Bimekizumab efficacy and safety through 2 years in patients with hidradenitis suppurativa: Results from the phase 3 BE HEARD I&II trials and open-label extension BE HEARD EXT

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Synopsis

- Hidradenitis suppurativa (HS) is a chronic and debilitating inflammatory skin disease.[1]
- Interleukin (IL)-17F and IL-17A are highly expressed in HS lesional skin and play a role in disease immunopathogenesis.[2–4]
- Bimekizumab (BKZ), a humanized IgG1 monoclonal antibody that selectively inhibits IL-17F in addition to IL-17A, has previously demonstrated clinically meaningful improvements in patients with moderate to severe HS.[5,6]

Objective

To report efficacy and safety data of BKZ in patients with HS over 2 years from the pooled phase 3 BE HEARD I&II (BHI&II) trials and their open-label extension (OLE), BE HEARD EXT (BHEXT).

Methods

- In BHI&II, patients with moderate to severe HS were randomized 2:2:2:1 (initial 16-week [wk]/maintenance 32-wk) to BKZ 320 mg every 2 wks (Q2W)/Q2W, Q2W/Q4W, Q4W/Q4W, or placebo/BKZQ2W. Wk48 completers could enroll in BHEXT and receive open-label BKZQ2W or Q4W based on ≥90% HS Clinical Response (HiSCR90; averaged from Wk36/40/44).[6,7]
- We report HiSCR50/75/90/100 rates, percentage change from baseline (%CfB, mean±SD) in International HS Severity Score System (IHS4), draining tunnel (DT) count, and Dermatology Life Quality Index (DLQI) 0/1 achievement over 2 years.
- Safety outcomes are reported for patients who received ≥1 BKZ dose across BHI&II/BHEXT.
- Data are reported for patients randomized to BKZ in BHI&II and entered BHEXT (BKZ Total).
- Data are reported as observed case (OC).

Results

- Of 1,014 total patients initially enrolled in BHI&II, 556 patients randomized at baseline to BKZ completed Wk48 and entered BHEXT, 446 patients completed Wk96 (**Figure 1**).
- The population was consistent with moderate to severe HS patient populations seen in clinical trials (**Table 1**).[8–10]
- At Wk48, HiSCR50/75/90/100 was achieved by 79.9/64.0/42.3/30.2% of patients; responses were maintained to Wk96: 85.4/77.1/57.6/44.2% (**Figure 2**).
- Substantial reductions in IHS4 score at Wk48 (−70.3 ± 39.6 %CfB) were maintained to Wk96 with a −79.8 ± 28.1 %CfB (**Figure 3A**).
- Clinically meaningful reductions in total DT count at Wk48 (−57.5 ± 72.9%CfB) were further reduced to Wk96 with a −73.7 ± 45.7%CfB (**Figure 3B**).
- DLQI total score 0/1 response rates at Wk48 (27.4%) were maintained to Wk96 at 33.9% (**Figure 3C**).
- Safety data were consistent with 1 year data from BHI&II (**Table 2**).[6]

Conclusions

Efficacy and health-related quality of life outcomes were maintained through 2 years of treatment.

No new safety signals were observed and the safety profile over 2 years was consistent with findings from BHI&II and studies of bimekizumab in other indications.[11–13]

These data highlight the durability and consistency of bimekizumab treatment in patients with moderate to severe HS.

Summary

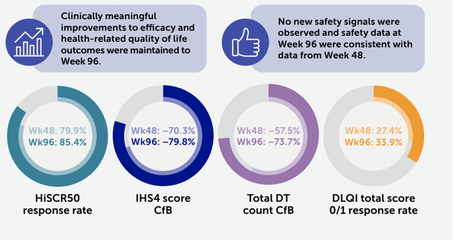
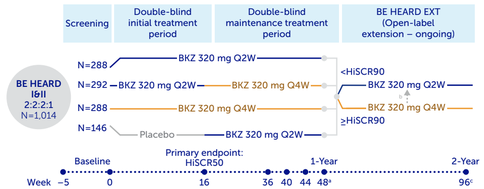


Figure 1 Study design



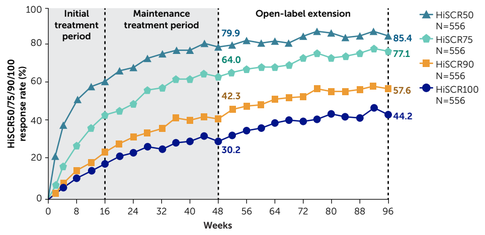
[a] Patients who completed Wk48 of BHI&II could enroll in BHEXT and receive open-label BKZ Q2W or BKZ Q4W based on HiSCR90 responder status using the average lesion counts from Wk36, Wk40 and Wk44 of BHI&II; **[b]** In the first 48Wks of the ongoing BHEXT, dose adjustment from BKZ Q4W to BKZ Q2W was permitted based on prespecified criteria for reduction in improvement from baseline in AN count; **[c]** Cumulative 2-year data (48Wks in BHI&II and 48Wks in BHEXT).

Table 1 Baseline characteristics

	BKZ Total[a] N=556
Age, years, mean ± SD	36.3 ± 12.2
Sex, female, n (%)	299 (53.8)
Racial group, white, n (%)	448 (80.6)
BMI, kg/m², mean ± SD	32.5 ± 7.8
Duration of disease, years, mean ± SD	7.4 ± 7.1
AN count, mean ± SD	16.9 ± 18.5
DT count, mean ± SD	3.8 ± 4.3
Hurley Stage, n (%)	
II	303 (54.5)
III	253 (45.5)
DLQI total score, mean ± SD	11.0 ± 6.8
Prior biologic use,[b] n (%)	112 (20.1)
Baseline antibiotic use, n (%)	54 (9.7)

OLE set: N=657; included only patients who entered BHEXT at Wk48. **[a]** BKZ Total comprised of patients randomized to BKZ from baseline in BHI&II who entered BHEXT; **[b]** Patients received prior biologic therapy for any indication.

Figure 2 HiSCR rates over time in BKZ Total group (OC)



OLE set: N=657; included only patients who entered BHEXT at Wk48. Data for patients in BKZ Total are presented. BKZ Total comprised of patients randomized to BKZ from baseline in BHI&II who entered BHEXT (N=556). Wk48 n/N: HiSCR50, 444/556; HiSCR75, 356/556; HiSCR90, 235/556; HiSCR100, 168/556; Wk96 n/N: HiSCR50, 381/446; HiSCR75, 344/446; HiSCR90, 257/446; HiSCR100, 197/446. OC, n/N: denominator represents number of patients with a non-missing lesion count assessment in the given week, and percentages are calculated accordingly (i.e. where data recorded after an intercurrent event are included as recorded).

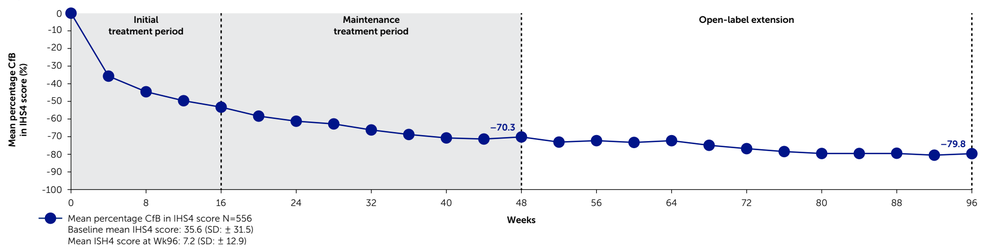
Table 2 Overview of safety outcomes over 2 years[a]

EAIR/100 PY (95% CI)	Patients with ≥1 dose BKZ N=995	
	Over 1 year (Weeks 0–48)[b] Total exposure: 8.1 per 100 PY	**Over 2 years (Weeks 0–96) Total exposure: 17.7 per 100 PY**
Any TEAE	287.0 (267.9, 307.1)	248.9 (233.0, 265.5)
Serious TEAEs	8.1 (6.3, 10.4)	7.2 (6.0, 8.6)
Severe TEAEs	10.4 (8.2, 12.9)	7.7 (6.4, 9.2)
TEAEs leading to discontinuation	8.5 (6.6, 10.8)	6.3 (5.1, 7.6)
All deaths[c]	0.1 (0.0, 0.7)	0.1 (0.0, 0.4)
Most common TEAEs		
Hidradenitis	25.7 (22.1, 29.6)	20.5 (18.2, 23.0)
Coronavirus infection	14.0 (11.4, 16.9)	15.3 (13.4, 17.4)
Oral candidiasis[d]	14.7 (12.1, 17.7)	10.5 (8.9, 12.2)
Serious infections	2.0 (1.1, 3.2)	1.9 (1.3, 2.6)
Fungal infections	34.2 (30.0, 38.9)	24.4 (21.8, 27.2)
Any malignancies	0.5 (0.1, 1.3)	0.7 (0.4, 1.3)
Any hepatic events	5.6 (4.1, 7.5)	4.7 (3.7, 5.8)
Adjudicated suicidal ideation and behavior[e]	0.6 (0.2, 1.4)	0.7 (0.4, 1.3)
Definite or probable adjudicated IBD		
With history of IBD (n=8)	0.0 (N/A)	14.2 (1.7, 51.2)
No history of IBD (n=987)	0.9 (0.4, 1.8)	0.5 (0.2, 0.9)

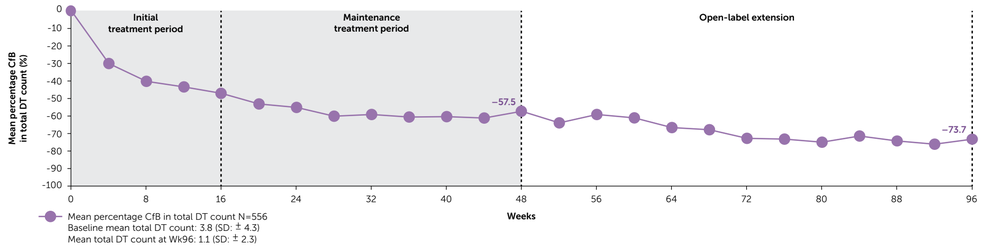
TEAEs were coded using MedDRA v19.0 and reported using EAIRs per 100 PY. **[a]** TEAEs for all patients who received ≥1 BKZ dose over 1 (Weeks 0–48) and 2 years (Weeks 0–96), including patients who switched at Week 16 from placebo to BKZ 320 mg Q2W (n=134; for these patients, events are reported after the switch to BKZ and for 80 weeks of BKZ treatment); **[b]** Data originally presented at EADV 2023: Bechara FG et al. P0087; **[c]** Across 2 years, one patient with significant cardiovascular history died due to congestive heart failure. One patient died due to possible central nervous system infection in the context of deteriorating HS; **[d]** The majority of oral candidiasis cases were mild to moderate and were resolved/recovering with standard anti-fungal therapy; **[e]** There were no events of completed suicide.

Figure 3 Percentage change from baseline in key efficacy outcomes

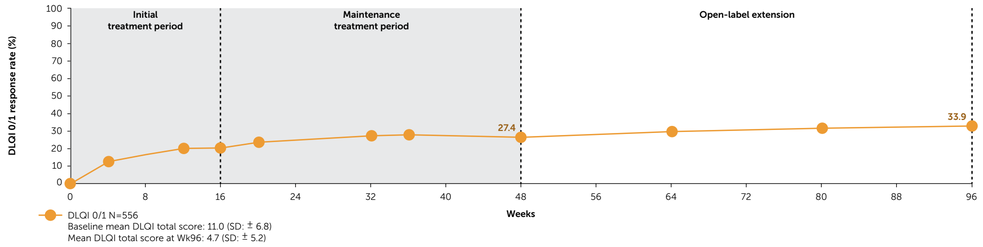
A) IHS4 score over time[a]



B) Total DT count over time[b]



C) DLQI total score 0/1 response rates over time[c]



OLE set: N=657; included only patients who entered BHEXT at Wk48. Data for patients in BKZ Total are presented. BKZ Total comprised patients randomized to BKZ from baseline in BHI&II who entered BHEXT. OC, n/Nsub: Nsub represents the number of participants with non-missing data at the given week, and percentages are calculated accordingly (i.e. where data recorded after an intercurrent event are included as recorded). **[a]** Wk48 n/N: 556/556, Wk96 n/N: 446/556; **[b]** Wk48 n/N: 425/556, Wk96 n/N: 350/556; **[c]** Wk48 n/N: 151/551, Wk96 n/N: 149/439.

AN: abscess and inflammatory nodule; **BHI&II:** BE HEARD I&II; BHEXT: BE HEARD EXT; **BKZ:** bimekizumab; **BMI:** body mass index; **CfB:** change from baseline; **CI:** confidence interval; **DLQI:** Dermatology Life Quality Index; **DT:** draining tunnel; **EAIR:** exposure-adjusted incidence rate; **HiSCR:** Hidradenitis Suppurativa Clinical Response; **HiSCR50/75/90/100:** ≥50/75/90/100% reduction from baseline in the total abscess and inflammatory nodule count with no increase from baseline in abscess or draining tunnel count; **HS:** hidradenitis suppurativa; **IBD:** inflammatory bowel disease; **Ig:** immunoglobulin; **IHS4:** International HS Severity Score System; **IL:** interleukin; **N/A:** not applicable; **OC:** observed case; **OLE:** open-label extension; **PY:** patient-years; **QXW:** every X weeks; **SD:** standard deviation; **TEAE:** treatment-emergent adverse event; **Wk:** Week.

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