

Introduction & Aim

Belantamab mafodotin is a B-cell maturation antigen–directed antibody–drug conjugate. Although monotherapy showed limited durability in relapsed or refractory multiple myeloma, recent combination regimens have demonstrated renewed clinical activity. This review evaluated the efficacy and safety of belantamab mafodotin combinations across clinical trials.

Design & Methods

A PRISMA-style systematic review included primary clinical trials evaluating belantamab mafodotin combination therapy in relapsed or refractory multiple myeloma. Extracted outcomes included treatment response, progression-free and overall survival, minimal residual disease negativity, adverse events, ocular toxicity, dose modification, and treatment discontinuation.

Study Overview

3 trials | 883 patients

- **Two randomized phase 3 trials**
- **One phase 1/2 study**
- **Regimens evaluated belantamab mafodotin with proteasome inhibitor - or immunomodulatory drug-based combinations**

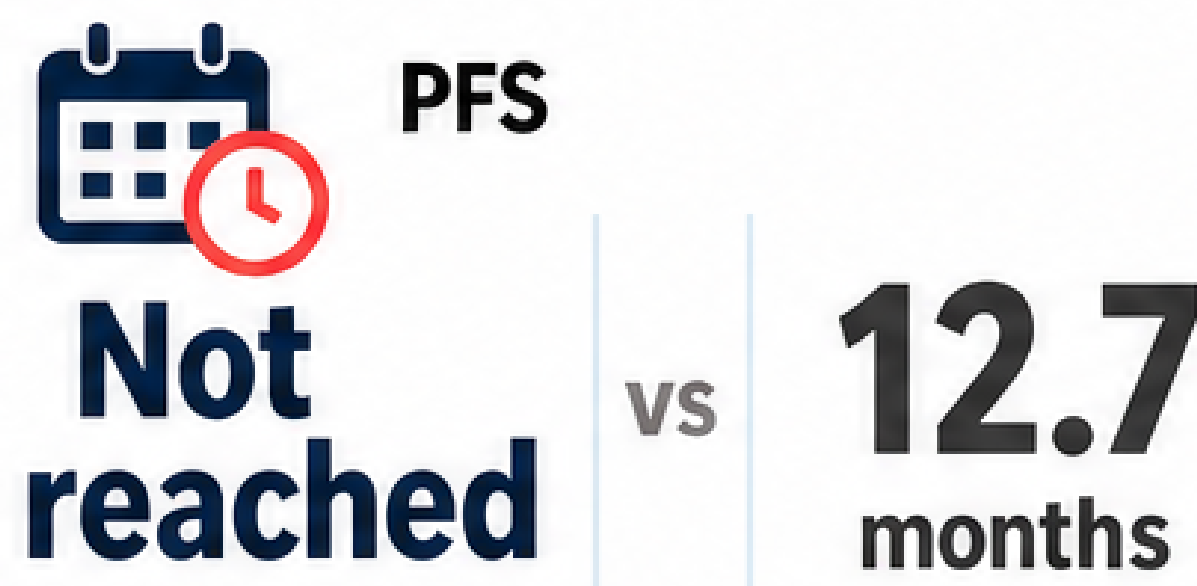
DREAMM-7

Bela-Vd vs Dara-Vd



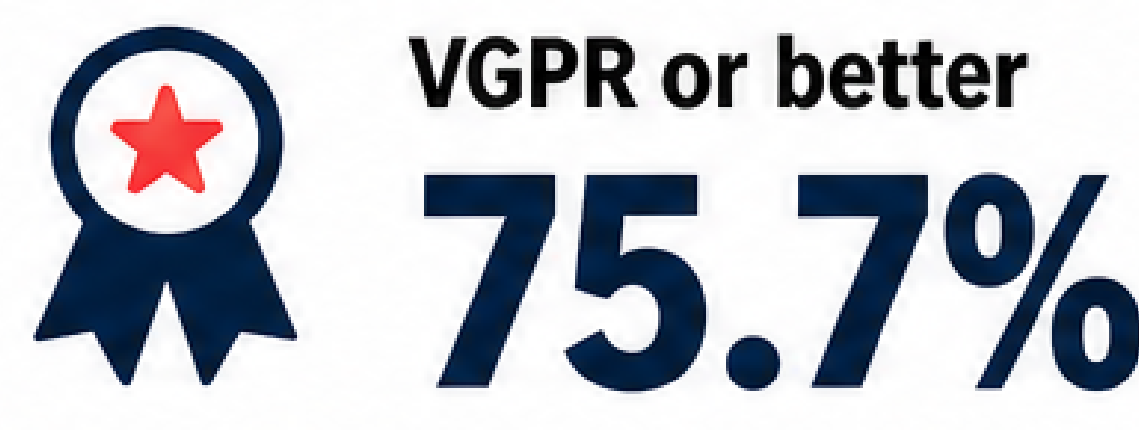
DREAMM-8

Bela-Pd vs PVd



ALGONQUIN

Bela-Pd



**OCULAR
SAFETY**



Keratopathy + visual-acuity changes
Monitoring + timely dose modification

Results

- DREAMM-7 and DREAMM-8 demonstrated improved progression-free survival and deeper responses with belantamab combinations.
- ALGONQUIN showed high and durable response rates.
- Ocular toxicity remained the principal safety concern.

Limitations

Differences in trial design, regimens, follow-up, and ocular-toxicity management limited direct comparison.

Conclusion

Belantamab mafodotin combinations provide substantial activity in relapsed or refractory multiple myeloma. Effective ocular-toxicity management remains essential.

REFERENCES

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3. Trudel S, et al. Belantamab mafodotin, pomalidomide and dexamethasone in refractory multiple myeloma: a phase 1/2 trial. Nat Med. 2024;30:543–551.

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