SPECTREM: Guselkumab Efficacy Across Multiple High-Impact Sites in Participants With Low BSA, Moderate Psoriasis

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Background

SPECTREM is an ongoing phase 3b, multicenter, randomized, double-blind, placebo (PBO)-controlled study evaluating the efficacy and safety of guselkumab (GUS) in participants with low body surface area (BSA), moderate plaque psoriasis (PsO) involving ≥1 high-impact site

Patients with low BSA PsO are underrepresented in clinical studies and may be undertreated despite being candidates for systemic treatment[1–3]

SPECTREM was intentionally designed to address the knowledge gap regarding patients with low BSA PsO involving high-impact sites, and most SPECTREM participants have more than one high-impact site involved

Objectives

To evaluate efficacy of GUS vs PBO at Week 16 via:

- High-impact site-specific Investigator's Global Assessment (IGA)
  - Scalp-specific IGA (ss-IGA)
  - Facial IGA (f-IGA)
  - Intertriginous IGA (i-IGA)
  - Static Physician's Global Assessment of Genitalia (sPGA-G)
- Psoriasis Symptoms and Signs Diary (PSSD)
- Dermatology Life Quality Index (DLQI)
- Psoriasis Area and Severity Index (PASI)

Methods

Key inclusion criteria:

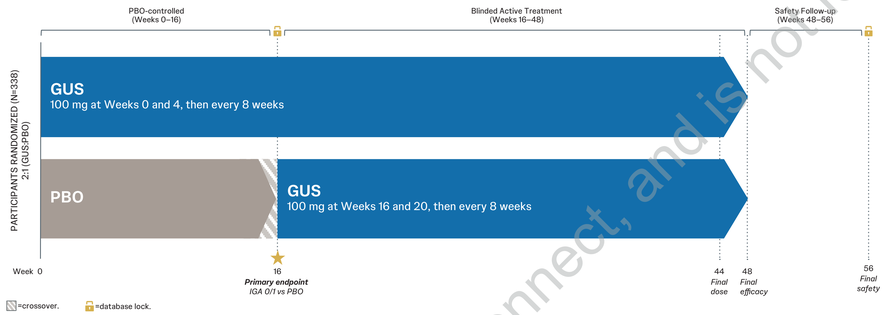
- IGA=3
- BSA=2–15% with ≥1 plaque outside of high-impact sites
- ≥1 high-impact site with at least moderate severity (scalp, face, intertriginous, genital)

A total of 338 participants were randomized to receive GUS (N=225) or PBO (N=113)

Endpoints presented at Week 16 include:

- Primary endpoint: proportion of participants achieving IGA 0/1
- Proportions of participants achieving overall IGA 0/1 and PASI 90 by number of high-impact sites (one, two, three, or four sites[a]) at baseline
- Patient-reported outcomes by number of high-impact sites (one, two, three, or four sites[a]) at baseline:
  - Mean change in PSSD total symptoms score
  - Proportion of participants achieving a ≥4-point improvement in PSSD itch score
  - Proportion of participants achieving DLQI 0/1
- Proportions of participants achieving ss-IGA 0/1, f-IGA 0/1, i-IGA 0/1, and sPGA-G 0/1 by number of high-impact sites (one, two, three, or four sites[a]) at baseline

[a]Participants in one, two, three, and four high-impact sites are mutually exclusive.



GUS=Guselkumab, IGA=Investigator's Global Assessment, PBO=Placebo, vs=Versus

Key Takeaways

- **At 16 weeks, GUS was effective in participants with low BSA, moderate plaque PsO with involvement of ≥1 high-impact site**
- **The majority of participants achieved clear/almost clear skin across high-impact sites after just 3 doses of GUS, regardless of the number of high-impact sites**
- **Compared to PBO-randomized participants, greater proportions of GUS-randomized participants had less itch and improved quality of life, regardless of the number of high-impact sites**

Results

Baseline demographics and disease characteristics were generally comparable between the PBO and GUS groups

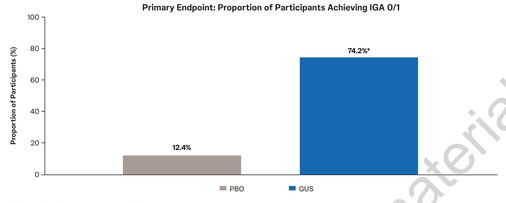
- No notable differences in baseline demographics by high-impact site were observed

	PBO (N=113)	GUS (N=225)	Total (N=338)
Demographics			
Age, yrs	44.5 (14.9)	47.0 (14.7)	46.2 (14.8)
Male	57 (50.4%)	116 (51.6%)	173 (51.2%)
White	83 (73.5%)	166 (73.8%)	249 (73.7%)
BMI, kg/m^2	31.0 (7.5)	30.9 (7.5)	30.9 (7.5)
Disease Characteristics			
PsO disease duration, yrs	14.0 (11.9)	18.4 (14.9)	16.9 (14.1)
IGA, moderate (3)	113 (100%)	224 (99.6%)[b]	337 (99.7%)
BSA, %	7.5 (3.7)	7.6 (3.7)	7.6 (3.7)
PASI (0–72)	9.0 (3.9)	9.1 (3.8)	9.0 (3.8)
Participants with high-impact site IGA/PGA ≥3 at baseline			
One site	41 (36.3%)	81 (36.0%)	122 (36.1%)
Two sites	53 (46.9%)	91 (40.4%)	144 (42.6%)
Three sites	13 (11.5%)	40 (17.8%)	53 (15.7%)
Four sites	6 (5.3%)	13 (5.8%)	19 (5.6%)
Previous Medication Use			

Topical Agents[c] (N=338)	Phototherapy[d] (N=336)	Systemics[e] (N=336)	Advanced Orals[f] (N=336)
100%	18.5%	13.7%	4.5%

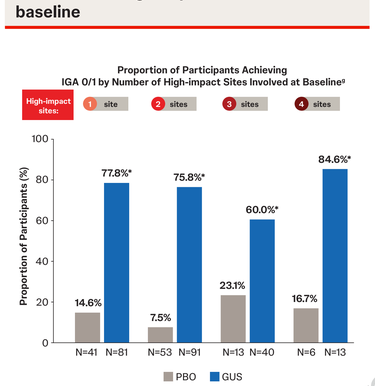
Data shown are mean (SD), unless otherwise indicated. [b]One GUS-randomized participant deviated from the inclusion criteria with a baseline IGA score of 4. [c]Topical, anthralin, keratolytics, and tar. [d]PUVA and UVB; [e]PUVA, methotrexate, cyclosporine, and acitretin; [f]Apremilast and deucravacitinib. **BMI**=Body mass index, **BSA**=Body surface area, **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **PASI**=Psoriasis Area and Severity Index, **PBO**=Placebo, **PGA**=Physician's Global Assessment, **PsO**=Psoriasis, **PUVA**=Psoralen plus ultraviolet A, **SD**=Standard deviation, **UVB**=Ultraviolet B, **yrs**=Years

74% of GUS-randomized participants achieved the primary endpoint (IGA 0/1) at Week 16



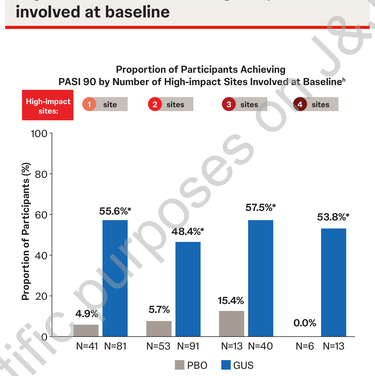
*p<0.001 GUS vs PBO; p-value is based on the Cochran-Mantel-Haenszel (CMH) test stratified by high-impact site (scalp, face, intertriginous, genital). Nonresponder imputation (NRI) was used: participants who discontinued study agent due to lack of efficacy, worsening of PsO, or use of a prohibited PsO treatment prior to designated visit were considered nonresponders from that point forward. Participants with missing data were considered nonresponders. **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **PBO**=Placebo, **PsO**=Psoriasis

≥60% of GUS-randomized participants achieved IGA 0/1 at Week 16, regardless of number of high-impact sites involved at baseline



*nominal p<0.05 GUS vs PBO; p-value is based on the chi-squared test, not adjusted for baseline stratification factor. NRI was used: participants who discontinued study agent due to lack of efficacy, worsening of PsO, or use of a prohibited PsO treatment prior to designated visit were considered nonresponders from that point forward. Participants with missing data were considered nonresponders. [a]Among participants with a baseline high-impact site assessment (ss-IGA, f-IGA, i-IGA, and/or sPGA-G) score ≥3. **f-IGA**=Facial IGA, **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **i-IGA**=Intertriginous IGA, **NRI**=Nonresponder imputation, **PBO**=Placebo, **PsO**=Psoriasis, **sPGA-G**=Static Physician's Global Assessment of Genitalia, **ss-IGA**=Scalp-specific IGA

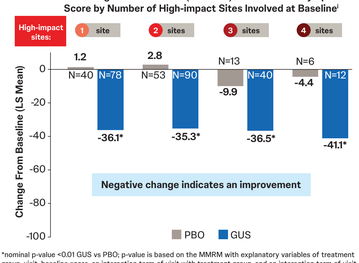
Approximately half of GUS-randomized participants achieved PASI 90 at Week 16, regardless of number of high-impact sites involved at baseline



*nominal p<0.05 GUS vs PBO; p-value is based on the chi-squared test, not adjusted for baseline stratification factor. NRI was used: participants who discontinued study agent due to lack of efficacy, worsening of PsO, or use of a prohibited PsO treatment prior to designated visit were considered nonresponders from that point forward. Participants with missing data were considered nonresponders. [b]Among participants with a baseline high-impact site assessment (ss-IGA, f-IGA, i-IGA, and/or sPGA-G) score ≥3. **f-IGA**=Facial IGA, **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **i-IGA**=Intertriginous IGA, **NRI**=Nonresponder imputation, **PASI**=Psoriasis Area and Severity Index, **PBO**=Placebo, **PsO**=Psoriasis, **sPGA-G**=Static Physician's Global Assessment of Genitalia, **ss-IGA**=Scalp-specific IGA

The GUS groups achieved generally comparable mean changes from baseline in PSSD total symptoms scores at Week 16, regardless of number of high-impact sites involved at baseline

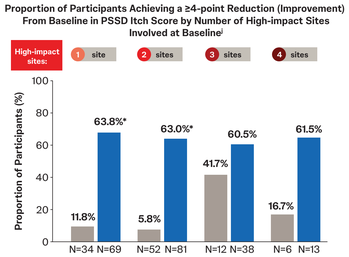
- Mean changes from baseline in PSSD total symptoms scores were >35 for the GUS group across the number of sites involved at baseline



*nominal p-value <0.01 GUS vs PBO; p-value is based on the MMRM with explanatory variables of treatment group, visit, baseline score, an interaction term of visit with treatment group, and an interaction term of visit with baseline score. [j]Among participants with a baseline high-impact site assessment (ss-IGA, f-IGA, i-IGA, or sPGA-G) score ≥3 and among the participants with PSSD itch score ≥4 at baseline. Threshold for clinically meaningful improvement in PSSD symptoms score is ≥4.0 points.[4] When participants discontinued study agent due to lack of efficacy, worsening of psoriasis, or use of a prohibited PsO treatment, zero change was assigned from that point onward. Missing data were handled by MMRM under missing at random assumption. Negative change indicates an improvement, and a positive change indicates worsening of disease. **f-IGA**=Facial IGA, **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **i-IGA**=Intertriginous IGA, **LS**=Least square, **MMRM**=Mixed-model repeated measures, **NRI**=Nonresponder imputation, **PASI**=Psoriasis Area and Severity Index, **PBO**=Placebo, **PSSD**=Psoriasis Symptoms and Signs Diary, **PsO**=Psoriasis, **sPGA-G**=Static Physician's Global Assessment of Genitalia, **ss-IGA**=Scalp-specific IGA

Greater proportions of GUS-randomized vs PBO-randomized participants achieved a ≥4-point reduction (improvement) from baseline in PSSD itch score at Week 16

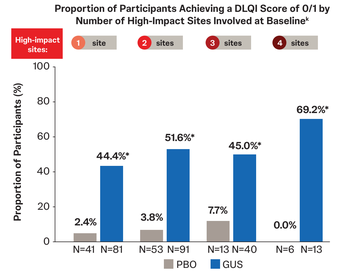
- >60% of GUS-randomized participants achieved a ≥4-point reduction (improvement) from baseline in PSSD itch score, regardless of number of sites involved at baseline



*nominal p<0.001 GUS vs PBO; p-value is based on the chi-squared test, not adjusted for baseline stratification factor. NRI was used: participants who discontinued study agent due to lack of efficacy, worsening of PsO, or use of a prohibited PsO treatment prior to designated visit were considered nonresponders from that point forward. Participants with missing data were considered nonresponders. [j]Among participants with a baseline high-impact site assessment (ss-IGA, f-IGA, i-IGA, and/or sPGA-G) score ≥3 and a baseline PSSD itch score ≥4. **f-IGA**=Facial IGA, **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **i-IGA**=Intertriginous IGA, **NRI**=Nonresponder imputation, **PBO**=Placebo, **PSSD**=Psoriasis Symptoms and Signs Diary, **PsO**=Psoriasis, **sPGA-G**=Static Physician's Global Assessment of Genitalia, **ss-IGA**=Scalp-specific IGA

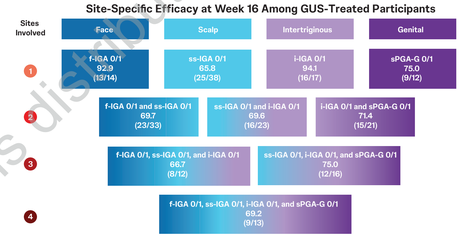
Greater proportions of GUS-randomized participants had no effect of PsO on their quality of life compared to PBO-randomized participants at Week 16

- >44% of GUS-randomized participants achieved a DLQI score of 0/1 (no effect on quality of life) at Week 16, regardless of number of sites involved



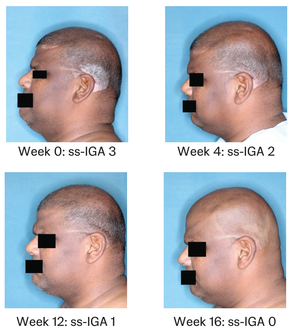
*nominal p-value <0.05 GUS vs PBO; p-value is based on the chi-squared test, not adjusted for baseline stratification factor. NRI was used: participants who discontinued study agent due to lack of efficacy, worsening of PsO, or use of a prohibited PsO treatment prior to designated visit were considered nonresponders from that point forward. Participants with missing data were considered nonresponders. [k]Among participants with a baseline high-impact site assessment (ss-IGA, f-IGA, i-IGA, and/or sPGA-G) score ≥3. **DLQI**=Dermatology Life Quality Index, **f-IGA**=Facial IGA, **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **i-IGA**=Intertriginous IGA, **NRI**=Nonresponder imputation, **PBO**=Placebo, **PsO**=Psoriasis, **sPGA-G**=Static Physician's Global Assessment of Genitalia, **ss-IGA**=Scalp-specific IGA

Proportions of participants achieving at least one high-impact site assessment score (ss-IGA, f-IGA, i-IGA, and/or sPGA-G) of 0/1 at Week 16



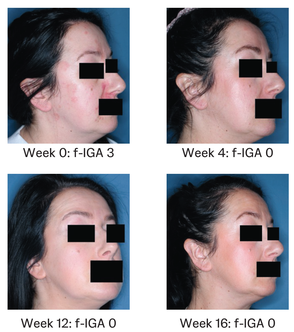
Groups are mutually exclusive and include participants with baseline high-impact site scores ≥3 who achieved respective site scores of 0/1 at Week 16. Data are shown for groups with ≥10 participants. NRI was used: participants who discontinued study agent due to lack of efficacy, worsening of PsO, or use of a prohibited PsO treatment prior to designated visit were considered nonresponders from that point forward. Participants with missing data were considered nonresponders. **f-IGA**=Facial IGA, **GUS**=Guselkumab, **IGA**=Investigator's Global Assessment, **i-IGA**=Intertriginous IGA, **NRI**=Nonresponder imputation, **PBO**=Placebo, **PsO**=Psoriasis, **sPGA-G**= Static Physician's Global Assessment of Genitalia, **ss-IGA**=Scalp-specific IGA

GUS-randomized participant who achieved ss-IGA 0 at Week 16[l]



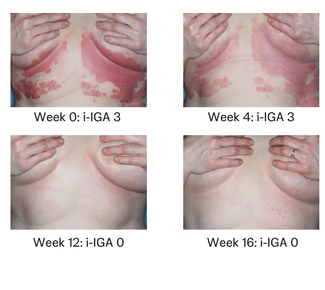
[l]ss-IGA ≥3 at Baseline. **ss-IGA**=Scalp-specific Investigator's Global Assessment

GUS-randomized participant who achieved f-IGA 0 at Week 16[m]



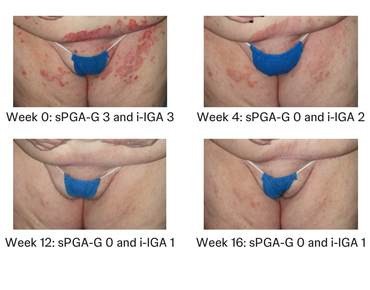
[m]f-IGA ≥3 at Baseline. **f-IGA**=Facial-Investigator's Global Assessment

GUS-randomized participant who achieved i-IGA 0 at Week 16[n]



[n]i-IGA ≥3 at Baseline. i-IGA=Intertriginous investigator's Global Assessment

GUS-randomized participant with genital and intertrigenous PsO who achieved sPGA-G 0 and i-IGA 1 at Week 16[o]



[o]sPGA-G ≥3 and i-IGA ≥3 at Baseline. **i-IGA**=Intertriginous investigator's Global Assessment, **sPGA-G**= Static Physician's Global Assessment of Genitalia

PRESENTED AT: 12th Annual Meeting of International Dermatology Outcomes Measures (IDEOM); Washington, DC, USA; June 27–28, 2025. **REFERENCES: 1.** Blauvelt A, et. al. *J Psoriasis Psoriatic Arthritis*. 2023;8:100–6. **2.** Golbari NM, et. al. *J Eur Acad Dermatol Venereol*. 2021;35:417–21. **3.** Strober B, et. al. *J Am Acad Dermatol*. 2019;82:117–22. **4.** Armstrong A, et. al. *J Dermatolog Treat*. 2019 Feb;30(1):27–34. **ACKNOWLEDGMENTS:** Medical writing support was provided by Jackie Johnson and Amy C. Porter, employees of Certara, under the direction of the authors in accordance with Good Publication Practice guidelines (*Ann Intern Med*. 2022;175:1298-1304). Sponsored by Johnson & Johnson, Horsham, PA, USA. **DISCLOSURES: HN:** has received speakers' bureau and/or honoraria from Amgen, Apogee Therapeutics, Bristol Meyer Squibb, Castle Biosciences, Dermavant, Galderma, Janssen (Johnson & Johnson), LEO Pharma, Novartis, Pfizer, Regeneron, Sun Pharma, UCB, and Verrica Pharmaceuticals. **NS:** received consulting fees from AbbVie, Dermavant, Eli Lilly, Galderma, Johnson & Johnson, Pfizer, Sun Pharma, and UCB. **HY:** has received honoraria, consulting fees, and speaker bureau from AbbVie, Amgen, Arcutis, Bausch Health, Boehringer Ingelheim, Bristol Meyer Squibb, Dermavant, Galderma, Incyte, Johnson & Johnson, LEO Pharma, Pfizer, Sun Pharma, and UCB. **OC:** is a former employee of Johnson & Johnson.**TA, KR, DC, JJ and SR:** are employees and stockholders of Johnson & Johnson. **AM:** received honoraria or research grants from AbbVie, Acelyrin, Arcutis, Bristol Myers Squibb, Dermavant, Eli Lilly, Galderma, Incyte, Janssen, Novartis, Pfizer, Sanofi, Takeda, and UCB. **LA:** has received grants, sponsored research, speakers' bureau, honoraria, and/or consulting fees from AbbVie, Alumis, Amgen, Arcutis, Aristea, Bausch Health, Boehringer Ingelheim, Bristol Myers Squibb, Celgene, Concert, Dermavant, Dermira, DICE, Eli Lilly, Evolo, Galderma, Horizon, Incyte, Janssen, LEO Pharma, Merck, Nektar, Novartis, Pfizer, Sanofi, Sun Pharma, Takeda, and UCB. **PREVIOUSLY PRESENTED AT:** Winter Clinical Dermatology Conference; Big Island, Waikoloa Village, Hawaii; February 14–19, 2025.