Comparative Effectiveness of Bimekizumab and Guselkumab in Patients with Psoriatic Arthritis at 52-Weeks Assessed Using a Matching-Adjusted Indirect Comparison

Supplementary Information

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Table S1. Pre- and post-matching adjustment baseline characteristics for bimekizumab-treated patients

	vs guselkumab Q4W (DISCOVER-2, bDMARD-naïve)		vs guselkumab Q8W (DISCOVER-2, bDMARD-naïve)		vs guselkumab Q8W (COSMOS, TNFi-IR)	
Mean (SD)	**Pre-adjustment**	**Post-adjustment**	**Pre-adjustment**	**Post-adjustment**	**Pre-adjustment**	**Post-adjustment**
Age, years	48.73 (12.44)	45.90 (11.50)	48.73 (12.44)	44.90 (11.90)	50.11 (12.40)	49.00 (12.00)
BMI score	29.22 (6.77)	30.32 (7.70)	29.22 (6.77)	30.27 (8.39)	30.16 (6.46)	30.82 (7.04)
Dactylitis, %	13 (33)	14 (35)	13 (33)	14 (35)	13 (33)	12 (32)
Time since diagnosis, years	5.92 (7.30)	5.50 (7.00)	5.92 (7.30)	5.10 (6.27)	9.64 (9.88)	8.30 (8.11)
Prior DMARD use, %	71 (46)	71 (45)	71 (46)	69 (46)	52 (50)	62 (49)
Enthesitis, %	33 (47)	37 (48)	33 (47)	34 (47)	40 (49)	45 (50)
HAQDI score	0.82 (0.59)	1.20 (0.55)	0.82 (0.59)	1.30 (0.53)	0.97 (0.59)	1.30 (0.58)
Male, %	46 (50)	58 (49)	46 (50)	52 (50)	49 (50)	46 (50)
MTX use, %	59 (49)	60 (49)	59 (49)	57 (50)	45 (50)	56 (50)
BSA ≥3%, %	50 (50)	75 (43)	50 (50)	71 (45)	66 (0.48)	70 (46)
SJC (of 66 joints)	8.97 (6.01)	12.90 (9.06)	8.97 (6.01)	11.70 (8.19)	9.68 (7.53)	10.00 (7.53)
TJC (of 68 joints)	16.75 (11.69)	22.40 (14.19)	16.75 (11.69)	19.80 (12.48)	18.39 (13.57)	21.00 (14.30)
VAS pain score	53.66 (24.26)	64.06 (19.40)	53.66 (24.26)	65.05 (18.69)	58.49 (24.09)	64.08 (21.91)
Weight, kg	84.71 (20.18)	89.54 (21.41)	84.71 (20.18)	88.05 (21.89)	87.57 (19.87)	89.08 (21.55)
White (race), %	95 (21)	96 (19)	95 (21)	97 (18)	96 (20)	98 (15)

bDMARD, biologic disease-modifying anti-rheumatic drug; BMI, body mass index; BSA, body surface area; DMARD, disease-modifying anti-rheumatic drug; HAQ-DI, Health Assessment Questionnaire–Disability Index; MAIC, matching-adjusted indirect comparison; MTX, methotrexate; Q4W, every 4 weeks; Q8W, every 8 weeks; SD, standard deviation; SJC, swollen joint count; TJC, tender joint count; TNFi-IR, tumor necrosis factor inhibitor-inadequate response or intolerant; VAS, visual analog scale.

Table S2. Unadjusted and adjusted response rates for bimekizumab (BE OPTIMAL) vs guselkumab (DISCOVER 2) at week 52 (bDMARD-naïve patient subgroup)

BKZ 160 mg Q4W	ACR20	ACR50	ACR70	MDA
vs. GUS 100 mg Q4W				
GUS response rate – % (95% CI) (N=245)	70.61 (64.88, 76.34)	45.71 (39.45, 51.98)	26.12 (20.59, 31.65)	34.30 (28.33, 40.27)
BKZ unadjusted response rate - % (95% CI) (N=431)	71.23 (66.94, 75.52)	54.52 (49.81, 59.24)	39.21 (34.59, 43.83)	54.99 (50.28, 59.70)
Unadjusted OR (95% CI)	1.03 (0.73, 1.46)	1.42 (1.04, 1.95)	1.82 (1.29, 2.58)	2.34 (1.69, 3.24)
BKZ ESS	155.08	155.08	155.08	155.08
BKZ adjusted response rate - % (95% CI)	72.28 (66.64, 77.92)	57.71 (51.49, 63.93)	43.70 (37.46, 49.95)	48.76 (42.46, 55.05)
Adjusted OR (95% CI)	1.09 (0.68, 1.74)	**1.62 (1.07, 2.44)**	**2.20 (1.43, 3.38)**	**1.82 (1.20, 2.76)**
p-value	0.734	**0.021**	**<0.001**	**0.005**
vs. GUS 100 mg Q8W				
GUS response rate – % (95% CI) (N=248)	74.60 (69.16, 80.04)	48.40 (42.15, 54.65)	27.80 (22.20, 33.40)	31.00 (25.22, 36.78)
BKZ unadjusted response rate - % (95% CI) (N=431)	71.23 (66.94, 75.52)	54.52 (49.81, 59.24)	39.21 (34.59, 43.83)	54.99 (50.28, 59.70)
Unadjusted OR (95% CI)	0.84 (0.59, 1.20)	1.28 (0.93, 1.75)	1.68 (1.19, 2.35)	2.72 (1.95, 3.78)
BKZ ESS	142.04	142.04	142.04	142.04
BKZ adjusted response rate – % (95% CI)	71.69 (65.75, 77.63)	56.35 (49.81, 62.89)	44.42 (37.87, 50.97)	48.14 (41.55, 54.73)
Adjusted OR (95% CI)	0.86 (0.53, 1.40)	1.38 (0.90, 2.09)	**2.08 (1.34, 3.22)**	**2.07 (1.35, 3.17)**
p-value	0.548	0.135	**0.001**	**<0.001**

Trial populations adjusted for: age, sex, BSA≥3%, HAQ-DI, MTX, SJC, TJC.
ACR, American College of Rheumatology; ACR20/50/70, at least a 20/50/70% improvement according to the ACR response criteria; bDMARD, biologic disease modifying anti-rheumatic drug; BKZ, bimekizumab; BSA, body surface area; CI, confidence interval; ESS, effective sample size; GUS, guselkumab; HAQ-DI, Health Assessment Questionnaire Disability Index; MDA, minimal disease activity; MTX, methotrexate; OR, odds ratio; Q4W, every 4 weeks; Q8W, every 8 weeks; SJC, swollen join count; TJC, tender joint count.

Table S3. Unadjusted and adjusted response rates for bimekizumab (BE COMPLETE/BE VITAL) vs guselkumab (COSMOS) at week 52 (TNFi-IR patient subgroup)

BKZ 160 mg Q4W	ACR20	ACR50	ACR70	MDA
vs. GUS 100 mg Q8W				
GUS response rate – % (95% CI) (N=189)	57.67 (50.58, 64.76)	39.15 (32.15, 46.16)	23.81 (17.70, 29.92)	26.98 (20.61, 33.35)
BKZ unadjusted response rate - % (95% CI) (N=267)	68.16 (62.55, 73.78)	51.69 (45.66, 57.71)	35.58 (29.81, 41.35)	47.19 (41.18, 53.21)
Unadjusted OR (95% CI)	1.57 (1.07, 2.32)	1.66 (1.14, 2.43)	1.77 (1.16, 2.69)	2.42 (1.62, 3.62)
BKZ ESS	180.84	180.84	180.84	180.84
BKZ adjusted response rate - % (95% CI)	70.66 (64.56, 76.76)	50.06 (43.36, 56.76)	34.13 (27.78, 40.48)	41.94 (35.33, 48.55)
Adjusted OR (95% CI)	**1.77 (1.15, 2.72)**	**1.56 (1.03, 2.36)**	**1.66 (1.05, 2.61)**	**1.95 (1.27, 3.02)**
p-value	**0.010**	**0.037**	**0.028**	**0.003**

Trial populations adjusted for: age, sex, BSA≥3%, HAQ-DI, MTX, SJC, TJC.
ACR, American College of Rheumatology; ACR20/50/70, at least a 20/50/70% improvement according to the ACR response criteria; BKZ, bimekizumab; BSA, body surface area; CI, confidence interval; ESS, effective sample size; GUS, guselkumab; HAQ-DI, Health Assessment Questionnaire Disability Index; MDA, minimal disease activity; MTX, methotrexate; OR, odds ratio; Q4W, every 4 weeks; Q8W, every 8 weeks; SJC, swollen join count; TJC, tender joint count, TNFi-IR, tumor necrosis factor inhibitor-inadequate response or intolerant.