ClinicoEconomics and Outcomes Research

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LETTER

Economic Impact of Elranatamab for Treatment of Patients with Relapsed or Refractory Multiple Myeloma [Letter]

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Dear editor

We read with interest the study by Shah et al evaluating the budget impact and cost of care associated with elranatamab for relapsed/refractory multiple myeloma (RRMM).[1] Their assessment provides useful insights into the evolving treatment landscape. However, we respectfully highlight several methodological concerns that may have materially impacted the study's conclusions regarding the comparative costs of elranatamab versus other treatments.

First, we commend the authors' efforts to estimate mean treatment duration (TD) in the budget impact analysis, but note that the cost-of-care analyses used a different method. The budget impact analysis estimated mean TD by converting the reported median TD into an exponential discontinuation rate and integrating across time to discontinuation.[2,3] In contrast, the cost-of-care analysis assumed the median TD for all patients. This approach led to inconsistent findings (eg, no difference between 1-year vs 3-year primary drug and administration costs). Given that payers incur mean and not median costs, mean TD should have been calculated based on area under the exponential TD curve within the 1- and 3-year timeframes using the formula $(1 - e^{-\text{timeframe}\times\text{rate}})/\text{rate}$.[4] Notably, this correction in the 1-year analysis would have yielded mean TDs of ~6.25 for elranatamab, ~7.65 for teclistamab, and ~7.21 months for talquetamab, implying smaller between-treatment differences than those implied by the medians.

Second, the analyses did not account for switching from weekly to biweekly dosing for teclistamab. As justification, the authors note that median time to switching (12.7 months, from Phase 2 of the Phase 1/2 MajesTEC-1 trial[5]) exceeded the estimated mean TD (12.26 months). However, median time to switching based on combined Phase 1/2 data (the source of all other model inputs for teclistamab) was 11.3 months.[5] Moreover, by definition, 50% of patients switched to biweekly dosing before the median. Even under the simplifying assumption that all switching occurred at 11.3 months, incorporating biweekly dosing would reduce teclistamab costs, particularly over the 3-year timeframe.

Third, the analyses used unadjusted progression-free survival (PFS) data from the MajesTEC-1 and MagnetisMM-3 trials without considering the imbalance in COVID-19-related deaths between the trials (18 vs 2).[2,3] MajesTEC-1 recruitment (February 2020-August 2021) coincided with the onset of COVID-19 pandemic and peak number of COVID-19 deaths worldwide, during which COVID-19 vaccinations and/or infection management guidelines were not available. MagnetisMM-3 enrolled between February 2021-January 2022, when COVID-19 vaccines were more widely available. Median PFS in MajesTEC-1 increased from 11.3 to 15.1 months when censoring COVID-related deaths.[6] Use of unadjusted PFS data may have inadvertently favored elranatamab in calculations of subsequent treatment costs and cost-per-PFS-month.

In summary, while Shah et al provide important insights into RRMM treatment costs, several methodological concerns warrant attention. We respectfully encourage the authors to consider revisiting their TD, dosing, and efficacy assumptions to ensure that payers and clinicians have the evidence they need to inform decision-making in the treatment of RRMM.

Received: 2 July 2025
Accepted: 17 July 2025
Published: 30 July 2025

Disclosure

The authors work for Johnson & Johnson. The authors report no other conflicts of interest in this communication.

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https://doi.org/10.2147/CEOR.S550970