Guselkumab efficacy and safety in East Asian participants with moderate to severely active ulcerative colitis: Subgroup analysis of the Phase 2b/3 QUASAR induction and maintenance studies

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Key Takeaways

- **Efficacy of GUS as IV induction and SC maintenance therapy in East Asian participants with moderately to severely active UC was consistent with that observed in the global QUASAR study population**
- **The safety profile of GUS was also favorable in East Asian participants, consistent with previous reports in global populations**

Background

Guselkumab (GUS) is a dual-acting interleukin (IL)-23p19 subunit inhibitor that potently neutralizes IL-23 and binds to CD64, a receptor on cells that produce IL-23[1]

The global QUASAR studies demonstrated efficacy and safety of GUS as induction and maintenance therapy in participants with moderately to severely active ulcerative colitis (UC)[1-3]

Objective

To report a subgroup analysis of GUS efficacy and safety in East Asian participants from QUASAR

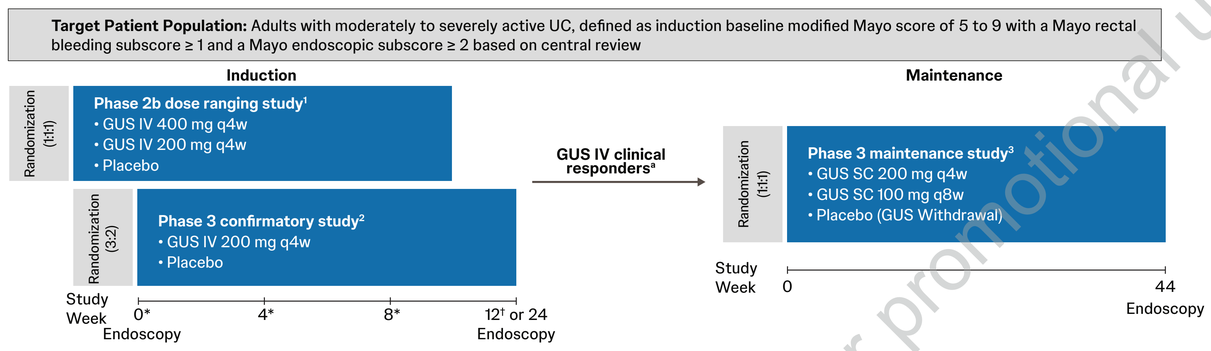
Methods

QUASAR clinical development program

- Two placebo-controlled, 12-week induction studies
- Randomized-withdrawal maintenance study
- Participants were adults with moderately to severely active UC with inadequate response or intolerance to conventional and/or advanced UC therapy

Subgroup analysis

- The East Asian subgroup included participants from QUASAR study sites located in East Asia (China, Japan, Korea, and Taiwan)
- No statistical comparisons were made between treatment cohorts for this subgroup analysis



*All studies were double-blinded. *Study treatment administered; †Additional study treatment administered to Week 12 clinical nonresponders. [a]Clinical response defined as a decrease from induction baseline in the modified Mayo score by ≥ 30% and ≥ 2 points, with either a ≥ 1-point decrease from baseline in the rectal bleeding subscore or a rectal bleeding subscore of 0 or 1. **GUS**=Guselkumab; **IV**=Intravenous; **q4w**=Every 4 weeks; **q8w**=Every 8 weeks; **SC**=Subcutaneous; **UC**=Ulcerative colitis.*

Results

Population

Phase 2b induction study		Phase 3 induction study		Maintenance study	
Global population:	N=313	Global population:	N=701	Global population:	N=568
East Asian subgroup:	N=71	East Asian subgroup:	N=135	East Asian subgroup:	N=106
• China, n=11		• China, n=61		• China, n=34	
• Japan, n=36		• Japan, n=58		• Japan, n=52	
• Korea, n=18		• Korea, n=13		• Korea, n=13	
• Taiwan, n=6		• Taiwan, n=3		• Taiwan, n=7	

Primary analysis population including participants with modified Mayo score 5-9 at induction baseline.

Participant characteristics at induction baseline were generally similar between East Asian and global participants

		Phase 2b Induction Study		Phase 3 Induction Study		Maintenance Study[a]	
		East Asian (N=71)	Global (N=313)	East Asian (N=135)	Global (N=701)	East Asian (N=106)	Global (N=568)
Demographics							
	Age, yrs	42.7 (14.2)	41.6 (14.4)	42.5 (13.4)	40.5 (13.7)	41.6 (13.9)	40.7 (13.8)
	Male, n (%)	46 (64.8)	185 (59.1)	82 (60.7)	399 (56.9)	67 (63.2)	311 (54.8)
	Weight, kg	61.9 (12.4)	70.3 (17.2)	62.2 (12.9)	72.5 (16.8)	62.7 (12.4)	71.7 (16.8)
UC Disease Characteristics							
	UC disease duration, yrs	8.0 (7.0)	7.6 (6.8)	6.3 (6.1)	7.5 (7.3)	7.76 (7.3)	7.81 (7.8)
	Mayo Score	8.9 (1.3)	9.2 (1.3)	9.1 (1.4)	9.1 (1.4)	9.0 (1.4)	9.1 (1.4)
	Disease severity, n (%)						
	Moderate (Mayo score 6-10)	64 (90.1)	258 (82.4)	109 (80.7)	575 (82.0)	89 (84.0)	466 (82.0)
	Severe (Mayo score >10)	7 (9.9)	55 (17.6)	26 (19.3)	126 (18.0)	17 (16.0)	102 (18.0)
	Modified Mayo score	6.8 (1.1)	7.0 (1.0)	6.8 (1.2)	6.9 (1.1)	6.9 (1.2)	6.9 (1.1)
	Extent of disease, n (%)						
	Limited to Left Side of Colon	35 (49.3)	160 (51.1)	66 (48.9)	366 (52.2)	51 (48.1)	311 (54.8)
	Extensive	36 (50.7)	153 (48.9)	69 (51.1)	335 (47.8)	55 (51.9)	257 (45.2)
	CRP, mg/mL	8.7 (14.3)	10.5 (17.1)[b]	5.5 (8.1)[c]	8.7 (12.1)[d]	5.7 (9.9)[e]	8.7 (13.5)[f]
	Fecal calprotectin, µg/g	2400.7 (3142.9)[g]	2579.6 (3765.7)[h]	3765.3 (4960.5)[i]	3132.8 (4749.1)[j]	3609.3 (5162.5)[k]	3097.3 (4567.8)[l]

*Data shown are mean (SD) unless otherwise noted. [a]Randomized participants; [b]N=308; [c]N=134; [d]N=694; [e]N=105; [f]N=562; [g]N=68; [h]N=287; [i]N=126; [j]N=623; [k]N=98; [l]N=506. **CRP**=C-reactive protein; **SD**=Standard deviation; **UC**=Ulcerative colitis.*

Summary of treatment-emergent adverse events (TEAEs) in the induction studies

- Rates of TEAEs in East Asian participants in the induction studies were generally consistent with observations in the global population

Phase 2b Induction Study (Week I-0 to I-12)

	East Asian			Global		
	PBO IV q4w (N=24)	GUS IV 200 mg q4w (N=22)	GUS IV 400 mg q4w (N=25)	PBO IV q4w (N=105)	GUS IV 200 mg q4w (N=101)	GUS IV 400 mg q4w (N=107)
Mean duration of follow-up, weeks	11.8	12.3	12.4	12.1	12.1	12.2
Pts w/any TEAEs	13 (54.2)	9 (40.9)	14 (56.0)	59 (56.2)	45 (44.6)	53 (49.5)
Pts w/serious TEAEs	1 (4.2)	0	1 (4.0)	6 (5.7)	1 (1.0)	3 (2.8)
Pts w/TEAEs leading to discontinuation	0	0	0	3 (2.9)	1 (1.0)	0
Deaths	0	0	0	0	0	0
Pts w/infections[a]	1 (4.2)	1 (4.5)	2 (8.0)	13 (12.4)	14 (13.9)	10 (9.3)
Serious infections	1 (4.2)	0	0	2 (1.9)	0	0
Most common TEAEs[b]						
Anemia	1 (4.2)	2 (9.1)	3 (12.0)	10 (9.5)	7 (6.9)	8 (7.5)
Headache	0	0	4 (16.0)	7 (6.7)	3 (3.0)	6 (5.6)

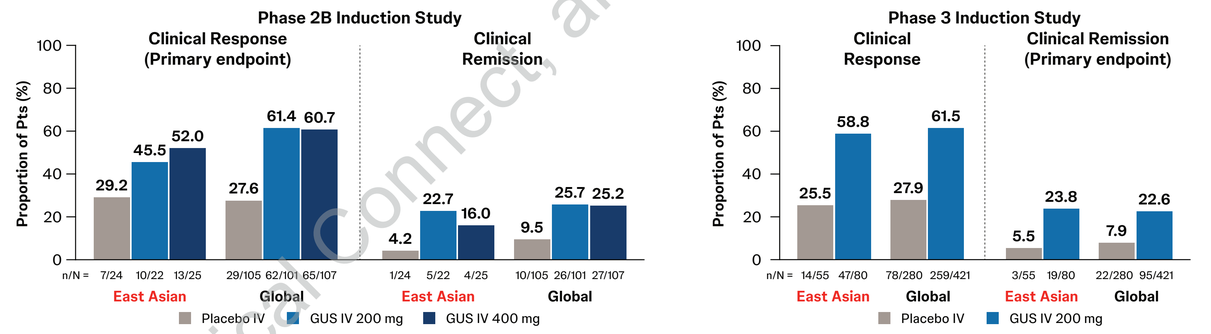
Phase 3 Induction Study (Week I-0 to I-12)

	East Asian		Global	
	PBO IV q4w (N=55)	GUS IV 200 mg q4w (N=80)	PBO IV q4w (N=280)	GUS IV 400 mg q4w (N=421)
Mean duration of follow-up, weeks	11.5	12.1	11.9	12.2
Pts w/any TEAEs	31 (56.4)	44 (55.0)	138 (49.3)	208 (49.4)
Pts w/serious TEAEs	3 (5.5)	4 (5.0)	20 (7.1)	12 (2.9)
Pts w/TEAEs leading to discontinuation	2 (3.6)	1 (1.3)	11 (3.9)	7 (1.7)
Deaths	0	1 (1.3)	2 (0.7)	1 (0.2)
Pts w/infections[c]	9 (16.4)	9 (11.3)	43 (15.4)	66 (15.7)
Serious infections	0	0	1 (0.4)	3 (0.7)
Most common TEAEs[b]				
Anemia	3 (5.5)	8 (10.0)	19 (6.8)	21 (5.0)
Ulcerative colitis	6 (10.9)	2 (2.5)	23 (8.2)	10 (2.4)

*Data are presented as n (%) unless otherwise specified. Includes only participants with modified Mayo score 5-9 at induction baseline. [a]Infections as assessed by the investigator. [b]TEAEs in ≥10% of pts. [c]Infections were defined as any adverse event which was coded to the MedDRA system organ class "Infections and infestations." **GUS**=Guselkumab; **I-0**=Induction study week 0; **I-12**=Induction study week 12; **IV**=Intravenous; **PBO**=Placebo; **Pts**=Participants; **q4w**=Every 4 weeks; **TEAE**=Treatment-emergent adverse event.*

Clinical endpoints in the GUS induction studies (week 12)

- At induction week 12, higher proportions of participants in the IV GUS cohorts achieved clinical response and clinical remission relative to placebo participants in both QUASAR induction studies
- Rates of achieving these endpoints were similar between East Asian and global participants

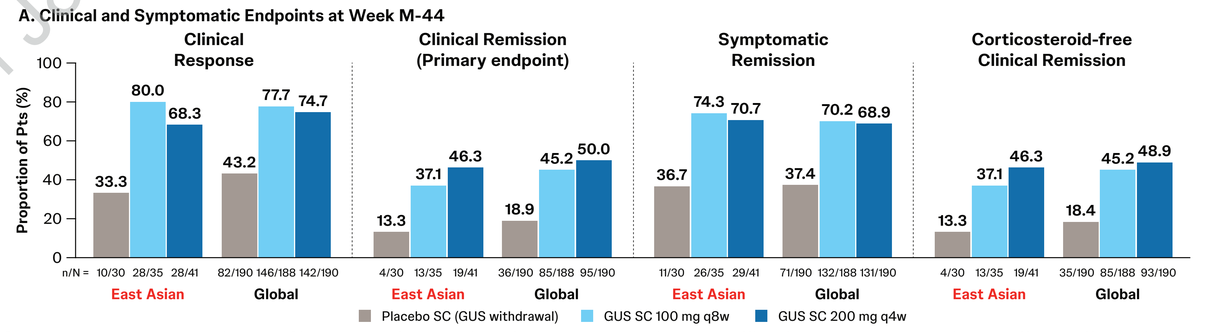


*Full analysis set. Includes only participants with modified Mayo score 5-9 at induction baseline. Clinical response: Decrease from induction baseline in the modified Mayo score by ≥30% and ≥2 points, with either a ≥1-point decrease from baseline in RB subscore or RB subscore of 0 or 1. Clinical remission: SF subscore of 0 or 1, RB subscore of 0, and endoscopy subscore of 0 or 1 with no friability present on the endoscopy, where the SF subscore has not increased from induction baseline. **GUS**=Guselkumab; **IV**=Intravenous; **Pts**=Participants **RB**=Rectal bleeding; **SF**=Stool frequency.*

Clinical endpoints in the GUS maintenance study (maintenance week 44)

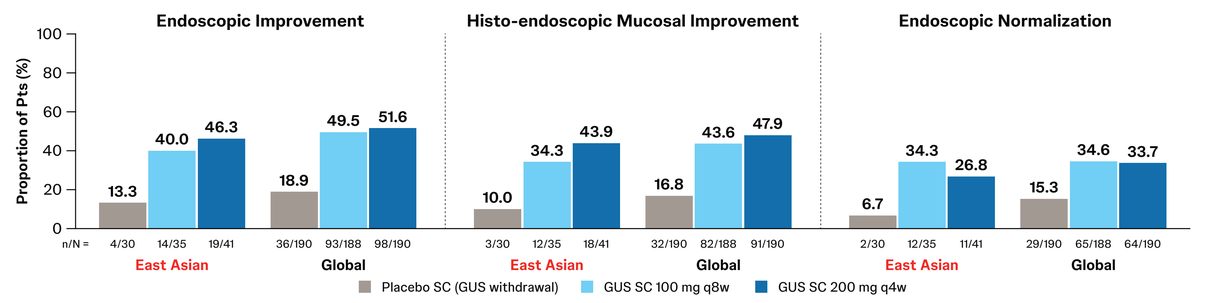
- At maintenance week 44, higher proportions of participants achieved clinical remission and other meaningful clinical, patient-reported outcome, and endoscopic endpoints, including endoscopic normalization, with both SC GUS maintenance dose regimens versus placebo
- Rates of achieving these endpoints were similar between East Asian and global participants

A. Clinical and Symptomatic Endpoints at Week M-44



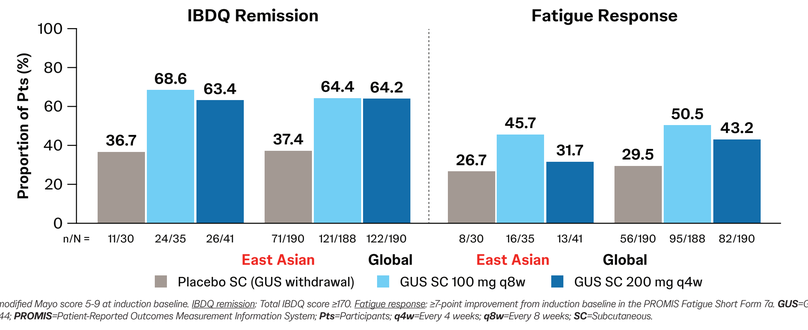
*Full analysis set. Includes only participants with modified Mayo score 5-9 at induction baseline. Clinical response: Decrease from induction baseline in the modified Mayo score by ≥30% and ≥2 points, with either a ≥1-point decrease from baseline in RB subscore or RB subscore of 0 or 1. Clinical remission: SF subscore of 0 or 1 and RB subscore of 0, where the SF subscore has not increased from induction baseline. Corticosteroid-free clinical remission: Not requiring any treatment with corticosteroids for at least 8 weeks prior to week M-44 and meeting criteria for clinical remission at week M-44. **GUS**=Guselkumab; **M-44**=Maintenance study week 44; **Pts**=Participants; **q4w**=Every 4 weeks; **q8w**=Every 8 weeks; **RB**=Rectal bleeding; **SF**=Stool frequency; **SC**=Subcutaneous.*

B. Endoscopic and Histologic Endpoints at Week M-44



*Full analysis set. Includes only participants with modified Mayo score 5-9 at induction baseline. Endoscopic improvement: Endoscopy subscore of 0 or 1 with no friability present on the endoscopy. Histo-endoscopic mucosal improvement: Achieving a combination of histologic healing (neutrophil infiltration in <5% of crypts, no crypt destruction, and no erosions, ulcerations or granulation tissue according to the Geboes grading system) and endoscopic improvement. Endoscopic normalization: Endoscopy subscore of 0. **GUS**=Guselkumab; **M-44**=Maintenance study week 44; **Pts**=Participants; **q4w**=Every 4 weeks; **q8w**=Every 8 weeks; **SC**=Subcutaneous.*

C. PRO Endpoints at Week M-44



*Full analysis set. Includes only participants with modified Mayo score 5-9 at induction baseline. IBDQ remission: Total IBDQ score ≥170. Fatigue response: ≥7-point improvement from induction baseline in the PROMIS Fatigue Short Form 7a. **GUS**=Guselkumab; **IBDQ**=Inflammatory Bowel Disease Questionnaire; **M-44**=Maintenance study week 44; **PROMIS**=Patient-Reported Outcomes Measurement Information System; **Pts**=Participants; **q4w**=Every 4 weeks; **q8w**=Every 8 weeks; **SC**=Subcutaneous.*

Summary of TEAEs in the maintenance study

- Rates of TEAEs in East Asian participants in the maintenance study were generally consistent with observations in the global population
- The most common TEAEs were COVID-19, pyrexia, and ulcerative colitis; TEAEs of ulcerative colitis were more common in the placebo group

Phase 3 Maintenance Study (Week M-0 to M-44)

	East Asian			Global		
	PBO SC (GUS w/d) (N=30)	GUS SC 100 mg q8w (N=35)	GUS SC 200 mg q4w (N=41)	PBO SC (GUS w/d) (N=192)	GUS SC 100 mg q8w (N=186)	GUS SC 200 mg q4w (N=190)
Mean duration of follow-up, weeks	32.3	42.1	38.2	34.0	40.5	39.2
Pts w/any TEAEs	23 (76.7)	20 (57.1)	36 (87.8)	131 (68.2)	120 (64.5)	133 (70.0)
Pts w/serious TEAEs	1 (3.3)	0	6 (14.6)	1 (0.5)	5 (2.7)	12 (6.3)
Pts w/TEAEs leading to discontinuation	3 (10.0)	1 (2.9)	0	13 (6.8)	7 (3.8)	5 (2.6)
Deaths	0	0	0	0	0	0
Pts w/infections[a]	9 (30.0)	8 (22.9)	13 (31.7)	63 (32.8)	59 (31.7)	59 (31.1)
Serious infections	0	0	0	0	1 (0.5)	2 (1.1)
Most common TEAEs[b]						
COVID-19	4 (13.3)	1 (2.9)	4 (9.8)	27 (14.1)	24 (12.9)	18 (9.5)
Pyrexia	3 (10.0)	4 (11.4)	6 (14.6)	5 (2.6)	7 (3.8)	9 (4.7)
Ulcerative colitis	12 (40.0)	3 (8.6)	5 (12.2)	57 (29.7)	17 (9.1)	25 (13.2)

*Data are presented as n (%) unless otherwise specified. Includes only participants with modified Mayo score 5-9 at induction baseline. Results are for the full analysis set of participants randomized at Week M-0; data are from Week M-0 through Week M-44 or, for participants who had a dose adjustment, up to the time of dose adjustment. [a]Any adverse event which was coded to the MedDRA system organ class "Infections and infestations." [b]TEAEs in ≥10% of pts. **GUS**=Guselkumab; **M-0**=Maintenance week 0; **M-44**=Maintenance week 44; **PBO**=Placebo; **Pts**=Participants; **q4w**=Every 4 weeks; **q8w**=Every 8 weeks; **SC**=Subcutaneous; **TEAE**=Treatment-emergent adverse event; **w/d**=Withdrawal.*

PRESENTED BY: B Chen at the 20th Congress of European Crohn's and Colitis Organization (ECCO), February 19–22, 2025, Berlin, Germany. **REFERENCES: 1.** Peyrin-Biroulet L, Allegretti JR, Rubin DT, et al. *Gastroenterology.* 2023;165(6):1443-1457. **2.** Allegretti JR, Peyrin-Biroulet L, Feagan BG, et al. *Gastroenterology.* 2023;164(6):S-1572. **3.** Rubin DT, Allegretti JR, Panés J, et al. *Gastroenterology.* 2024;166(5 Suppl.): S-180. **ACKNOWLEDGMENTS:** Medical writing support was provided by Erin Bekes, PhD, under the direction of the authors in accordance with Good Publication Practice guidelines (*Ann Intern Med.* 2022;175:1298-1304). Sponsored by Janssen Research & Development, LLC, a Johnson & Johnson Company. **DISCLOSURES: BC:** none. **BDY:** has received consulting fees from AbbVie Korea, BMS Pharmaceutical Korea Ltd., Celltrion, Chong Kun Dang Pharm, CJ Red BIO, Curacle, Daewoong Pharm, Dong-A ST, Ferring Korea, Imscout, IQVIA, Janssen, Janssen Korea, JEIL PHARMACEUTICAL CO., Kangstem Biotech, Korea Otsuka Pharm, Korea United Pharm, Medtronic Korea, NanoEntek, ORGANOIDSCIENCES LTD, Pfizer Korea, Samsung Bioepis, Takeda, Takeda Korea and Yuhan; speaker fees from AbbVie Korea, BMS Pharmaceutical Korea Ltd., Celltrion, Cornerstones Health, Curacle, Daewoong Pharm, Eisai Korea, Ferring Korea, IQVIA, Janssen Korea, Pfizer Korea Samsung Bioepis, and Takeda Korea; and research support from Celltrion and Pfizer Korea. **QC:** served as a steering committee adviser for Bristol Myers Squibb Company and Janssen Research Development, LLC, and has received research grants from Johnson & Johnson and Takeda. **FH:** none. **MS:** has received grants or contracts from AbbVie GK, CMIC CMO Co., Ltd., Kissei Pharmaceutical Co., Ltd., Mochida Pharmaceutical Co., Ltd., PPD-SNBL K.K., and Zeria Pharmaceutical Co., Ltd.; and payment or honoraria for lectures, presentations, speaker's bureaus, manuscript writing, or educational events from AbbVie GK, EA Pharma Co., Ltd., Gilead Sciences K.K., Janssen Pharmaceutical K.K., Kissei Pharmaceutical Co., Ltd., Mitsubishi Tanabe Pharma Corporation, Mochida Pharmaceutical Co., Ltd., Nobelpharma Co., Ltd., Takeda Pharmaceutical Co., Ltd., and Viatris Pharmaceutical Co., Ltd. **MC:** received research grants and served as a steering committee advisor for Johnson & Johnson Company, received lecture fees from Johnson & Johnson, Takeda, AbbVie and China Medical System Holding Limited. **SP, NS, BW,** and **JZ:** are employees of Johnson & Johnson and may own company stock/stock options. **TH:** reports grant support from AbbVie GK, Boston Scientific Corporation, EA pharma Co. Ltd., JIMRO Co. Ltd., Kissei Pharmaceutical Co. Ltd., Kyorin Pharmaceutical Co. Ltd., Mitsubishi Tanabe Pharma Corporation, Mochida Pharmaceutical Co. Ltd., Nippon Kayaku Co. Ltd., Pfizer Inc., Takeda Pharmaceutical Co. Ltd., and Zeria Pharmaceutical Co. Ltd.; consulting fees from AbbVie GK, Bristol Myers Squibb, EA Pharma Co. Ltd., Eli Lilly, Gilead Sciences, Janssen Pharmaceutical K.K., Mitsubishi Tanabe Pharma Corporation, and Pfizer Inc.; and lecture fees from AbbVie GK, EA Pharma Co. Ltd., Janssen Pharmaceutical K.K., JIMRO Co., Kissei Pharmaceutical Co. Ltd., Kyorin Pharmaceutical Co. Ltd., Mitsubishi Tanabe Pharma Corporation, Mochida Pharmaceutical Co., Ltd., Pfizer Inc., and Takeda Pharmaceutical Co. Ltd.