

BLNREP

Belantamab mafodotin

QUALITATIVE AND QUANTITATIVE COMPOSITION

BLNREP is an antibody-drug conjugate that contains belantamab, an afucosylated humanised monoclonal IgG1k antibody specific for B cell maturation antigen (BCMA), produced using recombinant DNA technology in a mammalian cell line (Chinese Hamster Ovary) that is conjugated with maleimidocaproyl monomethyl auristatin F (mcMMAF).

BLNREP is presented as a sterile, lyophilised white to yellow powder in a glass vial.

Each vial contains 100 mg of belantamab mafodotin. After reconstitution, the solution contains 50 mg belantamab mafodotin per mL.

CLINICAL INFORMATION

Indications

BLNREP is indicated as monotherapy for the treatment of multiple myeloma in adult patients, who have received at least 4 prior therapies and whose disease is refractory to at least one proteasome inhibitor, one immunomodulatory agent and an anti-CD38 monoclonal antibody, and who have demonstrated disease progression on the last therapy.

Dosage and Administration

Pharmaceutical form: Powder for concentrate for solution for infusion

Treatment with *BLNREP* should be initiated and supervised by physicians experienced in the treatment of multiple myeloma.

Method of Administration

BLNREP is a cytotoxic anticancer medicinal product. Proper handling procedures should be followed. Instructions on reconstitution and further dilution are provided in *Use and Handling*.

BLNREP is administered as an intravenous infusion over approximately 30 minutes.

Recommended Supportive Care

Patients should have an ophthalmic examination (including visual acuity and slit lamp examination) performed by an eye care professional at baseline, before the subsequent 3

treatment cycles, and as clinically indicated whilst on treatment (*see Warnings and Precautions*).

Physicians should advise patients to administer preservative-free artificial tears at least 4 times a day beginning on the first day of infusion and continuing until completion of treatment as this may reduce corneal symptoms (*see Warnings and Precautions*).

For patients with dry eye symptoms, additional therapies may be considered as recommended by their eye care professional.

Adults

The recommended dosage is 2.5 mg/kg belantamab mafodotin administered as an intravenous infusion once every 3 weeks.

Dose Modifications

Recommended dose modifications are provided in Table 1 for corneal adverse reactions and in Table 2 for other adverse reactions.

Corneal adverse reactions may include findings upon eye examination and/or changes in visual acuity (*see Warnings and Precautions*). The treating physician should review the patient's ophthalmic examination report before dosing and determine the dose of *BLENREP* based on the highest category from the report in the most severely affected eye as both eyes may not be affected to the same degree (Table 1).

During the ophthalmic examination, the eye care professional should assess the following:

- The corneal examination finding(s) and the decline in best corrected visual acuity (BCVA).
- If there is a decline in BCVA, the relationship of corneal examination findings to *BLENREP* should be determined.
- The highest category grading for these examination findings and BCVA should be reported to the treating physician.

Table 1. Dose modifications for corneal adverse reactions

| Severity^a | Eye examination findings | Recommended dose modifications |
|-----------------------------|---|---|
| Mild | <i>Corneal examination finding(s)</i> Mild superficial keratopathy ^b <i>Change in BCVA</i> Decline from baseline of 1 line on Snellen Visual Acuity | Continue treatment at current dose. |
| Moderate | <i>Corneal examination finding(s)</i> Moderate superficial keratopathy ^c <i>Change in BCVA</i> | Withhold treatment until improvement in examination findings and BCVA to mild severity or better. |

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| | Decline from baseline of 2 or 3 lines (and Snellen Visual Acuity not worse than 20/200) | Consider resuming treatment at a reduced dose of 1.9 mg/kg. |
| Severe | <i>Corneal examination finding(s)</i> Severe superficial keratopathy ^d Corneal epithelial defect ^e <i>Change in BCVA</i> Decline from baseline of more than 3 lines on Snellen Visual Acuity | Withhold until improvement in examination findings and BCVA to mild severity or better. For worsening symptoms that are unresponsive to appropriate management, consider discontinuation. |

^a The severity category is defined by the most severely affected eye as both eyes may not be affected to the same degree.

^b Mild superficial keratopathy (documented worsening from baseline), with or without symptoms.

^c Moderate superficial keratopathy – with or without patchy microcyst-like deposits, sub-epithelial haze (peripheral), or a new peripheral stromal opacity.

^d Severe superficial keratopathy with or without diffuse microcyst-like deposits, sub-epithelial haze (central), or a new central stromal opacity.

^e A corneal defect may lead to corneal ulcers. These should be managed promptly and as clinically indicated by an eye care professional.

Table 2. Dose modifications for other adverse reactions

| Adverse reaction | Severity | Recommended dose modifications |
|--|---|--|
| Thrombocytopenia (see Warnings and Precautions) | Grade 2-3: Platelet count 25,000 to less than 75,000/microlitres | Consider withholding <i>BLNREP</i> and/or reducing the dose of <i>BLNREP</i> to 1.9 mg/kg. |
| | Grade 4: Platelet count less than 25,000/microlitres | Withhold <i>BLNREP</i> until platelet count improves to Grade 3 or better. Consider resuming at a reduced dose of 1.9 mg/kg. |
| Infusion-related reactions (see Warnings and Precautions) | Grade 2 (moderate) | Interrupt infusion and provide supportive treatment. Once symptoms resolve, resume at lower infusion rate by at least 50%. |
| | Grade 3 or 4 (severe) | Interrupt infusion and provide supportive treatment. Once symptoms resolve, resume at lower infusion rate reduced by at least 50%. If anaphylactic or life-threatening infusion reaction, permanently discontinue the infusion and institute appropriate emergency care. |
| Other Adverse Reactions (see | Grade 3 | Withhold <i>BLNREP</i> until improvement to Grade 1 or better. Consider resuming at a reduced dose. |

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| <i>Adverse Reactions</i>) | Grade 4 | Consider permanent discontinuation of <i>BLNREP</i> . If continuing treatment, withhold until improvement to Grade 1 or better and resume at reduced dose. |
|----------------------------|---------|--|

Adverse reactions were graded according to the National Cancer Institute Common Terminology Criteria for Adverse Events (CTCAE).

Children

The safety and efficacy of *BLNREP* have not been established in children less than 18 years of age.

Elderly

No dosage adjustment is required in patients over 65 years of age (*see Pharmacokinetics – Special Patient Populations*).

Renal impairment

No dose adjustment is required in patients with mild or moderate renal impairment (eGFR ≥ 30 mL/min/1.73m²). There are insufficient data in patients with severe renal impairment to support a dose recommendation (*See Pharmacokinetics – Special Patient Populations*).

Hepatic impairment

No dose adjustment is required in patients with mild hepatic impairment (bilirubin greater than ULN to less than or equal to $1.5 \times$ ULN or aspartate transaminase [AST] greater than ULN). There are insufficient data in patients with moderate hepatic impairment and no data in patients with severe hepatic impairment to support a dose recommendation (*see Pharmacokinetics – Special Patient Populations*).

Contraindications

Hypersensitivity to the active substance or to any of the excipients.

Warnings and Precautions

Corneal Adverse Reactions

Corneal adverse reactions have been reported with the use of *BLNREP*. The most commonly reported adverse reactions were keratopathy including microcyst-like epithelial changes in corneal epithelium (as seen on eye examination) with or without changes in visual acuity, blurred vision, and dry eye. Patients with a history of dry eye were more prone to develop changes in the corneal epithelium. Changes in visual acuity may be associated with difficulty in driving or operating machinery.

Ophthalmic examinations, including assessment of visual acuity and slit lamp examination, should be performed at baseline, before the subsequent 3 treatment cycles and during treatment as clinically indicated. Patients should be advised to administer preservative-free artificial tears at least 4 times a day during treatment (*see Dosage and Administration*). Patients should avoid using contact lenses until the end of treatment unless directed by an ophthalmologist.

Patients experiencing keratopathy with or without changes in visual acuity may require a dose modification (delay and/or reduction) or treatment discontinuation based on severity of findings (*see Dosage and Administration, Table 1*).

Cases of corneal ulcer (ulcerative and infective keratitis) have been reported (*see Adverse Reactions*). These should be managed promptly and as clinically indicated by an eye care professional. Treatment with *BLNREP* should be interrupted until the corneal ulcer has healed (*see Dosage and Administration, Table 1*).

Thrombocytopenia

Thrombocytopenic events (thrombocytopenia and platelet count decreased) were frequently reported in study 205678. Thrombocytopenia may lead to serious bleeding events, including gastrointestinal and intracranial bleeding.

Complete blood counts should be obtained at baseline and monitored during treatment, as clinically indicated. Patients experiencing Grade 3 or 4 thrombocytopenia or those on concomitant anticoagulant treatments may require more frequent monitoring and should be managed with a dose delay or dose reduction (*see Dosage and Administration, Table 2*). Supportive therapy (e.g. platelet transfusions) should be provided according to standard medical practice.

Infusion Reactions

Infusion-related reactions (IRR) have been reported with *BLNREP*. Most IRRs were Grade 1 or 2 and resolved within the same day (*see Adverse Reactions*). If a grade 2 or higher IRR occurs during administration, reduce the infusion rate or stop the infusion depending on the severity of the symptoms. Institute appropriate medical treatment and restart infusion at a slower rate, if the patient's condition is stable. If Grade 2 or higher IRR occurs, administer premedication for subsequent infusions (*see Dosage and Administration, Table 2*).

Pneumonitis

Cases of pneumonitis from spontaneous reports and named patient programmes, including fatal events, have been observed with *BLNREP* although a causal association has not been established. Evaluation of patients with new or worsening unexplained pulmonary symptoms (e.g. cough, dyspnoea) should be performed to exclude possible pneumonitis. In case of suspected Grade 3 or higher pneumonitis, *BLNREP* should be withheld. If Grade 3 or higher pneumonitis is confirmed, appropriate treatment should be initiated. *BLNREP* should only be resumed after an evaluation of the benefit and risk.

Interactions

No formal drug interaction studies have been performed with *BLENREP*.

Based on available *in vitro* and clinical data, there is a low risk of pharmacokinetic or pharmacodynamic drug interactions for belantamab mafodotin (*see Pharmacokinetics*).

Pregnancy and Lactation

Fertility

Based on findings in animals and the mechanism of action, *BLENREP* may impair fertility in females and males of reproductive potential (*see Non-Clinical Information*).

Women of child-bearing potential/Contraception in males and females

The pregnancy status of child-bearing women should be verified prior to initiating therapy with *BLENREP*. Women of child-bearing potential should use effective contraception during treatment with *BLENREP* and for 4 months after the last dose.

Men with female partners of childbearing potential should use effective contraception during treatment with *BLENREP* and for 6 months after the last dose.

Pregnancy

There are no data from the use of *BLENREP* in pregnant women. Based on the mechanism of action of the cytotoxic component monomethyl auristatin F (MMAF), *BLENREP* can cause embryo-foetal harm when administered to a pregnant woman (*see Non-Clinical Information*). Human immunoglobulin G (IgG) is known to cross the placenta; therefore, *BLENREP* has the potential to be transmitted from the mother to the developing foetus.

BLENREP should not be used during pregnancy unless the benefit to the mother outweighs the potential risks to the foetus. If a pregnant woman needs to be treated, she should be clearly advised on the potential risk to the foetus.

Breast-feeding

It is not known whether belantamab mafodotin is excreted into human milk. Immunoglobulin G (IgG) is present in human milk in small amounts. Since belantamab mafodotin is a humanised IgG monoclonal antibody, and based on the mechanism of action, it may cause serious adverse reactions in breastfed children. Women should be advised to discontinue breast-feeding prior to initiating treatment with *BLENREP* and for 3 months after the last dose.

Effects on Ability to Drive and Use Machines

Worsening of visual acuity has been reported in some patients treated with *BLENREP* during clinical studies (*see Warnings and Precautions, Adverse Reactions*). Patients

should be advised to use caution when driving or operating machinery as *BLNREP* may affect their vision.

Adverse Reactions

Clinical trial data

The safety of *BLNREP* was evaluated in 95 patients who received *BLNREP* 2.5 mg/kg in study 205678.

Permanent discontinuation due to an adverse reaction occurred in 9% of patients who received *BLNREP* with 3% related to ocular adverse reactions.

Table 3 summarises adverse drug reactions that occurred in patients receiving the recommended dose of *BLNREP* 2.5 mg/kg once every 3 weeks.

Frequencies are defined as 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 $< 1/1,000$) and very rare ($< 1/10,000$). Within each frequency grouping, where relevant, adverse reactions are presented in order of decreasing seriousness.

Table 3. Adverse reactions reported in multiple myeloma patients treated with *BLNREP*

| System Organ Class | Adverse reactions ^a | Frequency | Incidence (%) | |
|--------------------------------------|------------------------------------|-------------|---------------|-----------|
| | | | Any Grade | Grade 3-4 |
| Infections and infestations | Pneumonia ^b | Very common | 11 | 7 |
| | Upper respiratory tract infection | Common | 9 | 0 |
| Blood and lymphatic system disorders | Thrombocytopenia ^c | Very common | 38 | 22 |
| | Anaemia | | 27 | 21 |
| | Lymphopenia ^d | | 20 | 17 |
| | Leukopenia ^e | | 17 | 6 |
| | Neutropenia ^f | | 15 | 11 |
| Eye disorders | Keratopathy ^g | Very common | 71 | 31 |
| | Blurred vision events ^h | | 25 | 4 |
| | Dry eye events ⁱ | | 15 | 1 |
| | Photophobia | Common | 4 | 0 |
| | Eye irritation | | 3 | 0 |
| | Ulcerative keratitis | Uncommon | 1 | 1 |
| | Infective keratitis | | 1 | 1 |
| Gastrointestinal disorders | Nausea | Very common | 25 | 0 |
| | Diarrhoea | | 13 | 1 |
| | Vomiting | Common | 7 | 2 |

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| Renal and urinary disorders | Albuminuria ^k | Common | 2 | 1 |
| General disorders and administration site conditions | Pyrexia | Very common | 23 | 4 |
| | Fatigue | | 16 | 2 |
| Investigations | Increased aspartate aminotransferase | Very common | 21 | 2 |
| | Increased gamma glutamyltransferase | | 11 | 3 |
| | Increased creatine phosphokinase | Common | 5 | 2 |
| Injury, poisoning and procedural complications | Infusion-related reactions ^j | Very common | 21 | 3 |

^a Adverse reactions coded using MedDRA and graded for severity based CTCAE v4.03.

^b Includes pneumonia and herpes simplex pneumonia.

^c Includes thrombocytopenia and decreased platelet count.

^d Includes lymphopenia and decreased lymphocyte count.

^e Includes leukopenia and decreased leukocyte count.

^f Includes neutropenia and decreased neutrophil count.

^g Based on eye examination, characterised as corneal epithelium changes with or without symptoms.

^h Includes diplopia, vision blurred, visual acuity reduced, and visual impairment.

ⁱ Includes dry eye, ocular discomfort, and eye pruritus.

^j Includes events determined by investigators to be related to infusion. Infusion reactions may include, but are not limited to, pyrexia, chills, diarrhoea, nausea, asthenia, hypertension, lethargy, tachycardia.

^k Identified from patients across the *BLNREP* clinical programme including study 205678. The frequency is based on the programme-wide exposure.

Corneal adverse reactions

In Study 205678 (n=95), eye disorder events occurred in 74% patients and the most common adverse reactions were keratopathy or microcyst-like epithelial changes in corneal epithelium [identified on eye exam, with or without symptoms] (71%), blurred vision (25%), and dry eye symptoms (15%). Decreased vision (Snellen Visual Acuity worse than 20/50) in the better eye was reported in 18% and severe vision loss (20/200 or worse) in the better seeing eye was reported in 1% of patients treated with *BLNREP*.

The median time to onset of Grade 2 or above corneal findings (best corrected visual acuity or keratopathy on eye examination) was 36 days (range: 19 to 143 days). The median time to resolution of these corneal findings (first occurrence) was 91 days (range: 21 to 201 days).

Corneal findings (keratopathy) led to dose delays in 47% of patients, and dose reductions in 27% of patients. Three percent of patients discontinued treatment due to ocular events.

Infusion-related reactions

In clinical studies, the incidence of infusion-related reactions (IRR) with *BLNREP* 2.5 mg/kg was 21%, and most (90%) occurred during the first infusion. Most IRRs were reported as Grade 1 (6%) and Grade 2 (12%) while 3% experienced Grade 3 IRRs. Serious IRRs were reported by 4% of patients and included symptoms of pyrexia and lethargy. Median time to onset and the median duration of the first occurrence of an IRR was 1 day. One patient (1%) discontinued treatment due to IRRs, experiencing Grade 3 IRRs at first and second infusion. No Grade 4 or 5 IRRs were reported.

Thrombocytopenia

Thrombocytopenic events, (thrombocytopenia and platelet count decreased) occurred in 38% of patients treated with *BLNREP* 2.5 mg/kg. Grade 2 thrombocytopenic events occurred in 3% of patients, Grade 3 in 9%, and Grade 4 in 13%. Grade 3 bleeding events occurred in 2% of patients and no Grade 4 or 5 events were reported.

Infections

Upper respiratory tract infections were commonly reported across the *BLNREP* clinical programme and were mostly mild to moderate (Grade 1 to 3), occurring in 9% of patients treated with *BLNREP* 2.5 mg/kg. There were no SAEs of upper respiratory tract infections reported.

Pneumonia was the most frequent infection reported in 11% of patients treated with *BLNREP* 2.5 mg/kg. Pneumonia was also the most frequent SAE, reported in 7% of patients. Infections with a fatal outcome were primarily due to pneumonia (1%).

Overdose

Symptoms and signs

There has been no experience of overdosage with *BLNREP* in clinical studies.

Treatment

There is no known specific antidote for overdose with *BLNREP*. In the event of an overdose, the patient should be monitored for any signs or symptoms of adverse effects and appropriate supportive treatment should be instituted immediately.

Further management should be as clinically indicated or as recommended by the national poisons centre, where available.

PHARMACOLOGICAL PROPERTIES

Pharmacodynamics

ATC code

L01XC39 belantamab mafodotin

Mechanism of action

Belantamab mafodotin is a humanised IgG1 kappa monoclonal antibody conjugated with a cytotoxic agent, maleimidocaproyl monomethyl auristatin F (mcMMAF). Belantamab mafodotin binds to cell surface BCMA and is rapidly internalised. Once inside the tumour cell, the cytotoxic agent is released disrupting the microtubule network, leading to cell cycle arrest and apoptosis. The antibody enhances recruitment and activation of immune effector cells, killing tumour cells by antibody-dependent cellular cytotoxicity and phagocytosis. Apoptosis induced by belantamab mafodotin is accompanied by markers of immunogenic cell death, which may contribute to an adaptive immune response to tumour cells.

Pharmacodynamic effects

Cardiac Electrophysiology

BLENREP had no meaningful QTc prolongation (>10 ms) at the recommended dose of 2.5 mg/kg once every 3 weeks.

Immunogenicity

In clinical studies in patients with multiple myeloma, <1% of patients (2/274) tested positive for anti-belantamab mafodotin antibodies after receiving *BLENREP*. One of the two patients tested positive for neutralising anti-belantamab mafodotin antibodies.

Pharmacokinetics

Absorption

Maximum concentration for belantamab mafodotin occurred at or shortly after the end of infusion while cys-mcMMAF concentrations peaked ~24 hours after dosing. Geometric mean belantamab mafodotin C_{\max} and $AUC_{(0-\tau)}$ concentrations were 43 mcg/mL and 4,666 mcg.h/mL, respectively.

Distribution

The mean steady-state volume of distribution of belantamab mafodotin was 10.8 L.

Metabolism

The monoclonal antibody portion of belantamab mafodotin is expected to undergo proteolysis to small peptides and individual amino acids by ubiquitous proteolytic enzymes. Cys-mcMMAF had limited metabolic clearance in human hepatic S9 fraction incubation studies.

Drug interactions

In vitro studies demonstrated that cys-mcMMAF is a substrate of organic anion transporting polypeptide (OATP)1B1 and OATP1B3, multidrug resistance-associated protein (MRP)1, MRP2, MRP3, bile salt export pump (BSEP), and a possible substrate of P-glycoprotein (P-gp).

Elimination

Belantamab mafodotin was cleared slowly with total plasma clearance of 0.92 L/day and a terminal phase half-life of 12 days. Over time, clearance was reduced by 28%, resulting in an elimination half-life of 14 days. In an animal study, approximately 83% of the radioactive dose of cys-mcMMAF was excreted in the faeces; urinary excretion (approximately 13%) was a minor route. Intact cys-mcMMAF was detected in human urine, with no evidence of other MMAF-related metabolites.

Linearity/non-linearity

Belantamab mafodotin exhibits dose-proportional pharmacokinetics over the recommended dose range with a reduction in clearance over time.

Special patient populations

Children

No pharmacokinetic data are available in paediatric patients.

Elderly

No formal studies have been conducted in elderly patients. Age was not a significant covariate in population pharmacokinetics analyses.

Renal impairment

No formal studies have been conducted in patients with renal impairment. Renal function was not a significant covariate in population pharmacokinetic analyses that included patients with normal renal function and mild or moderate renal impairment.

Hepatic impairment

No formal studies have been conducted in patients with hepatic impairment. Hepatic function was not a significant covariate in population pharmacokinetic analyses that included patients with normal hepatic function or mild hepatic impairment.

Body weight

Body weight was a significant covariate in population pharmacokinetic analyses. Belantamab mafodotin C_{tau} was predicted to be +10% at a body weight of 100 kg (+20% for 130 kg) and -10% at a body weight of 55 kg (-20% for 40 kg) compared to the typical patient (75 kg).

Clinical Studies

Study 205678 was an open-label, two arm, Phase II, multicentre study which evaluated *BLENREP* as monotherapy in patients with multiple myeloma who had relapsed following treatment with at least 3 prior therapies, and who were refractory to an immunomodulatory agent, a proteasome inhibitor and an anti-CD38 antibody alone or in combination. Patients were included if they had undergone autologous stem cell transplant or were considered transplant ineligible and had measurable disease by International Myeloma Working Group (IMWG) criteria.

Patients were randomised to receive 2.5 mg/kg (N=97) or 3.4 mg/kg (N=99) *BLENREP* by intravenous infusion every 3 weeks until disease progression or unacceptable toxicity. The data presented below is from the 2.5 mg/kg cohort who received the recommended therapeutic dose.

Table 4: Baseline demographics and disease characteristics

| Baseline Characteristics | | 2.5 mg/kg (N=97) |
|------------------------------|---------------------------------------|---------------------------|
| Age | Median (range) Interquartile range | 65 (39 to 85) 60 to 70 |
| Gender | Male Female | 53% 47% |
| ECOG at baseline | 0/1 2 | 33%, 50% 17% |
| ISS stage at screening | II III | 34% 43% |
| Cytogenetics risk | High risk* | 27% |
| Number of prior lines | Median, range | 7 (3 to 21) |
| Duration of exposure (weeks) | Median, range | 9 (2 to 75) |
| Treatment cycles | Median, range | 3 (1 to 17) |

*High risk cytogenetic factors [positive for t(4;14), t(14;16), and 17p13del]

The primary endpoint was overall response rate as evaluated by an Independent Review Committee (IRC) based on the IMWG Uniform Response Criteria for Multiple Myeloma. Table 5 provides the results of study 205678.

Table 5. Efficacy of *BLENREP* in patients with multiple myeloma in study 205678

| Clinical response | 2.5 mg/kg (N = 97) |
|---|---------------------------|
| Overall response rate (ORR), % (97.5% CI) | 32% (22, 44) |
| Stringent complete response (sCR), (%) | 2% |
| Complete response (CR), (%) | 5% |
| Very good partial response (VGPR), (%) | 11% |
| Partial response (PR), (%) | 13% |
| Clinical benefit rate (CBR)*, (%) (95% CI) | 36% (27, 47) |
| Median duration of response in months (95% CI) | 11 (4.2 to Not reached) |
| Probability of Maintaining Response at 12 Months (95% CI) | 0.50 (0.29, 0.68) |
| Median time to response in months (95% CI) | 1.5 (1.0, 2.1) |
| Median time to best response in months (95% CI) | 2.2 (1.5, 3.6) |
| Median overall survival (OS) in months (95% CI) | 13.7 (9.9 to Not reached) |
| Survival probability at 12 Months (95% CI) | 0.57 (0.46, 0.66) |

*CBR: sCR+CR+VGPR+PR+Minimal response

Non-Clinical Information

Carcinogenesis/mutagenesis

Belantamab mafodotin was genotoxic in an *in vitro* screening assay in human lymphocytes, consistent with the pharmacological effect of cys-mcMMAF-mediated disruption of microtubules causing aneuploidy.

No carcinogenicity or definitive genotoxicity studies have been conducted with belantamab mafodotin.

Reproductive Toxicology

No animal studies have been performed to evaluate the potential effects of belantamab mafodotin on reproduction or development. The mechanism of action is to kill rapidly dividing cells which would affect a developing embryo which has rapidly dividing cells. There is also a potential risk of heritable changes via aneuploidy in female germ cells.

Effects on male and female reproductive organs have been observed in animals at doses of ≥ 10 mg/kg, which is approximately 4 times the exposure of the clinical dose. Luteinized nonovulatory follicles were seen in the ovaries of rats after 3 weekly doses. Findings in male reproductive organs, that were adverse and progressed following repeat dosing in rat, included marked degeneration/atrophy of seminiferous tubules that generally did not reverse following dosing cessation.

Animal toxicology and/or pharmacology

In non-clinical studies, the principal adverse findings (directly related to belantamab mafodotin) in the rat and monkey, at exposures ≥ 1.2 times of the recommended clinical

dose of 2.5 mg/kg, were elevated liver enzymes sometimes associated with hepatocellular necrosis at ≥ 10 and ≥ 3 mg/kg, respectively, and increases in alveolar macrophages associated with eosinophilic material in the lungs at ≥ 3 mg/kg (rat only). Most findings in animals were related to the cytotoxic drug conjugate, the histopathological changes observed in the testes and lungs, were not reversible in rats.

Single cell necrosis in the corneal epithelium and/or increased mitoses of corneal epithelial cells was observed in rat and rabbit. Belantamab mafodotin was taken up into cells throughout the body by a mechanism unrelated to BCMA receptor expression on the cell membrane.

PHARMACEUTICAL INFORMATION

List of Excipients

sodium citrate

citric acid

trehalose dihydrate

disodium edetate

polysorbate 80

Shelf Life

The expiry date is indicated on the packaging.

Storage

The storage conditions are detailed on the packaging.

Store at 2 - 8°C. Store in the original container. Do not freeze.

Reconstituted solution:

The reconstituted solution can be stored for up to 4 hours at room temperature (20°C to 25°C) or stored in a refrigerator (2°C to 8°C) for up to 4 hours. Do not freeze.

Diluted solution:

If not used immediately, the diluted solution can be stored in a refrigerator (2°C to 8°C) prior to administration for up to 24 hours. Do not freeze. If refrigerated, allow the diluted solution to equilibrate to room temperature prior to administration.

The diluted infusion solution may be kept at room temperature (20°C to 25°C) for a maximum of 6 hours (including infusion time).

Nature and Contents of Container

BLNREP is presented as a sterile lyophilised white to yellow powder in a type I glass vial with bromobutyl rubber stopper and an aluminium overseal with a plastic removable cap. The drug is supplied in a single use vial without a preservative.

Each carton contains one vial.

Incompatibilities

In the absence of compatibility studies, the reconstituted concentrate and diluted solution for infusion must not be mixed with other medicinal products.

Use and Handling

BLNREP is a cytotoxic anticancer medicinal product. Proper handling procedures should be followed. Use aseptic technique for the reconstitution and dilution of the dosing solution.

Calculate the dose (mg), total volume (mL) of solution required and the number of vials needed based on the patient's actual body weight (kg).

Reconstitution

1. Remove the vial(s) of *BLNREP* from the refrigerator and allow to stand for approximately 10 minutes to reach room temperature.
2. Reconstitute each vial with 2 mL of water for injections to obtain a concentration of 50 mg/mL. Gently swirl the vial to aid dissolution. Do not shake.
3. Visually inspect the reconstituted solution for particulate matter and discoloration. The reconstituted solution should be a clear to opalescent, colourless to yellow to brown liquid. Discard the reconstituted vial if extraneous particulate matter other than translucent to white proteinaceous particles is observed.

Dilution Instructions for Intravenous Use

1. Withdraw the necessary volume for the calculated dose from each vial.
2. Add the necessary amount of *BLNREP* to the infusion bag containing 250 mL of sodium chloride 9 mg/mL (0.9%) solution for injection. Mix the diluted solution by gentle inversion. The final concentration of the diluted solution should be between 0.2 mg/mL to 2 mg/mL. DO NOT SHAKE.
3. Discard any unused reconstituted solution of *BLNREP* left in the vial.

If the diluted solution is not used immediately, it may be stored in a refrigerator (2°C to 8°C) for up to 24 hours prior to administration. If refrigerated, allow the diluted solution to equilibrate to room temperature prior to administration. The diluted solution may be

kept at room temperature (20°C to 25°C) for a maximum of 6 hours (including infusion time).

Administration Instructions

1. Administer the diluted solution by intravenous infusion over approximately 30 minutes using an infusion set made of polyvinyl chloride or polyolefin.
2. Filtration of the diluted solution is not required. However, if the diluted solution is filtered, polyethersulfone (PES) based filter is recommended.

Disposal

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

Not all presentations are available in every country.

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