DREAMM-9: PHASE I STUDY OF BELANTAMAB MAFODOTIN (BELAMAF) PLUS STANDARD OF CARE (SOC) IN PATIENTS WITH TRANSPLANT-INELIGIBLE NEWLY DIAGNOSED MULTIPLE MYELOMA (TI-NDMM)

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Background: Bortezomib/lenalidomide/dexamethasone (VRd) is a SoC for NDMM. Belamaf, a B-cell-maturation-antigen–targeting antibody-drug conjugate, demonstrated durable responses in patients with relapsed/refractory multiple myeloma (RRMM). Preclinical studies of belamaf+VRd suggest enhanced antimyeloma activity. We report preliminary findings of belamaf+VRd in TI-NDMM.

Methods: DREAMM-9 (NCT04091126) is an ongoing Phase I, open-label, randomized, dose/schedule evaluation study. Adults with TI-NDMM and ECOG status 0–2 are eligible. Belamaf was given with VRd Q3W until Cycle 8, then Rd Q4W. Belamaf doses: Cohort1 (1.9mg/kg Q3/4W), Cohort2 (1.4mg/kg Q6/8W), Cohort3 (1.9mg/kg Q6/8W), Cohort4 (1.0mg/kg Q3/4W), and Cohort5 (1.4mg/kg Q3/4W). Primary endpoint is safety. Secondary endpoints include efficacy, tolerability, and pharmacokinetics.

Results: Overall 36 patients were treated. The median (range) age was 74.0 (63–80) years; patients were 56% male, with 47% stage 2 disease, 8% extramedullary disease, 17% high-risk cytogenetics; median belamaf cycles ranged 1–9. No new safety signals were observed. Across Cohorts 1–5, all patients experienced treatment-related AEs; 1 patient died from COVID-19 infection. Most common AEs leading to dose modification: thrombocytopenia, neutropenia, corneal events. Patients in Cohorts 2 and 3 had the fewest Grade ≥3 corneal events.
All patients in Cohorts 1, 3, and 5, and 5/6 patients in Cohorts 2 and 4 responded; ≥half of each cohort achieved ≥VGPR. At data cut-off, 3/12 patients in Cohort1, 2/6 in Cohort4, and 1/6 patients each in Cohorts 3 and 5 remained in complete response. Pharmacokinetics were similar to patients with RRMM.

Conclusions: Preliminary data suggest belamaf+VRd revealed no new safety signals and shows high response rates, albeit with short follow-up. Study is ongoing to evaluate safety and efficacy of belamaf+VRd.

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