

ANNEX I
SUMMARY OF PRODUCT CHARACTERISTICS

▼ This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions. See section 4.8 for how to report adverse reactions.

1. NAME OF THE MEDICINAL PRODUCT

Bimzelx 160 mg solution for injection in pre-filled syringe
Bimzelx 160 mg solution for injection in pre-filled pen

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Bimzelx 160 mg solution for injection in pre-filled syringe

Each pre-filled syringe contains 160 mg of bimekizumab in 1 mL.

Bimzelx 160 mg solution for injection in pre-filled pen

Each pre-filled pen contains 160 mg of bimekizumab in 1 mL.

Bimekizumab is a humanised IgG1 monoclonal antibody produced in a genetically engineered Chinese hamster ovary (CHO) cell line by recombinant DNA technology.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection (injection)

The solution is clear to slightly opalescent and, colourless to pale brownish-yellow.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Plaque psoriasis

Bimzelx is indicated for the treatment of moderate to severe plaque psoriasis in adults who are candidates for systemic therapy.

Psoriatic arthritis

Bimzelx, alone or in combination with methotrexate, is indicated for the treatment of active psoriatic arthritis in adults who have had an inadequate response or who have been intolerant to one or more disease-modifying antirheumatic drugs (DMARDs).

Axial spondyloarthritis

Non-radiographic axial spondyloarthritis (nr-axSpA)

Bimzelx is indicated for the treatment of adults with active non-radiographic axial spondyloarthritis with objective signs of inflammation as indicated by elevated C-reactive protein (CRP) and/or magnetic resonance imaging (MRI) who have responded inadequately or are intolerant to non-steroidal anti-inflammatory drugs (NSAIDs).

Ankylosing spondylitis (AS, radiographic axial spondyloarthritis)

Bimzelx is indicated for the treatment of adults with active ankylosing spondylitis who have responded inadequately or are intolerant to conventional therapy.

Hidradenitis suppurativa (HS)

Bimzelx is indicated for the treatment of active moderate to severe hidradenitis suppurativa (acne inversa) in adults with an inadequate response to conventional systemic HS therapy (see section 5.1).

4.2 Posology and method of administration

Bimzelx is intended for use under the guidance and supervision of a physician experienced in the diagnosis and treatment of conditions for which Bimzelx is indicated.

Posology

Plaque psoriasis

The recommended dose for adult patients with plaque psoriasis is 320 mg (given as 2 subcutaneous injections of 160 mg each) at week 0, 4, 8, 12, 16 and every 8 weeks thereafter.

Psoriatic arthritis

The recommended dose for adult patients with active psoriatic arthritis is 160 mg (given as 1 subcutaneous injection of 160 mg) every 4 weeks.

For psoriatic arthritis patients with coexistent moderate to severe plaque psoriasis, the recommended dose is the same as for plaque psoriasis [320 mg (given as 2 subcutaneous injections of 160 mg each) at Week 0, 4, 8, 12, 16 and every 8 weeks thereafter]. After 16 weeks, regular assessment of efficacy is recommended and if a sufficient clinical response in joints cannot be maintained, a switch to 160 mg every 4 weeks can be considered.

Axial spondyloarthritis (nr-axSpA and AS)

The recommended dose for adult patients with axial spondyloarthritis is 160 mg (given as 1 subcutaneous injection) every 4 weeks.

Hidradenitis suppurativa

The recommended dose for adult patients with hidradenitis suppurativa is 320 mg (given as 2 subcutaneous injections of 160mg each) every 2 weeks up to Week 16 and every 4 weeks thereafter.

For above indications, consideration should be given to discontinuing treatment in patients who have shown no improvement by 16 weeks of treatment.

Special populations

Overweight patients with plaque psoriasis

For some patients with plaque psoriasis (including psoriatic arthritis with coexistent moderate to severe psoriasis) and a body weight ≥ 120 kg who did not achieve complete skin clearance at week 16, 320 mg every 4 weeks after week 16 may further improve treatment response (see section 5.1).

Elderly (≥ 65 years)

No dose adjustment is required (see section 5.2).

Renal or hepatic impairment

Bimekizumab has not been studied in these patient populations. Dose adjustments are not considered necessary based on pharmacokinetics (see section 5.2).

Paediatric population

The safety and efficacy of bimekizumab in children and adolescents below the age of 18 years have not been established. No data are available.

Method of administration

This medicinal product is administered by subcutaneous injection.

Suitable areas for injection include thigh, abdomen and upper arm. Injection sites should be rotated and injections should not be given into psoriasis plaques or areas where the skin is tender, bruised, erythematous, or indurated.

The pre-filled syringe or pre-filled pen must not be shaken.

After proper training in subcutaneous injection technique, patients may self-inject Bimzelx with the pre-filled syringe or pre-filled pen if their physician determines that it is appropriate and with medical follow-up as necessary. Patients should be instructed to inject the full amount of Bimzelx according to the instructions for use provided in the package leaflet.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

Clinically important active infections (e.g. active tuberculosis, see section 4.4).

4.4 Special warnings and precautions for use

Traceability

In order to improve the traceability of biological medicinal products, the name and the batch number of the administered product should be clearly recorded.

Infections

Bimekizumab may increase the risk of infections such as upper respiratory tract infections and oral candidiasis (see section 4.8).

Caution should be exercised when considering the use of bimekizumab in patients with a chronic infection or a history of recurrent infection. Treatment with bimekizumab must not be initiated in patients with any clinically important active infection until the infection resolves or is adequately treated (see section 4.3).

Patients treated with bimekizumab should be instructed to seek medical advice if signs or symptoms suggestive of an infection occur. If a patient develops an infection, the patient should be carefully monitored. If the infection becomes serious or is not responding to standard therapy, treatment should be discontinued until the infection resolves.

Pre-treatment evaluation for tuberculosis (TB)

Prior to initiating treatment with bimekizumab, patients should be evaluated for TB infection. Bimekizumab should not be given in patients with active TB (see section 4.3). Patients receiving bimekizumab should be monitored for signs and symptoms of active TB. Anti-TB therapy should be considered prior to initiating bimekizumab in patients with a past history of latent or active TB in

whom an adequate course of treatment cannot be confirmed.

Inflammatory bowel disease

Cases of new or exacerbations of inflammatory bowel disease have been reported with bimekizumab (see section 4.8). Bimekizumab is not recommended in patients with inflammatory bowel disease. If a patient develops signs and symptoms of inflammatory bowel disease or experiences an exacerbation of pre-existing inflammatory bowel disease, bimekizumab should be discontinued and appropriate medical management should be initiated.

Hypersensitivity

Serious hypersensitivity reactions including anaphylactic reactions have been observed with IL-17 inhibitors. If a serious hypersensitivity reaction occurs, administration of bimekizumab should be discontinued immediately and appropriate therapy initiated.

Vaccinations

Prior to initiating therapy with bimekizumab, completion of all age appropriate immunizations according to current immunization guidelines should be considered.

Live vaccines should not be given in patients treated with bimekizumab.

Patients treated with bimekizumab may receive inactivated or non-live vaccinations. Healthy individuals who received a single 320 mg dose of bimekizumab two weeks prior to vaccination with an inactivated seasonal influenza vaccine had similar antibody responses compared to individuals who did not receive bimekizumab prior to vaccination.

Excipients

This medicinal product contains less than 1 mmol (23 mg) sodium per dose, that is to say essentially “sodium free”.

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed.

There is no direct evidence for the role of IL-17A or IL-17F in the expression of CYP450 enzymes. The formation of some CYP450 enzymes is suppressed by increased levels of cytokines during chronic inflammation. Thus, anti-inflammatory treatments, such as with the IL-17A and IL-17F inhibitor bimekizumab, may result in normalisation of CYP450 levels with accompanying lower exposure of CYP450-metabolised medicinal products. Therefore, a clinically relevant effect on CYP450 substrates with a narrow therapeutic index, in which the dose is individually adjusted (e.g. warfarin) cannot be excluded. On initiation of bimekizumab therapy in patients being treated with these types of medicinal products, therapeutic monitoring should be considered.

Population pharmacokinetic (PK) data analyses indicated that concomitant administration of conventional disease modifying antirheumatic drugs (cDMARDs) including methotrexate or prior exposure to biologics have no clinically relevant impact on the clearance of bimekizumab.

Live vaccines should not be given concurrently with bimekizumab (see section 4.4).

4.6 Fertility, pregnancy and lactation

Women of childbearing potential

Women of childbearing potential should use an effective method of contraception during treatment and for at least 17 weeks after treatment.

Pregnancy

There is a limited amount of data on the use of bimekizumab in pregnant women. Animal studies do not indicate direct or indirect harmful effects with respect to pregnancy, embryonic/foetal development, parturition or postnatal development (see section 5.3). As a precautionary measure, it is preferable to avoid the use of Bimzelx during pregnancy.

Breast-feeding

It is unknown whether bimekizumab is excreted in human milk. A risk to the newborn/infant cannot be excluded. A decision must be made whether to discontinue breast-feeding or to discontinue/abstain from Bimzelx therapy taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman.

Fertility

The effect of bimekizumab on human fertility has not been evaluated. Animal studies do not indicate direct or indirect harmful effects with respect to fertility (see section 5.3).

4.7 Effects on ability to drive and use machines

Bimzelx has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

Summary of the safety profile

A total of 5862 patients have been treated with bimekizumab in blinded and open-label clinical studies in plaque psoriasis (PSO), psoriatic arthritis (PsA), axial spondyloarthritis (nr-axSpA and AS) and hidradenitis suppurativa (HS) representing 11468.6 patient-years of exposure. Of these, over 4660 patients were exposed to bimekizumab for at least one year. Overall, the safety profile of bimekizumab is consistent across all indications.

The most frequently reported adverse reactions were upper respiratory tract infections (14.5%, 14.6%, 16.3%, 8.8% in plaque psoriasis, psoriatic arthritis, axial spondyloarthritis (axSpA) and hidradenitis suppurativa respectively) and oral candidiasis (7.3%, 2.3%, 3.7%, 5.6% in PSO, PsA, axSpA and HS respectively).

Tabulated list of adverse reactions

Adverse reactions from clinical studies (Table 1) are classified by MedDRA System Organ Class and frequency, using the following convention: very common ($\geq 1/10$), common ($\geq 1/100$ to $< 1/10$), uncommon ($\geq 1/1,000$ to $< 1/100$), rare ($\geq 1/10,000$ to $< 1/1,000$), very rare ($< 1/10,000$), not known (cannot be estimated from the available data).

Table 1: List of adverse reactions

System Organ Class	Frequency	Adverse reaction
Infections and infestations	Very common	Upper respiratory tract infections
	Common	Oral candidiasis, Tinea infections, Ear infections, Herpes simplex infections, Oropharyngeal candidiasis, Gastroenteritis, Folliculitis, Vulvovaginal mycotic infection (including vulvovaginal candidiasis)
	Uncommon	Mucosal and cutaneous candidiasis (including oesophageal candidiasis), Conjunctivitis
Blood and lymphatic system disorders	Uncommon	Neutropenia
Nervous System disorders	Common	Headache
Gastrointestinal disorders	Uncommon	Inflammatory bowel disease
Skin and subcutaneous tissue disorders	Common	Rash, dermatitis and eczema, Acne
General disorders and administration site conditions	Common	Injection site reactions ^a , Fatigue
^a) Includes: injection site erythema, reaction, oedema, pain, swelling.		

Description of selected adverse reactions

Infections

In the placebo-controlled period of Phase III clinical studies in plaque psoriasis, infections were reported in 36.0% of patients treated with bimekizumab for up to 16 weeks compared with 22.5% of patients treated with placebo. Serious infections occurred in 0.3% of patients treated with bimekizumab and 0% treated with placebo.

The majority of infections consisted of non-serious mild to moderate upper respiratory tract infections such as nasopharyngitis. There were higher rates of oral and oropharyngeal candidiasis in patients treated with bimekizumab consistent with the mechanism of action (7.3% and 1.2% respectively compared to 0% for placebo-treated patients). More than 98% of cases were non-serious, mild or moderate in severity, and did not require treatment discontinuation. A slightly higher incidence of oral candidiasis was reported in patients < 70 kg (8.5% versus 7.0% in patients ≥ 70 kg).

Over the entire treatment period of Phase III studies in plaque psoriasis, infections were reported in 63.2% of patients treated with bimekizumab (120.4 per 100 patient-years). Serious infections were reported in 1.5% of patients treated with bimekizumab (1.6 per 100 patient-years) (see section 4.4).

Infection rates observed in PsA and axSpA (nr-axSpA and AS) Phase III clinical studies were similar to those observed in plaque psoriasis apart from oral and oropharyngeal candidiasis rates in patients treated with bimekizumab, which were lower at 2.3% and 0% respectively in PsA and 3.7% and 0.3%

respectively in axSpA compared to 0% with placebo.

Infection rates observed in HS Phase III clinical studies were similar to those observed in other indications. In the placebo-controlled period, oral and oropharyngeal candidiasis rates in patients treated with bimekizumab were 7.1% and 0% respectively compared to 0% with placebo.

Neutropenia

Neutropenia was observed with bimekizumab in phase III clinical studies in plaque psoriasis. Over the entire treatment period of Phase III studies, neutropenia grade 3/4 were observed in 1% of patients treated with bimekizumab.

The frequency of neutropenia in PsA, axSpA (nr-axSpA and AS) and HS clinical studies was similar to that observed in plaque psoriasis studies.

Most cases were transient and did not require treatment discontinuation. No serious infections were associated with neutropenia.

Hypersensitivity

Serious hypersensitivity reactions including anaphylactic reactions have been observed with IL-17 inhibitors.

Immunogenicity

Plaque psoriasis

Approximately 45% of plaque psoriasis patients treated with bimekizumab up to 56 weeks at the recommended dosing regimen (320 mg every 4 weeks up to week 16 and 320 mg every 8 weeks thereafter) developed anti-drug antibodies. Of the patients who developed anti-drug antibodies, approximately 34% (16% of all patients treated with bimekizumab) had antibodies that were classified as neutralising.

Psoriatic arthritis

Approximately 31% of patients with psoriatic arthritis treated with bimekizumab at the recommended dosing regimen (160 mg every 4 weeks) up to 16 weeks had anti-drug antibodies. Of the patients with anti-drug antibodies, about 33% (10% of all patients treated with bimekizumab) had antibodies that were classified as neutralizing. By week 52, approximately 47% of biologic disease-modifying anti-rheumatic drug (bDMARD) treatment naïve patients with psoriatic arthritis in the BE OPTIMAL study treated with bimekizumab at the recommended dosing regimen (160 mg every 4 weeks) had anti-drug antibodies. Of the patients with anti-drug antibodies, about 38% (18% of all patients in the BE OPTIMAL study treated with bimekizumab) had antibodies that were classified as neutralizing.

Axial spondyloarthritis (nr-axSpA and AS)

Approximately 57% of patients with nr-axSpA treated with bimekizumab up to 52 weeks at the recommended dosing regimen (160 mg every 4 weeks) had anti-drug antibodies. Of the patients with anti-drug antibodies, approximately 44% (25% of all patients treated with bimekizumab) had antibodies that were classified as neutralizing.

Approximately 44% of patients with AS treated with bimekizumab up to 52 weeks at the recommended dosing regimen (160 mg every 4 weeks) had anti-drug antibodies. Of the patients with anti-drug antibodies, approximately 44% (20% of all patients treated with bimekizumab) had antibodies that were classified as neutralizing.

Hidradenitis suppurativa

Approximately 59% of HS patients treated with bimekizumab up to 48 weeks at the recommended dosing regimen (320 mg every 2 weeks up to Week 16 and 320 mg every 4 weeks thereafter) developed anti-drug antibodies. Of the patients who developed anti-drug antibodies, approximately 63% (37% of all patients treated with bimekizumab) had antibodies that were classified as neutralizing.

Across indications, no clinically meaningful impact on clinical response was associated with anti-bimekizumab antibodies development and an association between immunogenicity and treatment emergent adverse events has not been clearly established.

Elderly patients (≥65 years)

Exposure is limited in elderly subjects.

Elderly patients may be more likely to experience certain adverse reactions such as oral candidiasis, dermatitis and eczema when using bimekizumab.

In the placebo-controlled period of Phase III clinical studies in plaque psoriasis, oral candidiasis was observed in 18.2% of patients ≥65 years *versus* 6.3% in <65 years, dermatitis and eczema in 7.3% of patients ≥65 years *versus* 2.8% in <65 years.

In the placebo-controlled period of Phase III clinical studies in psoriatic arthritis, oral candidiasis was observed in 7.0% of patients ≥65 years *versus* 1.6% in <65 years, dermatitis and eczema in 1.2% of patients ≥65 years *versus* 2.0% in <65 years.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via **the national reporting system** listed in [Appendix V](#).

4.9 Overdose

Single doses of 640 mg intravenously or 640 mg subcutaneously, followed by 320 mg subcutaneously every two weeks for five doses have been administered in clinical studies without dose-limiting toxicity. In the event of overdose, it is recommended that the patient be monitored for any signs and symptoms of adverse reactions and appropriate symptomatic treatment be instituted immediately.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Immunosuppressants, interleukin inhibitors, ATC code: L04AC21

Mechanism of action

Bimekizumab is a humanised IgG1/κ monoclonal antibody that selectively binds with high affinity to IL-17A, IL-17F and IL-17AF cytokines, blocking their interaction with the IL-17RA/IL-17RC receptor complex. Elevated concentrations of IL-17A and IL-17F have been implicated in the pathogenesis of several immune-mediated inflammatory diseases including plaque psoriasis, psoriatic arthritis, axial spondyloarthritis and hidradenitis suppurativa. IL-17A and IL-17F cooperate and/or synergize with other inflammatory cytokines to induce inflammation. IL-17-F is produced in significant amount by innate immune cells. This production can be independent of IL-23. Bimekizumab inhibits the proinflammatory cytokines, resulting in the normalization of skin inflammation and substantial decrease of local and systemic inflammation, and as a consequence improvement in clinical signs and symptoms associated with psoriasis, psoriatic arthritis, axial

spondyloarthritis and hidradenitis suppurativa. From *in vitro* models, bimekizumab was shown to inhibit psoriasis-related gene expression, cytokine production, the migration of inflammatory cells and pathological osteogenesis to a greater extent than inhibition of IL-17A alone.

Clinical efficacy and safety

Plaque psoriasis

The safety and efficacy of bimekizumab was evaluated in 1,480 patients with moderate to severe plaque psoriasis in three Phase 3 multicenter, randomised, placebo and/or active comparator-controlled studies. Patients were at least 18 years of age, had a Psoriasis Area and Severity Index (PASI) score ≥ 12 and Body Surface Area (BSA) affected by psoriasis (PSO) $\geq 10\%$, an Investigators Global Assessment (IGA) score ≥ 3 on a 5-point scale and were candidates for systemic psoriasis therapy and/or phototherapy. The efficacy and safety of bimekizumab were evaluated *versus* placebo and ustekinumab (BE VIVID – PS0009), *versus* placebo (BE READY – PS0013) and *versus* adalimumab (BE SURE - PS0008).

The BE VIVID study evaluated 567 patients for 52 weeks where patients were randomised to receive either bimekizumab 320 mg every 4 weeks, ustekinumab (45 mg or 90 mg, depending on patient weight, at baseline and week 4 and then every 12 weeks), or placebo for an initial 16 weeks, followed by bimekizumab 320 mg every 4 weeks.

The BE READY study evaluated 435 patients for 56 weeks. Patients were randomised to receive bimekizumab 320 mg every 4 weeks or placebo. At week 16, patients who achieved a PASI 90 response entered the 40-week randomised withdrawal period. Patients initially randomised to bimekizumab 320 mg every 4 weeks were re-randomised to either bimekizumab 320 mg every 4 weeks or bimekizumab 320 mg every 8 weeks or placebo (i.e. withdrawal of bimekizumab). Patients initially randomised to placebo continued to receive placebo provided they were PASI 90 responders. Patients who did not achieve a PASI 90 response at week 16 entered an open-label escape arm and received bimekizumab 320 mg every 4 weeks for 12 weeks. Patients who relapsed (did not achieve PASI 75 response) during the randomised withdrawal period also entered the 12-week escape arm.

The BE SURE study evaluated 478 patients for 56 weeks. Patients were randomised to receive either bimekizumab 320 mg every 4 weeks through week 56, bimekizumab 320 mg every 4 weeks through week 16 followed by bimekizumab 320 mg every 8 weeks through week 56 or adalimumab as per labeling recommendation through Week 24 followed by bimekizumab 320 mg every 4 weeks through week 56.

Baseline characteristics were consistent across all 3 studies: patients were predominantly male (70.7%) and white (84.1%), with a mean age of 45.2 years (18 to 83 years), and 8.9% were ≥ 65 years of age. The median baseline BSA was 20%, the median baseline PASI score was 18 and the baseline IGA score was severe in 33% of patients. The median baseline scores for Patient Symptoms Diary (PSD) pain, itch and scaling items ranged between 6 and 7 on a 0-10 points scale and the median baseline Dermatology Life Quality Index (DLQI) total score was 9.

Across all 3 studies, 38% of patients had received a prior biologic therapy; 23% had received at least one anti-IL17 agent (primary anti-IL17 failures were excluded) and 13% had received at least one TNF-antagonist. Twenty-two percent were naïve to any systemic therapy (including non-biologic and biologic) and 39% of patients had received prior phototherapy or photochemotherapy.

The efficacy of bimekizumab was evaluated with respect to impact on skin disease overall, specific body locations (scalp, nails, palms and soles), patient reported symptoms and impact on quality of life. The two co-primary endpoints in all 3 studies were the proportion of patients who achieved 1) a PASI 90 response and 2) an IGA “clear or almost clear” (IGA 0/1 with at least two points improvement from baseline) response at week 16. PASI 100, IGA 0 response at week 16 and PASI 75 response at week 4 were secondary endpoints in all 3 studies.

Skin disease overall

Treatment with bimekizumab resulted in significant improvement across efficacy endpoints compared to placebo, ustekinumab or adalimumab at week 16. The main efficacy results are shown in Table 2.

Table 2: Summary of clinical responses in BE VIVID, BE READY and BE SURE

	BE VIVID			BE READY		BE SURE	
	Placebo (N= 83)	Bimekizumab 320 mg Q4W (N= 321)	Ustekinumab (N=163)	Placebo (N= 86)	Bimekizumab 320 mg Q4W (N= 349)	Bimekizumab 320 mg Q4W (N= 319)	Adalimumab (N= 159)
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
PASI 100 Week 16	0 (0.0)	188 (58.6) ^a	34 (20.9)	1 (1.2)	238 (68.2) ^a	194 (60.8) ^a	38 (23.9)
PASI 90 Week 16	4 (4.8)	273 (85.0) ^{a, b}	81 (49.7)	1 (1.2)	317 (90.8) ^a	275 (86.2) ^a	75 (47.2)
PASI 75 Week 4	2 (2.4)	247 (76.9) ^{a, b}	25 (15.3)	1 (1.2)	265 (75.9) ^a	244 (76.5) ^a	50 (31.4)
Week 16	6 (7.2)	296 (92.2)	119 (73.0)	2 (2.3)	333 (95.4)	295 (92.5)	110 (69.2)
IGA 0 Week 16	0 (0.0)	188 (58.6) ^a	36 (22.1)	1 (1.2)	243 (69.6) ^a	197 (61.8)	39 (24.5)
IGA 0/1 Week 16	4 (4.8)	270 (84.1) ^{a, b}	87 (53.4)	1 (1.2)	323 (92.6) ^a	272 (85.3) ^a	91 (57.2)
Absolute PASI ≤ 2 Week 16	3 (3.6)	273 (85.0)	84 (51.5)	1 (1.2)	315 (90.3)	280 (87.8)	86 (54.1)
PSD Pain improvement ≥4 (N) Week 16	(N=48) 5 (10.4)	(N=190) 140 (73.7)	(N=90) 54 (60.0)	(N=49) 0 (0.0)	(N=209) 148 (70.8)	(N=222) 143 (64.4)	(N=92) 43 (46.7)
PSD Itch improvement ≥4 (N) Week 16	(N=53) 6 (11.3)	(N=222) 151 (68.0)	(N=104) 57 (54.8)	(N=60) 0 (0.0)	(N=244) 161 (66.0)	(N=248) 153 (61.7)	(N=107) 42 (39.3)
PSD Scaling improvement ≥4 (N) Week 16	(N=56) 6 (10.7)	(N=225) 171 (76.0)	(N=104) 59 (56.7)	(N=65) 1 (1.5)	(N=262) 198 (75.6)	(N=251) 170 (67.7)	(N= 109) 42 (38.5)

Bimekizumab 320 mg Q4W= bimekizumab every 4 weeks. Non-Responder Imputation (NRI) is used.

IGA 0/1 response was defined as Clear (0) or Almost Clear (1) with at least a 2-category improvement from Baseline at week 16. IGA 0 response was defined as Clear (0) with at least a 2-category improvement from Baseline at week 16.

PSD is a Patient Symptoms Diary, also referred to as Psoriasis Symptoms and Impacts Measure (P-SIM), measuring psoriasis symptom severity on a scale from 0 (no symptoms) to 10 (very severe symptoms). Response is defined as a decrease ≥4 from baseline to week 16 for pain, itch and scaling on a scale from 0 to 10.

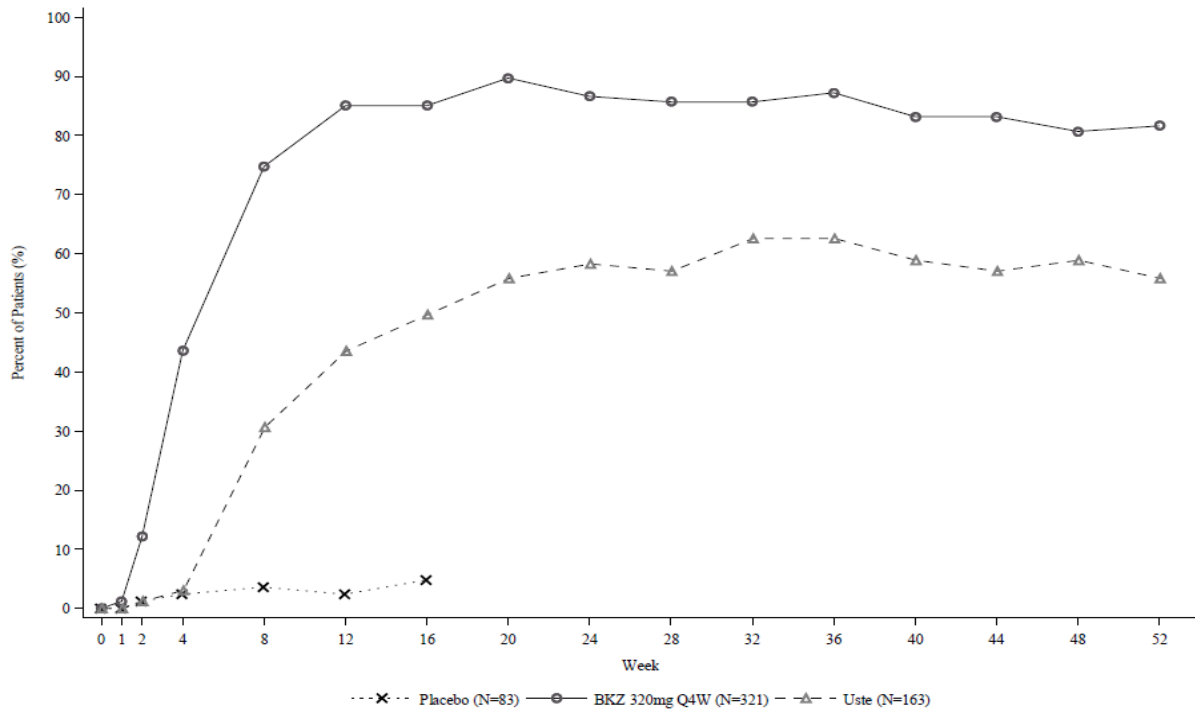
a) p<0.001 versus placebo (BE VIVID and BE READY), versus adalimumab (BE SURE), adjusted for multiplicity.

b) p<0.001 versus ustekinumab (BE VIVID), adjusted for multiplicity.

Bimekizumab was associated with a rapid onset of efficacy. In BE VIVID, at week 2 and week 4, PASI 90 response rates were significantly higher for bimekizumab-treated patients (12.1% and 43.6% respectively) compared to placebo (1.2% and 2.4% respectively) and ustekinumab (1.2% and 3.1% respectively).

In the BE VIVID study, at week 52, bimekizumab-treated patients (every 4 weeks) achieved significantly higher response rates than the ustekinumab-treated patients on the endpoints of PASI 90 (81.9% bimekizumab vs 55.8% ustekinumab, p<0.001), IGA 0/1 (78.2% bimekizumab vs 60.7% ustekinumab, p<0.001) and PASI 100 (64.5% bimekizumab vs 38.0% ustekinumab).

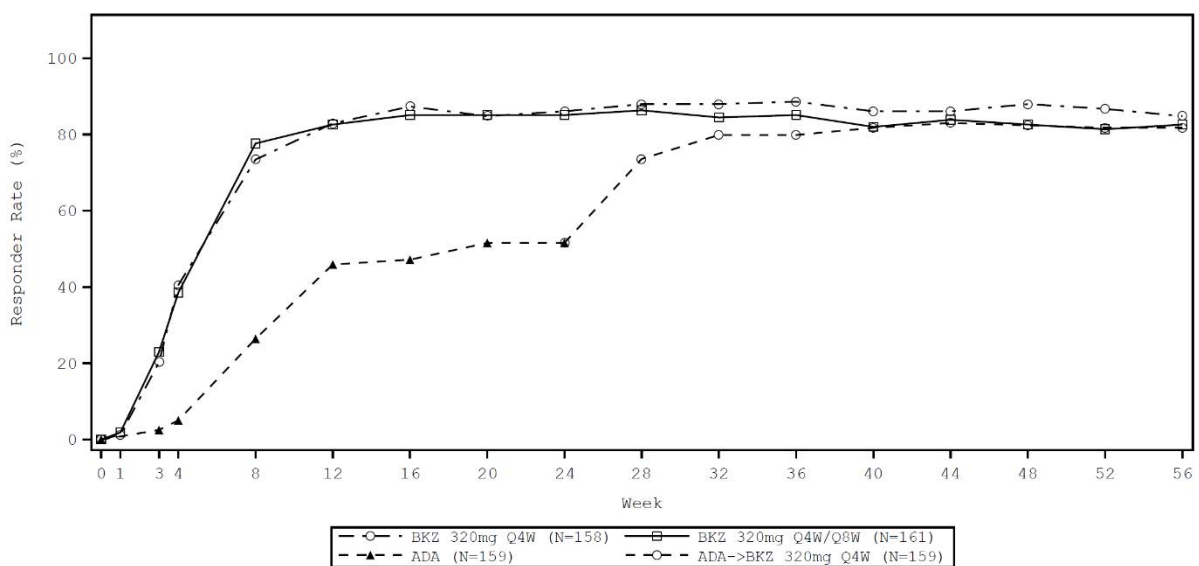
Figure 1: PASI 90 responder rates over time in BE VIVID



BKZ 320 mg Q4W=bimekizumab every 4 weeks; Uste=ustekinumab. NRI is used.

In the BE SURE study at week 24, a significantly higher percentage of patients treated with bimekizumab (Q4W/Q4W and Q4W/Q8W combined dosing arms) achieved PASI 90 and IGA 0/1 responses as compared with adalimumab (85.6% and 86.5% respectively vs 51.6% and 57.9% respectively, $p < 0.001$). At week 56, 70.2% of patients treated with bimekizumab Q8W achieved a PASI 100 response. Among the 65 adalimumab non-responders at week 24 (< PASI 90), 78.5% achieved a PASI 90 response after 16 weeks of treatment with bimekizumab. The safety profile observed in patients who switched from adalimumab to bimekizumab without a wash-out period was similar to patients who initiated bimekizumab after wash out of prior systemic therapies.

Figure 2: PASI 90 responder rates over time in BE SURE



BKZ 320 mg Q4W = bimekizumab every 4 weeks; BKZ 320 mg Q8W = bimekizumab every 8 weeks; ADA= adalimumab. Patients in the BKZ Q4W/Q8W group switched from Q4W to Q8W dosing at week 16. Patients in the ADA/BKZ 320 mg Q4W group switched from ADA to BKZ Q4W at week 24. NRI is used.

The efficacy of bimekizumab was demonstrated regardless of age, gender, race, disease duration, body weight, PASI baseline severity and previous treatment with a biologic. Bimekizumab was efficacious in prior biologic exposed patients, including anti-TNF / anti IL-17 and in systemic treatment-naïve patients. Efficacy in patients with primary failure to anti-IL17 has not been investigated.

Based on population PK/ PD analysis and supported by clinical data, patients with higher body weight (≥ 120 kg) who did not achieve complete skin clearance at week 16 benefited from continued bimekizumab 320 mg every four weeks (Q4W) after the initial 16 weeks of treatment. In the BE SURE study, patients received bimekizumab 320 mg Q4W through week 16, followed by either Q4W or every eight weeks (Q8W) dosing through week 56, regardless of responder status at week 16. Patients in the ≥ 120 kg group (N=37) on the Q4W maintenance regimen showed greater improvement in PASI100 between week 16 (23.5%) and week 56 (70.6%) compared to those on the Q8W maintenance regimen (week 16: 45.0% vs week 56: 60.0%).

Improvements were observed in psoriasis involving the scalp, nails, palms and soles in patients treated with bimekizumab at week 16 (see Table 3).

Table 3: Scalp, palmoplantar and nail responses in BE VIVID, BE READY and BE SURE at week 16

	BE VIVID			BE READY		BE SURE	
	Placebo	Bimekizumab 320 mg Q4W	Ustekinumab	Placebo	Bimekizumab 320 mg Q4W	Bimekizumab 320 mg Q4W	Adalimumab
Scalp IGA (N)^a	(72)	(285)	(146)	(74)	(310)	(296)	(138)
Scalp IGA 0/1, n (%)	11 (15.3)	240 (84.2) ^b	103 (70.5)	5 (6.8)	286 (92.3) ^b	256 (86.5)	93 (67.4)
pp-IGA (N)^a	(29)	(105)	(47)	(31)	(97)	(90)	(34)
pp-IGA 0/1, n (%)	7 (24.1)	85 (81.0)	39 (83.0)	10 (32.3)	91 (93.8)	75 (83.3)	24 (70.6)
mNAPSI 100 (N)^a	(51)	(194)	(109)	(50)	(210)	(181)	(95)
mNAPSI 100, n (%)	4 (7.8)	57 (29.4)	15 (13.8)	3 (6.0)	73 (34.8)	54 (29.8)	21 (22.1)

Bimekizumab 320 mg Q4W= bimekizumab every 4 weeks. Non responder imputation (NRI) is used.

Scalp IGA 0/1 and pp-IGA 0/1 responses were defined as Clear (0) or Almost Clear (1) with ≥ 2 category improvement relative to Baseline.

^{a)} Include only patients with a scalp Investigator Global Assessment (IGA) of 2 or greater, a palmoplantar IGA of 2 or greater and a modified Nail Psoriasis and Severity Index (mNAPSI) score > 0 at baseline.

^{b)} $p < 0.001$ versus placebo, adjusted for multiplicity

Scalp IGA and palmoplantar IGA responses in bimekizumab-treated patients were maintained through week 52 / 56. Nail psoriasis continued to improve beyond week 16. In BE VIVID, at week 52, 60.3% of patients treated with bimekizumab 320 mg every 4 weeks achieved complete nail clearance (mNAPSI 100). In BE READY, at week 56, 67.7% and 69.8% of week 16 PASI 90 responders achieved complete nail clearance with bimekizumab 320 mg every 8 weeks and bimekizumab 320 mg every 4 weeks respectively.

Maintenance of response

Table 4: Maintenance of responses with bimekizumab at week 52 in PASI100, PASI90, IGA 0/1 and Absolute PASI ≤ 2 responders at week 16*

PASI 100		PASI 90		IGA 0/1		Absolute PASI ≤ 2	
320mg Q4W (N=355) n (%)	320mg Q8W (N=182) n (%)	320mg Q4W (N=516) n (%)	320mg Q8W (N=237) n (%)	320mg Q4W (N=511) n (%)	320mg Q8W (N=234) n (%)	320mg Q4W (N=511) n (%)	320mg Q8W (N= 238) n (%)
295 (83.1)	161 (88.5)	464 (89.9)	214 (90.3)	447 (87.5)	214 (91.5)	460 (90.0)	215 (90.3)

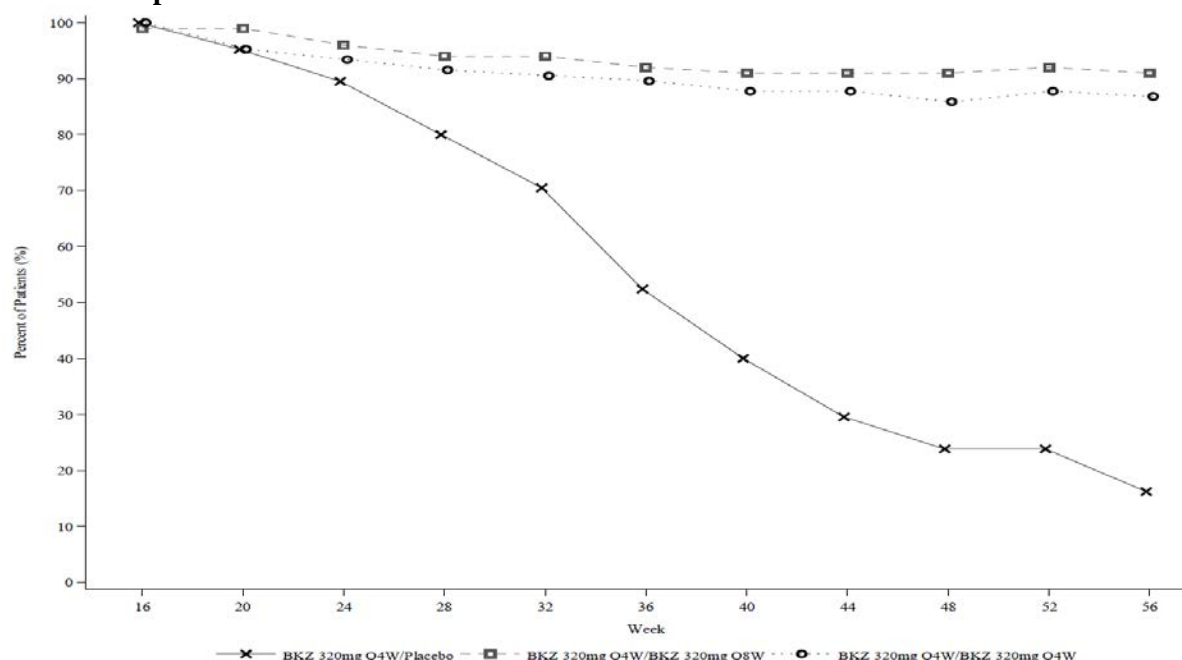
* Integrated analysis of BE VIVID, BE READY and BE SURE. NRI is used.

320 mg Q4W: bimekizumab 320 mg every 4 weeks followed by bimekizumab 320 mg every 4 weeks from week 16.

320 mg Q8W: bimekizumab 320 mg every 4 weeks followed by bimekizumab 320 mg every 8 weeks from week 16.

Durability of response (after bimekizumab discontinuation)

Figure 3: PASI 90 responder rates over time for PASI 90 responders at week 16 – Randomized withdrawal period in BE READY



NRI is used.

At week 16, 105 study participants started the Randomized-Withdrawal Period in the bimekizumab 320 mg Q4W/placebo group, 100 in the bimekizumab 320 mg Q4W/Q8W group, and 106 in the bimekizumab 320 mg Q4W/Q4W group.

In BE READY, for PASI 90 responders at week 16 who were re-randomised to placebo and withdrawn from bimekizumab, the median time to relapse, defined as loss of PASI 75, was approximately 28 weeks (32 weeks after the last bimekizumab dose). Among these patients, 88.1% regained a PASI 90 response within 12 weeks of restarting treatment with bimekizumab 320 mg every 4 weeks.

Health-related Quality of Life / Patient reported outcomes

Across all 3 studies, a greater proportion of patients treated with bimekizumab experienced no impact of psoriasis on their quality of life as measured by the Dermatology Life Quality Index (DLQI) compared to placebo and active comparator-treated patients at week 16 (Table 5).

Table 5: Quality of life in study BE VIVID, BE READY and BE SURE

	BE VIVID			BE READY		BE SURE	
	Placebo (N= 83)	Bimekizumab 320 mg Q4W (N= 321)	Ustekinumab (N= 163)	Placebo (N= 86)	Bimekizumab 320 mg Q4W (N= 349)	Bimekizumab 320 mg Q4W (N= 319)	Adalimumab (N= 159)
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
DLQI 0/1^a Baseline	3 (3.6)	16 (5.0)	5 (3.1)	4 (4.7)	11 (3.2)	10 (3.1)	13 (8.2)
DLQI 0/1^a Week 16	10 (12.0)	216 (67.3)	69 (42.3)	5 (5.8)	264 (75.6)	201 (63.0)	74 (46.5)

^{a)} DLQI absolute score of 0 or 1 indicates no impact of the disease on health-related quality of life. NRI is used.

DLQI 0/1 responses continued to increase beyond week 16 and then were maintained through week 52 / 56. In BE VIVID, DLQI 0/1 response rate at week 52 was 74.8% in patients treated with bimekizumab 320 mg every 4 weeks. In BE SURE at week 56, 78.9% and 74.1% of patients had a DLQI 0/1 with bimekizumab 320 mg every 8 weeks and bimekizumab 320 mg every 4 weeks, respectively.

Phase 3b direct comparative study versus secukinumab

The efficacy and safety of bimekizumab were also evaluated in a double-blind study compared with secukinumab, an IL-17A inhibitor, (BE RADIANT - PS0015). Patients were randomized to receive bimekizumab (N=373, 320mg at Week 0, 4, 8, 12 and 16 (Q4W) followed by 320mg every 4 weeks (Q4W/Q4W) or 320 mg every 8 weeks (Q4W/Q8W)) or secukinumab (N=370, 300 mg at Weeks 0,1, 2, 3, 4 followed by 300 mg every 4 weeks). Baseline characteristics were consistent with a population of moderate to severe plaque psoriasis patients with a median BSA of 19% and a median PASI score of 18.

Bimekizumab-treated patients achieved significantly higher response rates compared to secukinumab for the primary endpoint of PASI100 (complete skin clearance) at Week 16. Significantly higher response rates were also achieved with bimekizumab for the secondary endpoint of PASI 100 at Week 48 (for both Q4W/Q4W and Q4W/Q8W regimens). Comparative PASI response rates are presented in Table 6.

Differences in response rates between bimekizumab and secukinumab-treated patients were noted as early as week 1 for PASI 75 (7.2% and 1.4% respectively) and as early as Week 2 for PASI 90 (7.5% and 2.4% respectively).

Table 6: PASI response rates from BE RADIANT - bimekizumab versus secukinumab

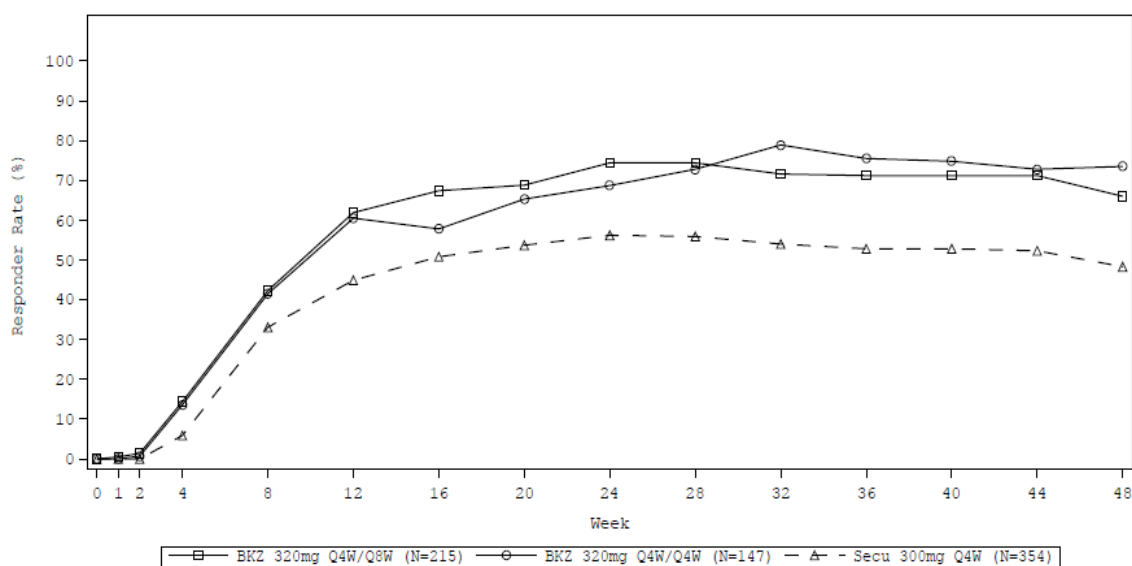
	Week 4		Week 16		Week 48 ^{a)}		
	Bimekizumab 320 mg Q4W (N=373) n (%)	Secukinumab (N=370) n (%)	Bimekizumab 320 mg Q4W (N=373) n (%)	Secukinumab (N=370) n (%)	Bimekizumab 320 mg Q4W/Q4W (N=147) n (%)	Bimekizumab 320 mg Q4W/Q8W (N=215) n (%)	Secukinumab (N=354) n (%)
PASI 100	52 (13.9)	23 (6.2)	230 (61.7)*	181 (48.9)	108 (73.5)*	142 (66.0)*	171 (48.3)
PASI 90	134 (35.9)	65 (17.6)	319 (85.5)	275 (74.3)	126 (85.7)	186 (86.5)	261 (73.7)
PASI 75	265 (71.0)*	175 (47.3)	348 (93.3)	337 (91.1)	134 (91.2)	196 (91.2)	301 (85.0)
Absolute PASI<2	151 (40.5)	75 (20.3)	318 (85.3)	283 (76.5)	127 (86.4)	186 (86.5)	269 (76.0)

^{a)} Data are from the Maintenance Set consisting of patients who received at least one dose of study treatment at Week 16 or later

*p<0.001 versus secukinumab, adjusted for multiplicity. NRI is used.

Bimekizumab and secukinumab PASI 100 response rates through Week 48 are presented in Figure 4.

Figure 4: PASI 100 response rate over time in BE RADIANT



NRI is used. Maintenance Set consisting of patients who received at least one dose of study treatment at Week 16 or later

The efficacy of bimekizumab in BE RADIANT was consistent with BE VIVID, BE READY and BE SURE.

Psoriatic arthritis (PsA)

The safety and efficacy of bimekizumab were evaluated in 1112 adult patients (at least 18 years of age) with active psoriatic arthritis (PsA) in two multicentre, randomized, double-blind, placebo-controlled studies (PA0010 - BE OPTIMAL and PA0011- BE COMPLETE). The BE OPTIMAL study included an active reference treatment arm (adalimumab) (N=140).

For both studies, patients had a diagnosis of active psoriatic arthritis for at least 6 months based on the Classification Criteria for Psoriatic Arthritis (CASPAR) and had active disease with tender joint count (TJC) ≥ 3 and swollen joint count (SJC) ≥ 3 . Patients had a diagnosis of PsA for a median of 3.6 years in BE OPTIMAL and 6.8 years in BE COMPLETE. Patients with each subtype of PsA were enrolled in these studies, including polyarticular symmetric arthritis, oligoarticular asymmetric arthritis, distal interphalangeal joint predominant, spondylitis predominant and arthritis mutilans. At baseline, 55.9% of patients had $\geq 3\%$ Body Surface Area (BSA) with active plaque psoriasis. 10.4% of patients had moderate to severe plaque psoriasis and 31.9% and 12.3% had enthesitis and dactylitis at baseline, respectively. The primary efficacy endpoint in both studies was the American College of Rheumatology (ACR) 50 response at Week 16.

The BE OPTIMAL study evaluated 852 patients not previously exposed to any biologic disease-modifying anti-rheumatic drug (bDMARD) for the treatment of psoriatic arthritis or psoriasis. Patients were randomized (3:2:1) to receive bimekizumab 160 mg every 4 weeks through Week 52 or placebo up to Week 16 followed by bimekizumab 160 mg every 4 weeks through Week 52 or an active reference treatment arm (adalimumab 40mg every 2 weeks) up to Week 52. In this study, 78.3% of patients had received prior treatment with ≥ 1 cDMARDs and 21.7% of patients had no prior treatment with cDMARDs. At baseline, 58.2% of patients were receiving concomitant methotrexate (MTX), 11.3% were receiving concomitant cDMARDs other than MTX, and 30.5% were receiving no cDMARDs.

The BE COMPLETE study evaluated 400 patients with an inadequate response (lack of efficacy) or intolerance to treatment with 1 or 2 tumour necrosis factor alpha inhibitors (anti-TNF α – IR) for either psoriatic arthritis or psoriasis. Patients were randomized (2:1) to receive bimekizumab 160 mg every 4 weeks or placebo up to Week 16. At baseline, 42.5% of patients were receiving concomitant MTX, 8.0% were receiving concomitant cDMARDs other than MTX, and 49.5% were receiving no

cDMARDs. In this study, 76.5% of participants had an inadequate response to 1 TNF α inhibitor, 11.3% had an inadequate response to 2 TNF α inhibitors and 12.3% were intolerant to TNF α inhibitors.

Signs and symptoms

In bDMARDs-naïve patients (BE OPTIMAL) and anti-TNF α IR patients (BE COMPLETE) treatment with bimekizumab resulted in significant improvement in signs and symptoms and measures of disease activity compared to placebo at Week 16, with similar response rates seen in both patient populations (see Table 7). Clinical responses were sustained up to Week 52 in BE OPTIMAL as assessed by ACR 20, ACR 50, ACR 70, MDA, PASI 90, PASI 100 and ACR 50 / PASI 100.

Table 7: Clinical response in study BE OPTIMAL and BE COMPLETE

	BE OPTIMAL (bDMARD-naïve)				BE COMPLETE (anti TNF α -IR)		
	Placebo (N=281) n (%)	BKZ 160mg Q4W (N=431) n (%)	Difference from placebo (95% CI) ^(d)	Reference Arm ^(e) (Adalimumab) (N=140) ^e n (%)	Placebo (N=133) n (%)	BKZ 160 mg Q4W (N=267) n (%)	Difference from placebo (95% CI) ^(d)
ACR 20							
Week 16	67 (23.8)	268 (62.2)	38.3 (31.4, 45.3)	96 (68.6)	21 (15.8)	179 (67.0)	51.2 (42.1, 60.4)
Week 24	-	282 (65.4)		99 (70.7)			
Week 52		307 (71.2)		102 (72.9)			
ACR 50							
Week 16	28 (10.0)	189 (43.9)*	33.9 (27.4, 40.4)	64 (45.7)	9 (6.8)	116 (43.4)*	36.7 (27.7, 45.7)
Week 24	-	196 (45.5)		66 (47.1)			
Week 52		235 (54.5)		70 (50.0)			
ACR 70							
Week 16	12 (4.3)	105 (24.4)	20.1 (14.7, 25.5)	39 (27.9)	1 (0.8)	71 (26.6)	25.8 (18.2, 33.5)
Week 24	-	126 (29.2)		42 (30.0)			
Week 52		169 (39.2)		53 (37.9)			
MDA^(a)							
Week 16	37 (13.2)	194 (45.0)*	31.8 (25.2, 38.5)	63 (45.0)	8 (6.0)	118 (44.2)*	38.2 (29.2, 47.2)
Week 24	-	209 (48.5)		67 (47.9)			
Week 52		237 (55.0)		74 (52.9)			
Patients with ≥3% BSA	(N=140)	(N=217)		(N=68)	(N=88)	(N=176)	
PASI 90							
Week 16	4 (2.9)	133 (61.3)*	58.4 (49.9, 66.9)	28 (41.2)	6 (6.8)	121 (68.8)*	61.9 (51.5, 72.4)
Week 24	-	158 (72.8)		32 (47.1)			
Week 52		155 (71.4)		41 (60.3)			
PASI 100							
Week 16	3 (2.1)	103 (47.5)	45.3 (36.7, 54.0)	14 (20.6)	4 (4.5)	103 (58.5)	54.0 (43.1, 64.8)
Week 24	-	122 (56.2)		26 (38.2)			
Week 52		132 (60.8)		33 (48.5)			
ACR50/ PASI 100							
Week 16	0	60 (27.6)	NC (NC, NC)	11 (16.2)	1 (1.1)	59 (33.5)	32.4 (22.3, 42.5)
Week 24	-	68 (31.3)		17 (25.0)			
Week 52		102 (47.0)		24 (35.3)			
Patients with LDI>0^(b)	(N=47)	(N=90)					
Dactylitis free state^(b)							
Week 16	24 (51.1)	68 (75.6)***	24.5 (8.4, 40.6)				

Patients with LEI>0 ^(c)	(N=106)	(N=249)			
Enthesitis free state ^(c) Week 16	37 (34.9)	124 (49.8)**	14.9 (3.7, 26.1)		

ACR50/PASI100= composite ACR50 and PASI100 response. BKZ 160 mg Q4W= bimekizumab 160 mg every 4 weeks. CI= confidence interval. NC=Not calculable

(a) A patient was classified as achieving Minimal Disease Activity (MDA) when meeting 5 of the 7 following criteria: tender joint count ≤ 1 ; swollen joint count ≤ 1 ; Psoriasis Activity and Severity Index ≤ 1 or body surface area ≤ 3 ; patient pain visual analogue scale (VAS) ≤ 15 ; patient global disease activity VAS ≤ 20 ; Health Assessment Questionnaire Disability Index ≤ 0.5 ; tender enthesal points ≤ 1

(b) Based on pooled data from BE OPTIMAL and BE COMPLETE studies for patients with baseline Leeds Dactylitis Index (LDI) >0. Dactylitis free state is LDI=0

(c) Based on pooled data from BE OPTIMAL and BE COMPLETE studies for patients with baseline Leeds Enthesitis Index (LEI) >0. Enthesitis free state is LEI =0

(d) Unadjusted differences are shown

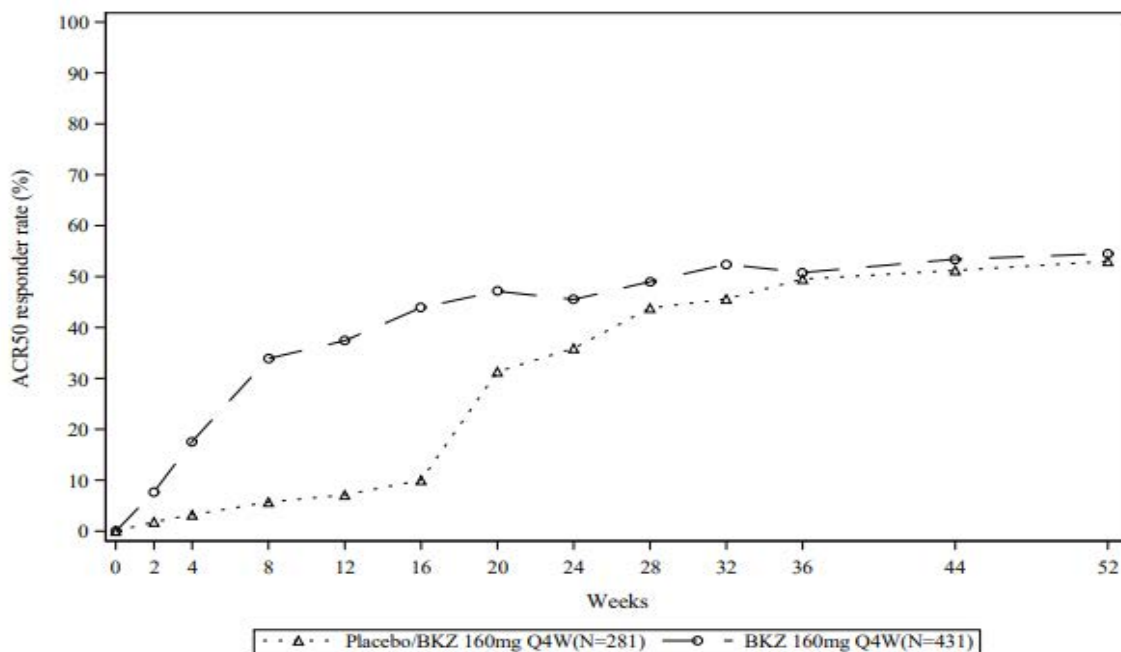
(e) No statistical comparison to bimekizumab or placebo performed

* p<0.001 versus placebo adjusted for multiplicity. ** p=0.008 versus placebo adjusted for multiplicity. *** p=0.002 versus placebo adjusted for multiplicity. NRI is used. Other endpoints at Week 16 and all endpoints at Week 24 and Week 52 were not part of the sequential testing hierarchy and any comparisons are nominal.

Improvements from baseline were shown in all individual ACR components with bimekizumab at Week 16 and were sustained up to Week 52 in BE OPTIMAL.

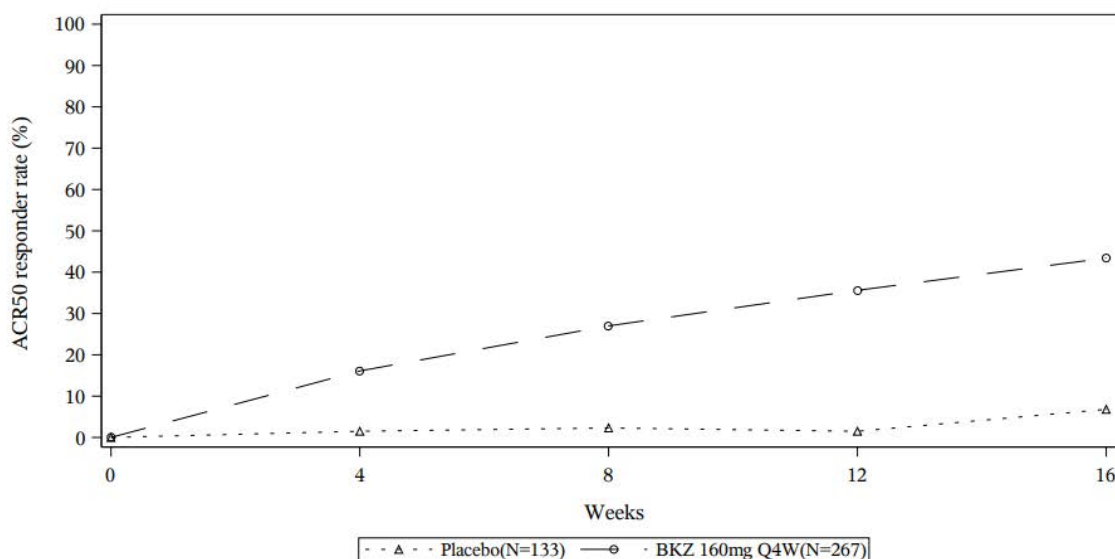
Treatment responses on bimekizumab were significantly greater than those on placebo as early as Week 2 for ACR 20 (BE OPTIMAL, 27.1% versus 7.8%, nominal p<0.001) and Week 4 for ACR 50 (BE OPTIMAL, 17.6% versus 3.2%, nominal p<0.001 and BE COMPLETE, 16.1% versus 1.5%, nominal p<0.001).

Figure 5: ACR 50 response over time up to Week 52 in BE OPTIMAL (NRI)



Patients on placebo switched to bimekizumab 160 mg Q4W at Week 16.

Figure 6: ACR 50 response over time up to Week 16 in BE COMPLETE (NRI)



For the bimekizumab-treated patients who achieved an ACR 50 response at Week 16 in BE OPTIMAL, 87.2% maintained this response at Week 52.

The efficacy and safety of bimekizumab were demonstrated regardless of age, gender, race, baseline body weight, baseline psoriasis involvement, baseline CRP, disease duration and prior cDMARDs use. In both studies, similar responses were observed with bimekizumab regardless of whether patients were on concomitant cDMARDs, including MTX, or not.

The modified Psoriatic Arthritis Response Criteria (PsARC) is a specific composite responder index comprising of tender joint count, swollen joints count, patient and physician global assessment. The proportion of patients achieving modified PsARC at Week 16 was higher in the bimekizumab-treated patients compared to placebo (80.3% versus 40.2% respectively in BE OPTIMAL and 85.4% versus 30.8% respectively in BE COMPLETE). PsARC response was sustained up to Week 52 in BE OPTIMAL.

Radiographic response

In BE OPTIMAL, inhibition of progression of structural damage was assessed radiographically and expressed as the change from baseline in the Van der Heijde modified total Sharp Score (vdHmTSS) and its components, the Erosion Score (ES) and the Joint Space Narrowing score (JSN) at Week 16 (see Table 8).

Table 8: Change in vdHmTSS in BE OPTIMAL at Week 16

	Placebo	BKZ 160mg Q4W	Difference from placebo (95% CI) ^{a)}
Population with elevated hs-CRP and/or at least 1 bone erosion at baseline	(N=227)	(N=361)	
Mean change from baseline (SE)	0.36 (0.10)	0.04 (0.05)*	-0.32 (-0.35, -0.30)
Overall population	(N=269)	(N=420)	
Mean change from baseline (SE)	0.32 (0.09)	0.04 (0.04)*	-0.26 (-0.29, -0.23)

*p =0.001 versus placebo. p-values are based on reference-based imputation using difference in LS Mean using an ANCOVA model with treatment, bone erosion at Baseline and region as fixed effects and Baseline score as a covariate.

Week 16 summary data is based on the first set of reads for the primary analysis.

^{a)} Unadjusted differences are shown

Bimekizumab significantly inhibited the progression of joint damage at Week 16 in both the population with elevated hs-CRP and/or at least 1 bone erosion at baseline and the overall population compared to placebo. While reference-based imputation was specified as the missing data handling method in the statistical testing procedure comparing bimekizumab versus placebo, changes from baseline were also calculated using standard multiple imputation in both the population with elevated hs-CRP and/or at least 1 bone erosion at baseline and the overall population at Week 16 in the bimekizumab arm (mean change from baseline 0.01 and 0.01 respectively) and the adalimumab arm (mean change from baseline -0.05 and -0.03 respectively). Inhibition of the progression of joint damage was sustained in both the population with elevated hs-CRP and/or at least 1 bone erosion at baseline and the overall population to Week 52 in both the bimekizumab arm (mean change from baseline 0.10 and 0.10 respectively) and the adalimumab arm (mean change from baseline -0.17 and -0.12 respectively).

The observed percentage of patients with no radiographic joint damage progression (defined as a change from baseline in mTSS of ≤ 0.5) from randomization to Week 52 was 87.9% (N=276/314) for bimekizumab and 84.8% (N=168/198) for placebo study participants switching to bimekizumab and 94.1% (N=96/102) for adalimumab in the population with elevated hs-CRP and/or at least 1 bone erosion. Similar rates were observed in the overall population (89.3% (N=326/365) for bimekizumab and 87.3% (N=207/237) for placebo study participants switching to bimekizumab and 94.1% (N=111/118) for adalimumab).

Physical function and other health-related outcomes

Both bDMARD-naïve (BE OPTIMAL) and anti-TNF α -IR (BE COMPLETE) patients receiving bimekizumab showed significant improvement from baseline in physical function compared to placebo patients at Week 16 ($p < 0.001$) as assessed by the HAQ-DI (LS Mean change from baseline: -0.3 versus -0.1 in BE OPTIMAL and -0.3 versus 0 in BE COMPLETE, respectively). In both studies, a greater proportion of patients achieved a clinically meaningful reduction of at least 0.35 in HAQ-DI score from baseline in the bimekizumab group compared with placebo at Week 16.

Bimekizumab-treated patients reported significant improvement from baseline in the Short Form-36 item Health Survey Physical Component Summary (SF-36 PCS) score at Week 16 compared to placebo (LS Mean change from baseline: 6.3 versus 1.9, $p < 0.001$ in BE OPTIMAL and 6.2 versus 0.1, $p < 0.001$ in BE COMPLETE).

In both studies, bimekizumab-treated patients reported meaningful reduction from baseline in fatigue as measured by the Functional Assessment of Chronic Illness Therapy (FACIT)-Fatigue score at Week 16 compared to placebo. Meaningful improvement from baseline was also observed in the Psoriatic Arthritis Impact of Disease-12 (PsAID-12) score in the bimekizumab-treated group compared to the placebo group at Week 16.

Patients with axial involvement at baseline, approximately 74% of patients, (defined as a Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) score ≥ 4) showed greater improvement from baseline in BASDAI compared with placebo at Week 16.

Improvements achieved at Week 16 in all measures of physical function and other health-related outcomes mentioned above (HAQ-DI, SF-36 PCS, FACIT-Fatigue, PsAID-12 scores and BASDAI) were sustained up to Week 52 in BE OPTIMAL.

In BE OPTIMAL, at Week 52, 65.5% of patients treated with bimekizumab achieved complete nail clearance (mNAPSI resolution in patients with mNAPSI higher than 0 at Baseline).

Axial spondyloarthritis (nr-axSpA and AS)

The efficacy and safety of bimekizumab was evaluated in 586 adult patients (at least 18 years of age) with active axial spondyloarthritis (axSpA) in two multicenter, randomized, double-blind, placebo-controlled studies, one in non-radiographic axial spondyloarthritis (nr-axSpA) and one in ankylosing spondylitis (AS), also known as radiographic axSpA. The primary endpoint in both studies was the percentage of patients achieving an Assessment of SpondyloArthritis International Society (ASAS) 40 response at Week 16. Consistent results were seen across both patient populations.

The BE MOBILE 1 study (AS0010) evaluated 254 patients with active nr-axSpA. Patients had axSpA (age of symptoms onset < 45 years) meeting the ASAS classification criteria and had active disease as defined by a Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) ≥ 4 and spinal pain ≥ 4 on a 0 to 10 numeric rating scale (NRS) (from BASDAI Item 2) and no evidence of radiographic changes in the sacroiliac joints that would meet the modified New York criteria for AS. Patients also had objective signs of inflammation as indicated by elevated C-reactive protein (CRP) level and/or evidence of sacroiliitis on Magnetic Resonance Imaging (MRI) as well as a history of inadequate response to 2 different non-steroidal anti-inflammatory drugs (NSAIDs) or intolerance or contraindication to NSAIDs. Patients were randomized (1:1) to receive bimekizumab 160 mg every 4 weeks up to Week 52 or placebo up to Week 16 followed by bimekizumab 160 mg every 4 weeks up to Week 52. At baseline, patients had symptoms of nr-axSpA for a mean of 9 years (median of 5.5 years). 10.6% of patients were previously treated with an anti-TNF α agent.

The BE MOBILE 2 study (AS0011) evaluated 332 patients with active AS determined by documented radiologic evidence (x-ray) fulfilling the Modified New York criteria for AS. Patients had active disease as defined by a BASDAI ≥ 4 and spinal pain ≥ 4 on a 0 to 10 numeric rating scale (NRS) (from BASDAI Item 2). Patients had to have a history of inadequate response to 2 different NSAIDs or intolerance or contraindication to NSAIDs. Patients were randomized (2:1) to receive bimekizumab 160 mg every 4 weeks up to Week 52 or placebo up to Week 16 followed by bimekizumab 160 mg every 4 weeks up to Week 52. At baseline, patients had symptoms of AS for a mean of 13.5 years (median of 11 years). 16.3% of patients were previously treated with an anti-TNF α agent.

Clinical response

Treatment with bimekizumab resulted in significant improvement in signs and symptoms and measures of disease activity compared to placebo at Week 16 in both nr-axSpA and AS patient populations (see Table 9). Clinical responses were sustained up to Week 52 in both patient populations as assessed by all the endpoints presented in Table 9.

Table 9: Clinical responses in BE MOBILE 1 and BE MOBILE 2

	BE MOBILE 1 (nr-axSpA)			BE MOBILE 2 (AS)		
	Placebo (N=126) n (%)	BKZ 160 mg Q4W (N=128) n (%)	Difference from placebo (95% CI) ^{a)}	Placebo (N=111) n (%)	BKZ 160 mg Q4W (N=221) n (%)	Difference from placebo (95% CI) ^{a)}
ASAS 40						
Week 16	27 (21.4)	61 (47.7)*	26.2 (14.9, 37.5)	25 (22.5)	99 (44.8)*	22.3 (11.5, 33.0)
Week 52		78 (60.9)			129 (58.4)	
ASAS 40 in anti-TNFα naives	(N=109)	(N= 118)		(N=94)	(N=184)	
Week 16	25 (22.9)	55 (46.6)	24.8 (12.4, 37.1)	22 (23.4)	84 (45.7)*	22.3 (10.5, 34.0)
Week 52		73 (61.9)			108 (58.7)	
ASAS 20						
Week 16	48 (38.1)	88 (68.8)*	30.7 (19.0, 42.3)	48 (43.2)	146 (66.1)*	22.8 (11.8, 33.8)
Week 52		94 (73.4)			158 (71.5)	
ASAS-partial remission						
Week 16	9 (7.1)	33 (25.8)*	18.6 (9.7, 27.6)	8 (7.2)	53 (24.0)*	16.8 (8.1, 25.5)
Week 52		38 (29.7)			66 (29.9)	
ASDAS-major improvement						
Week 16	9 (7.1)	35 (27.3)*	20.2 (11.2, 29.3)	6 (5.4)	57 (25.8)*	20.4 (11.7, 29.1)
Week 52		47 (36.7)			71 (32.1)	
BASDAI-50						
Week 16	27 (21.4)	60 (46.9)	25.3 (14.0, 36.6)	29 (26.1)	103 (46.6)	20.5 (9.6, 31.4)
Week 52		69 (53.9)			119 (53.8)	

BKZ 160 mg Q4W = bimekizumab 160 mg every 4 weeks. ASDAS = Ankylosing Spondylitis Disease Activity Score. NRI is used.

^{a)} Unadjusted differences are shown.

*p<0.001 versus placebo, adjusted for multiplicity.

The proportion of patients in BE MOBILE 1 reaching ASDAS <2.1 (combining ASDAS-inactive disease (ID) and ASDAS-low disease (LD)) at Week 16 was 46.1% in the bimekizumab group versus 21.1% in the placebo group (multiple imputation). At Week 52, 61.6% of patients in the bimekizumab group achieved an ASDAS <2.1, including 25.2% in inactive disease state (ASDAS <1.3).

The proportion of patients in BE MOBILE 2 reaching ASDAS <2.1 (combining ASDAS-ID and ASDAS-LD) at Week 16 was 44.8% in the bimekizumab group versus 17.4% in placebo group (multiple imputation). At Week 52, 57.1% of patients in the bimekizumab group achieved an ASDAS <2.1, including 23.4 % in inactive disease state (ASDAS <1.3).

All four ASAS 40 components (total spinal pain, morning stiffness, Bath Ankylosing Spondylitis Functional Index [BASFI] and Patient's Global Assessment of Disease Activity [PGADA]) were improved with bimekizumab treatment and contributed to the overall ASAS 40 response at week 16, and these improvements were sustained up to Week 52 in both patient populations.

Improvements in other measures of efficacy are shown in Table 10.

Table 10: Other measures of efficacy in BE MOBILE 1 and BE MOBILE 2

	BE MOBILE 1 (nr-axSpA)		BE MOBILE 2 (AS)	
	Placebo (N= 126)	BKZ 160 mg Q4W (N= 128)	Placebo (N= 111)	BKZ 160 mg Q4W (N=221)
Nocturnal spinal pain				
Baseline	6.7	6.9	6.8	6.6
Mean change from baseline at Week 16	-1.7	-3.6*	-1.9	-3.3*
Mean change from baseline at Week 52		-4.3		-4.1
BASDAI				
Baseline	6.7	6.9	6.5	6.5
Mean change from baseline at Week 16	-1.5	-3.1*	-1.9	-2.9*
Mean change from baseline at Week 52		-3.9		-3.6
BASMI				
Baseline	3.0	2.9	3.8	3.9
Mean change from baseline at Week 16	-0.1	-0.4	-0.2	-0.5**
Mean change from baseline at Week 52		-0.6		-0.7
hs-CRP (mg/L)				
Baseline (Geometric Mean)	5.0	4.6	6.7	6.5
Ratio to baseline at Week 16	0.8	0.4	0.9	0.4
Ratio to baseline at Week 52		0.4		0.3

BASMI = Bath Ankylosing Spondylitis Metrology Index. Hs-CRP = high sensitivity C-reactive protein MI is used.

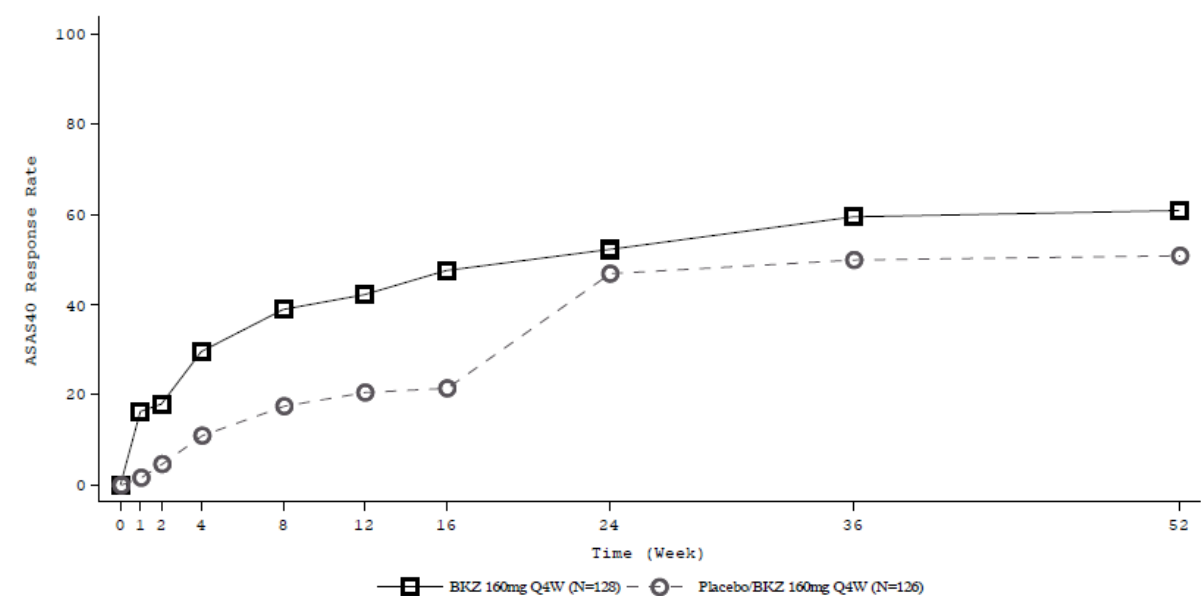
*p<0.001 reference-based imputation, versus placebo, adjusted for multiplicity. **p<0.01 reference-based imputation, versus placebo, adjusted for multiplicity.

Bimekizumab was associated with a rapid onset of efficacy in both nr-axSpA and AS patient population.

Treatment responses on bimekizumab-treated patients for ASAS 40 were greater than those on placebo as early as Week 1 in BE MOBILE 1 (16.4% vs. 1.6%, nominal p<0.001) and Week 2 in BE MOBILE 2 (16.7% vs. 7.2%, nominal p=0.019).

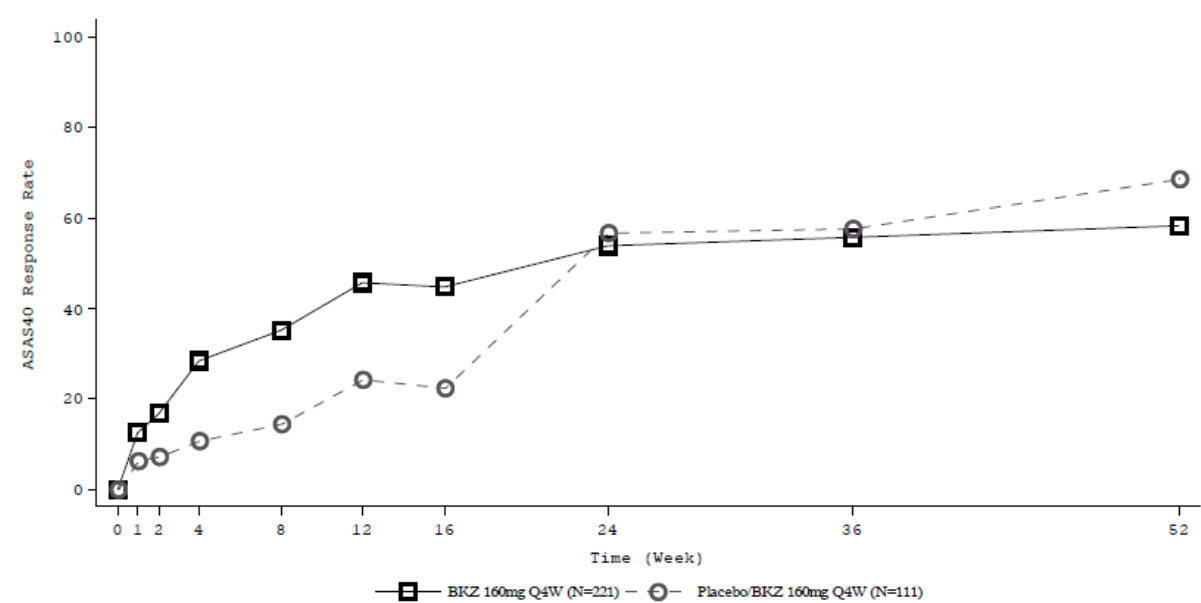
Bimekizumab was also associated with a rapid decrease in systemic inflammation as measured by hs-CRP levels as early as Week 2 in both nr-axSpA and AS patient populations, with nominal p-values <0.001 in both studies.

Figure 7: ASAS 40 response over time up to Week 52 in BE MOBILE 1 (NRI)



Patients on placebo switched to bimekizumab 160 mg Q4W at Week 16

Figure 8: ASAS 40 response over time up to Week 52 in BE MOBILE 2 (NRI)



Patients on placebo switched to Bimekizumab 160 mg Q4W at Week 16

In an integrated analysis of BE MOBILE 1 and BE MOBILE 2, of bimekizumab-treated patients who achieved an ASAS 40 response at Week 16, 82.1% maintained this response at Week 52.

The efficacy of bimekizumab was demonstrated regardless of age, gender, race, disease duration, baseline inflammation status, baseline ASDAS and concomitant cDMARDs. Similar response in ASAS 40 was seen in patients regardless of prior anti-TNF α exposure.

At Week 16, among patients with enthesitis at baseline, the proportion of patients (NRI) with enthesitis resolution as assessed by the Maastricht Ankylosing Spondylitis Enthesitis (MASES) index was greater with bimekizumab compared to placebo (BE MOBILE 1: 51.1% versus 23.9% and BE MOBILE 2: 51.5% versus 32.8%). The resolution of enthesitis with bimekizumab was sustained up to Week 52 in both studies (BE MOBILE 1: 54.3% and BE MOBILE 2: 50.8%).

Reduction of inflammation

Bimekizumab reduced inflammation as measured by hs-CRP (see Table 10) and as assessed by MRI in an imaging sub-study. Signs of inflammation were assessed by MRI at baseline and Week 16 and expressed as change from baseline in Spondyloarthritis Research Consortium of Canada (SPARCC) score for sacroiliac joints and Ankylosing Spondylitis spine Magnetic Resonance Image-activity (ASspiMRI-a score in the Berlin modification) for the spine. Reduction of inflammatory signs in both sacroiliac joints and the spine was observed in patients treated with bimekizumab as compared with placebo (see Table 11). Reduction of inflammation as measured by hs-CRP and as assessed by MRI was sustained to Week 52.

Table 11: Reduction of inflammation as assessed by MRI in BE MOBILE 1 and BE MOBILE 2

	BE MOBILE 1 (nr-axSpA)		BE MOBILE 2 (AS)	
	Placebo	BKZ 160 mg Q4W	Placebo	BKZ 160 mg Q4W
SPARCC score				
Mean change from baseline ^{a)} at week 16	-1.56 (N=62)	-6.15 (N=78)	0.59 (N=46)	-4.51 (N=81)
Mean change from baseline ^{a)} at week 52		-7.57 (N=67)		-4.67 (N=78)
ASspiMRI-a (Berlin modifications) score				
Mean change from baseline ^{a)} at week 16	0.03 (N=60)	-0.36 (N=74)	-0.34 (N=46)	-2.23 (N=81)
Mean change from baseline ^{a)} at week 52		-0.70 (N=65)		-2.38 (N=77)

^{a)} Change from baseline values are based on observed cases as assessed by central read of Week 52 dataset.

Physical function and other health-related outcomes

Patients treated with bimekizumab showed significant improvement from baseline in physical function as assessed by the BASFI compared to placebo (LS Mean change from baseline at Week 16 in BE MOBILE 1: -2.4 versus -0.9, $p<0.001$ and in BE MOBILE 2: -2.0 versus -1.0, $p<0.001$). Patients treated with bimekizumab reported significant improvement from baseline compared to placebo-treated patients in SF-36 PCS score (LS Mean change from baseline at Week 16 in BE MOBILE 1: 9.3 versus 5.4, $p<0.001$ and in BE MOBILE 2: 8.5 versus 5.2, $p<0.001$).

Patients treated with bimekizumab reported significant improvement from baseline in health-related quality of life as measured by the AS Quality of Life Questionnaire (ASQoL) compared to placebo (LS Mean change from baseline at Week 16 in BE MOBILE 1: -4.9 versus -2.3, $p<0.001$ and in BE MOBILE 2: -4.6 versus -3.0, $p<0.001$) as well as meaningful reduction in fatigue as assessed by the FACIT-Fatigue score (Mean change from baseline at Week 16 in BE MOBILE 1: 8.5 for bimekizumab versus 3.9 for placebo and in BE MOBILE 2: 8.4 for bimekizumab versus 5.0 for placebo).

Improvements achieved at Week 16 in all measures of physical function and other health-related outcomes mentioned above (BASFI, SF-36 PCS, ASQoL and FACIT-Fatigue scores) were sustained up to Week 52 in both studies.

Extra-articular manifestation

In pooled data from BE MOBILE 1 (nr-axSpA) and BE MOBILE 2 (AS), at Week 16, the proportion of patients developing a uveitis event was lower with bimekizumab (0.6%) compared to placebo (4.6%). The incidence of uveitis remained low with long-term treatment with bimekizumab (1.2/100 patient-years in the pooled phase 2/3 studies).

Hidradenitis suppurativa

The safety and efficacy of bimekizumab was evaluated in 1014 adult patients (at least 18 years of age) with moderate to severe Hidradenitis Suppurativa (HS) in two Phase 3 multicenter, randomized, double-blind, placebo-controlled studies (HS0003 – BE HEARD I and HS0004 – BE HEARD II). Patients had a diagnosis of HS for at least 6 months with Hurley Stage II or Hurley Stage III disease, and with ≥ 5 inflammatory lesions (i.e. number of abscesses plus number of inflammatory nodules) and had a history of inadequate response to a course of systemic antibiotics for the treatment of HS.

In both studies patients were randomized (2:2:2:1) to receive bimekizumab 320 mg every 2 weeks for 48 weeks (320 mg Q2W/Q2W) or bimekizumab 320 mg every 4 weeks for 48 weeks (320 mg Q4W/Q4W) or bimekizumab 320 mg every 2 weeks to Week 16 followed by 320 mg every 4 weeks up to Week 48 (320 mg Q2W/Q4W) or placebo to Week 16 followed by bimekizumab 320 mg every 2 weeks up to Week 48. Concomitant oral antibiotic use was allowed if the patient was on a stable dose

regimen of doxycycline, minocycline, or an equivalent systemic tetracycline for 28 days prior to baseline.

The primary efficacy endpoint in both studies was the Hidradenitis Suppurativa Clinical Response 50 (HiSCR₅₀) at Week 16, i.e. at least a 50% reduction in the total abscess and inflammatory nodule count with no increase in abscess or draining tunnel count relative to baseline.

Baseline characteristics were consistent across both studies and reflective of a population with moderate to severe HS. Patients had a median disease duration of 5.3 years (mean 8.0 years). The proportions of Hurley Stage II and Stage III patients were 55.7% (50.3% in HS0003 and 61.1% in HS0004) and 44.3% (49.7% in HS0003 and 38.9% in HS0004) respectively, and 8.5% were receiving concomitant antibiotic therapy for HS. The mean baseline Dermatology Life Quality Index (DLQI) total score was 11.4. 56.8% of patients were female and the mean age of all patients was 36.6 years. 79.7% of patients were White, and 10.8% were Black or African American. 45.6% of patients were current smokers.

Clinical response

Treatment with bimekizumab resulted in clinically relevant improvement in disease activity compared to placebo at Week 16. Key efficacy results are shown in Table 12 and 13. The results in Table 12 reflect the predefined primary analysis in which any systemic antibiotic use prior to Week 16 resulted in imputation of nonresponse. In Table 13, only systemic antibiotic use considered by the Investigator to be rescue treatment for HS resulted in imputation of nonresponse.

Table 12: Response in BE HEARD I and BE HEARD II at Week 16 - primary analysis^a

	BE HEARD I			BE HEARD II		
	Placebo (N=72)	BKZ 320 mg Q4W (N=144)	BKZ 320 mg Q2W (N=289)	Placebo (N=74)	BKZ 320 mg Q4W (N=144)	BKZ 320 mg Q2W (N=291)
HiSCR₅₀, % (95% CI)	28.7 (18.1, 39.3)	45.3 (36.8, 53.8)	47.8* (41.8, 53.7)	32.2 (21.4, 42.9)	53.8* (45.4, 62.1)	52.0* (46.1, 57.8)
HiSCR₇₅, % (95% CI)	18.4 (9.3, 27.5)	24.7 (17.3, 32.1)	33.4* (27.8, 39.1)	15.6 (7.2, 24.0)	33.7* (25.7, 41.7)	35.7* (30.1, 41.3)
HSSDD worst skin pain response^b % (95% CI)	15.0 (3.6, 26.5)	22.1 (12.7, 31.4)	32.3 (25.1, 39.5)	10.9 (1.7, 20.1)	28.6 (19.5, 37.8)	31.8 (25.1, 38.4)

^a) Patients who take systemic antibiotics for any reason or who discontinue due to adverse event or lack of efficacy are treated as non-responders at all subsequent visits for responder variables (or are subject to multiple imputation for continuous variables). Other missing data were imputed via multiple imputation.

^b) Skin pain response, based on the threshold for within-patient clinically meaningful change (defined as at least a 3-point decrease from Baseline in Hidradenitis Suppurativa Symptom Daily Diary (HSSDD) weekly worst skin pain score) at Week 16 among study participants with a score of ≥ 3 at Baseline. For BE HEARD I: N=46 for placebo, N=103 for BKZ Q4W and N=190 for BKZ Q2W; BE HEARD II: N=49 for placebo, N=108 for BKZ Q4W and N=209 for BKZ Q2W.

*p<0.025 versus placebo, adjusted for multiplicity.

Table 13: Response in BE HEARD I and BE HEARD II at Week 16 - supportive analysis^a

	BE HEARD I			BE HEARD II		
	Placebo (N=72)	BKZ 320 mg Q4W (N=144)	BKZ 320 mg Q2W (N=289)	Placebo (N=74)	BKZ 320 mg Q4W (N=144)	BKZ 320 mg Q2W (N=291)
HiSCR₅₀, % (95% CI)	34.0 (23.0, 45.1)	53.5 (45.0, 62.0)	55.2 (49.2, 61.1)	32.3 (21.5, 43.1)	58.5 (50.2, 66.8)	58.7 (53.0, 64.5)
HiSCR₇₅, % (95% CI)	18.3 (9.3, 27.3)	31.4 (23.5, 39.4)	38.7 (32.9, 44.5)	15.7 (7.2, 24.1)	36.4 (28.3, 44.5)	39.7 (34.0, 45.5)
HSSDD worst skin pain response^b % (95% CI)	16.1 (4.5, 27.8)	25.3 (16.0, 34.7)	36.7 (29.4, 44.1)	11.1 (1.8, 20.4)	32.9 (23.5, 42.4)	36.7 (29.8, 43.6)

^a) Post-hoc analysis (modified nonresponder imputation [mNRI]): Patients who take systemic antibiotics as rescue medication for HS as defined by the Investigator or who discontinue due to adverse event or lack of efficacy are treated as non-responders at all subsequent visits for responder variables (or are subject to multiple imputation for continuous variables). Other missing data were imputed via multiple imputation.

^b) Skin pain response, based on the threshold for within-patient clinically meaningful change (defined as at least a 3-point decrease from Baseline in Hidradenitis Suppurativa Symptom Daily Diary (HSSDD) weekly worst skin pain score) at Week 16 among study participants with a score of ≥ 3 at Baseline. For BE HEARD I: N=46 for placebo, N=103 for BKZ Q4W and N=190 for BKZ Q2W; BE HEARD II: N=49 for placebo, N=108 for BKZ Q4W and N=209 for BKZ Q2W.

In both studies, the onset of action of bimekizumab occurred as early as week 2.

The efficacy of bimekizumab was demonstrated regardless of prior biologics therapy and systemic antibiotic use at baseline.

Clinical responses were sustained through Week 48 in both studies (see Table 14).

Table 14: Response in BE HEARD I and BE HEARD II at Week 48 (mNRI*)

	BE HEARD I			BE HEARD II		
	BKZ 320mg Q4W/Q4W (N=144)	BKZ 320 mg Q2W/Q4W (N=146)	BKZ 320 mg Q2W/Q2W (N=143)	BKZ 320mg Q4W/Q4W (N=144)	BKZ 320 mg Q2W/Q4W (N=146)	BKZ 320 mg Q2W/Q2W (N=145)
HiSCR₅₀, %	52.7	61.4	60.6	63.2	63.8	60.6
HiSCR₇₅, %	40.5	44.7	47.6	53.9	48.8	47.3

* mNRI (modified non-responder imputation): Patients who take systemic antibiotics as rescue medication for HS as defined by the Investigator or who discontinue due to adverse event or lack of efficacy are treated as non-responders at all subsequent visits for responder variables (or are subject to multiple imputation for continuous variables). Other missing data were imputed via multiple imputation. This exploratory approach to handling missing data was performed post-hoc.

Health-related quality of life

Across both studies, patients treated with bimekizumab experienced greater meaningful improvement compared to placebo in their health-related quality of life as measured by the standard skin-specific DLQI (Table 15).

Table 15: Health-related quality of life in BE HEARD I and BE HEARD II at Week 16

	BE HEARD I			BE HEARD II		
	Placebo (N=72)	BKZ 320 mg Q4W (N=144)	BKZ 320 mg Q2W (N=289)	Placebo (N=74)	BKZ 320 mg Q4W (N=144)	BKZ 320 mg Q2W (N=291)
DLQI total score						
Mean cfb ^a (SE)	-2.9 (0.8)	-5.4 (0.6)	-5.0 (0.4)	-3.2 (0.6)	-4.5 (0.5)	-4.6 (0.3)

DLQI total score ranges from 0 to 30 with higher scores indicating lower HRQoL.

Patients who take systemic antibiotics as rescue medication for HS as defined by the Investigator or who discontinue due to adverse event or lack of efficacy are subject to multiple imputation. Other missing data were imputed via multiple imputation.

^a) cfb: change from baseline

Improvement achieved at Week 16 in health-related quality of life measurements with bimekizumab were sustained through Week 48.

Paediatric population

The European Medicines Agency has deferred the obligation to submit the results of studies with Bimzelx in one or more subsets of the paediatric population in psoriasis, chronic idiopathic arthritis and hidradenitis suppurativa (see section 4.2 for information on paediatric use).

5.2 Pharmacokinetic properties

The pharmacokinetic (PK) properties of bimekizumab were similar in patients with plaque psoriasis, psoriatic arthritis and axial spondyloarthritis (nr-axSpA and AS).

Based on population PK analyses and using a reference bodyweight of 90 kg, the bimekizumab apparent clearance and volume of distribution, respectively, in patients with hidradenitis suppurativa were estimated to be approximately 31 and 18 % higher than for the aforementioned indications, with an estimated half-life in HS of 20 days. Consequently, the median steady state trough concentration at a dose of 320 mg every 4 weeks was approximately 40 % lower in HS compared to other indications.

Absorption

Based on population pharmacokinetic analysis, following a single subcutaneous dose of 320 mg in plaque psoriasis patients, bimekizumab reached a median (2.5th and 97.5th percentile) peak plasma concentration of 25 (12 -50) µg/mL, between 3 and 4 days post dose.

Population pharmacokinetic analysis showed that bimekizumab was absorbed with an average absolute bioavailability of 70.1% in healthy volunteers.

Based on simulated data, the median (2.5th and 97.5th percentile) peak and trough concentration at steady-state following subcutaneous administration of 320 mg every 4 weeks are 43 (20-91) µg/mL and 20 (7-50) µg/mL respectively and steady-state is reached after approximately 16 weeks with every 4 weeks dosing regimen. Compared with exposure after a single dose, the population pharmacokinetic analysis showed that patients exhibited a 1.74-fold increase in peak plasma concentrations and area under the curve (AUC) following repeated four weekly dosing.

After switching from the 320 mg every 4 weeks dosing regimen to 320 mg every 8 weeks dosing regimen at week 16, steady-state is achieved approximately 16 weeks after the switch. Median (2.5th and 97.5th percentile) peak and trough plasma concentrations are 30 (14 -60) µg/mL and 5 (1-16) µg/mL respectively.

Distribution

Based on population pharmacokinetic analyses, the median (coefficient of variation %) volume of

distribution (V/F) at steady state was 11.2 (30.5%) L in plaque psoriasis patients.

Biotransformation

Bimekizumab is a monoclonal antibody and is expected to be degraded into small peptides and amino acids via catabolic pathways in the same manner as endogenous immunoglobulins.

Elimination

Based on population pharmacokinetic analyses, the median (coefficient of variation %) apparent clearance (CL/F) of bimekizumab was 0.337 L/day (32.7%) and the mean terminal elimination half-life of bimekizumab was 23 days in clinical studies in patients with plaque psoriasis.

Linearity/non-linearity

Bimekizumab exhibited dose-proportional pharmacokinetics in patients with plaque psoriasis over a dose range from 64 mg to 480 mg following multiple subcutaneous administrations, with apparent clearance (CL/F) being independent of dose.

Pharmacokinetic/Pharmacodynamic relationship

A population pharmacokinetic/pharmacodynamic model was developed using all available data in moderate to severe plaque psoriasis patients. The analysis showed that higher bimekizumab concentrations are related to better Psoriasis Area and Severity Index (PASI) and Investigators Global Assessment (IGA) response. A dose of 320 mg every 4 weeks was shown to be an appropriate dose for the initial treatment period and 320 mg every 8 weeks thereafter is appropriate for the maintenance period for the majority of moderate to severe plaque psoriasis patients (see Special Populations, Body weight).

Special populations

Body weight

Population pharmacokinetic modelling indicated that exposure decreased as body weight increased. The average plasma concentration in adult patients weighing ≥ 120 kg following a 320 mg subcutaneous injection was predicted to be at least 30% lower than in adult patients weighing 90 kg. Dose adjustment may be appropriate in some patients (see section 4.2).

Elderly

Based on population pharmacokinetic analysis with a limited number of elderly patients (n=355 for age ≥ 65 years and n= 47 for age ≥ 75 years), apparent clearance (CL/F) in elderly patients and patients less than 65 years of age was similar. No dose adjustment is required (see section 4.2).

Renal impairment or hepatic impairment

No specific studies have been conducted to determine the effect of renal or hepatic impairment on the pharmacokinetics of bimekizumab. The renal elimination of intact bimekizumab, an IgG monoclonal antibody, is expected to be low and of minor importance. Similarly, IgGs are mainly eliminated via intracellular catabolism and hepatic impairment is not expected to influence clearance of bimekizumab. Based on population pharmacokinetic analyses, hepatic function markers (ALT/bilirubin) did not have any impact on bimekizumab clearance in patients with plaque psoriasis.

Race

No clinically meaningful differences in bimekizumab exposure were observed in Japanese or Chinese subjects compared to Caucasian subjects in a clinical pharmacokinetic study. No dose adjustment is required.

Gender

Population pharmacokinetic modelling indicated females may have 10% faster apparent clearance

(CL/F) compared to males and it is not clinically meaningful. No dose adjustment is required.

5.3 Preclinical safety data

Non-clinical data revealed no special hazard for humans based on tissue cross-reactivity testing, repeat-dose toxicity studies (including safety pharmacology endpoints and assessment of fertility-related endpoints) and evaluation of pre- and postnatal development in the cynomolgus monkey.

In cynomolgus monkeys, bimekizumab-related effects were limited to mucocutaneous changes consistent with pharmacologic modulation of commensal microflora.

No mutagenicity or carcinogenicity studies were conducted with bimekizumab. However monoclonal antibodies are not expected to damage DNA or chromosomes. In a 26-week chronic toxicology study in cynomolgus monkeys there were no pre-neoplastic or neoplastic lesions observed at a dose resulting in 109 times the human exposure at 320 mg every 4 weeks.

In a peri- and postnatal development study in the cynomolgus monkey, bimekizumab showed no effects on gestation, parturition, infant survival, foetal and postnatal development when administered throughout organogenesis until parturition at a dose resulting in 27 times the human exposure at 320 mg every 4 weeks based on AUC. At birth, serum bimekizumab concentrations in infant monkeys were comparable to those of mothers.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Glycine
Sodium acetate trihydrate
Glacial acetic acid
Polysorbate 80
Water for injections

6.2 Incompatibilities

In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

6.3 Shelf life

3 years

6.4 Special precautions for storage

Bimzelx 160 mg solution for injection in pre-filled syringe

Store in a refrigerator (2°C – 8°C).
Do not freeze.

Keep the pre-filled syringe in the outer carton in order to protect from light.

The pre-filled syringe may be stored at room temperature (up to 25°C) for a single period of maximum 25 days with protection from light. Once removed from the refrigerator and stored under these conditions, discard after 25 days or by the expiry date printed on the container, whichever occurs first. A field for the date is provided on the carton to record the date removed from the refrigerator.

Bimzelx 160 mg solution for injection in pre-filled pen

Store in a refrigerator (2°C – 8°C).
Do not freeze.

Keep the pre-filled pen in the outer carton in order to protect from light.

The pre-filled pen may be stored at room temperature (up to 25°C) for a single period of maximum 25 days with protection from light. Once removed from the refrigerator and stored under these conditions, discard after 25 days or by the expiry date printed on the container, whichever occurs first. A field for the date is provided on the carton to record the date removed from the refrigerator.

6.5 Nature and contents of container

Bimzelx 160 mg solution for injection in pre-filled syringe

One mL pre-filled syringe (type I glass) with a fluoropolymer-laminated bromobutyl rubber stopper, staked 27G, ½” thin wall needle, and a polypropylene rigid needle shield assembled in a passive safety device.

Pack size of 1 pre-filled syringe.

Pack size of 2 pre-filled syringes.

Multipack containing 3 (3 packs of 1) pre-filled syringes.

Multipack containing 4 (2 packs of 2) pre-filled syringes.

Not all pack sizes may be marketed.

Bimzelx 160 mg solution for injection in pre-filled pen

One mL pre-filled pen containing a pre-filled syringe (type I glass) with a fluoropolymer-laminated bromobutyl rubber stopper, staked 27G, ½” thin wall needle, and a polypropylene rigid needle shield.

Pack size of 1 pre-filled pen.

Pack size of 2 pre-filled pens.

Multipack containing 3 (3 packs of 1) pre-filled pens.

Multipack containing 4 (2 packs of 2) pre-filled pens.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

UCB Pharma S.A.
Allée de la Recherche 60
B-1070 Bruxelles
Belgium

8. MARKETING AUTHORISATION NUMBER(S)

Bimzelx 160 mg solution for injection in pre-filled syringe

EU/1/21/1575/001

EU/1/21/1575/002

EU/1/21/1575/003

EU/1/21/1575/004

Bimzelx 160 mg solution for injection in pre-filled pen

EU/1/21/1575/005

EU/1/21/1575/006

EU/1/21/1575/007

EU/1/21/1575/008

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 20 August 2021

10. DATE OF REVISION OF THE TEXT

Detailed information on this medicinal product is available on the website of the European Medicines Agency <http://www.ema.europa.eu>.

ANNEX II

- A. MANUFACTURER(S) OF THE BIOLOGICAL ACTIVE SUBSTANCE(S) AND MANUFACTURER(S) RESPONSIBLE FOR BATCH RELEASE**
- B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE**
- C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION**
- D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT**

A. MANUFACTURER(S) OF THE BIOLOGICAL ACTIVE SUBSTANCE(S) AND MANUFACTURER(S) RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturer(s) of the biological active substance(s)

Rentschler Biopharma SE
Erwin-Rentschler-Strasse 21
88471 Laupheim
Germany

Samsung Biologics Co., Ltd.
300 Songdo bio-daero, Yeonsu-gu
Incheon, 21987
Republic of Korea

Name and address of the manufacturer(s) responsible for batch release

UCB Pharma S.A.
Chemin du Foriest
1420 Braine-l'Alleud
Belgium

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

Medicinal product subject to restricted medical prescription (see Annex I: Summary of Product Characteristics, section 4.2).

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

• **Periodic safety update reports (PSURs)**

The requirements for submission of PSURs for this medicinal product are set out in the list of Union reference dates (EURD list) provided for under Article 107c(7) of Directive 2001/83/EC and any subsequent updates published on the European medicines web-portal.

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

• **Risk management plan (RMP)**

The marketing authorisation holder (MAH) shall perform the required pharmacovigilance activities and interventions detailed in the agreed RMP presented in Module 1.8.2 of the marketing authorisation and any agreed subsequent updates of the RMP.

An updated RMP should be submitted:

- At the request of the European Medicines Agency;
- Whenever the risk management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit/risk profile or as the result of an important (pharmacovigilance or risk minimisation) milestone being reached.

ANNEX III
LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

PRE-FILLED SYRINGE CARTON

1. NAME OF THE MEDICINAL PRODUCT

Bimzelx 160 mg solution for injection in pre-filled syringe
bimekizumab

2. STATEMENT OF ACTIVE SUBSTANCE(S)

One pre-filled syringe contains 160 mg bimekizumab in one mL.

3. LIST OF EXCIPIENTS

Excipients: glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80, water for injections.

4. PHARMACEUTICAL FORM AND CONTENTS

Solution for injection
1 pre-filled syringe
2 pre-filled syringes

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Subcutaneous use
Read the package leaflet before use.
Do not shake.

Lift here to open.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator. Do not freeze.

May be stored at room temperature (up to 25°C) for a maximum of 25 days.

Keep the pre-filled syringe in the outer carton to protect from light.

Keep the pre-filled syringes in the outer carton to protect from light.

Date removed from refrigerator:

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE**11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

UCB Pharma S.A. (logo)
Allée de la Recherche 60
B-1070 Bruxelles
Belgium

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/21/1575/001 Pack containing 1 pre-filled syringe

EU/1/21/1575/002 Pack containing 2 pre-filled syringes

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY**15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Bimzelx 160 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC
SN
NN

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON OF PRE FILLED SYRINGE MULTIPACK (WITH BLUEBOX)

1. NAME OF THE MEDICINAL PRODUCT

Bimzelx 160 mg solution for injection in pre-filled syringe
bimekizumab

2. STATEMENT OF ACTIVE SUBSTANCE(S)

One pre-filled syringe contains 160 mg bimekizumab in one mL.

3. LIST OF EXCIPIENTS

Excipients: glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80, water for injections.

4. PHARMACEUTICAL FORM AND CONTENTS

Solution for injection

Multipack: 3 (3 packs of 1) pre-filled syringes

Multipack: 4 (2 packs of 2) pre-filled syringes

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Read the package leaflet before use.

Subcutaneous use

Do not shake.

Lift here to open.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator. Do not freeze.
May be stored at room temperature (up to 25°C) for a maximum of 25 days.
Keep the pre-filled syringes in the outer carton to protect from light.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE**11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

UCB Pharma S.A. (logo)
Allée de la Recherche 60
B-1070 Bruxelles
Belgium

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/21/1575/003 3 pre-filled syringes (3 packs of 1)
EU/1/21/1575/004 4 pre-filled syringes (2 packs of 2)

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY**15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Bimzelx 160 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC
SN
NN

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

INTERMEDIATE CARTON OF PRE FILLED SYRINGE MULTIPACK (WITHOUT BLUEBOX)

1. NAME OF THE MEDICINAL PRODUCT

Bimzelx 160 mg solution for injection in pre-filled syringe
bimekizumab

2. STATEMENT OF ACTIVE SUBSTANCE(S)

One pre-filled syringe contains 160 mg bimekizumab in one mL.

3. LIST OF EXCIPIENTS

Excipients: glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80, water for injections.

4. PHARMACEUTICAL FORM AND CONTENTS

Solution for injection

1 pre-filled syringe

2 pre-filled syringes

Component of a multipack, can't be sold separately.

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Subcutaneous use

Read the package leaflet before use.

Do not shake.

Lift here to open.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator. Do not freeze.

May be stored at room temperature (up to 25°C) for a maximum of 25 days.

Keep the pre-filled syringe in the outer carton to protect from light.

Keep the pre-filled syringes in the outer carton to protect from light.

Date removed from refrigerator:

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE**11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

UCB Pharma S.A. (logo)
Allée de la Recherche 60
B-1070 Bruxelles
Belgium

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/21/1575/003 3 pre-filled syringes (3 packs of 1)

EU/1/21/1575/004 4 pre-filled syringes (2 packs of 2)

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY**15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Bimzelx 160 mg

17. UNIQUE IDENTIFIER – 2D BARCODE**18. UNIQUE IDENTIFIER - HUMAN READABLE DATA**

**MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS
PRE-FILLED SYRINGE LABEL**

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

Bimzelx 160 mg injection
bimekizumab
SC

2. METHOD OF ADMINISTRATION

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

1 mL

6. OTHER

UCB Pharma S.A. (logo)

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

PRE-FILLED PEN CARTON

1. NAME OF THE MEDICINAL PRODUCT

Bimzelx 160 mg solution for injection in pre-filled pen
bimekizumab

2. STATEMENT OF ACTIVE SUBSTANCE(S)

One pre-filled pen contains 160 mg bimekizumab in one mL.

3. LIST OF EXCIPIENTS

Excipients: glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80, water for injections.

4. PHARMACEUTICAL FORM AND CONTENTS

Solution for injection
1 pre-filled pen
2 pre-filled pens

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Subcutaneous use
Read the package leaflet before use.
Do not shake.

Lift here to open.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator. Do not freeze.

May be stored at room temperature (up to 25°C) for a maximum of 25 days.

Keep the pre-filled pen in the outer carton to protect from light.

Keep the pre-filled pens in the outer carton to protect from light.

Date removed from refrigerator:

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE**11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

UCB Pharma S.A. (logo)

Allée de la Recherche 60

B-1070 Bruxelles

Belgium

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/21/1575/005 Pack containing 1 pre-filled pen

EU/1/21/1575/006 Pack containing 2 pre-filled pens

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY**15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Bimzelx 160 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC
SN
NN

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON OF PRE FILLED PEN MULTIPACK (WITH BLUEBOX)

1. NAME OF THE MEDICINAL PRODUCT

Bimzelx 160 mg solution for injection in pre-filled pen
bimekizumab

2. STATEMENT OF ACTIVE SUBSTANCE(S)

One pre-filled pen contains 160 mg bimekizumab in one mL.

3. LIST OF EXCIPIENTS

Excipients: glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80, water for injections.

4. PHARMACEUTICAL FORM AND CONTENTS

Solution for injection

Multipack: 3 (3 packs of 1) pre-filled pens

Multipack: 4 (2 packs of 2) pre-filled pens

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Subcutaneous use

Read the package leaflet before use.

Do not shake.

Lift here to open.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator. Do not freeze.
May be stored at room temperature (up to 25°C) for a maximum of 25 days.
Keep the pre-filled pens in the outer carton to protect from light.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE**11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

UCB Pharma S.A. (logo)
Allée de la Recherche 60
B-1070 Bruxelles
Belgium

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/21/1575/007 3 pre-filled pens (3 packs of 1)
EU/1/21/1575/008 4 pre-filled pens (2 packs of 2)

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY**15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Bimzelx 160 mg

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC
SN
NN

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

INTERMEDIATE CARTON OF PRE FILLED PEN MULTIPACK (WITHOUT BLUEBOX)

1. NAME OF THE MEDICINAL PRODUCT

Bimzelx 160 mg solution for injection in pre-filled pen
bimekizumab

2. STATEMENT OF ACTIVE SUBSTANCE(S)

One pre-filled pen contains 160 mg bimekizumab in one mL.

3. LIST OF EXCIPIENTS

Excipients: glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80, water for injections.

4. PHARMACEUTICAL FORM AND CONTENTS

Solution for injection

1 pre-filled pen

2 pre-filled pens

Component of a multipack, can't be sold separately.

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Subcutaneous use

Read the package leaflet before use.

Do not shake.

Lift here to open.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator. Do not freeze.

May be stored at room temperature (up to 25°C) for a maximum of 25 days.

Keep the pre-filled pen in the outer carton to protect from light.

Keep the pre-filled pens in the outer carton to protect from light.

Date removed from refrigerator:

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE**11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

UCB Pharma S.A. (logo)
Allée de la Recherche 60
B-1070 Bruxelles
Belgium

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/21/1575/007 3 pre-filled pens (3 packs of 1)

EU/1/21/1575/008 4 pre-filled pens (2 packs of 2)

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY**15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

Bimzelx 160 mg

17. UNIQUE IDENTIFIER – 2D BARCODE**18. UNIQUE IDENTIFIER - HUMAN READABLE DATA**

**MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS
PRE-FILLED PEN LABEL**

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

Bimzelx 160 mg injection
bimekizumab
SC

2. METHOD OF ADMINISTRATION

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

1 mL

6. OTHER

UCB Pharma S.A. (logo)

B. PACKAGE LEAFLET

Package leaflet: Information for the user

Bimzelx 160 mg solution for injection in pre-filled syringe bimekizumab

▼ This medicine is subject to additional monitoring. This will allow quick identification of new safety information. You can help by reporting any side effects you may get. See the end of section 4 for how to report side effects.

Read all of this leaflet carefully before you start using this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Bimzelx is and what it is used for
 2. What you need to know before you use Bimzelx
 3. How to use Bimzelx
 4. Possible side effects
 5. How to store Bimzelx
 6. Contents of the pack and other information
- Instructions for use

1. What Bimzelx is and what it is used for

What Bimzelx is

Bimzelx contains the active substance bimekizumab.

What Bimzelx is used for

Bimzelx is used to treat the following inflammatory diseases:

- Plaque psoriasis
- Psoriatic arthritis
- Axial spondyloarthritis, including non-radiographic axial spondyloarthritis and ankylosing spondylitis (radiographic axial spondyloarthritis)
- Hidradenitis suppurativa

Plaque psoriasis

Bimzelx is used in adults to treat a skin condition called plaque psoriasis. Bimzelx reduces the symptoms, including pain, itching, and scaling of the skin.

Psoriatic arthritis

Bimzelx is used to treat adults with psoriatic arthritis. Psoriatic arthritis is a disease that causes inflamed joints, often accompanied by plaque psoriasis. If you have active psoriatic arthritis, you may first be given other medicines. If these medicines do not work well enough or in case of intolerance, you will be given Bimzelx either alone or in combination with another medicine called methotrexate.

Bimzelx reduces inflammation and can therefore help to reduce pain, stiffness, swelling in and around your joints, psoriatic skin rash, psoriatic nail damage and slow down the damage to the cartilage and bone of the joints involved in the disease. These effects can help you to control signs and symptoms of the disease, ease your normal daily activities, reduce tiredness, and improve your quality of life.

Axial spondyloarthritis, including non-radiographic axial spondyloarthritis and ankylosing spondylitis (radiographic axial spondyloarthritis)

Bimzelx is used to treat adults with an inflammatory disease primarily affecting the spine which causes inflammation of the spinal joints, called axial spondyloarthritis. If the condition is not visible using X-rays, it is referred to as “non-radiographic axial spondyloarthritis”; if it occurs in patients with visible signs on X-rays, it is referred to as “ankylosing spondylitis” or “radiographic axial spondyloarthritis”.

If you have axial spondyloarthritis you will first be given other medicines. If you do not respond well enough to these medicines, you will be given Bimzelx to reduce the signs and symptoms of the disease, reduce inflammation and improve your physical function. Bimzelx can help to reduce back pain, stiffness and tiredness, which can ease your normal daily activities and improve your quality of life.

Hidradenitis suppurativa

Bimzelx is used in adults to treat a condition called hidradenitis suppurativa (sometimes called acne inversa or Verneuil’s disease). Hidradenitis suppurativa is a chronic inflammatory skin disease that causes painful lesions like tender nodules (lumps) and abscesses (boils), and lesions that may leak pus. It most commonly affects specific areas of the skin such as under the breasts, the armpits, inner thighs, groin and buttocks. Scarring may also occur in affected areas. You will first be given other medicines. If you do not respond well enough to these medicines, you will be given Bimzelx.

Bimzelx reduces the inflammatory nodules (lumps), abscesses (boils), and lesions that may leak pus, as well as pain caused by hidradenitis suppurativa.

How Bimzelx works

Bimekizumab, the active substance in Bimzelx, belongs to a group of medicines called interleukin (IL) inhibitors. Bimekizumab works by reducing the activity of two proteins called IL-17A and IL-17F, which are involved in causing inflammation. There are higher levels of these proteins in inflammatory diseases such as psoriasis, psoriatic arthritis, axial spondyloarthritis and hidradenitis suppurativa.

2. What you need to know before you use Bimzelx

Do not use Bimzelx

- if you are allergic to bimekizumab or any of the other ingredients of this medicine (listed in section 6).
- if you have an infection, including tuberculosis (TB), which your doctor thinks is important.

Warnings and precautions

Talk to your doctor, pharmacist or nurse before using Bimzelx if:

- you have an infection or an infection that keeps coming back.
- you recently had or plan to have a vaccination. You should not be given certain types of vaccines (live vaccines) while using Bimzelx.
- you have ever had tuberculosis (TB).
- you have ever had inflammatory bowel disease (Crohn’s disease or ulcerative colitis).

Inflammatory bowel disease (Crohn’s disease or ulcerative colitis)

Stop using Bimzelx and tell your doctor or get medical help immediately if you notice blood in the stool, abdominal cramps, pain, diarrhoea or weight loss. These may be signs of new or worsening inflammatory bowel disease (Crohn’s disease or ulcerative colitis).

Look out for infections and allergic reactions

Bimzelx can rarely cause serious infections. Talk to your doctor or get medical help **immediately** if you notice any signs of a serious infection. Such signs are listed under “Serious side effects” in section 4.

Bimzelx can potentially cause serious allergic reactions. Talk to your doctor or get medical help **immediately** if you notice any signs of a serious allergic reaction. Such signs may include:

- difficulty breathing or swallowing
- low blood pressure, which can make you dizzy or light-headed
- swelling of the face, lips, tongue or throat
- severe itching of the skin, with a red rash or raised bumps.

Children and adolescents

Do not give this medicine to children and young people under 18 years of age. This is because it has not been studied in this age group.

Other medicines and Bimzelx

Tell your doctor or pharmacist if you are using, have recently used or might use any other medicines.

Pregnancy, breast-feeding and fertility

If you are pregnant, think you may be pregnant or are planning to have a baby, ask your doctor for advice before using this medicine. It is preferable to avoid the use of Bimzelx in pregnancy. This is because it is not known how this medicine will affect the baby.

If you are a woman who can become pregnant, you should use contraception while using this medicine and for at least 17 weeks after your last dose of Bimzelx.

If you are breast-feeding or are planning to breast-feed, talk to your doctor before using this medicine. You and your doctor should decide if you can breast-feed or use Bimzelx.

Driving and using machines

Bimzelx is unlikely to affect your ability to drive and use machines.

Bimzelx contains sodium

This medicine contains less than 1 mmol (23 mg) sodium per dose, that is to say essentially “sodium free”.

3. How to use Bimzelx

Always use this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure.

How much Bimzelx is given and for how long

Plaque psoriasis

The recommended dose, given as injections under your skin (‘subcutaneous injections’) is as follows:

- 320 mg (given as **two** pre-filled syringes, containing 160 mg each) at weeks 0, 4, 8, 12, 16.
- From week 16, you will use 320 mg (**two** pre-filled syringes, containing 160 mg each) every 8 weeks. If you weigh more than 120 kg, your doctor may decide to continue your injections every 4 weeks from week 16.

Psoriatic arthritis

The recommended dose, given as an injection under your skin (‘subcutaneous injections’) is as follows:

- 160 mg (given as **one** pre-filled syringe) every 4 weeks.
- If you have psoriatic arthritis with coexistent moderate to severe plaque psoriasis, the recommended dose regimen is the same as for plaque psoriasis. After Week 16, your doctor may adapt your injections to 160 mg every 4 weeks, depending on your joint symptoms.

Axial spondyloarthritis, including non-radiographic axial spondyloarthritis and ankylosing spondylitis (radiographic axial spondyloarthritis)

The recommended dose, given as an injection under your skin ('subcutaneous injections') is 160 mg (given as **one** pre-filled syringe) every 4 weeks.

Hidradenitis suppurativa

The recommended dose, given as injections under your skin ('subcutaneous injections') is as follows:

- 320 mg (given as **two** pre-filled syringes, containing 160 mg each) every 2 weeks until Week 16.
- From week 16, you will use 320 mg (**two** pre-filled syringes, containing 160 mg each) every 4 weeks.

You and your doctor or nurse will decide if you should inject this medicine yourself. Do not inject this medicine unless you have been trained by a healthcare professional. A caregiver may also give your injections after they have been trained.

Read the '**Instructions for use**' at the end of this leaflet before injecting Bimzelx pre-filled syringe yourself.

If you use more Bimzelx than you should

Tell your doctor if you have used more Bimzelx than you should or if you have injected your dose earlier than you should.

If you forget to use Bimzelx

Talk to your doctor if you have forgotten to inject a dose of Bimzelx.

If you stop using Bimzelx

Talk to your doctor before you stop using Bimzelx. If you stop treatment, your symptoms may come back.

If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Serious side effects

Tell your doctor or get medical help **immediately** if you get any of the following side effects:

Possible serious infection - the signs may include:

- fever, flu-like symptoms, night sweats
- feeling tired or short of breath, cough which will not go away
- warm, red and painful skin, or a painful skin rash with blisters

Your doctor will decide if you can keep using Bimzelx.

Other side effects

Tell your doctor, pharmacist or nurse if you get any of the following side effects:

Very common (may affect more than 1 in 10 people)

- upper respiratory infections with symptoms such as sore throat and stuffy nose

Common (may affect up to 1 in 10 people)

- thrush in the mouth or throat with symptoms such as white or yellow patches; red or sore mouth and pain with swallowing
- fungal infection of the skin, such as athlete's foot between the toes
- ear infections
- cold sores (herpes simplex infections)
- stomach flu (gastroenteritis)
- inflamed hair follicles which may look like pimples
- headache
- itchy, dry skin or an eczema-like rash sometimes with swollen and reddened skin (dermatitis)
- acne
- redness, pain or swelling at the site of injection
- feeling tired
- fungal infection of the vulvovaginal area (vaginal thrush)

Uncommon (may affect up to 1 in 100 people)

- lowered levels of white blood cells (neutropenia)
- fungal infections of the skin and mucous membranes (including oesophageal candidiasis)
- discharge from the eye with itching, redness and swelling (conjunctivitis)
- blood in the stool, abdominal cramps and pain, diarrhoea or weight loss (signs of bowel problems)

Reporting of side effects

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in [Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Bimzelx

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the label and carton after EXP. The expiry date refers to the last day of that month.

Store in a refrigerator between 2°C and 8°C. Do not freeze.

Keep the pre-filled syringes in the original carton in order to protect from light.

Bimzelx can be kept out of the refrigerator for up to 25 days. This must be in the outer carton, not above 25°C and away from direct light. Do not use the pre-filled syringes after this time period. There is a space on the box so you can write the date it was taken out of the refrigerator.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Bimzelx contains

- The active substance is bimekizumab. Each pre-filled syringe contains 160 mg of bimekizumab in the 1 mL solution.
- The other ingredients are glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80 and water for injections.

What Bimzelx looks like and contents of the pack

Bimzelx is a clear to slightly opalescent liquid. Its colour may vary from colourless to pale brownish-yellow. It comes in a single use disposable pre-filled syringe with needle cap.

Bimzelx is available in unit packs containing 1 or 2 pre-filled syringe(s) and in multipacks comprising 3 cartons, each containing 1 pre-filled syringe, or in multipacks comprising 2 cartons, each containing 2 pre-filled syringes.

Not all pack sizes may be marketed.

Marketing Authorisation Holder

UCB Pharma S.A.
Allée de la Recherche 60
B-1070 Bruxelles, Belgium

Manufacturer

UCB Pharma S.A.
Chemin du Foriest
B-1420 Braine-l'Alleud, Belgium

For any information about this medicine, please contact the local representative of the Marketing Authorisation Holder:

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This leaflet was last revised in .

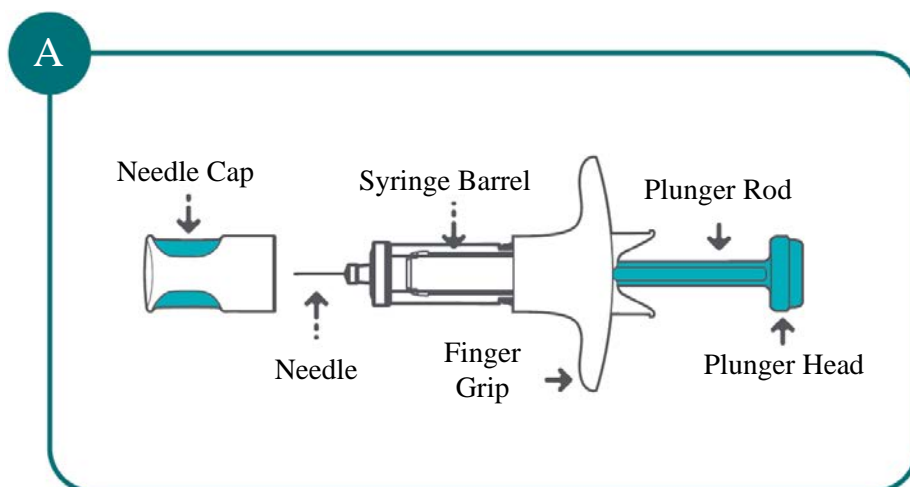
Other sources of information

Detailed information on this medicine is available on the European Medicines Agency website:
<http://www.ema.europa.eu>

Instructions for use

Read all the instructions below before you use Bimzelx pre-filled syringe.

Bimzelx pre-filled syringe at a glance (see **Figure A**):



Important information:

- Your healthcare professional should show you how to prepare and inject Bimzelx using the pre-filled syringe. **Do not** inject yourself or someone else until you have been shown how to inject Bimzelx the right way.
- You and/or your caregiver should read these Instructions for Use before each use of Bimzelx.
- Call your healthcare professional if you or your caregiver have any questions about how to inject Bimzelx the right way.
- **Depending on your prescribed dose you will need to use 1 or 2 Bimzelx pre-filled syringe(s).** One pre-filled syringe is needed for a 160 mg dose and 2 pre-filled syringes (one after the other) are needed for a 320 mg dose.
- The Bimzelx pre-filled syringe has a needle safety feature. This will cover the needle automatically after the injection is finished. The needle safety feature will help to prevent needle injury to anyone who handles the pre-filled syringe after injection.

Do not use this medicine and return it to the pharmacy if:

- the expiry date (EXP) has passed.
- the carton seal is broken.
- the pre-filled syringe has been dropped or looks damaged.
- the liquid has ever been frozen (even if thawed).

For a more comfortable injection: Take the Bimzelx pre-filled syringe(s) out of the refrigerator and let it / them sit on a flat surface at room temperature for **30 to 45 minutes** before injecting.

- Do not warm in any other way, such as in a microwave or in hot water.
- Do not shake the pre-filled syringe(s).
- Do not uncap the pre-filled syringe(s) until you are ready to inject.

Follow the steps below each time you use Bimzelx.

Step 1: Setting up for your injection(s)

Depending on your prescribed dose, place the following items on a clean flat, well-lit work surface, like a table:

- 1 or 2 Bimzelx pre-filled syringe(s)

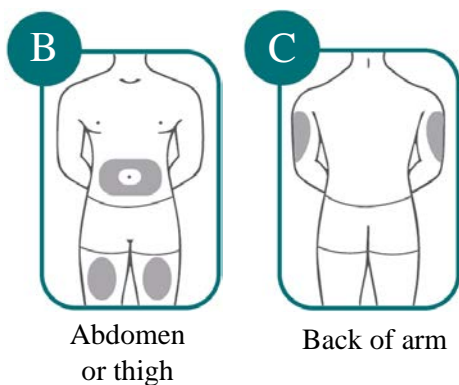
You will also need (not included in the carton):

- 1 or 2 alcohol wipe(s)
- 1 or 2 clean cotton ball(s)
- 1 sharps disposal container. See “Throw away the used Bimzelx pre-filled syringe” at the end of these Instructions for Use.

Step 2: Choose injection site and prepare your injection

2a: Choose your injection site

- The places you may choose for your injection are:
 - your stomach (abdomen) or your thigh (**see Figure B**).
 - the back of your arm may also be used if a caregiver is giving you the injection (**see Figure C**).



- Do not inject into areas where the skin is tender, bruised, red, scaly, hard or areas with scars or stretch marks.
- Do not inject within 5 cm of the belly-button (navel).
- If a second injection is needed for your prescribed dose (320 mg), you should use a different place for your second injection. Do not use the same place to inject twice in a row.

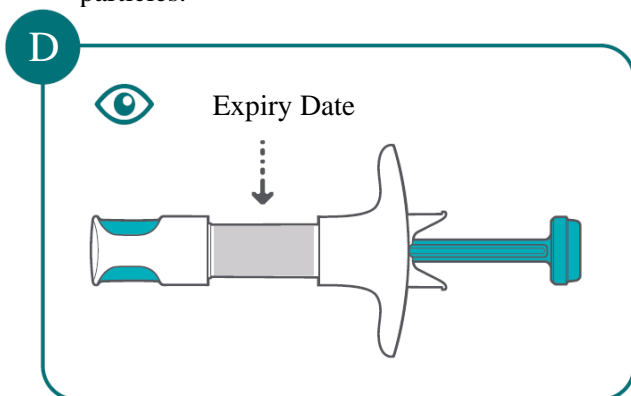
2b: Wash your hands well with soap and water and dry with a clean towel

2c: Prepare your skin

- Clean the injection site with an alcohol wipe. Let the area dry completely. Do not touch the cleaned area again before injecting.

2d: Check the pre-filled syringe (see Figure D)

- Make sure the name Bimzelx and expiry date appear on the label.
- Check the medicine through the viewing window. The medicine should be clear to slightly opalescent and free of particles. Its colour may vary from colourless to pale brownish-yellow. You may see air bubbles in the liquid. This is normal.
- Do not use the Bimzelx pre-filled syringe if the medicine is cloudy, discoloured, or has particles.

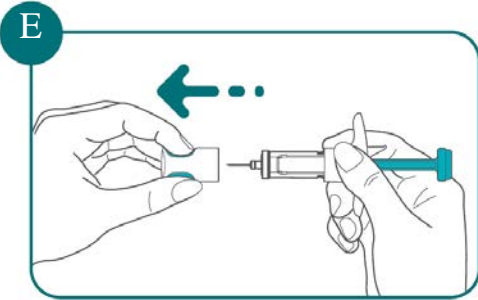


Step 3: Inject Bimzelx

3a: Remove the pre-filled syringe needle cap

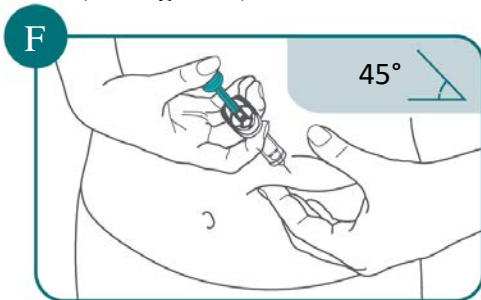
- Hold the pre-filled syringe around the finger grip with one hand. Pull the cap straight off the pre-filled syringe with the other hand (see Figure E). You may see a drop of liquid on the tip of the needle, this is normal.
 - **Do not** touch the needle or let the needle touch any surface.
 - **Do not** hold the plunger rod when you remove the cap. If you accidentally remove the plunger rod, throw the pre-filled syringe in the sharps disposal container and get a new one.

- **Do not** put the needle cap back on. If you do, you could damage the needle or prick yourself by accident.

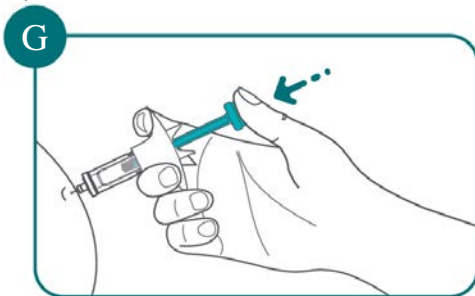


3b: Gently pinch and hold with one hand a fold of skin that you cleaned for the injection. With the other hand, insert the needle into your skin at about 45 degree angle

- Push the needle all the way in. Then gently let go of your skin. Make sure the needle is in place (see **Figure F**).



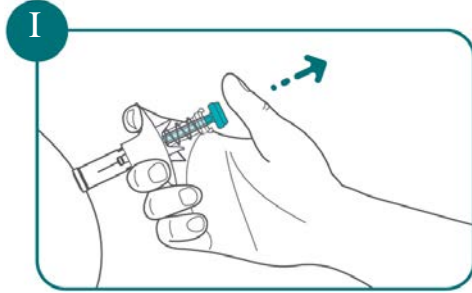
3c: Firmly push the plunger head all the way down until all the medicine is injected (see **Figure G)**



- All the medicine is injected when you cannot push the plunger head any further (see **Figure H**).



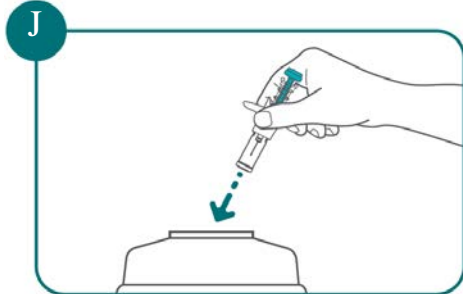
3d: Lift your thumb off the plunger head (see Figure I). The needle will automatically move back in and lock in place



- Press a dry cotton ball over the injection site for a few seconds. Do not rub the injection site. You may see slight bleeding or a drop of liquid. This is normal. You may cover the injection site with a small adhesive plaster, if needed.

Step 4: Throw away the used Bimzelx pre-filled syringe

Put the used pre-filled syringe in a sharps disposal container straight away after use (see **Figure J**).



If you need to have a second injection as prescribed by your doctor, use a new Bimzelx pre-filled syringe and repeat steps 2 to 4.

Make sure to select a new injection site for your second injection.

Package leaflet: Information for the user

Bimzelx 160 mg solution for injection in pre-filled pen bimekizumab

▼ This medicine is subject to additional monitoring. This will allow quick identification of new safety information. You can help by reporting any side effects you may get. See the end of section 4 for how to report side effects.

Read all of this leaflet carefully before you start using this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Bimzelx is and what it is used for
 2. What you need to know before you use Bimzelx
 3. How to use Bimzelx
 4. Possible side effects
 5. How to store Bimzelx
 6. Contents of the pack and other information
- Instructions for use

1. What Bimzelx is and what it is used for

What Bimzelx is

Bimzelx contains the active substance bimekizumab.

What Bimzelx is used for

Bimzelx is used to treat the following inflammatory diseases:

- Plaque psoriasis
- Psoriatic arthritis
- Axial spondyloarthritis, including non-radiographic axial spondyloarthritis and ankylosing spondylitis (radiographic axial spondyloarthritis)
- Hidradenitis suppurativa

Plaque psoriasis

Bimzelx is used in adults to treat a skin condition called plaque psoriasis. Bimzelx reduces the symptoms, including pain, itching, and scaling of the skin.

Psoriatic arthritis

Bimzelx is used to treat adults with psoriatic arthritis. Psoriatic arthritis is a disease that causes inflamed joints, often accompanied by plaque psoriasis. If you have active psoriatic arthritis, you may first be given other medicines. If these medicines do not work well enough or in case of intolerance, you will be given Bimzelx either alone or in combination with another medicine called methotrexate.

Bimzelx reduces inflammation and can therefore help to reduce pain, stiffness, swelling in and around your joints, psoriatic skin rash, psoriatic nail damage and slow down the damage to the cartilage and bone of the joints involved in the disease. These effects can help you to control signs and symptoms of the disease, ease your normal daily activities, reduce tiredness, and improve your quality of life.

Axial spondyloarthritis, including non-radiographic axial spondyloarthritis and ankylosing spondylitis (radiographic axial spondyloarthritis)

Bimzelx is used to treat adults with an inflammatory disease primarily affecting the spine which causes inflammation of the spinal joints, called axial spondyloarthritis. If the condition is not visible using X-rays, it is referred to as “non-radiographic axial spondyloarthritis”; if it occurs in patients with visible signs on X-rays, it is referred to as “ankylosing spondylitis” or “radiographic axial spondyloarthritis”.

If you have axial spondyloarthritis you will first be given other medicines. If you do not respond well enough to these medicines, you will be given Bimzelx to reduce the signs and symptoms of the disease, reduce inflammation and improve your physical function. Bimzelx can help to reduce back pain, stiffness and tiredness, which can ease your normal daily activities and improve your quality of life.

Hidradenitis suppurativa

Bimzelx is used in adults to treat a condition called hidradenitis suppurativa (sometimes called acne inversa or Verneuil’s disease). Hidradenitis suppurativa is a chronic inflammatory skin disease that causes painful lesions like tender nodules (lumps) and abscesses (boils), and lesions that may leak pus. It most commonly affects specific areas of the skin such as under the breasts, the armpits, inner thighs, groin and buttocks. Scarring may also occur in affected areas. You will first be given other medicines. If you do not respond well enough to these medicines, you will be given Bimzelx.

Bimzelx reduces the inflammatory nodules (lumps), abscesses (boils), and lesions that may leak pus, as well as pain caused by hidradenitis suppurativa.

How Bimzelx works

Bimekizumab, the active substance in Bimzelx, belongs to a group of medicines called interleukin (IL) inhibitors. Bimekizumab works by reducing the activity of two proteins called IL-17A and IL-17F, which are involved in causing inflammation. There are higher levels of these proteins in inflammatory diseases such as psoriasis, psoriatic arthritis, axial spondyloarthritis and hidradenitis suppurativa.

2. What you need to know before you use Bimzelx

Do not use Bimzelx

- if you are allergic to bimekizumab or any of the other ingredients of this medicine (listed in section 6).
- if you have an infection, including tuberculosis (TB), which your doctor thinks is important.

Warnings and precautions

Talk to your doctor, pharmacist or nurse before using Bimzelx if:

- you have an infection or an infection that keeps coming back.
- you recently had or plan to have a vaccination. You should not be given certain types of vaccines (live vaccines) while using Bimzelx.
- you have ever had tuberculosis (TB).
- you have ever had inflammatory bowel disease (Crohn’s disease or ulcerative colitis).

Inflammatory bowel disease (Crohn’s disease or ulcerative colitis)

Stop using Bimzelx and tell your doctor or get medical help immediately if you notice blood in the stool, abdominal cramps, pain, diarrhoea or weight loss. These may be signs of new or worsening inflammatory bowel disease (Crohn’s disease or ulcerative colitis).

Look out for infections and allergic reactions

Bimzelx can rarely cause serious infections. Talk to your doctor or get medical help **immediately** if you notice any signs of a serious infection. Such signs are listed under “Serious side effects” in section 4.

Bimzelx can potentially cause serious allergic reactions. Talk to your doctor or get medical help **immediately** if you notice any signs of a serious allergic reaction. Such signs may include:

- difficulty breathing or swallowing
- low blood pressure, which can make you dizzy or light-headed
- swelling of the face, lips, tongue or throat
- severe itching of the skin, with a red rash or raised bumps.

Children and adolescents

Do not give this medicine to children and young people under 18 years of age. This is because it has not been studied in this age group.

Other medicines and Bimzelx

Tell your doctor or pharmacist if you are using, have recently used or might use any other medicines.

Pregnancy, breast-feeding and fertility

If you are pregnant, think you may be pregnant or are planning to have a baby, ask your doctor for advice before using this medicine. It is preferable to avoid the use of Bimzelx in pregnancy. This is because it is not known how this medicine will affect the baby.

If you are a woman who can become pregnant, you should use contraception while using this medicine and for at least 17 weeks after your last dose of Bimzelx.

If you are breast-feeding or are planning to breast-feed, talk to your doctor before using this medicine. You and your doctor should decide if you can breast-feed or use Bimzelx.

Driving and using machines

Bimzelx is unlikely to affect your ability to drive and use machines.

Bimzelx contains sodium

This medicine contains less than 1 mmol (23 mg) sodium per dose, that is to say essentially “sodium free”.

3. How to use Bimzelx

Always use this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure.

How much Bimzelx is given and for how long

Plaque psoriasis

The recommended dose, given as injections under your skin (‘subcutaneous injections’) is as follows:

- 320 mg (given as **two** pre-filled pens, containing 160 mg each) at weeks 0, 4, 8, 12, 16.
- From week 16, you will use 320 mg (**two** pre-filled pens, containing 160 mg each) every 8 weeks. If you weigh more than 120 kg, your doctor may decide to continue your injections every 4 weeks from week 16.

Psoriatic arthritis

The recommended dose, given as an injection under your skin (‘subcutaneous injections’) is as follows:

- 160 mg (given as **one** pre-filled pen) every 4 weeks.
- If you have psoriatic arthritis with coexistent moderate to severe plaque psoriasis, the recommended dose regimen is the same as for plaque psoriasis. After Week 16, your doctor may adapt your injections to 160 mg every 4 weeks, depending on your joint symptoms.

Axial spondyloarthritis, including non-radiographic axial spondyloarthritis and ankylosing spondylitis (radiographic axial spondyloarthritis)

The recommended dose, given as an injection under your skin ('subcutaneous injections') is 160 mg (given as **one** pre-filled pen) every 4 weeks.

Hidradenitis suppurativa

The recommended dose, given as injections under your skin ('subcutaneous injections') is as follows:

- 320 mg (given as **two** pre-filled pens, containing 160 mg each) every 2 weeks until Week 16.
- From week 16, you will use 320 mg (**two** pre-filled pens, containing 160 mg each) every 4 weeks.

You and your doctor or nurse will decide if you should inject this medicine yourself. Do not inject this medicine unless you have been trained by a healthcare professional. A caregiver may also give your injections after they have been trained.

Read the '**Instructions for use**' at the end of this leaflet before injecting Bimzelx pre-filled pen yourself.

If you use more Bimzelx than you should

Tell your doctor if you have used more Bimzelx than you should or if you have injected your dose earlier than you should.

If you forget to use Bimzelx

Talk to your doctor if you have forgotten to inject a dose of Bimzelx.

If you stop using Bimzelx

Talk to your doctor before you stop using Bimzelx. If you stop treatment, your symptoms may come back.

If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Serious side effects

Tell your doctor or get medical help **immediately** if you get any of the following side effects:

Possible serious infection - the signs may include:

- fever, flu-like symptoms, night sweats
- feeling tired or short of breath, cough which will not go away
- warm, red and painful skin, or a painful skin rash with blisters

Your doctor will decide if you can keep using Bimzelx.

Other side effects

Tell your doctor, pharmacist or nurse if you get any of the following side effects:

Very common (may affect more than 1 in 10 people)

- upper respiratory infections with symptoms such as sore throat and stuffy nose

Common (may affect up to 1 in 10 people)

- thrush in the mouth or throat with symptoms such as white or yellow patches; red or sore mouth and pain with swallowing
- fungal infection of the skin, such as athlete's foot between the toes
- ear infections
- cold sores (herpes simplex infections)

- stomach flu (gastroenteritis)
- inflamed hair follicles which may look like pimples
- headache
- itchy, dry skin or an eczema-like rash sometimes with swollen and reddened skin (dermatitis)
- acne
- redness, pain or swelling at the site of injection
- feeling tired
- fungal infection of the vulvovaginal area (vaginal thrush)

Uncommon (may affect up to 1 in 100 people)

- lowered levels of white blood cells (neutropenia)
- fungal infections of the skin and mucous membranes (including oesophageal candidiasis)
- discharge from the eye with itching, redness and swelling (conjunctivitis)
- blood in the stool, abdominal cramps and pain, diarrhoea or weight loss (signs of bowel problems)

Reporting of side effects

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in [Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Bimzelx

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the label and carton after EXP. The expiry date refers to the last day of that month.

Store in a refrigerator between 2°C and 8°C. Do not freeze.

Keep the pre-filled pens in the original carton in order to protect from light.

Bimzelx can be kept out of the refrigerator for up to 25 days. This must be in the outer carton, not above 25°C and away from direct light. Do not use the pre-filled pens after this time period. There is a space on the box so you can write the date it was taken out of the refrigerator.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Bimzelx contains

- The active substance is bimekizumab. Each pre-filled pen contains 160 mg of bimekizumab in the 1 mL solution.
- The other ingredients are glycine, sodium acetate trihydrate, glacial acetic acid, polysorbate 80 and water for injections.

What Bimzelx looks like and contents of the pack

Bimzelx is a clear to slightly opalescent liquid. Its colour may vary from colourless to pale brownish-yellow. It comes in a single use disposable pre-filled pen.

Bimzelx is available in unit packs containing 1 or 2 pre-filled pen(s) and in multipacks comprising 3 cartons, each containing 1 pre-filled pen, or in multipacks comprising 2 cartons, each containing 2 pre-filled pens.

Not all pack sizes may be marketed.

Marketing Authorisation Holder

UCB Pharma S.A.
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B-1070 Bruxelles, Belgium

Manufacturer

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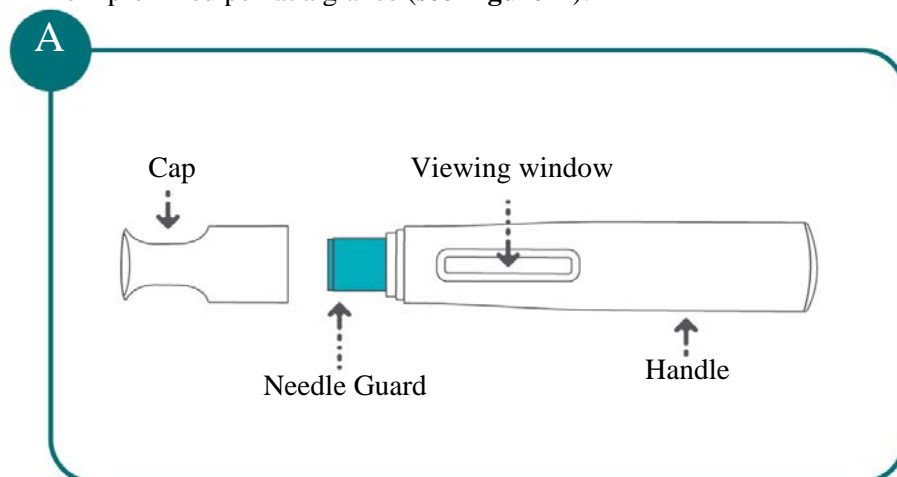
Other sources of information

Detailed information on this medicine is available on the European Medicines Agency web site:
<http://www.ema.europa.eu>

Instructions for use

Read all the instructions below before you use Bimzelx pre-filled pen.

Bimzelx pre-filled pen at a glance (see **Figure A**):

**Important information:**

- Your healthcare professional should show you how to prepare and inject Bimzelx using the pre-filled pen. **Do not** inject yourself or someone else until you have been shown how to inject Bimzelx the right way.
- You and/or your caregiver should read these Instructions for Use before each use of Bimzelx.

- Call your healthcare professional if you or your caregiver have any questions about how to inject Bimzelx the right way.
- **Depending on your prescribed dose, you will need to use 1 or 2 Bimzelx pre-filled pen(s).** One pre-filled pen is needed for a 160 mg dose and 2 pre-filled pens (one after the other) are needed for a 320 mg dose.

Do not use this medicine and return it to the pharmacy if:

- the expiry date (EXP) has passed.
- the carton seal is broken.
- the pre-filled pen has been dropped or looks damaged.
- the liquid has ever been frozen (even if thawed).

For a more comfortable injection: Take the Bimzelx pre-filled pen(s) out of the refrigerator and let it / them sit on a flat surface at room temperature for **30 to 45 minutes** before injecting.

- Do not warm in any other way, such as in a microwave or in hot water.
- Do not shake the pre-filled pen(s).
- Do not uncap the pre-filled pen(s) until you are ready to inject.

Follow the steps below each time you use Bimzelx.

Step 1: Setting up for your injection(s)

Depending on your prescribed dose, place the following items on a clean flat, well-lit work surface, like a table:

- 1 or 2 Bimzelx pre-filled pen(s)

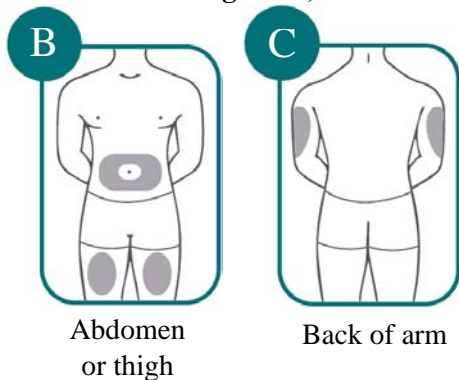
You will also need (not included in the carton):

- 1 or 2 alcohol wipe(s)
- 1 or 2 clean cotton ball(s)
- 1 sharps disposal container. See “Throw away the used Bimzelx pre-filled pen” at the end of these Instructions for Use.

Step 2: Choose injection site and prepare your injection

2a: Choose your injection site

- The places you may choose for your injection are:
 - your stomach (abdomen) or your thigh (see **Figure B**).
 - the back of your arm may also be used if a caregiver is giving you the injection (see **Figure C**).



- Do not inject into areas where the skin is tender, bruised, red, scaly, hard or areas with scars or stretch marks.
- Do not inject within 5 cm of the belly-button (navel).
- If a second injection is needed for your prescribed dose (320 mg), you should use a different place for your second injection. Do not use the same place to inject twice in a row.

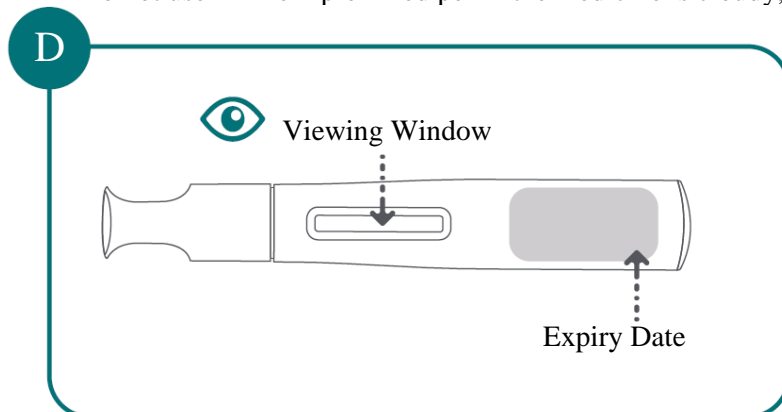
2b: Wash your hands well with soap and water and dry with a clean towel

2c: Prepare your skin

- Clean the injection site with an alcohol wipe. Let the area dry completely. Do not touch the cleaned area again before injecting.

2d: Check the pre-filled pen (see Figure D)

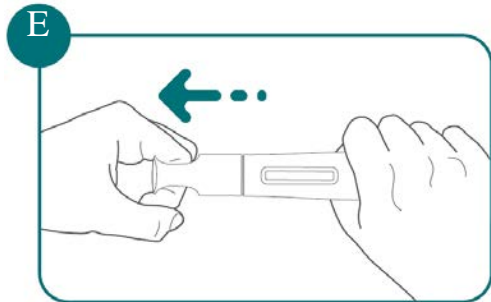
- Make sure the name Bimzelx and expiry date appear on the label.
- Check the medicine through the viewing window. The medicine should be clear to slightly opalescent and free of particles. Its colour may vary from colourless to pale brownish-yellow. You may see air bubbles in the liquid. This is normal.
- Do not use Bimzelx pre-filled pen if the medicine is cloudy, discoloured, or has particles.



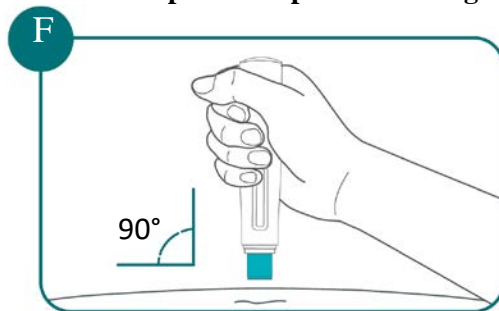
Step 3: Inject Bimzelx

3a: Remove the pre-filled pen cap

- Hold the pre-filled pen firmly with one hand around the handle. Pull the cap straight off the pre-filled pen with the other hand (see **Figure E**). Although you cannot see the needle tip, it is now uncovered.
- Do not touch the needle guard or put the cap back on. This is because it could activate the pre-filled pen and you could prick yourself.



3b: Hold the pre-filled pen at a 90 degree angle to the cleaned injection site (see Figure F)



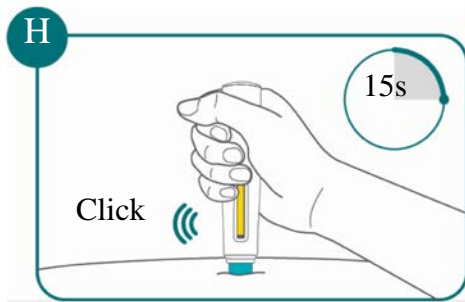
3c: Place the pre-filled pen flat against your skin, then firmly press the pre-filled pen down against your skin

You will hear a click sound. Your injection begins when the first “click” is heard (see **Figure G**).
Do not lift the pre-filled pen away from the skin.



3d: Keep holding the pre-filled pen in place and pressed firmly against your skin

- You will hear a second “click” within 15 seconds after the first click.
- The second click tells you that all the medicine has been injected and your Bimzelx injection is finished. You should see the yellow colour indicator filling the viewing window (see **Figure H**).

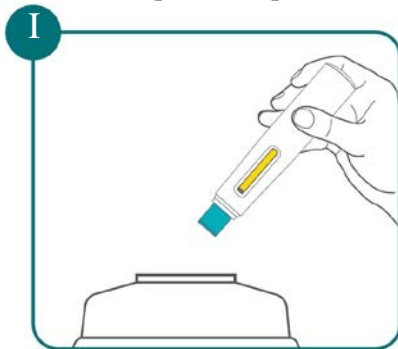


3e: Remove the pre-filled pen by carefully pulling it straight up from your skin. The needle guard will automatically cover the needle

- Press a dry cotton ball over the injection site for a few seconds. Do not rub the injection site. You may see slight bleeding or a drop of liquid. This is normal. You may cover the injection site with a small adhesive plaster, if needed.

Step 4: Throw away the used Bimzelx pre-filled pen

Put the used pre-filled pen in a sharps disposal container straight away after use (see **Figure I**).



If you need to have a second injection as prescribed by your doctor, use a new Bimzelx pre-filled pen, and repeat steps 2 to 4.

Make sure to select a new injection site for your second injection.