ELSEVIER

Blood 142 (2023) 3357–3358

The 65th ASH Annual Meeting Abstracts

POSTER ABSTRACTS

652.MULTIPLE MYELOMA: CLINICAL AND EPIDEMIOLOGICAL

Impact of Long-Term Treatment with Belantamab Mafodotin on Safety and Efficacy Outcomes in Patients with Relapsed/Refractory Multiple Myeloma in DREAMM-3

Vania T.M Hungria[1], *Katja Weisel, MD*[2], *Atanas Radinoff*[3], *Sosana Delimpasi*[4], *Gabor Mikala*[5], *Tamas Masszi*[6], *Jian Li*[7], *Marcelo Capra*[8], *Angelo Maiolino*[9], *Vasiliki Pappa*[10], *Dominik Chraniuk*[11], *Iurii Osipov*[12], *Xavier Leleu, MD*[13], *Michael Low*[14], *Morio Matsumoto*[15], *Mary Li*[16], *Neal Sule*[16], *Margaret Polinkovsky*[17], *Randy Davis*[16], *Shelley Bright*[16], *Astrid McKeown*[18], *Joanna Opalinska*[16], *Meletios Athanasios Dimopoulos*[19]

[1] Department of Hematology, Clinica São Germano, São Paulo, Brazil
[2] University Medical Center of Hamburg-Eppendorf, Hamburg, Germany
[3] Department of Clinical Hematology, University Hospital "St Ivan Rilski" EAD, Sofia, Bulgaria
[4] General Hospital Evangelismos, Athens, Greece
[5] South Pest Central Hospital, National Institute for Haematology and Infectious Diseases, Budapest, Hungary
[6] Department of Internal Medicine and Hematology, Semmelweis University, Budapest, Hungary
[7] Department of Hematology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China
[8] Centro Integrado de Hematologia e Oncologia, Hospital Mãe de Deus, Porto Alegre, Brazil
[9] Instituto Americas de Ensino„ Pesquisa e Inovacao, Rio de Janeiro, Brazil
[10] Second Department of Internal Medicine and Research Unit, Hematology Unit, University General Hospital "Attikon", Athens, Greece
[11] Department of Hematology, Wojewodzki Szpital Zespolony, Torun, Poland
[12] V.A. Almazov National Medical Research Centre, Saint-Petersburg, Russian Federation
[13] Service D'Hématologie Et Thérapie Cellulaire, Poitiers, France
[14] Monash Haematology, Monash University, Clayton University, Victoria, Australia
[15] Department of Hematology, Shibukawa Medical Center, Shibukawa, Japan
[16] GSK, Upper Providence, PA
[17] GSK, Research Triangle Park, NC
[18] GSK, Stevenage, United Kingdom
[19] Department of Clinical Therapeutics, National and Kapodistrian University of Athens, Athens, Greece

Introduction: DREAMM-3 (NCT04162210) is a randomized study comparing single-agent belantamab mafodotin, a first-in-class antibody-drug conjugate targeting B-cell maturation antigen, to a standard-of-care regimen, pomalidomide plus dexamethasone (Pd). This post-hoc analysis from the DREAMM-3 trial evaluated the safety and efficacy of long-term treatment (≥52 weeks) with belantamab mafodotin compared with Pd, as well as the effects of dose modifications, in adult patients with relapsed/refractory multiple myeloma (RRMM) at third line of therapy or later.

Methods: Patients were randomized (2:1) to belantamab mafodotin 2.5 mg/kg intravenously once every 3 weeks (Q3W; 21-day cycle) or pomalidomide 4 mg orally once daily (Days 1-21) and dexamethasone 40 mg (20 mg if >75 years) orally once weekly (28-day cycle). Belantamab mafodotin dose reductions or delays were permitted to manage treatment-related Grade 3-4 adverse events (AEs), or Grade 2 AEs that were worsening or had symptoms lasting >7 days. Following AE resolution to Grade ≤1, belantamab mafodotin treatment could resume with or without dose reduction (to 1.9 mg/kg). If no dose delays occurred, patients could receive a maximum of 17 cycles in 52 weeks, hence 17 cycles was used as a threshold to assess long term safety. Ocular exams were performed prior to dosing belantamab mafodotin Q3W up to Cycle 6, then every 3 months if no significant ocular events were reported. Treatment-related ocular AEs were graded per National Cancer Institute-Common Terminology Criteria for Adverse Events (NCI-CTCAE) v5 and per the Keratopathy Visual Acuity (KVA) scale. The KVA scale incorporates corneal examination findings and changes in Snellen-equivalent best corrected visual acuity (BCVA) into a composite grade. Ocular AEs are reported as worst-case post-baseline. Efficacy responses (per 2016 International Myeloma Working Group criteria) were assessed Q3W, regardless of treatment delays.

Results: As of September 12, 2022, 50/218 (23%) patients were treated with belantamab mafodotin for ≥52 weeks. AEs were reported in all patients treated with belantamab mafodotin for ≥52 weeks. Grade ≥3 AEs occurred in 82% (n=41); the most frequent were reduced visual acuity (24%), thrombocytopenia (18%), and neutropenia (16%). The majority of AEs reported occurred at or before cycle 17. For the most common (>40%) AEs (any grade), few additional events occurred after cycle 17 (1 new occurrence each of dry eye, reduced visual acuity, eye irritation, and thrombocytopenia after cycle 17). Few infections (any grade) occurred after cycle 17 (COVID-19, n=5; viral infection, n=1; pneumonia influenzal, n=1). No patients permanently discontinued treatment due to AEs considered related to belantamab mafodotin. Ocular AEs were reported in 94% (n=47) of patients treated with belantamab mafodotin for ≥52 weeks. The majority of ocular AEs (n=487) were of Grade 1 or 2 severity (88%) and no ocular AEs led to study treatment discontinuation. At the time of data cutoff, 95% (n=41) of patients experiencing Grade ≥2 KVA events had recovered prior to the end of study treatment exposure (defined as last dose + 20 days). Most patients had a dose modification, and no loss of efficacy was observed. The clinical benefit rate (≥minimal response) in these patients was 90% (45/50) and the median time to best response was 6.3 months (range 0.8-18.8). Median duration of response was not reached (NR; 95% CI 17.9, NR) in the subset of patients treated for ≥52 weeks. At the time of data cutoff, 94% (n=47) patients were alive.

Conclusions: In patients who received long-term treatment (≥52 weeks), the safety profile of belantamab mafodotin was consistent with previous reports. Despite the need for belantamab mafodotin dose delays and reductions, no patients discontinued study treatment due to belantamab mafodotin-related AEs. During dose delays, clinical responses were maintained or deepened in most cases, demonstrating that management of AEs using dose modifications did not impact clinical activity. Together, this suggests that dose modifications are highly effective in the management of emerging AEs while allowing for sustained clinical benefit.

Funding: GSK (207495). Drug linker technology licensed from Seagen Inc.; monoclonal antibody produced using POTELLIGENT Technology licensed from BioWa.

Disclosures Hungria: *Takeda:* Consultancy; *Sanofi:* Consultancy; *Regeneron:* Consultancy; *Janssen:* Consultancy; *GSK:* Consultancy; *Celgene:* Consultancy; *BMS:* Consultancy; *Amgen:* Consultancy; *AbbVie:* Consultancy. **Weisel:** *Pfizer:* Consultancy, Honoraria; *Roche Pharma:* Consultancy, Honoraria; *Oncopeptides:* Consultancy, Honoraria; *Sanofi:* Consultancy, Honoraria, Other: Research grant to institution; *Stemline:* Honoraria; *Karyopharm:* Consultancy, Honoraria; *Novartis:* Honoraria; *Menarini:* Consultancy, Honoraria; *BeiGene:* Consultancy, Honoraria; *Takeda:* Consultancy, Honoraria, Other: Research grant; *AstraZeneca:* Honoraria; *GlaxoSmithKline:* Consultancy, Honoraria, Other: Research grant to institution; *Bristol Myers Squibb/Celgene:* Consultancy, Honoraria, Other: Research grant to institution; *Janssen:* Consultancy, Honoraria, Other: Research grant to institution; *Adaptive Biotech:* Consultancy, Honoraria; *Amgen:* Consultancy, Honoraria, Other: Research grant to institution; *AbbVie:* Consultancy, Honoraria, Other: Research grant to institution. **Radinoff:** *Roche:* Consultancy, Honoraria; *Pfizer:* Honoraria; *Abbvie:* Honoraria; *Swixx:* Consultancy, Honoraria; *SOBI:* Consultancy, Honoraria; *Novartis:* Honoraria. **Delimpasi:** *Takeda:* Honoraria; *Janssen:* Honoraria; *Amgen:* Honoraria; *GSK:* Honoraria. **Mikala:** *AbbVie:* Consultancy, Honoraria, Research Funding; *Amgen:* Consultancy, Honoraria; *Celgene:* Consultancy, Honoraria; *Janssen:* Consultancy, Honoraria, Other; *BMS:* Consultancy, Honoraria, Other; *Takeda:* Consultancy, Honoraria, Other; *Roche:* Consultancy, Honoraria; *Richter:* Honoraria. **Masszi:** *Novartis:* Membership on an entity's Board of Directors or advisory committees; *Pfizer:* Membership on an entity's Board of Directors or advisory committees; *Takeda:* Membership on an entity's Board of Directors or advisory committees; *Abbvie:* Membership on an entity's Board of Directors or advisory committees; *Janssen:* Membership on an entity's Board of Directors or advisory committees; *BMS:* Membership on an entity's Board of Directors or advisory committees. **Capra:** *BMS:* Membership on an entity's Board of Directors or advisory committees, Other; *Janssen:* Membership on an entity's Board of Directors or advisory committees, Other; *Sanofi:* Membership on an entity's Board of Directors or advisory committees, Other. **Maiolino:** *BMS:* Honoraria; *Amgen:* Honoraria; *Janssen:* Honoraria; *Sanofi:* Honoraria; *Takeda:* Honoraria. **Pappa:** *Genesis Pharma SA:* Research Funding. **Leleu:** *Harpoon Therapeutics:* Honoraria; *GSK:* Honoraria; *Sanofi:* Honoraria; *Novartis:* Honoraria; *Takeda:* Honoraria; *Janssen:* Honoraria; *BMS/Celgene:* Honoraria; *Amgen:* Honoraria; *Merck:* Honoraria; *AbbVie:* Honoraria. **Li:** *GSK:* Current Employment, Current equity holder in publicly-traded company; *AstraZeneca:* Current equity holder in publicly-traded company. **Sule:** *GSK:* Current Employment, Current equity holder in publicly-traded company; *Pfizer:* Current equity holder in publicly-traded company; *BMS:* Current equity holder in publicly-traded company. **Polinkovsky:** *GSK:* Current Employment, Current equity holder in publicly-traded company. **Davis:** *GSK:* Current Employment, Current equity holder in publicly-traded company; *Novartis:* Current equity holder in publicly-traded company. **Bright:** *GSK:* Current Employment, Current equity holder in publicly-traded company. **McKeown:** *GSK:* Current Employment, Current equity holder in publicly-traded company; *AstraZeneca:* Current equity holder in publicly-traded company; *Novartis:* Current equity holder in publicly-traded company. **Opalinska:** *GSK:* Current Employment, Current equity holder in publicly-traded company.

https://doi.org/10.1182/blood-2023-178009