

Supplementary Material

Influence of Biological Sex on Participant Characteristics, Guselkumab Efficacy and Radiographic Progression in Active Psoriatic Arthritis: Post-Hoc Analysis of 3 Randomized Trials

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36 **Supplementary Tables****Supplementary Table S1. Sex differences in baseline characteristics among guselkumab Q8W-randomized participants with active PsA pooled across DISCOVER-1, DISCOVER-2, and COSMOS**

	Female (N=281)	Male (N=283)	p-value
Demographics			
Age, years	48.6 (12.2)	45.8 (11.9)	0.0072
White/Asian, %	93/6	96/4	0.2793 ^a
Weight, kg	79.3 (19.8)	88.6 (16.7)	<0.0001
BMI, kg/m ²	29.8 (7.2)	28.3 (4.9)	0.0042
PsA disease characteristics			
PsA disease duration, years	7.1 (7.0)	5.9 (6.1)	0.0310
CRP, mg/dL	1.4 (2.0)	1.9 (2.5) ^b	0.0164
SJC (0-68)	11.2 (7.6)	10.8 (7.3)	0.5117
TJC (0-68)	21.5 (13.4)	19.1 (12.3)	0.0254
Enthesitis, n (%)	190 (68) ^c	166 (59) ^b	0.0231
LEI (1-6) ^d	2.9 (1.6)	2.5 (1.4)	0.0102
Dactylitis, n (%)	102 (37) ^c	125 (44) ^b	0.0609
DSS (1-60) ^c	8.1 (8.5)	7.3 (9.2)	0.5387
PhGA (VAS 0-100)	67.2 (15.3)	64.6 (16.7)	0.0532
cDAPSA (0-154; HDA >27)	45.9 (20.8)	42.4 (19.1) ^b	0.0411
PASDAS (0-10; HDA ≥5.4)	6.5 (1.0) ^f	6.4 (1.1) ^g	0.0706
PASI (0-72)	7.9 (10.0) ^g	12.2 (12.4)	<0.0001
BSA (0-100%)	12.8 (17.5) ^f	20.1 (22.5)	<0.0001
IGA (0-4)	2.0 (1.0)	2.5 (0.9)	<0.0001
Patient-reported outcomes			
PtGA Arthritis + Psoriasis ([VAS 0-100])	68.8 (19.6) ^c	66.8 (19.2)	0.2159
Patient Pain (VAS 0-100)	65.0 (19.4)	60.8 (19.8)	0.0120
HAQ-DI (0-3)	1.4 (0.6)	1.1 (0.6)	<0.0001
FACIT-Fatigue (0-52)	27.6 (11.1)	31.1 (10.0)	<0.0001
SF-36 MCS (0-100)	46.7 (12.0) ^g	47.8 (10.5)	0.2350
SF-36 PCS (0-100)	31.9 (7.6) ^g	34.3 (7.3)	0.0002
Medications, n (%)			
csDMARDs	192 (68)	181 (64)	0.2729
Corticosteroids	58 (21)	43 (15)	0.0917
NSAIDs	170 (60)	171 (60)	0.9856
Prior TNFi	120 (43)	110 (39)	0.3541

Data shown are mean (SD), unless otherwise indicated.

^aComparing White, Asian and Native Hawaiian (~0.3% of total population). ^bN=282. ^cN=279. ^dAmong participants with enthesitis at baseline and available LEI score (Female N=189; Male N=166). ^eAmong participants with dactylitis at baseline and available DSS (Female N=102; Male N=125). ^fN=278. ^gN=280.

BMI: body mass index; BSA: body surface area; cDAPSA: clinical Disease Activity Index for Psoriatic Arthritis; CRP: C-reactive protein; csDMARD: conventional synthetic disease-modifying antirheumatic drug; DSS: Dactylitis Severity Score; FACIT: Functional Assessment of Chronic Illness Therapy; HAQ-DI: Health Assessment Questionnaire-Disability Index; IGA: Investigator's Global assessment; LEI: Leeds Enthesitis Index; MCS: Mental Component Score; NSAID: nonsteroidal anti-inflammatory drug; PASDAS: Psoriatic Arthritis Disease Activity Score; PASI: Psoriasis Area Severity Index; PCS: Physical Component Score; PhGA: physician global assessment; PsA:

psoriatic arthritis; PtGA: patient global assessment; Q8W: every 8 weeks; SF-36: 36-item Short Form health survey; SD: standard deviation; SJC: swollen joint count; TJC: tender joint count; TNFi: tumor necrosis factor inhibitor; VAS: visual analogue scale.

Supplementary Table S2. Sex differences in baseline characteristics among guselkumab (Q4W and Q8W)-randomized participants with active PsA in DISCOVER-2

	Female (N=222)	Male (N=271)	p-value
Demographics			
Age, years	45.5 (11.7)	45.3 (11.7)	0.8108
White/Asian, %	96/4	99/1	0.0131
Weight, kg	78.2 (18.3)	89.5 (18.9)	<0.0001
BMI, kg/m ²	29.4 (7.0)	28.5 (5.2)	0.1096
PsA characteristics			
PsA disease duration, years	5.4 (5.9)	5.3 (5.6)	0.7771
CRP, mg/dL	1.6 (1.7)	2.2 (2.7)	0.0011
SJC (0-68)	11.7 (6.2)	12.8 (8.2)	0.1179
TJC (0-68)	21.1 (12.7)	21.1 (12.8)	0.9420
Enthesitis, n (%)	151 (68)	177 (65)	0.5267
LEI (1-6) ^a	2.9 (1.6)	2.7 (1.6)	0.1890
Dactylitis, n (%)	92 (41)	140 (52)	0.0237
DSS (1-60) ^b	6.6 (6.0)	9.5 (11.2)	0.0120
PhGA (VAS 0-100)	66.8 (14.8)	65.2 (16.4)	0.2561
PASI (0-72)	7.5 (8.9)	12.5 (13.2)	<0.0001
BSA (0-100%)	13.6 (17.1) ^c	20.8 (22.7)	<0.0001
IGA (0-4)	2.1 (0.9)	2.5 (1.0)	<0.0001
cDAPSA (0-154; HDA >27)	45.9 (18.6)	46.2 (20.9)	0.8569
PASDAS (0-10; HDA ≥5.4) ^d	6.6 (1.0)	6.6 (1.2)	0.8082
PsA-modified vdH-S score (0-528)	25.5 (44.2) ^e	26.3 (40.3) ^f	0.8586
Patient-reported outcomes			
PtGA (Arthritis + Psoriasis) ([VAS 0-100])	67.7 (19.5)	67.0 (20.5)	0.7100
Patient Pain (VAS 0-100)	64.4 (18.3)	60.6 (20.7)	0.0308
HAQ-DI (0-3)	1.4 (0.6)	1.2 (0.6)	<0.0001
FACIT-Fatigue (0-52)	28.5 (9.7)	31.3 (9.7)	0.0018
SF-36 MCS (0-100)	47.6 (11.4)	48.2 (10.5)	0.5524
SF-36 PCS (0-100)	31.8 (7.2)	34.0 (7.6)	0.0015
Medications use at baseline, n (%)			
csDMARDs	159 (72)	181 (67)	0.2486
Corticosteroids	51 (23)	45 (17)	0.0757
NSAIDs	155 (70)	182 (67)	0.5273

Data shown are mean (SD), unless otherwise indicated.

^aAmong participants with enthesitis at baseline and available LEI score (Female N= 147; Male N=176). ^bAmong participants with dactylitis at baseline and available DSS (Female N=92; Male N=140). ^cN=220. ^dAmong participants with PASDAS data at baseline (Female N=218 and Male N=269). ^eN=195. ^fN=254.

BMI: body mass index; BSA: Body Surface Area; cDAPSA: clinical Disease Activity Index for PsA; CRP: C-reactive protein; csDMARD: conventional synthetic disease-modifying antirheumatic drug; DSS: Dactylitis Severity Score; FACIT: Functional Assessment of Chronic Illness Therapy; HAQ-DI: Health Assessment Questionnaire-Disability Index; IGA: Investigator's Global Assessment of psoriasis; LEI: Leeds Enthesitis Index; MCS: Mental Component Summary; PASDAS: Psoriatic Arthritis Disease Activity Score; PASI: Psoriasis Area Severity Index; PCS: Physical Component Summary; PhGA: physician global assessment; PsA: psoriatic arthritis; PtGA: patient global assessment; Q4W: every 4 weeks; Q8W: every 8 weeks; SD: standard deviation; SF-36: 36-item Short Form health survey; SJC: Swollen Joint Count; TJC: Tender Joint Count; VAS: visual analogue scale; vdH-S: van der Heijde-Sharp.

Supplementary Table S3. Proportions of female and male guselkumab Q8W-randomized participants in DISCOVER-1, DISCOVER-2 and COSMOS studies achieving clinical and PRO responses at Week 24 in unadjusted analyses

	No. (%) achievement		OR	OR 95% CI	P-value
	Female (N=281)	Male (N=283)			
ACR20	142 (50)	167 (59)	0.71	0.51-0.99	0.0434
cDAPSA LDA/REM ^a	87 (31)	112 (40)	0.68	0.48-0.97	0.0326
Enthesitis resolution ^b	80 (42)	84 (51)	0.71	0.47-1.08	0.1090
Dactylitis resolution ^c	56 (55)	69 (55)	0.99	0.58-1.67	0.9642
PASI 75 ^f	120 (71) ^d	160 (72) ^e	0.95	0.61-1.48	0.8166
PASI 90 ^f	97 (57) ^d	133 (60) ^e	0.90	0.60-1.35	0.6169
FACIT-Fatigue response ^g	149 (53) ^h	149 (53)	1.03	0.74-1.44	0.8577
HAQ-DI response ⁱ	114 (44) ^j	123 (48) ^k	0.82	0.58-1.16	0.2630

Unadjusted odds ratios, 95% CI, and nominal p-values comparing females vs males. ^aAmong participants with baseline cDAPSA >13. ^bAmong participants with enthesitis at baseline (Females N=190; Males N=166). ^cAmong participants with dactylitis at baseline (N=102; N=125). ^dN=169. ^eN=222. ^fAmong participants with baseline BSA ≥3% and IGA ≥2. ^gAmong participants with baseline FACIT-Fatigue ≤48. ^hN=279. ⁱAmong participants with baseline HAQ-DI <0.35. ^jN=262. ^kN=254. ACR20: 20% improvement per American College of Rheumatology response criteria; BSA: Body Surface Area; cDAPSA: clinical Disease Activity Index for PsA; CI: confidence interval; FACIT-Fatigue: Functional Assessment of Chronic Illness Therapy; HAQ-DI: Health Assessment Questionnaire-Disability Index; IGA: Investigator's Global Assessment of psoriasis; LDA: low disease activity; OR: odds ratio; PASI 75: ≥75% improvement in Psoriasis Area Severity Index; PASI 90: ≥90% improvement in PASI; PRO: patient reported outcome; Q8W: every 8 weeks; REM: remission.