EULAR Recommendations for the Management of Psoriatic Arthritis With Pharmacological Therapies: 2023 Update

For proactive use by medical affairs personnel

Inspired by **patients.**
Driven by **science.**

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BIMZELX® (bimekizumab-bkzx) is indicated for the treatment of moderate to severe plaque psoriasis in adult patients who are candidates for systemic therapy or phototherapy. The recommended dosage of BIMZELX is 320 mg (given as 2 subcutaneous injections of 160 mg each) at Weeks 0, 4, 8, 12, and 16, then every 8 weeks thereafter. For patients weighing ≥120 kg, consider a dosage of 320 mg every 4 weeks after Week 16.

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Supporting Publication

Gossec, et al. (**2024**)
EULAR Recommendations for the Management of Psoriatic Arthritis With Pharmacological Therapies: 2023 Update

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New Therapeutics Have Been Approved, Necessitating an Update of EULAR Recommendations

- Since the 2019 EULAR recommendations for pharmacological management of PsA, new treatment options have been approved for the treatment of patients with PsA. Therefore, an update of the EULAR recommendations was needed
- The 2023 update considered new non-topical, pharmacological agents approved for the treatment of patients with PsA. This update specifically focused on musculoskeletal manifestations, while also addressing the spectrum of PsA, including how skin psoriasis, extra-musculoskeletal manifestations, and comorbidities should influence treatment choices

Disease-modifying treatment options for PsA as of December 2023

Type of DMARD	Target	Name of Drug	
csDMARD		➢ Methotrexate ➢ Leflunomide	➢ Sulfasalazine
bDMARD	TNF	➢ Adalimumab ➢ Certolizumab ➢ Etanercept	➢ Infliximab ➢ Golimumab
	IL-12/23	➢ Ustekinumab	
	IL-17A	➢ Ixekizumab	➢ Secukinumab
	IL-17A/F	➢ Bimekizumab	
	IL-23-p19	➢ Guselkumab	➢ Risankizumab
	CTLA-4	➢ Abatacept	
tsDMARD	PDE4	➢ Apremilast	
	JAK	➢ Tofacitinib	➢ Upadacitinib

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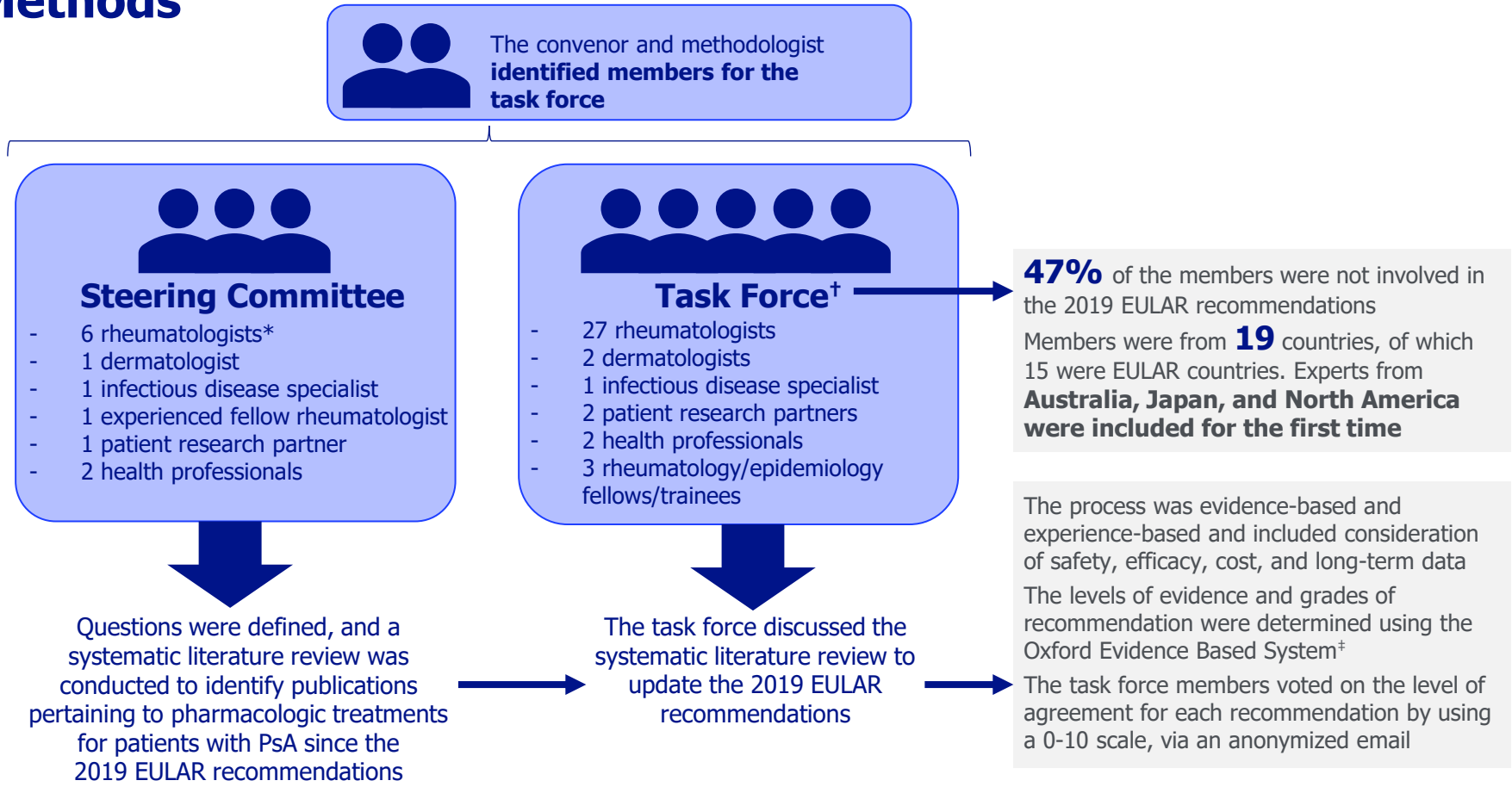
Methods



*Included the convenor and methodologist. †The task force included members of the steering committee. ‡The limit for acceptance of individual recommendations was set at ≥75% majority among the task force for the first voting round; then (after discussions and potential reformulations), at ≥67% majority; and finally, if required, the last round of votes was accepted with >50% acceptance or else a proposal was rejected.

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Overarching Principles: 2023 Update

- Overarching principles set the stage for EULAR recommendations—to help delineate highly obvious and relevant clinical observations and provide context for the recommendations that appear in the following slides

	Overarching principle*	Changes
A	Psoriatic arthritis is a heterogeneous and potentially severe disease, which may require multidisciplinary treatment	Unchanged
B	Treatment of psoriatic arthritis patients should aim at the best care and must be based on a shared decision between the patient and the rheumatologist, considering efficacy, safety, **patient preferences** and costs	Reformulated
C	Rheumatologists are the specialists who should primarily care for the musculoskeletal manifestations of patients with psoriatic arthritis; in the presence of **clinically relevant** skin involvement, a rheumatologist and a dermatologist should collaborate in diagnosis and management	Reformulated
D	The primary goal of treating patients with psoriatic arthritis is to maximize health-related quality of life, through control of symptoms, prevention of structural damage, normalization of function and social participation; abrogation of inflammation is an important component to achieve these goals	Unchanged
E	In managing patients with psoriatic arthritis, consideration should be given to each musculoskeletal manifestation and treatment decisions made accordingly	Unchanged
F	When managing patients with psoriatic arthritis, non-musculoskeletal manifestations (particularly skin, eye and gastrointestinal tract) should be taken into account; comorbidities such **as obesity**, metabolic syndrome, cardiovascular disease or depression should also be considered	Reformulated
G	**The choice of treatment should take account of safety considerations regarding individual modes of action to optimize the benefit–risk profile**	New

The level of agreement was ≥9.7 for all overarching principles. The level of agreement was recorded on a scale ranging from 0 (no agreement) to 10 (full agreement).
*Words highlighted in blue were added or modified from the 2019 overarching principles.

Link to the table with level of agreement

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Recommendations: 2023 Update (1/2)

	Recommendations*	Changes
1	Treatment should be aimed at reaching the target of remission or, alternatively, minimal/low disease activity, by regular monitoring and appropriate adjustment of therapy	Unchanged
2	Non-steroidal anti-inflammatory drugs may be used to relieve musculoskeletal signs and symptoms; local injections of glucocorticoids may be considered as adjunctive therapy	Previous recommendations 2 and 3 were merged and modified. "Systemic glucocorticoids may be used with caution at the lowest effective dose" was removed from the recommendation
3	In patients with polyarthritis, or those with monoarthritis/oligoarthritis and poor prognostic factors (e.g., structural damage, elevated acute phase reactants, dactylitis, or nail involvement), a csDMARD should be initiated rapidly, with methotrexate preferred in those with clinically relevant skin involvement	Previous recommendations 4 and 5 were merged for clarity
4	In patients with peripheral arthritis and an inadequate response to at least one csDMARD, therapy with a bDMARD should be commenced	Previous recommendation 6 was separated into 2 recommendations. Given the worldwide cautionary statement issued from the FDA and EMA based on the increased risk of CVDs and malignancies observed in older patients with RA treated with tofacitinib, task force members updated the recommendation for the use of a JAKi emphasizing usage with caution
5	In patients with peripheral arthritis and an inadequate response to at least one bDMARD, or when a bDMARD is not appropriate, a JAKi may be considered, taking safety considerations into account	

Link to the table with level of evidence, grade of recommendation, and level of agreement

The level of agreement was ≥9.1 for all recommendations. The level of agreement was recorded on a scale ranging from 0 (no agreement) to 10 (full agreement). *Words highlighted in blue were added or modified from the 2019 overarching principles.

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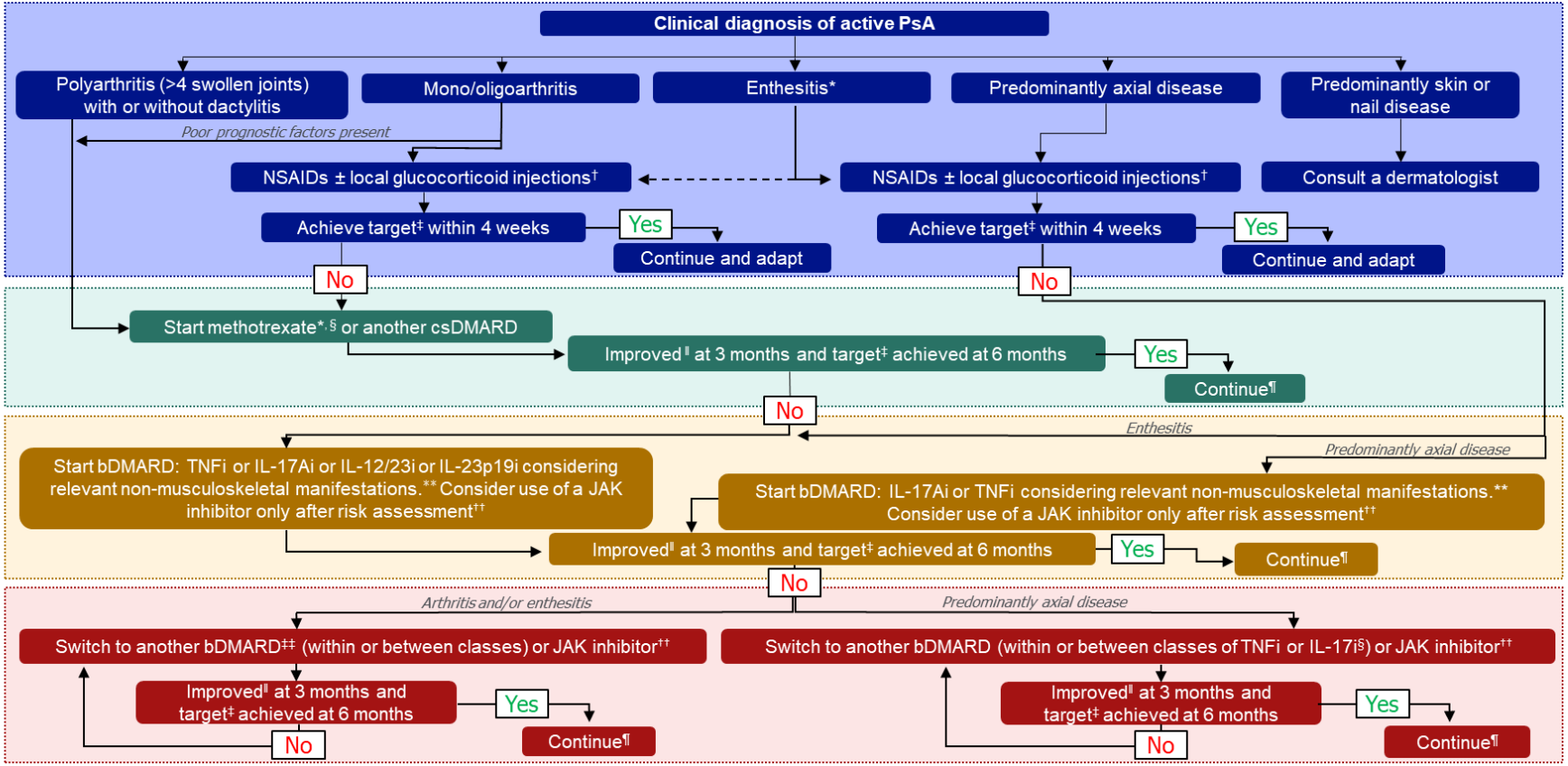
Recommendations: 2023 Update (2/2)

	Recommendations*	Changes
6	In patients with mild disease† and an inadequate response to at least one csDMARD, in whom neither a bDMARD nor a JAKi is appropriate, a PDE4 inhibitor may be considered	Unchanged
7	In patients with unequivocal enthesitis and an insufficient response to NSAIDs or local glucocorticoid injections, therapy with a bDMARD should be considered	Unchanged
8	In patients with clinically relevant axial disease with an insufficient response to NSAIDs, therapy with an IL-17Ai, a TNFi, **an IL-17A/Fi,** or a JAKi should be considered	This recommendation was updated to emphasize the choice of drugs rather than a combination of the drugs. In addition, the list of drugs was updated, and the order of the drugs listed reflect the order in which each treatment should be considered
9	**The choice of the mode of action should reflect non-musculoskeletal manifestations related to psoriatic arthritis; with clinically relevant skin involvement, preference should be given to an IL-17A or IL-17A/F or IL-23 or IL-12/23 inhibitor; with uveitis to an anti-TNF monoclonal antibody; and with IBD to an anti-TNF monoclonal antibody or an IL-23i or IL-12/23i or a JAKi**	New
10	In patients with an inadequate response or intolerance to a bDMARD or a JAKi, switching to another bDMARD or **JAKi** should be considered, including one switch within a class	This recommendation was updated to specifically indicate JAKi instead of tsDMARD
11	In patients in sustained remission, tapering of DMARDs may be considered	Reformulated

Link to the table with level of evidence, grade of recommendation, and level of agreement

The level of agreement was ≥8.7 for all recommendations. The level of agreement was recorded on a scale ranging from 0 (no agreement) to 10 (full agreement).
*Words highlighted in blue were added or modified from the 2019 overarching principles. †Mild disease is defined as oligoarticular or entheseal disease without poor prognostic factors and limited skin involvement.

2023 EULAR Recommendations Algorithm for the Management of PsA



*Some studies suggest that enthesitis may respond to methotrexate, but the level of evidence is low. †No glucocorticoids for axial disease. ‡The target is remission or low disease activity (especially with long-standing disease) in accordance with the target-to-treat recommendations. §Preferred in the presence of relevant skin involvement; however, in case of concomitant inflammatory bowel disease or uveitis, a TNF monoclonal antibody or (for IBD) IL-23i or 12/23i or JAKi is recommended. ‖Improvement means at least 50% reduction in disease activity. ¶Consider tapering in sustained remission. **Arthritis/enthesitis: TNFi or IL-17i or IL-12/23i or IL-23p19i; Skin: IL-17i or IL-12/23i or IL-23p19i; Uveitis: anti-TNF monoclonal antibody; IBD: anti-TNF monoclonal antibody or IL-12/23i or IL-23p19i or JAKi; Consider using PDE4i in mild disease if bDMARD and JAKi is inappropriate. ††For JAK inhibitors, caution is needed for patients aged 65 years or above, current, or past long-time smokers, with a history of atherosclerotic cardiovascular disease or other cardiovascular risk factors or with other malignancy risk factors; with known risk factors for venous thromboembolism. ‡‡Including abatacept.

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Research Agenda Indicating Priorities for Future Research in PsA (1/2)

Theme	Question	
Responsibility	➢ Role of the rheumatologist vs other specialists in the management of PsA	
Pathogenesis	➢ Pathogenesis of different tissue involvements in PsA ➢ Pathogenesis of axial disease ➢ Microbiome relationship to disease onset and progression ➢ Prediction markers of response on synovial histopathology	➢ Identification of new therapeutic targets ➢ Understanding the biopathology of treatment-refractory PsA ➢ Genetics of PsA
Very Early PsA	➢ Biomarkers for pre-PsA ➢ Defining screening strategies for PsA among patients with psoriasis: is screening needed, and if so, in which populations, how and when? ➢ Criteria for early diagnosis of PsA and role of imaging	➢ Prevention of progression from psoriasis to PsA: pre-PsA therapy/interception (efficacy of DMARDs in preventing progression from PSO to PsA) ➢ Window of opportunity studies
Drug ordering/response prediction and biomarkers	➢ Research on the effect of sex on treatment choices, treatment efficacy and treatment maintenance ➢ Incorporating ultrasonography in decision-making	➢ Biomarkers for prediction of disease and response ➢ Prediction of response with genetics and polygenetics
Prognosis	➢ Prognostic factors of progressive disease, structural damage and unfavorable functional outcomes ➢ Predicting response to treatment (predicting response to NSAIDs, to csDMARDs, to the different bDMARDs, to tsDMARDs) ➢ Prognosis of early-onset (juvenile) PsA	
First DMARD choices	➢ Biosimilars vs methotrexate as first choice—strategy trials ➢ Comparing direct and indirect costs, efficacy, side effects in employed, early, severe, bio-naïve PsA patient groups treated with methotrexate or biosimilars. Is there any advantage of using methotrexate over biosimilars in this group?	

Research Agenda Indicating Priorities for Future Research in PsA (2/2)

Theme	Question	
Outcomes in PsA	➢ Development/validation of composite scores of disease activity in PsA ➢ Consensus on core outcomes in PsA trials ➢ Coprimary outcomes for skin and joints	➢ Efficacy of apremilast on structural changes ➢ Drug-free remission as an outcome in PsA
Treatments	➢ Efficacy of csDMARDs for dactylitis ➢ Assessing combinations of csDMARDs with biologics compared with biologic monotherapy ➢ Associations of bDMARDs	
Contextual factors in PsA	➢ Sex and gender ➢ Age	
Safety	➢ Differential JAKi safety in PsA and across drugs ➢ Tyrosine-kinase inhibition safety in PsA	➢ Long-term safety trials in PsA
Axial PSA	➢ Pathogenesis of axial PsA vs axSpA ➢ Criteria for differentiation and overlap between axSpA and PsA	➢ JAKis in axial PsA ➢ Assessment of spinal disease: defining the similarities and differences with axSpA
Comorbidities	➢ Impact of comorbidities on drug choice ➢ Effect of metabolic intervention on disease activity ➢ Effect of different DMARDs on cardiovascular risk ➢ Influence of non-pharmacological interventions on multimorbidity ➢ Entheseal PsA: overlap with widespread pain syndrome and role of imaging in the diagnosis	➢ Treatment of pain which does not respond to usual therapies ➢ Fatigue in PsA ➢ Unraveling complexities of difficult-to-manage PsA
Switches	➢ Repeat switching within a DMARD class ➢ Switching and cycling between drugs	

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Strengths and Limitations of the Study

Strengths

- EULAR standardized the voting procedure to avoid minor modification and rewording
- Since 2019, additional therapeutics were approved, and longer efficacy and safety data were available to refine the 2019 recommendations

Limitations

- The 2023 EULAR recommendations only considered treatments for patients with PsA that were approved during the systematic literature review. Therefore, the recommendations do not consider therapeutics that were approved for psoriasis only (e.g., brodalumab) or therapeutics that were in development (e.g., TYK2i, izokibep)
- The task force recognized that cost is an important factor to consider when deciding on the treatment for patients with PsA. The task force noted that a few originators (e.g., tofacitinib) will soon become generic, which will allow a wider application, especially in less-affluent countries

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Laure Gossec, Andreas Kerschbaumer, Ricardo J O Ferreira, Daniel Aletaha, Xenofon Baraliakos, Heidi Bertheussen, Wolf-Henning Boehncke, Bente Appel Esbensen, Iain B McInnes, Dennis McGonagle, Kevin L Winthrop, Andra Balanescu, Peter V Balint, Gerd R Burmester, Juan D Cañete, Pascal Claudepierre, Lihi Eder, Merete Lund Hetland, Annamaria Iagnocco, Lars Erik Kristensen, Rik Lories, Rubén Queiro, Daniele Mauro, Helena Marzo-Ortega, Philip J Mease, Peter Nash, Wendy Wagenaar, Laura Savage, Georg Schett, Stephanie J W Shoop-Worrall, Yoshiya Tanaka, Filip E Van den Bosch, Annette van der Helm-van Mil, Alen Zabotti, Désirée van der Heijde, Josef S Smolen

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LEK: Consultancies for **UCB Pharma**
RQ: Consultancy and/or speaker's honoraria from and/or participated in clinical trials and/or research projects sponsored by **UCB Pharma**
DM: Honoraria from **UCB Pharma**
HM-O: Grant support from **UCB Pharma**; honoraria and/or speaker fees from **UCB Pharma**
PJM: Grant support from **UCB Pharma**; consulting fees and honoraria from **UCB Pharma**
PN: Consulting fees and honoraria from **UCB Pharma**; participation in boards for **UCB Pharma**
LS: Consulting fees from **UCB Pharma**; honoraria fees from **UCB Pharma**; support to attending meetings for **UCB Pharma**; participation in boards for **UCB Pharma**
FEVdB: Consultancy honoraria from **UCB Pharma**
AZ: Speakers bureau for **UCB Pharma**; paid instructor for **UCB Pharma**
DvdH: Consulting fees **UCB Pharma**

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Bimekizumab Data Informing the 2023 Update of EULAR Recommendations

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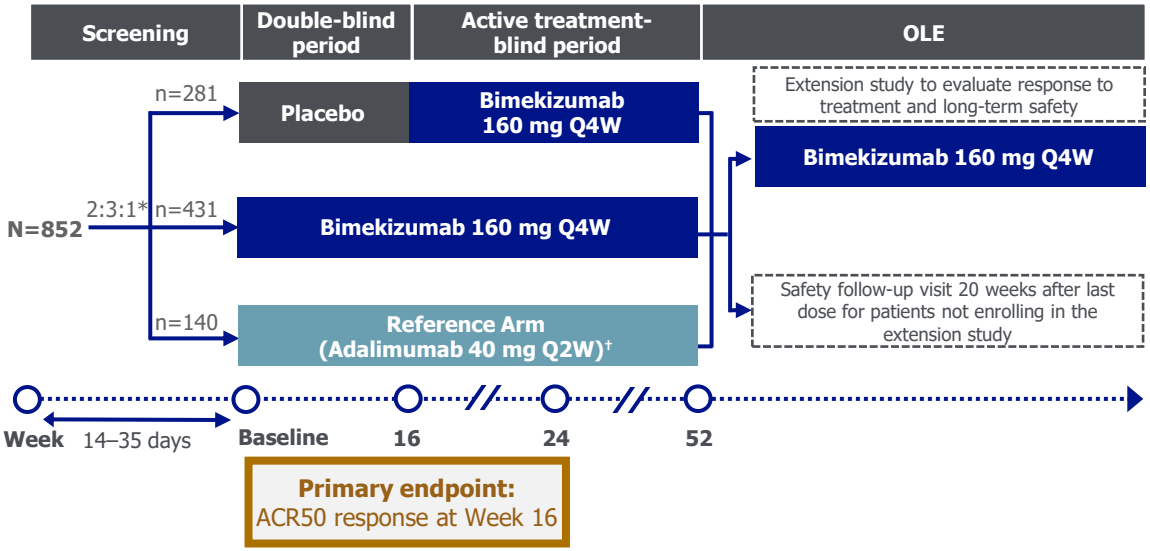
BE OPTIMAL Study Design

Key inclusion criteria[1]
- ≥18 years of age with adult-onset PsA fulfilling CASPAR criteria for ≥6 months before screening
- TJC of ≥3 of 68 joints and SJC of ≥3 of 66 joints
- ≥1 active psoriatic lesion and/or a documented history of PSO

Key exclusion criteria[1,2]
- Current or prior exposure to any biologics for treatment of PsA or PSO
- Active symptomatic IBD at baseline or screening (prior history was not an exclusion criterion)

Patients were allowed concomitant NSAIDs, analgesics, oral corticosteroids, or conventional synthetic DMARDs at stable doses[1]

BE OPTIMAL (bDMARD-naïve patients)[1,2]



Patients treated with BKZ were eligible to receive rescue therapy from Week 16 at the discretion of the investigator, while continuing to receive BKZ.[1] *Patients were stratified by bone erosion number at baseline (0 or ≥1) and region (North America, western Europe, eastern Europe, or Asia).[1] The BE OPTIMAL study was not powered for statistical comparisons of adalimumab to bimekizumab or adalimumab to placebo.[1] †The adalimumab 40-mg Q2W treatment arm served as an active reference.[1]

1. McInnes IB, et al. *Lancet.* 2023;401(10370):25-37. 2. McInnes IB, et al. Supplementary appendix. *Lancet.* 2023;401(10370):25-37.

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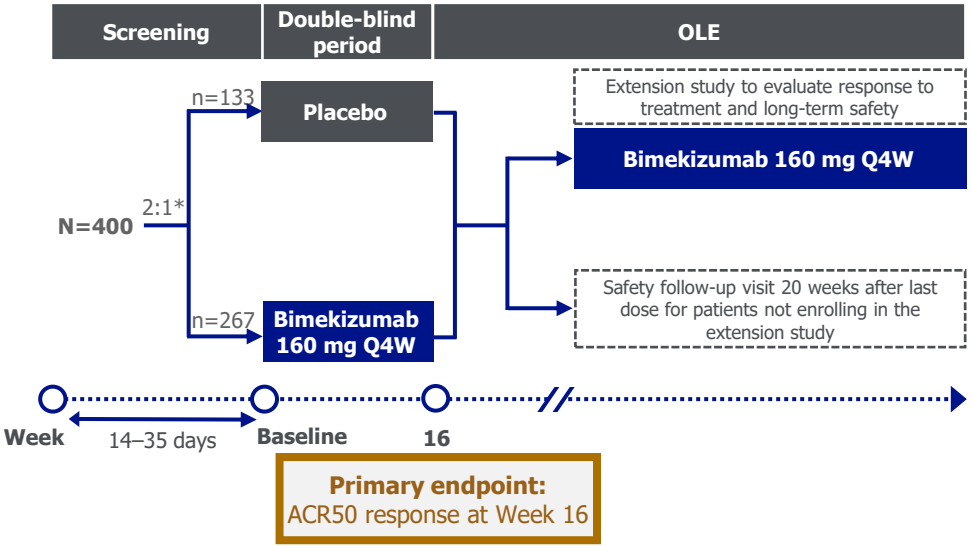
BE COMPLETE Study Design

Key inclusion criteria[1]
- ≥18 years of age with adult-onset PsA fulfilling CASPAR criteria for ≥6 months before screening
- TJC of ≥3 of 68 joints and SJC of ≥3 of 66 joints
- ≥1 active psoriatic lesion and/or a documented history of PSO
- Inadequate response or intolerance to 1 or 2 TNFis for either PsA or PSO

Key exclusion criteria[1,2]
- Current or prior exposure to any biologics other than TNFis for treatment of PsA or PSO
- Active symptomatic IBD at baseline or screening (prior history was not an exclusion criterion)

Patients were allowed concomitant NSAIDs, analgesics, oral corticosteroids, or conventional synthetic DMARDs at stable doses[1]

BE COMPLETE (TNFi-IR patients)[1,2]



BKZ-treated patients were eligible to receive rescue therapy from Week 16 at the discretion of the investigator, while continuing to receive BKZ.[2] *Patients were stratified by previous exposure to TNFis (inadequate response to one or two TNFis or intolerance to TNFis) and region (North America, western Europe, eastern Europe, or Asia).[1]

1. Merola JF, et al. *Lancet.* 2023;401(10370):38-48. 2. Merola JF, et al. Supplementary appendix. *Lancet.* 2023;401(10370):38-48.

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Statistical Testing Hierarchy

BE OPTIMAL (bDMARD-naïve patients)[1]

Bimekizumab 160 mg Q4W α=0.05	Outcome	Test
H_1	Primary	ACR50 response at Week 16 superior to placebo
H_2	Secondary	Change from baseline in HAQ-DI score at Week 16 superior to placebo
H_3	Secondary	PASI90 response at Week 16 superior to placebo*
H_4	Secondary	Change from baseline in SF-36 PCS at Week 16 superior to placebo
H_5	Secondary	MDA response at Week 16 superior to placebo
H_6	Secondary	Change from baseline in vdHmTSS at Week 16 superior to placebo†
H_7	Secondary	Enthesitis-free response at Week 16 superior to placebo (in the pooled BE OPTIMAL/BE COMPLETE population)
H_8	Secondary	Dactylitis-free response at Week 16 superior to placebo (in the pooled BE OPTIMAL/BE COMPLETE population)
H_9	Secondary	Change from baseline in vdHmTSS at Week 16 superior to placebo (overall population)

BE COMPLETE (TNFi-IR patients)[2]

Bimekizumab 160 mg Q4W α=0.05	Outcome	Test
H_1	Primary	ACR50 response at Week 16 superior to placebo
H_2	Secondary	Change from baseline in HAQ-DI score at Week 16 superior to placebo
H_3	Secondary	PASI90 response at Week 16 superior to placebo*
H_4	Secondary	Change from baseline in SF-36 PCS at Week 16 superior to placebo
H_5	Secondary	MDA response at Week 16 superior to placebo

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*In patients with psoriasis affecting at least 3% BSA at baseline.[1,2] †In patients with elevated hs-CRP levels (≥6 mg/L) and/or at least one bone erosion.[1]

1. McInnes IB, et al. Supplementary appendix. *Lancet*. 2023;401(10370):25-37. 2. Merola JF, et al. Supplementary appendix. *Lancet*. 2023;401(10370):38-48.

BE OPTIMAL and BE COMPLETE: Baseline Characteristics (1/2)

	BE OPTIMAL[1]			BE COMPLETE[2]	
	Placebo (n=281)	BKZ 160 mg Q4W (n=431)	Reference Arm (ADA 40 mg Q2W) (n=140)	Placebo (n=133)	BKZ 160 mg Q4W (n=267)
Age, mean (SD), y	48.7 (11.7)	48.5 (12.6)	49.0 (12.8)	51.3 (12.9)	50.1 (12.4)
Sex, male, n (%)	127 (45)	201 (47)	71 (51)	60 (45)	130 (49)
BMI, mean (SD), kg/m^2	29.6 (6.1)	29.2 (6.8)	28.4 (5.9)	29.0 (5.4)	30.1 (6.5)
Time since PsA diagnosis,* mean (SD), y	5.6 (6.5)	6.0 (7.3)	6.1 (6.8)	9.2 (8.1)	9.6 (9.9)
csDMARDs at baseline, n (%)	192 (68)	301 (70)	99 (71)	63 (47)	139 (52)
Concomitant methotrexate, n (%)	162 (58)	252 (59)	82 (59)	51 (38)	119 (45)
Prior TNFi exposure, n (%)					
Inadequate response to 1 TNFi	-	-	-	103 (77)	204 (76)
Inadequate response to 2 TNFis	-	-	-	15 (11)	29 (11)
Intolerance to TNFi	-	-	-	15 (11)	34 (13)
TJC (of 68 joints), mean (SD)	17.1 (12.5)	16.8 (11.8)	17.5 (13.1)	19.3 (14.2)	18.4 (13.5)
SJC (of 66 joints), mean (SD)	9.5 (7.3)	9.0 (6.2)	9.7 (7.1)	10.3 (8.2)	9.7 (7.5)
hs-CRP ≥6 mg/L, n (%)	121 (43)	158 (37)	44 (31)	59 (44)	118 (44)

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Randomized set.[1,2] BE OPTIMAL: the study was not powered for statistical comparisons of ADA to BKZ or ADA to PBO.[1] *BE OPTIMAL: data missing for 2 patients receiving placebo, 8 patients receiving BKZ and 1 patient receiving ADA; BE COMPLETE: data missing for 1 patient receiving placebo and 1 patient receiving BKZ.[1,2]

1. McInnes IB, et al. *Lancet.* 2023;401(10370):25-37. 2. Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

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BE OPTIMAL and BE COMPLETE: Baseline Characteristics (2/2)

	BE OPTIMAL[1]			BE COMPLETE[2]	
	Placebo (n=281)	BKZ 160 mg Q4W (n=431)	Reference Arm (ADA 40 mg Q2W) (n=140)	Placebo (n=133)	BKZ 160 mg Q4W (n=267)
Affected BSA ≥3%, n (%)	140 (50)	217 (50)	68 (49)	88 (66)	176 (66)
PASI score,* mean (SD)	7.9 (5.6)	8.2 (6.8)	8.6 (7.6)	8.5 (6.6)	10.1 (9.1)
HAQ-DI score,† mean (SD)	0.89 (0.61)	0.82 (0.59)	0.86 (0.54)	1.0 (0.69)	1.0 (0.59)
SF-36 PCS,† mean (SD)	36.9 (9.7)	38.1 (9.4)	37.6 (8.8)	35.9 (10.2)	36.4 (9.0)
PtAAP,† mean (SD)	56.8 (23.2)	53.6 (24.3)	56.7 (23.9)	61.7 (24.6)	58.3 (24.2)
Nail psoriasis,‡ n (%)	-	-	-	83 (62)	159 (60)
mNAPSI score,§ mean (SD)	-	-	-	4.5 (2.8)	4.3 (2.8)
Enthesitis,‖ n (%)	70 (25)	143 (33)	36 (26)	36 (27)	106 (40)
LEI score,¶ mean (SD)	2.9 (1.5)	2.5 (1.5)	2.3 (1.6)	2.9 (1.6)	2.6 (1.5)
Dactylitis,** n (%)	33 (12)	56 (13)	11 (8)	14 (11)	34 (13)
LDI score,†† mean (SD)	47.3 (41.1)	46.7 (54.3)	49.7 (31.9)	66.4 (127.6)	72.7 (114.4)

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Randomized set.[1,2] *In patients with ≥3% BSA with PSO at baseline (BE OPTIMAL: placebo, n=140; BKZ 160 mg Q4W, n=217; reference group [ADA 40 mg Q2W], n=68; BE COMPLETE: placebo, n=83; BKZ 160 mg Q4W, n=176).[1,2] †BE OPTIMAL: data missing for 1 patient receiving BKZ.[1] ‡mNAPSI score >0[1,2]; BE COMPLETE: data missing for 1 patient receiving placebo.[2] §In patients with nail psoriasis at baseline (BE COMPLETE; placebo, n=83; BKZ, n=159).[2] ‖The presence of enthesitis was defined by a score greater than 0 on the LEI[1,2]; BE OPTIMAL: data missing for 6 patients receiving BKZ and for 1 patient receiving ADA.[1] ¶In patients with enthesitis at baseline (BE COMPLETE: placebo, n=36; BKZ, n=106).[2] **Leeds Dactylitis Index >0; BE OPTIMAL: data missing for 1 patient receiving placebo, 7 patients receiving BKZ, and 1 patient receiving ADA.[1,2] ††In patients with dactylitis at baseline (BE COMPLETE: placebo, n=14; BKZ, n=34).[1,2]

1. McInnes IB, et al. *Lancet*. 2023;401(10370):25-37. 2. Merola JF, et al. *Lancet*. 2023;401(10370):38-48.

BE OPTIMAL Met the Primary and All Ranked Secondary Endpoints at Week 16

	BE OPTIMAL			
	Placebo (n=281)	BKZ 160 mg Q4W (n=431)	BKZ vs placebo p value*	Reference Arm (ADA 40 mg Q2W) (n=140)†
ACR50 response‡	**28 (10%)**	**189 (44%)**	**<0.0001**	**64 (46%)**
HAQ-DI score CfB	-0.09 (0.03)	-0.26 (0.02)	<0.0001	-0.33 (0.04)
PASI90 response §	4 of 140 (3%)	133 of 217 (61%)	<0.0001	28 of 68 (41%)
SF-36 PCS CfB	2.3 (0.5)	6.3 (0.4)	<0.0001	6.8 (0.8)
MDA response	37 (13%)	194 (45%)	<0.0001	63 (45%)
vdHmTSS CfB (at-risk subgroup); No. of patients	0.36 (0.10); 227	0.01 (0.04); 361	0.0012	-0.06 (0.08); 112
Complete resolution of enthesitis (pooled)‖	37 (35%) of 106	124 (50%) of 249	0.0083	18 (50%) of 36
Complete resolution of dactylitis (pooled)‖	24 (51%) of 47	68 (76%) of 90	0.0022	9 (82%) of 11
vdHmTSS CfB (overall population); No. of patients	0.31 (0.09); 269	0.01 (0.04); 420	0.0012	-0.03 (0.07); 135

Missing data were imputed using RBMI for continuous variables and NRI for proportions. Randomized set. Data are n (%) or mean CfB (SE) unless indicated. *For binary values, ORs, CIs, and p values were generated using logistic regression with treatment, bone erosion, and region as factors. For enthesitis and dactylitis resolution, where data were pooled from BE OPTIMAL and BE COMPLETE, the study was also included as a factor in the model, and bone erosion at baseline was excluded. For continuous variables, least squares mean, SE, difference in least squares means, and p values were generated using ANCOVA with treatment, bone erosion at baseline, and region as fixed effects and the baseline value as covariate. †The adalimumab 40-mg every-2-weeks treatment group served as an active reference, and the study was not powered for statistical comparisons of adalimumab to bimekizumab or placebo. ‡Primary endpoint. §In patients with psoriasis affecting 3% or more BSA at baseline. ‖Resolution of enthesitis and dactylitis data are reported for patients with enthesitis or dactylitis at baseline. Data for the placebo and bimekizumab groups are pooled from the BE OPTIMAL and BE COMPLETE trials; data for patients in the reference group are reported from BE OPTIMAL only.

McInnes IB, et al. *Lancet.* 2023;401(10370):25-37.

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BE COMPLETE Met the Primary and All Ranked Secondary Endpoints at Week 16

	BE COMPLETE		
	Placebo (n=133)	**BKZ 160 mg Q4W (n=267)**	**BKZ vs placebo p value***
ACR50 response†	**9 (7%)**	**116 (43%)**	**<0.0001**
HAQ-DI score CfB	-0.07 (0.04)	-0.38 (0.03)	<0.0001
PASI90 response‡	6 (7%) of 88	121 (69%) of 176	<0.0001
SF-36 PCS CfB	1.4 (0.7)	7.3 (0.5)	<0.0001
MDA response	8 (6%)	118 (44%)	<0.0001

Missing data were imputed using RBMI for continuous variables and NRI for binary variables. Randomized set. Data are n (%) or mean CfB (SE) unless indicated. *For binary variables, ORs, CIs, and p values were generated using logistic regression with treatment, previous exposure to TNFα inhibitors, and region as factors. For continuous variables, least squares mean, SEs, difference in least squares means, and p values were generated using ANCOVA with treatment, previous exposure to TNFα inhibitors, and region as fixed effects and the baseline value of the outcome as covariate. †Primary endpoint. ‡In patients with psoriasis affecting 3% or more BSA at baseline.

Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

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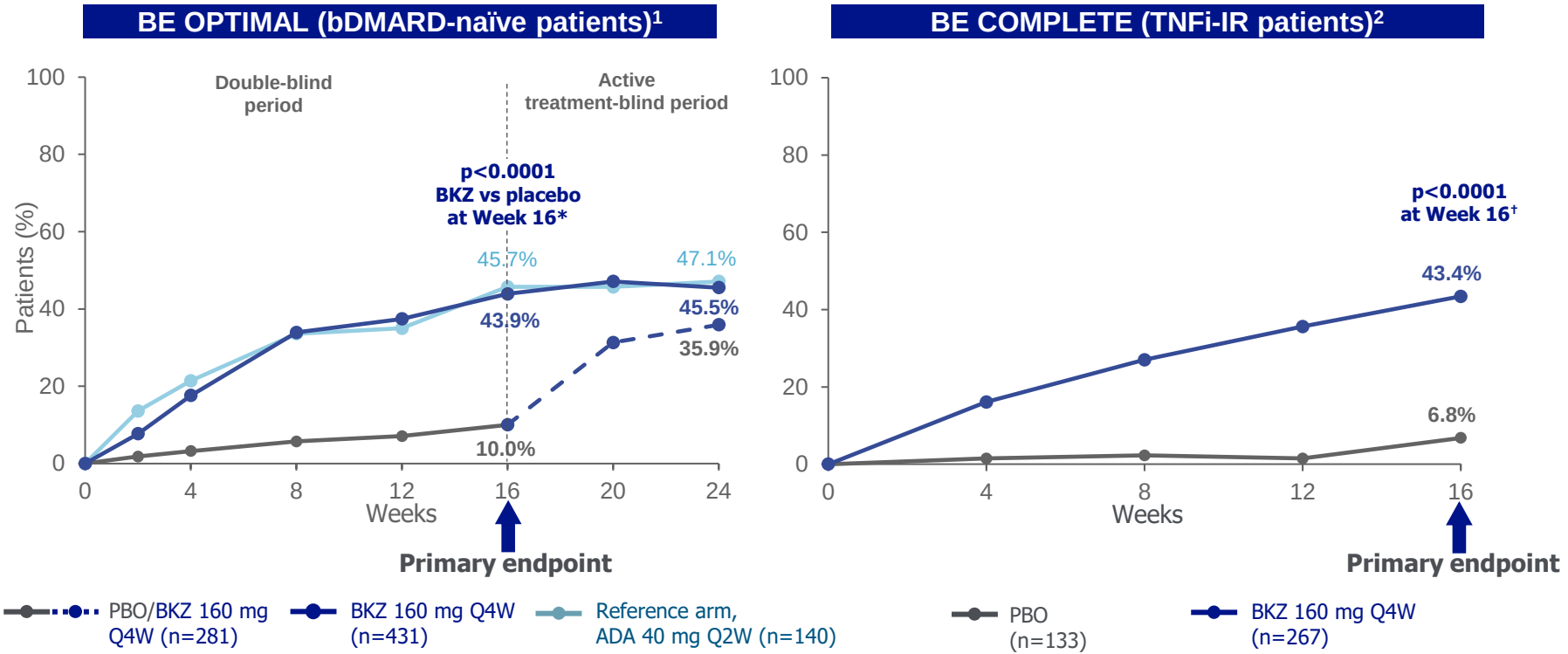
ACR50 Response With BKZ to Week 16 or Week 24 in bDMARD-Naïve and TNFi-IR Patients (NRI)



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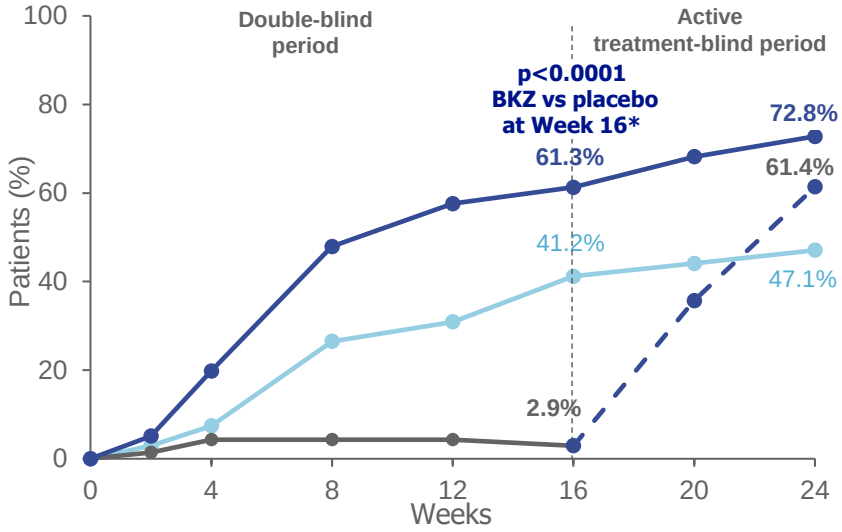
Non-responder imputation.[1,2] **p values were only calculated for the primary endpoints (Week 16).**[1,2] Randomized set.[1,2] *p value was calculated using a logistic regression with treatment, bone erosion at baseline, and region as factors. The study was not powered for statistical comparisons of ADA to BKZ or ADA to placebo.[1] †p value obtained from logistic regression with treatment, prior TNFi exposure and region as factors.[2]

1. McInnes IB, et al. *Lancet.* 2023;401(10370):25-37. 2. Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

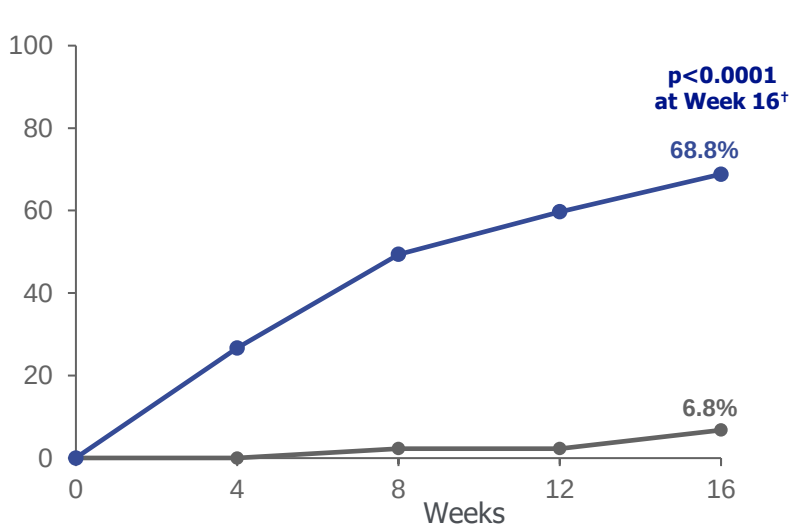
PASI90 Response With BKZ to Week 16 or Week 24 in bDMARD-Naïve and TNFi-IR Patients (NRI)

BE OPTIMAL (bDMARD-naïve patients)[1]



PBO/BKZ 160 mg Q4W (n=140)
BKZ 160 mg Q4W (n=217)
Reference arm, ADA 40 mg Q2W (n=68)

BE COMPLETE (TNFi-IR patients)[2]



PBO (n=88)
BKZ 160 mg Q4W (n=176)

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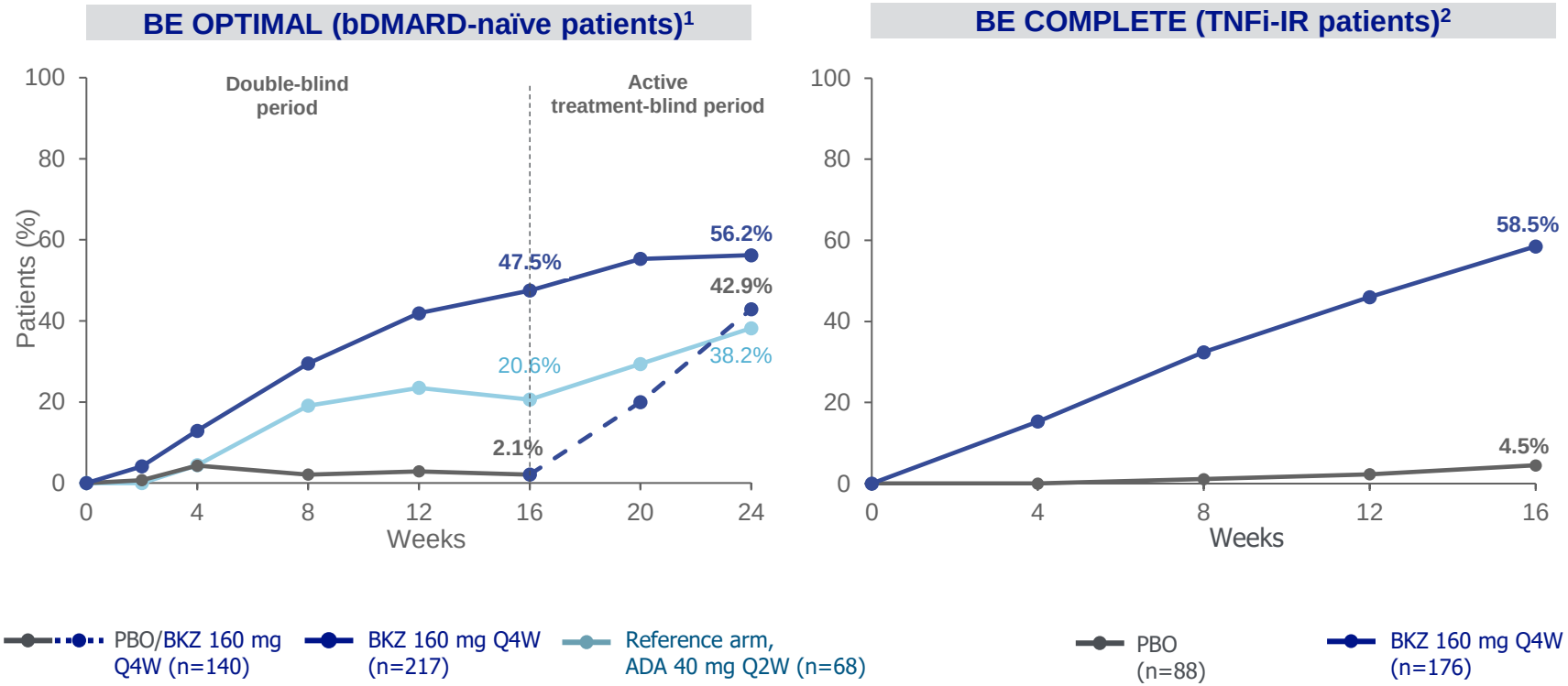
Non-responder imputation.[1,2] **p values were only calculated for the ranked secondary endpoints (Week 16).**[1,2] Randomized set, in patients with PSO involving ≥3% BSA at baseline.[1,2] *p value was calculated using a logistic regression with treatment, bone erosion at baseline, and region as factors. The study was not powered for statistical comparisons of ADA to BKZ or ADA to placebo.[1] †p value obtained from logistic regression with treatment, prior TNFi exposure and region as factors.[2]

1. McInnes IB, et al. *Lancet.* 2023;401(10370):25-37. 2. Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

PASI100 Response With BKZ to Week 16 or Week 24 in bDMARD-Naïve and TNFi-IR Patients (NRI)



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Non-responder imputation.[1,2] Randomized set, in patients with PSO involving ≥3% BSA at baseline.[1,2]

1. McInnes IB, et al. *Lancet*. 2023;401(10370):25-37. 2. Merola JF, et al. *Lancet*. 2023;401(10370):38-48.

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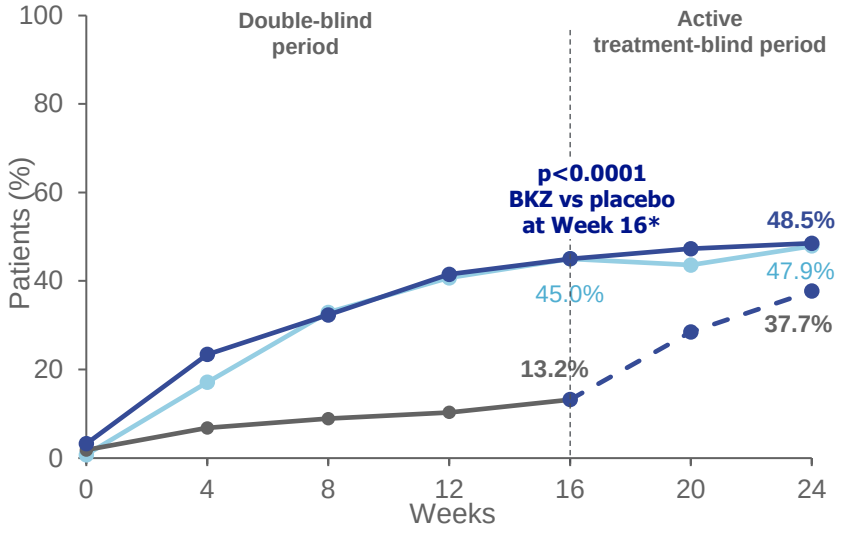
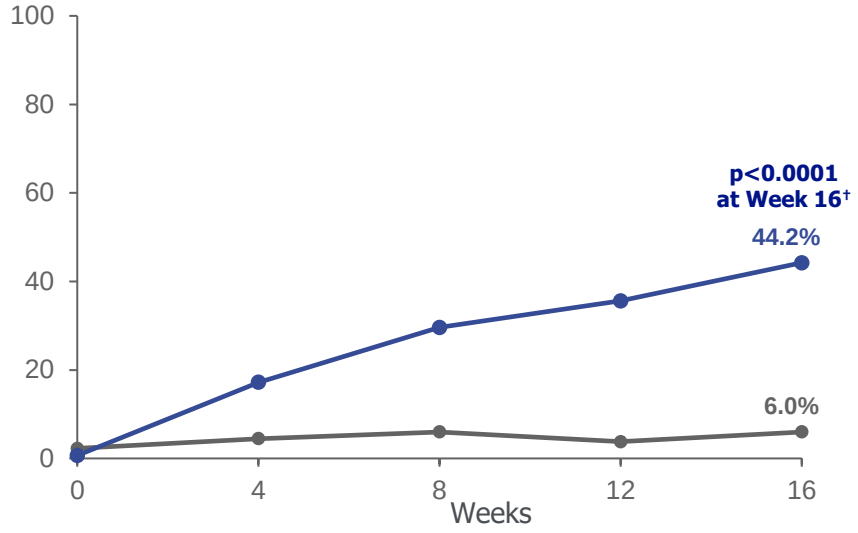
Minimal Disease Activity (MDA) Response With BKZ to Week 16 or Week 24 in bDMARD-Naïve and TNFi-IR Patients (NRI)

MDA response defined as achievement of at least 5 of the following 7 criteria:
TJC of ≤1, SJC of ≤1, PASI ≤1 or BSA ≤3%, patient assessment of arthritis pain (VAS) ≤15, patient global assessment for PsA (VAS) ≤20, HAQ-DI ≤0.5, and tender entheseal points (LEI) ≤1[1,2]

BE OPTIMAL (bDMARD-naïve patients)[1]



BE COMPLETE (TNFi-IR patients)[2]



PBO/BKZ 160 mg Q4W (n=281) | BKZ 160 mg Q4W (n=431) | Reference arm, ADA 40 mg Q2W (n=140)

PBO (n=133) | BKZ 160 mg Q4W (n=267)

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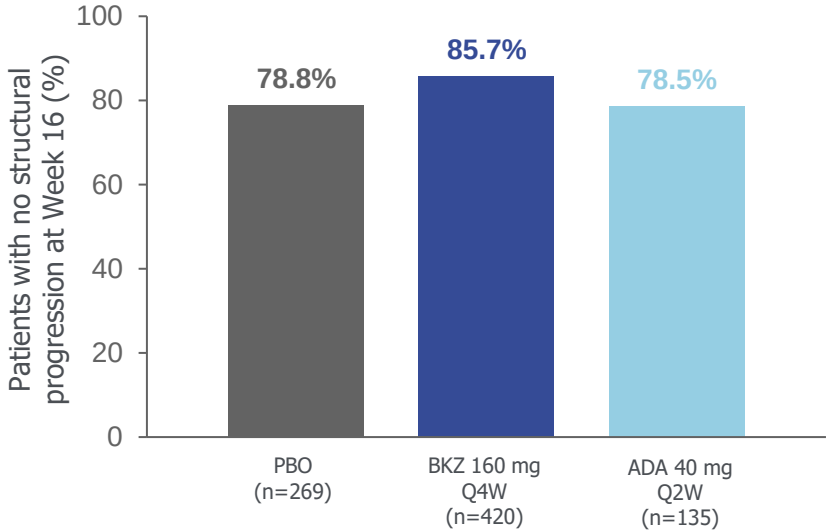
Non-responder imputation.[1,2] p values were only calculated for the ranked secondary endpoints (Week 16).[1,2] Randomized set.[1,2] *p value was calculated using a logistic regression model with treatment, bone erosion at baseline, and region as factors. The study was not powered for statistical comparisons of ADA to BKZ or ADA to placebo.[1] †p value obtained from logistic regression with treatment, prior TNFi exposure and region as factors.[2]

1. McInnes IB, et al. *Lancet.* 2023;401(10370):25-37. 2. Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

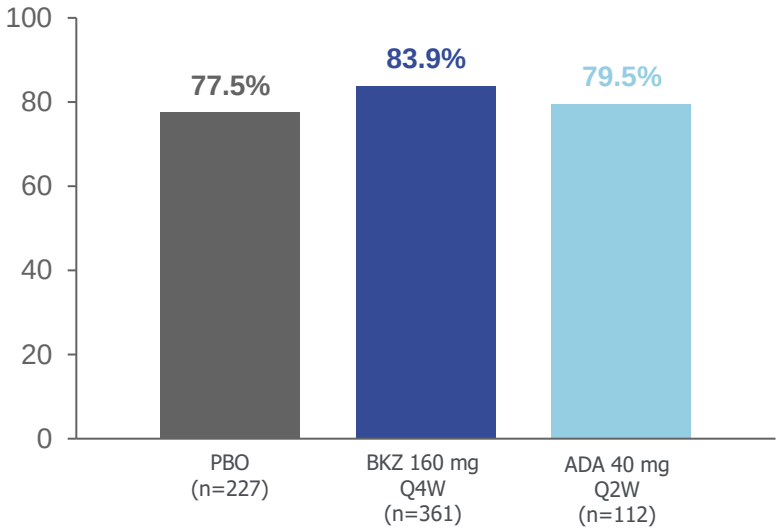
BE OPTIMAL: Inhibition of Structural Progression With BKZ at Week 16 in bDMARD-Naïve Patients (NRI)

Overall Population[1]



At-risk population[1,2,*]

Elevated hs-CRP (≥6 mg/L) and/or ≥1 bone erosion at baseline



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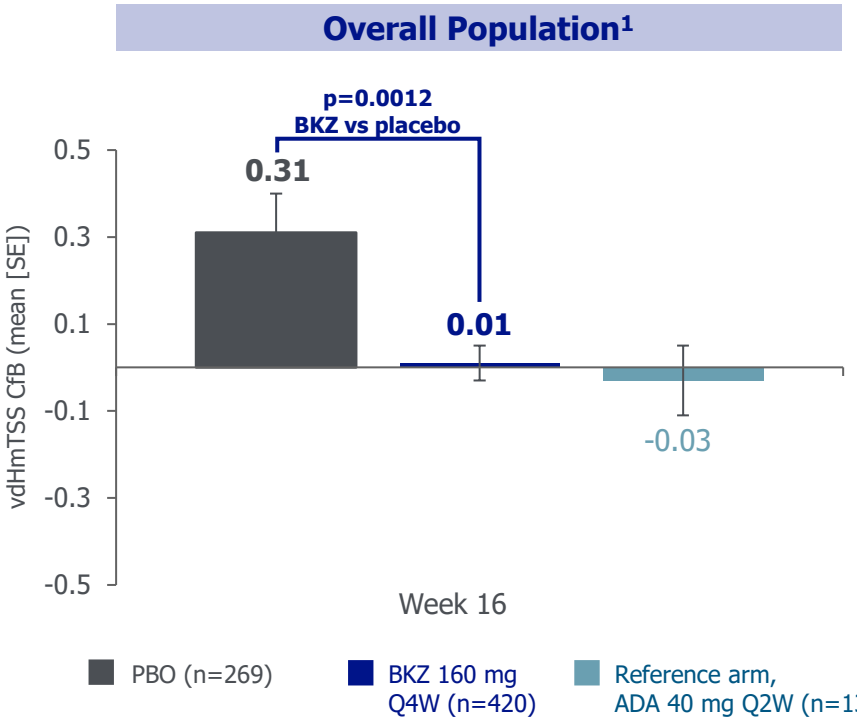
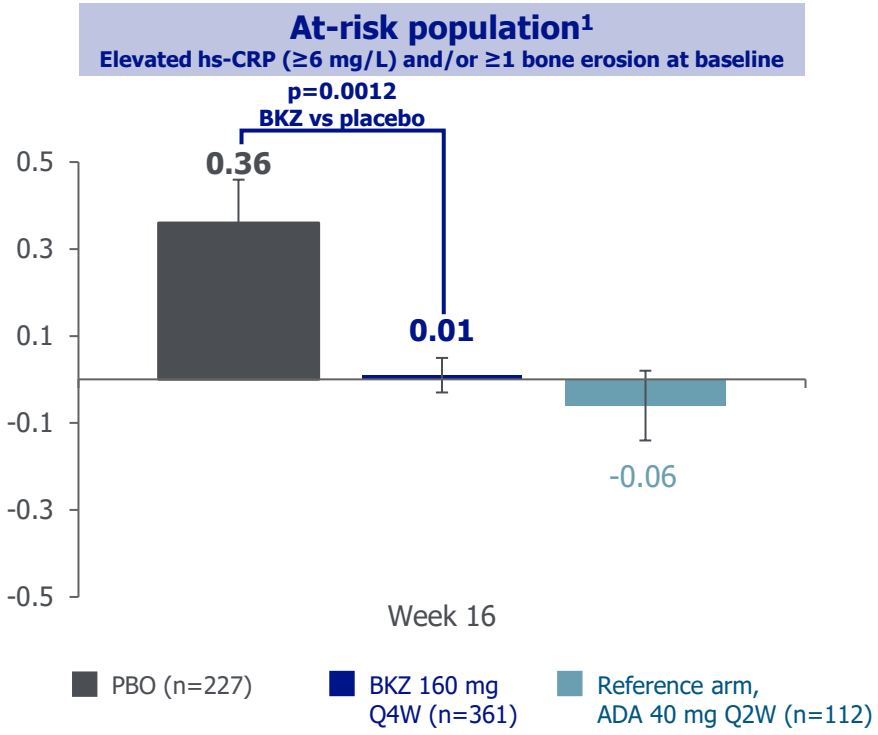
Non-responder imputation (Week 16).[1] Radiographic set.[1] No structural progression defined as vdHmTSS score CfB ≤0.5.[2] This analysis was not performed for the BE COMPLETE study.[3] *Patients were stratified by bone erosion number at baseline (0 or ≥1) and region (North America, western Europe, eastern Europe, or Asia).[1]

1. McInnes IB, et al. Supplementary appendix. *Lancet*. 2023;401(10370):25-37. 2. McInnes IB, et al. *Lancet*. 2023;401(10370):25-37. 3. Merola JF, et al. *Lancet*. 2023;401(10370):38-48.

BE OPTIMAL: Inhibition of Structural Progression With BKZ at Week 16 in bDMARD-Naïve Patients (MI)





US-BK-2401135 | Date of preparation: September 2024

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Multiple imputation.[1] The study was not powered for statistical comparisons of ADA to BKZ or ADA to placebo.[1] Radiographic set.[1] This analysis was not performed for the BE COMPLETE study.[2]

1. McInnes IB, et al. *Lancet.* 2023;401(10370):25-37. 2. Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

BE OPTIMAL: Adverse Event Summary to Week 16 and Week 24 (1/4)

n (%)	Weeks 0–16			Weeks 0–24		
	Placebo n=281	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140	Placebo to BKZ 160 mg Q4W n=271*	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140
Any TEAE	139 (49)	258 (60)	83 (59)	95 (35)	300 (70)	96 (69)
Serious TEAE	3 (1)	7 (2)	2 (1)	3 (1)	17 (4)	5 (4)
Discontinuation due to TEAE	3 (1)	8 (2)	3 (2)	0	12 (3)	7 (5)
Drug-related TEAE	35 (12)	101 (23)	34 (24)	27 (10)	122 (28)	43 (31)
Severe TEAE	0	4 (1)	3 (2)	1 (<1)	9 (2)	3 (2)
Deaths	0	0	0	0	0	0

Safety set. A safety follow-up was conducted 20 weeks after the last dose of bimekizumab for those not entering the open-label extension, or who discontinued early. *Includes patients who switched from placebo to BKZ (events after switch only).
McInnes IB, et al. *Lancet.* 2023;401(10370):25-37.

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BE OPTIMAL: Adverse Event Summary to Week 16 and Week 24 (2/4)

n (%)	Weeks 0–16			Weeks 0–24		
	Placebo n=281	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140	Placebo to BKZ 160 mg Q4W n=271*	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140
Most frequent TEAEs†						
Nasopharyngitis	13 (5)	40 (9)	7 (5)	8 (3)	50 (12)	12 (9)
Upper respiratory tract infection	18 (6)	21 (5)	3 (2)	5 (2)	26 (6)	5 (4)
Headache	7 (2)	20 (5)	2 (1)	6 (2)	20 (5)	3 (2)
Diarrhea	7 (2)	16 (4)	5 (4)	1 (<1)	20 (5)	5 (4)
Oral candidiasis	0	9 (2)	0	1 (<1)	15 (3)	0
Pharyngitis	4 (1)	11 (3)	2 (1)	3 (1)	15 (3)	2 (1)
Hypertension	11 (4)	12 (3)	4 (3)	5 (2)	14 (3)	4 (3)
Urinary tract infection	4 (1)	9 (2)	3 (2)	4 (1)	14 (3)	3 (2)
Oral herpes	3 (1)	5 (1)	3 (2)	0	7 (2)	6 (4)
Increased ALT	2 (1)	3 (1)	7 (5)	1 (<1)	4 (1)	8 (6)
Injection site erythema	0	1 (<1)	4 (3)	0	2 (<1)	5 (4)

Safety set. A safety follow-up was conducted 20 weeks after the last dose of bimekizumab for those not entering the open-label extension, or who discontinued early. *Includes patients who switched from placebo to BKZ (events after switch only). †Most frequent adverse events are those occurring in ≥3% of patients in any study group.

McInnes IB, et al. *Lancet.* 2023;401(10370):25-37.

BE OPTIMAL: Adverse Event Summary to Week 16 and Week 24 (3/4)

n (%)	Weeks 0–16			Weeks 0–24		
	Placebo n=281	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140	Placebo to BKZ 160 mg Q4W n=271*	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140
Infections	56 (20)	131 (30)	35 (25)	41 (15)	170 (39)	41 (29)
Serious	0	1 (<1)	1 (1)	0	3 (1)	2 (1)
Opportunistic	0	0	1 (1)	3 (1)	1 (<1)	1 (1)
Active tuberculosis	0	0	0	0	0	0
SARS-CoV-2	0	0	0	1 (<1)	1 (<1)	0
Neutropenia	1 (<1)	5 (1)	1 (1)	1 (<1)	5 (1)	2 (1)
Serious hypersensitivity	0	0	0	0	0	0
Injection site reactions	3 (1)	5 (1)	7 (5)	1 (<1)	6 (1)	11 (8)
Adjudicated SI/B	0	0	0	0	0	0
Adjudicated MACE	0	0	0	0	1 (<1)	0
Liver function test changes or enzyme concentration increases†						
ALT >3 ULN	0	5 (1)	2 (1)	0	6 (1)	5 (4)
AST >3 ULN	0	5 (1)	3 (2)	0	7 (2)	6 (4)
Adjudicated IBD	0	0	0	0‡	1 (<1)§	0
Malignancies	1 (<1)	1 (<1)	0	1 (<1)	2 (<1)	0
Breast cancer stage I	1 (<1)	0	0	0	0	0
Non-melanoma skin cancers	0	1 (<1)	0	1 (<1)	2 (<1)	0

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Safety set. A safety follow-up was conducted 20 weeks after the last dose of bimekizumab for those not entering the open-label extension, or who discontinued early. *Includes patients who switched from placebo to BKZ (events after switch only). †Data were not available for all patients; proportions are based on the following: to week 16, placebo, n=279; BKZ, n=431; and ADA, n=139; and to week 24, placebo, n=262; BKZ, n=431; and ADA, n=139. ‡One possible IBD. §One probable IBD.

McInnes IB, et al. *Lancet.* 2023;401(10370):25-37.

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BE OPTIMAL: Adverse Event Summary to Week 16 and Week 24 (4/4)

n (%)	Weeks 0–16			Weeks 0–24		
	Placebo n=281	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140	Placebo to BKZ 160 mg Q4W n=271*	BKZ 160 mg Q4W n=431	Reference Arm (ADA 40 mg Q2W) n=140
Fungal infections	4 (1)	20 (5)	1 (1)	7 (3)	33 (8)	1 (1)
Candida infections	2 (1)	11 (3)	0	4 (1)	18 (4)	0
Oral candidiasis	0	9 (2)	0	1 (<1)	15 (3)	0
Vulvovaginal candidiasis	2 (1)	1 (<1)	0	2 (1)	1 (<1)	0
Esophageal candidiasis	0	0	0	1 (<1)	1 (<1)	0
Skin candida	0	1 (<1)	0	0	2 (<1)	0
Fungal infections NEC	2 (1)	9 (2)	0	2 (1)	15 (3)	0
Fungal skin infection	0	3 (1)	0	0	5 (1)	0
Tongue fungal infection	0	3 (1)	0	0	3 (1)	0
Oral fungal infection	0	2 (<1)	0	0	4 (1)	0
Onychomycosis	0	1 (<1)	0	0	1 (<1)	0
Fungal esophagitis	0	0	0	1 (<1)	0	0
Laryngitis fungal	0	0	0	1 (<1)	0	0
Vulvovaginal mycotic infection	2 (1)	0	0	0	3 (1)	0
Tinea infections	0	0	1 (1)	1 (<1)	1 (<1)	1 (1)
Tinea pedis	0	0	0	0	1 (<1)	0
Tinea versicolor	0	0	1 (1)	1 (<1)	0	1 (1)
Serious *Candida* infections	0	0	0	0	0	0
Systemic fungal infections	0	0	0	0	0	0
Candida infections leading to study discontinuation	0	1 (<1)	0	0	1 (<1)	0

Safety set. A safety follow-up was conducted 20 weeks after the last dose of bimekizumab for those not entering the open-label extension, or who discontinued early. *Includes patients who switched from placebo to BKZ (events after switch only).

McInnes IB, et al. *Lancet.* 2023;401(10370):25-37.

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BE COMPLETE: Adverse Event Summary to Week 16 (1/3)

n (%)	Weeks 0–16	
	Placebo n=132*	BKZ 160 mg Q4W n=267
Any TEAE	44 (33)	108 (40)
Serious TEAEs†	0	5 (2)
Discontinuation due to TEAEs‡	0	2 (1)
Drug-related TEAEs	4 (3)	35 (13)
Severe TEAEs§	0	5 (2)
Deaths	0	0
Most frequently reported TEAEs in the BKZ group‖		
Nasopharyngitis	1 (1)	10 (4)
Oral candidiasis	0	7 (3)
Upper respiratory tract infection	2 (2)	6 (2)

Safety set. A safety follow-up was conducted 20 weeks after the last dose of BKZ for those not entering the OLE, or who discontinued early. *One patient was randomly assigned but did not receive any doses of placebo, so was not included in the safety set. †One case of intestinal obstruction, one of bronchitis, one of COVID-19 pneumonia, one of joint injury, and one of toxic encephalopathy. ‡One case of stomatitis and one of oral candidiasis. §Six events in 5 patients: 1 case of bronchitis, 1 of back pain, 1 of toxic encephalopathy, 1 of headache, 1 of pruritus, 1 of renal pain; 1 patient reported both severe back pain and renal pain. ‖Most frequent adverse events are those occurring in ≥2% of patients in the bimekizumab group.

Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

BE COMPLETE: Adverse Event Summary to Week 16 (2/3)

n (%)	Weeks 0–16	
	Placebo n=132*	BKZ 160 mg Q4W n=267
Infections[†]		
Serious[‡]	0	2 (1)
Opportunistic	0	0
Active tuberculosis	0	0
SARS-CoV-2	6 (5)	5 (2)
Fungal infections	0	12 (4)
Candida infections[§]	0	7 (3)
Oral candidiasis[§]	0	7 (3)
Fungal infections NEC	0	4 (1)
Fungal skin infection	0	1 (<1)
Tongue fungal infection	0	1 (<1)
Vulvovaginal mycotic infection	0	2 (1)
Tinea infections	0	1 (<1)
Tinea pedis	0	1 (<1)
Serious fungal infections	0	0
Systemic fungal infections	0	0
Fungal infections leading to discontinuation	0	1 (<1)
Candida infections leading to discontinuation	0	1 (<1)

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Safety set. A safety follow-up was conducted 20 weeks after the last dose of BKZ for those not entering the OLE, or who discontinued early. *One patient was randomly assigned but did not receive any doses of placebo, so was not included in the safety set. [†]Apart from one case of severe bronchitis, all infections were mild or moderate. [‡]One case of bronchitis and one of COVID-19 pneumonia. [§]One patient had recurrent candidiasis (3 infections withing the 16-week period).

Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

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BE COMPLETE: Adverse Event Summary to Week 16 (3/3)

n (%)	Weeks 0–16	
	Placebo n=132*	BKZ 160 mg Q4W n=267
Neutropenia†	0	4 (1)
Serious hypersensitivity	0	0
Injection site reactions	0	3 (1)
Adjudicated SI/B	0	0
Adjudicated MACE	0	0
Liver function test changes or enzyme concentration increases†		
ALT >3 ULN	0	2 (1)
AST >3 ULN	0	4 (1)
Adjudicated IBD	0	0
Malignancies	1 (1)	0
Basal cell carcinoma	1 (1)	0

Safety set. A safety follow-up was conducted 20 weeks after the last dose of BKZ for those not entering the OLE, or who discontinued early. *One patient was randomly assigned but did not receive any doses of placebo, so was not included in the safety set. †Three cases of neutropenia and one case of decreased neutrophil count.

Merola JF, et al. *Lancet.* 2023;401(10370):38-48.

Appendix

Overarching Principles: 2023 Update

	Overarching principle	Level of agreement, mean (SD)
A	Psoriatic arthritis is a heterogeneous and potentially severe disease, which may require multidisciplinary treatment	10.0 (0.1)
B	Treatment of psoriatic arthritis patients should aim at the best care and must be based on a shared decision between the patient and the rheumatologist, considering efficacy, safety, patient preferences and costs	9.7 (0.6)
C	Rheumatologists are the specialists who should primarily care for the musculoskeletal manifestations of patients with psoriatic arthritis; in the presence of clinically relevant skin involvement, a rheumatologist and a dermatologist should collaborate in diagnosis and management	9.7 (0.5)
D	The primary goal of treating patients with psoriatic arthritis is to maximize health-related quality of life, through control of symptoms, prevention of structural damage, normalization of function and social participation; abrogation of inflammation is an important component to achieve these goals	9.9 (0.3)
E	In managing patients with psoriatic arthritis, consideration should be given to each musculoskeletal manifestation and treatment decisions made accordingly	9.8 (0.4)
F	When managing patients with psoriatic arthritis, non-musculoskeletal manifestations (particularly skin, eye and gastrointestinal tract) should be taken into account; comorbidities such as obesity, metabolic syndrome, cardiovascular disease or depression should also be considered	9.7 (0.7)
G	The choice of treatment should take account of safety considerations regarding individual modes of action to optimize the benefit–risk profile	9.9 (0.4)

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The level of agreement was recorded on a scale ranging from 0 (no agreement) to 10 (full agreement).

Recommendations: 2023 Update (1/2)

	Recommendations	Level of evidence	Grade of recommendation	Level of agreement, mean (SD)
1	Treatment should be aimed at reaching the target of remission or, alternatively, minimal/low disease activity, by regular monitoring and appropriate adjustment of therapy	1b	A	9.5 (1.0)
2	Non-steroidal anti-inflammatory drugs may be used to relieve musculoskeletal signs and symptoms[a]; local injections of glucocorticoids may be considered as adjunctive therapy[b]	1b[a], 3b[b]	A, C	9.5 (0.7)
3	In patients with polyarthritis, or those with monoarthritis/oligoarthritis and poor prognostic factors[a] (e.g., structural damage, elevated acute phase reactants, dactylitis or nail involvement), a csDMARD should be initiated rapidly, with methotrexate preferred in those with clinically relevant skin involvement	1b, 4[a]	B, C	9.3 (0.8)
4	In patients with peripheral arthritis and an inadequate response to at least one csDMARD, therapy with a bDMARD should be commenced	1a	A	9.5 (1.3)
5	In patients with peripheral arthritis and an inadequate response to at least one bDMARD, or when a bDMARD is not appropriate[a], a JAKi may be considered*, taking safety considerations into account	1b, 4[a]	B, D	9.1 (1.5)

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The level of evidence is an estimate of the extent to which a bullet-point is supported by the availability of properly weighed scientific publications on a 1-5 level (1=most supported, 4=least supported). The grade of recommendation is determined by qualitative assessment and expert opinion. The level of agreement was recorded on a scale ranging from 0 (no agreement) to 10 (full agreement). *For JAKis, caution is needed for patients aged 65 years or above, those who are current or past long-time smokers, with a history of atherosclerotic cardiovascular disease or other cardiovascular risk factors or with other malignancy risk factors, and with known risk factors for venous thromboembolism. The superscript letters 'a' and 'b' are used to link a part of the recommendation to a level of evidence.

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Recommendations: 2023 Update (2/2)

	Recommendations	Level of evidence	Grade of recommendation	Level of agreement, mean (SD)
6	In patients with mild disease* and an inadequate response to at least one csDMARD, in whom neither a bDMARD nor a JAKi is appropriate†, a PDE4 inhibitor may be considered	1b	B	8.7 (1.1)
7	In patients with unequivocal enthesitis and an insufficient response to NSAIDs or local glucocorticoid injections, therapy with a bDMARD should be considered	1b	B	9.5 (0.9)
8	In patients with clinically relevant axial disease with an insufficient response to NSAIDs, therapy with an IL-17Ai, a TNFi, an IL-17A/Fi or a JAKi should be considered†	1b	B	9.4 (1.3)
9	The choice of the mode of action should reflect non-musculoskeletal manifestations related to psoriatic arthritis; with clinically relevant skin involvement, preference should be given to an IL-17A or IL-17A/F or IL-23 or IL-12/23 inhibitor; with uveitis to an anti-TNF monoclonal antibody; and with IBD to an anti-TNF monoclonal antibody or an IL-23i or IL-12/23i or a JAKi†	1b	B	9.6 (0.7)
10	In patients with an inadequate response or intolerance to a bDMARD or a JAKi, switching to another bDMARD or JAKi should be considered†,[a], including one switch within a class[b]	1b[a], 4[b]	C	9.5 (0.7)
11	In patients in sustained remission, tapering of DMARDs may be considered	2b	B	9.4 (1.2)

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Abbreviations

Abbreviations

	Description
ACR50	≥50% improvement in American College of Rheumatology criteria
ADA	Adalimumab
ALT	Alanine aminotransferase
ANCOVA	Analysis of covariance
AST	Aspartate aminotransferase
axSpA	Axial spondyloarthritis
bDMARD	Biologic disease-modifying antirheumatic drug
BKZ	Bimekizumab
BMI	Body mass index
BSA	Body surface area
CASPAR	Classification criteria for psoriatic arthritis
CfB	Change from baseline
csDMARD	Conventional synthetic disease-modifying antirheumatic drug
CVDs	Cardiovascular diseases
CTLA-4	Cytotoxic T-lymphocyte protein 4
DMARD	Disease-modifying antirheumatic drug
EAIR	Exposure-adjusted incidence rate
EMA	European Medicines Agency
EULAR	European Alliance of Associations for Rheumatology
FDA	Food and Drug Administration
HAQ-DI	Health Assessment Questionnaire – Disability Index
hs-CRP	High-sensitivity C-reactive protein

	Description
IBD	Inflammatory bowel disease
IL	Interleukin
IL-Xi	Interleukin X inhibitor
IR	Inadequate response
JAKi	Janus kinase inhibitor
LDI	Leeds dactylitis index
LEI	Leeds enthesitis index
MACE	Major adverse cardiovascular event
MDA	Minimal disease activity
MI	Multiple imputation
mNAPSI	Modified Nail Psoriasis Severity Index
NEC	Not elsewhere classified
NRI	Nonresponder imputation
NSAIDs	Nonsteroidal anti-inflammatory drugs
OLE	Open-label extension
OR	Odd ratio
PASI90/100	≥90%/100% improvement in Psoriasis Area and Severity Index
PBO	Placebo
PCS	Physical Component Summary
PDE4i	3',5'-Cyclic-AMP phosphodiesterase 4A inhibitor
PsA	Psoriatic arthritis
PSO	Psoriasis
PtAAP	Patient Assessment of Arthritis Pain

	Description
PY	Patient-years
Q2/4W	Every 2/4 weeks
RA	Rheumatoid arthritis
RBMI	Reference based multiple imputation
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SF-36	36-Item Short-Form Health Survey
SI/B	Suicide ideation and behavior
SJC	Swollen joint count
TEAE	Treatment-emergent adverse event
TNF	Tumor necrosis factor
TJC	Tender joint count
TNFi	Tumor necrosis factor inhibitor
tsDMARD	Targeted synthetic disease-modifying antirheumatic drug
TYK2i	Tyrosine kinase 2 inhibitor
ULN	Upper limit of normal
VAS	Visual analogue scale
vdHmTSS	van der Heijde-modified total Sharp score

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