Public Health Impact of Belantamab Mafodotin, Bortezomib and Dexamethasone in Relapsed/Refractory Multiple Myeloma: A QALY-based Analysis from the Brazilian Perspective

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Belantamab mafodotin plus bortezomib-dexamethasone (BVd) achieved the highest QALYs across all evaluated populations, supporting its value for treating relapsed/refractory multiple myeloma from second line onward in Brazil

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Introduction

- In Brazil, multiple myeloma remains associated with a substantial disease burden, with ~4,600 to 5,800 new cases and ~4,400 deaths reported annually[1-3].
- The DREAMM-7 study demonstrated significant improvements in PFS and OS with BVd vs DVd in the ITT population (HR=0.41 and 0.58, respectively) with consistent benefits observed in lenalidomide-refractory (HR=0.37 and 0.57) and lenalidomide-exposed patients (HR=0.33 and 0.57) with RRMM who had received ≥1 prior line of therapy[4].

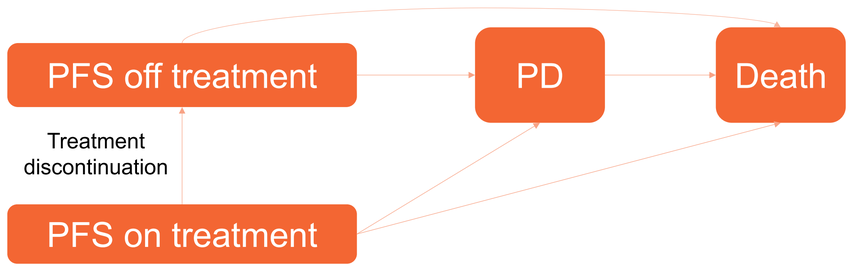
Objective

- To estimate quality-adjusted life years (QALYs) associated with belantamab mafodotin plus bortezomib and dexamethasone (BVd) compared with other clinically relevant treatment alternatives used in routine practice for patients with relapsed/refractory multiple myeloma (RRMM) receiving second-line or later treatment (2L+)*.

*Based on the indication approved in Brazil; indications may vary by country.

Method

A four-state partitioned survival model with parametric extrapolation was developed to estimate QALYs in patients with RRMM 2L+, including the lenalidomide-refractory and lenalidomide-exposed subgroups.



State occupancy

PFS on treatment = time on treatment (ToT)
PFS off treatment = PFS − ToT
PD = OS − PFS
Death = 1 − OS

QALY calculation

Total QALYs = Σ (time in each health state × state-specific utility)

BVd was compared with Vd and Kd, available in both public and private healthcare systems in Brazil, and with DVd, PVd, IKd, and DKd, available in the private system.

Key model inputs

Clinical efficacy

- BVd and DVd: DREAMM-7 first interim analysis (IA1)[4]
- Other comparators: relative treatment effects from a network meta-analysis[5]

Utilities/ Disutilities

- Utilities were derived from DREAMM-7 data (IA1)[4] and adjusted using age-specific utility estimates for the Brazilian population[6]
- Only grade ≥3 adverse events (AEs) were considered (e.g., neutropenia, anaemia, ocular AEs, etc).

Time horizon and discounting

- Lifetime horizon (36 years)
- 5% annual discounting

Results

Figure 1. QALY ITT

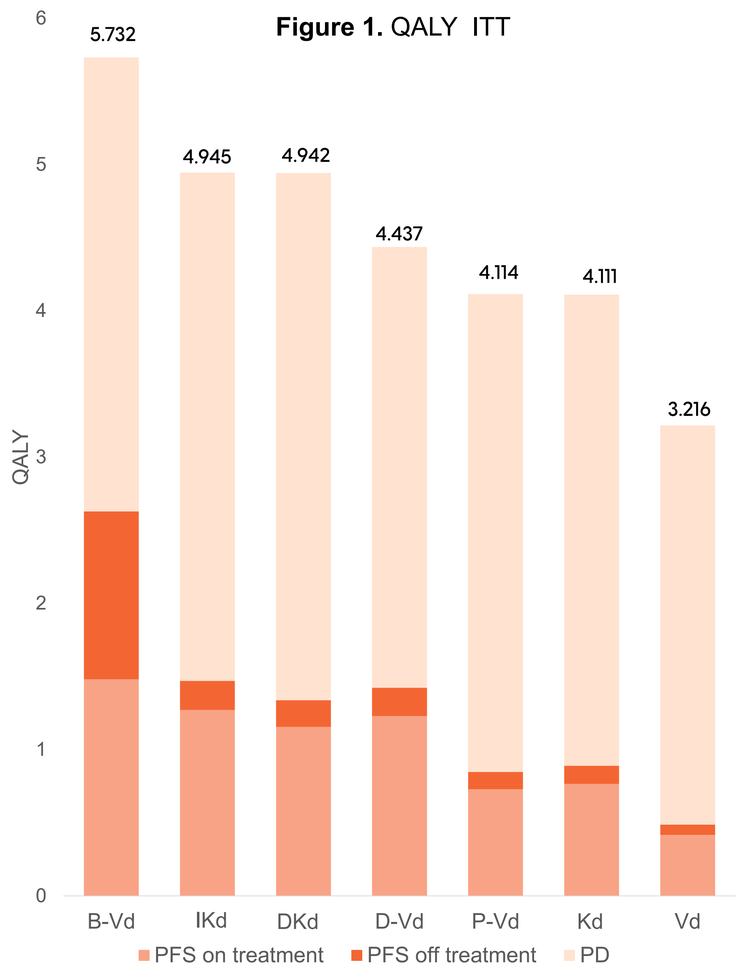


Figure 2. QALY lenalidomide-exposed

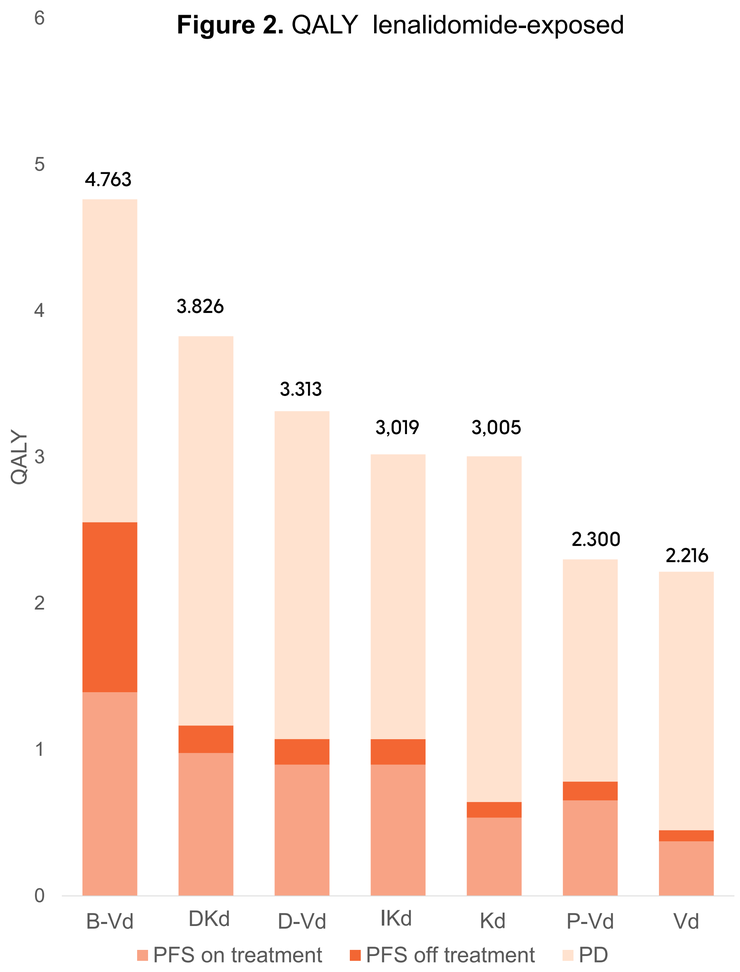
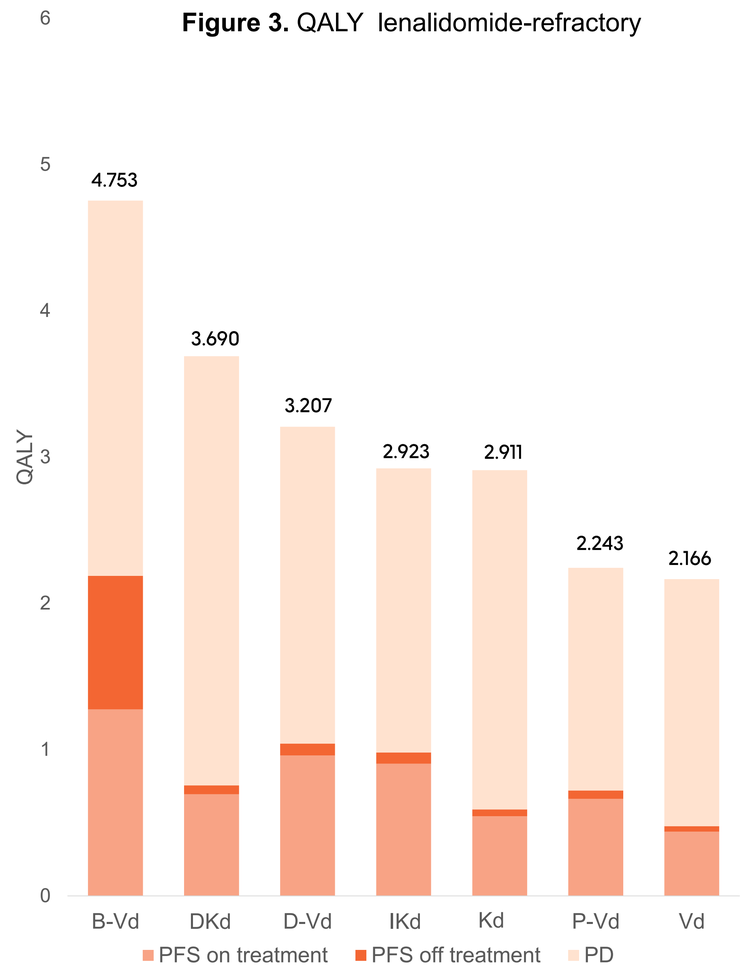


Figure 3. QALY lenalidomide-refractory



Conclusions

The results indicate that BVd used in the 2L or later provides the highest QALY gains in the ITT population and across subgroups, including lenalidomide-exposed and lenalidomide-refractory patients. Notably, the PFS benefit extends beyond active treatment, allowing patients to continue accruing QALYs while remaining progression-free off treatment.

These findings support BVd as a health benefit treatment strategy for RRMM patients in Brazil.

Abbreviations

2L – second line, BVd – belantamab mafodotin + bortezomib-dexamethasone, DhKd – daratumumab + high-dose carfilzomib-dexamethasone, DVd – daratumumab+ bortezomib-dexamethasone, AE – adverse event, hKd – high dose carfilzomib-dexamethasone , HR – hazard ratio, IhKd – Isatuximab + high dose carfilzomib-dexamethasone, IA1 – interim analysis 1, ITT – intent-to-treat, OS – overall survival, PD – progressed disease, PFS – progression free survival, PVd - Pomalidomide + bortezomib-dexamethasone, Vd - bortezomib-dexamethasone, QALY - quality-adjusted life year, RRMM – relapsed/refractory multiple myeloma, ToT – time on treatment.

References

1. Bray F, et al. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2024 May 4;74(3):229–63. 2. Ferlay J, et al. Global Cancer Observatory: Cancer Today [Internet]. Lyon, FR: International Agency for Research on Cancer; 2025. Available from: https://gco.iarc.who.int/today 3. Ministério da Saúde (Brasil). Painel-Oncologia - BRASIL - DATASUS [Internet]. [cited 2025 Sep 17]. Available in: http://tabnet.datasus.gov.br/cgi/dhdat.exe?PAINEL_ONCO/PAINEL_ONCOLOGIABR.def. 4. Hungria, Vania et al. "Belantamab Mafodotin, Bortezomib, and Dexamethasone for Multiple Myeloma." The New England journal of medicine vol. 391,5 (2024): 393-407. 5. Cartier S, Zhang B, Rosen VM, et al. Relationship between treatment effects on progression-free survival and overall survival in multiple myeloma: a systematic review and meta-analysis of published clinical trial data. Oncol Res Treat. 2015;38(3):88-94. 6. Tura GK e S, al. et. Measuring health-related quality of life using EQ-5D-3L in the Brazilian population: a valuation study. Health Qual Life Outcomes 2024. https://doi.org/10.1186/s12955-024-02235-0.

Limitations of the study

- Indirect comparison;
- Extrapolation beyond the clinical trial;
- Trial-based utilities.

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Disclosures

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