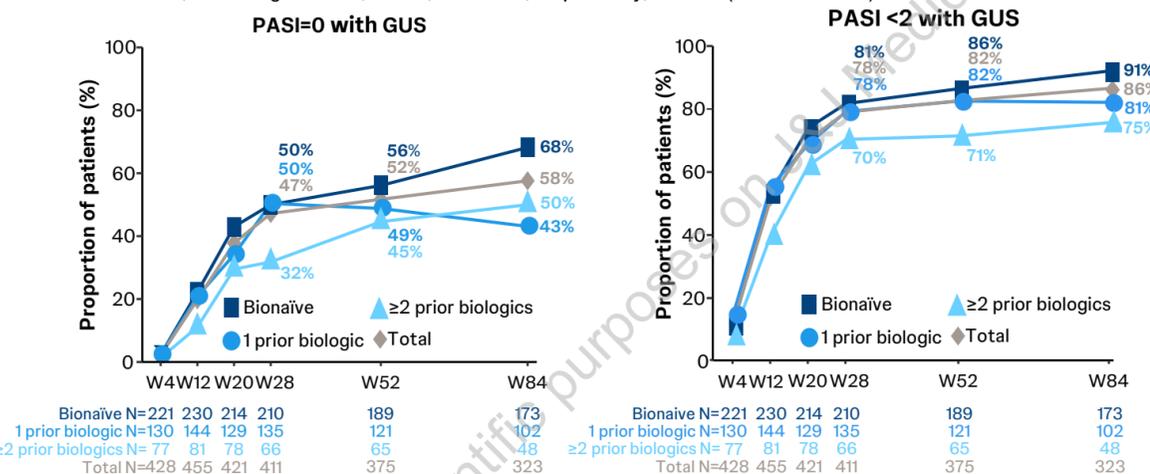### Baseline patient and disease characteristics were generally comparable across treatment lines

- Bionaïve patients had shorter Pso duration, lower prior csDMARDs use, and lower rates of PsA

Baseline Characteristics of GUS-treated Patients	Bionaïve (N=259)	1 prior biologic (N=155)	≥2 prior biologics (N=88)	Total (N=502)
Demographics				
Mean age, yrs (SD)	46.7 (14.5)	47.6 (14.3)	49.7 (12.5)	47.5 (14.1)
Male, n (%)	167 (64.5)	89 (57.4)	50 (56.8)	306 (61.0)
Mean BMI, kg/m² (SD)	28.7 (6.4)	29.7 (5.9)	29.6 (6.2)	29.2 (6.2)
Disease Characteristics				
Mean Pso duration, yrs (SD)	14.3 (12.9)[a]	18.1 (12.2)	19.5 (12.4)	16.4 (12.8)[b]
Mean DLQI (0–30) (SD)	14.1 (7.3)[c]	13.8 (7.7)[d]	13.7 (7.7)[e]	14.0 (7.5)[f]
Mean PASI (0–72) (SD)	16.7 (8.9)	14.1 (8.1)	11.8 (6.9)	15.1 (8.5)
Concomitant Diseases[g], n (%)				
Hypertension	66 (25.5)	50 (32.3)	26 (29.5)	142 (28.3)
PsA	45 (17.4)	40 (25.8)	36 (40.9)	121 (24.1)
Hyperlipidaemia	30 (11.6)	20 (12.9)	8 (9.1)	58 (11.6)
Diabetes	26 (10.0)	14 (9.0)	8 (9.1)	48 (9.6)
Depression	11 (4.2)	10 (6.5)	10 (11.4)	31 (6.2)
Prior csDMARDs Use, n (%)				
Methotrexate	78 (30.1)	65 (41.9)	62 (70.5)	205 (40.8)
Cyclosporine	7 (2.7)	8 (5.2)	15 (17.0)	30 (6.0)

[a]N=258. [b]N=501. [c]N=253. [d]N=151. [e]N=86. [f]N=490. [g]Top 5 most frequent concomitant diseases shown. **BMI**=body mass index, **csDMARD**=conventional synthetic disease-modifying antirheumatic drug, **PsA**=psoriatic arthritis, **SD**=standard deviation.
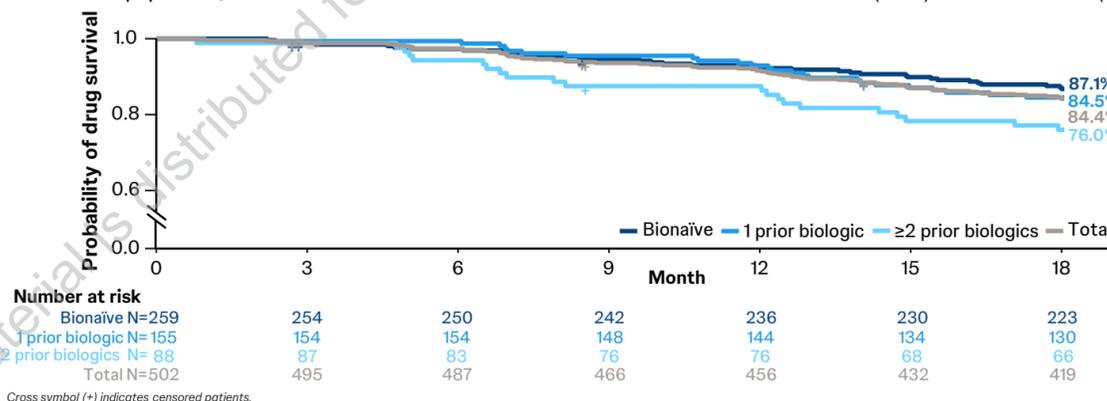
Rates of complete or almost complete skin clearance with GUS treatment were highest among bionaïve patients through W84

- GUS demonstrated high and durable PASI=0 and PASI <2 response rates through W84; bionaïve patients had the highest rates
- The rate of super-response (PASI=0 at W20 and W28) with GUS treatment was highest among bionaïve patients (31.5% versus 25.7% of those with 1 prior biologic and 18.7% of those with ≥2 prior biologics; data not shown)
- PASI ≤2 was achieved by 54.3% (bionaïve), 56.3% (1 prior biologic), and 39.5% (≥2 prior biologics) of patients with GUS treatment at W12, increasing to 91.9%, 84.3%, and 81.3%, respectively, at W84 (data not shown)
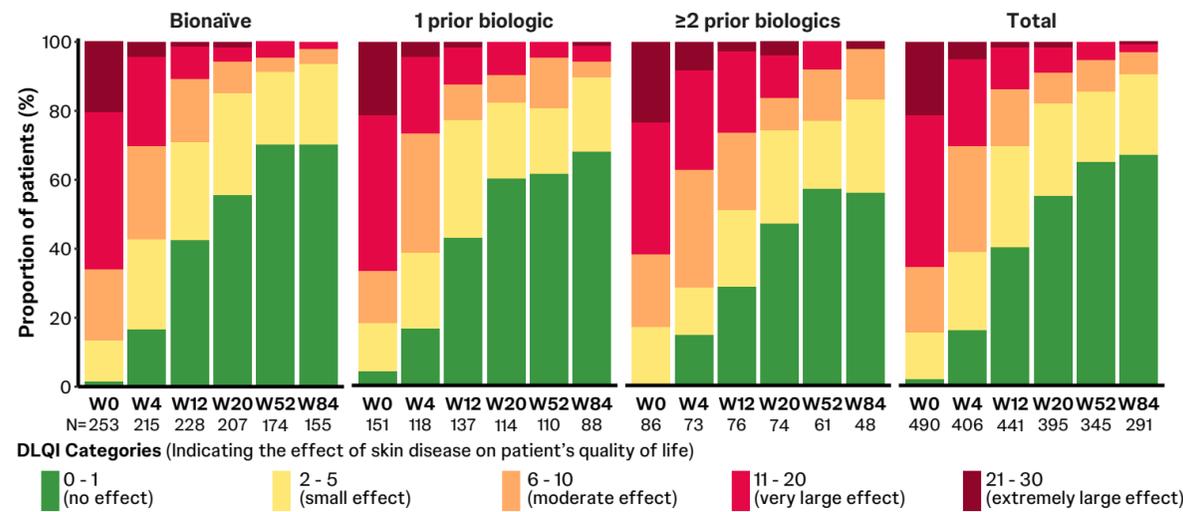

PASI=0 with GUS

Bionaïve N=221 230 214 210 189 173
1 prior biologic N=130 144 129 135 121 102
≥2 prior biologics N= 77 81 78 66 65 48
Total N=428 455 421 411 375 323

PASI <2 with GUS

Highest drug survival rate with GUS treatment at 18 months was observed among bionaïve patients

- High drug survival rates with GUS were sustained through 18 months across treatment lines
- In the total population, the most common reasons for GUS discontinuation were adverse events (5.0%) and loss of effect (2.2%)

87.1%
84.5%
84.4%
76.0%

Number at risk

	0	3	6	9	12	15	18
Bionaïve N=259		254	250	242	236	230	223
1 prior biologic N=155		154	148	144	134	130	
≥2 prior biologics N= 88		87	83	76	76	68	66
Total N=502		495	487	466	456	432	419

Cross symbol (+) indicates censored patients.

Quality of life improved rapidly and continuously with GUS treatment through W84 across treatment lines

- Quality of life improved rapidly with GUS treatment across all treatment lines
- At W84, the proportions of patients with DLQI 0/1 (no effect of skin disease on quality of life) were 70.3% (bionaïve), 68.2% (1 prior biologic), and 56.3% (≥2 prior biologics)

	Bionaïve	1 prior biologic	≥2 prior biologics	Total
N=	253 215 228 207 174 155	151 118 137 114 110 88	86 73 76 74 61 48	490 406 441 395 345 291

(W0 W4 W12 W20 W52 W84)

DLQI Categories (Indicating the effect of skin disease on patient's quality of life)

- 0 - 1 (no effect)
- 2 - 5 (small effect)
- 6 - 10 (moderate effect)
- 11 - 20 (very large effect)
- 21 - 30 (extremely large effect)

No new safety signals were identified with GUS treatment through W84

Safety through W84	Bionaïve (N=259)	1 prior biologic (N=158)	≥2 prior biologics (N=91)	Total (N=508)
Any TEAE, n (%)	148 (57.1)	95 (60.1)	53 (58.2)	296 (58.3)
TEAE related to treatment[a]	24 (9.3)	25 (15.8)	13 (14.3)	62 (12.2)
Infections and infestations	18 (6.9)	17 (10.8)	5 (5.5)	40 (7.9)
Skin and subcutaneous tissue disorders	2 (0.8)	5 (3.2)	2 (2.2)	9 (1.8)
Nervous system disorders	4 (1.5)	3 (1.9)	2 (2.2)	9 (1.8)
Musculoskeletal and connective tissue disorders	3 (1.2)	3 (1.9)	1 (1.1)	7 (1.4)
Any serious TEAE, n (%)	24 (9.3)	18 (11.4)	8 (8.8)	50 (9.8)
Serious TEAE related to treatment[a]	1 (0.4)	1 (0.6)	1 (1.1)	3 (0.6)
Infections and infestations	1 (0.4)	1 (0.6)	1 (1.1)	3 (0.6)
Death, n (%)	1 (0.4)	1 (0.6)	0 (0.0)	2 (0.4)[b]

[a]Most frequently reported system organ classes for TEAEs/serious TEAEs related to treatment are shown. [b]One death due to intestinal perforation and another due to stroke. Both deaths were considered not related to the study treatment. TEAE=treatment-emergent adverse event.