US Cost Burden of Relapsed Refractory Multiple Myeloma During Third and Later Lines of Treatment

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**Novel therapies for multiple myeloma (MM), typically applied in late-line relapsed refractory settings, have led to improvements in real-world disease control and patient survival.**

The cost burden of late-line relapsed refractory MM is not completely understood due to the wide range of interventions and the presence of newly approved therapies, although previous studies have evaluated some of these factors. This retrospective cohort study analyzes US claims data (IQVIA Real World Data) to understand the cost burden related to MM for patients with MM.

### Methods

#### Design and data source

This was a retrospective cohort study utilizing IQVIA Real World Data in the IQVIA® Advantaged Claims database (IQVIA®, Durham, NC), a US commercial claims database containing enrollment date information and data on medical/patient health insurance claims.

The index date was the date of first MM diagnosis.

Costs were examined at different lines of treatment (LOTs), with a focus on newly approved therapies, although previous studies have evaluated some of these factors. This study focused on the cost burden related to MM for patients with MM.

### Results

#### Patients

- **2120 patients** included in the incident cohort.
- Of these, 799 (37.7%) and 390 (18.4%) patients received 3L+ and 4L+ treatments, respectively.
- Median (standard deviation, SD) age at initial MM diagnosis, for patients progressing to 3L+ and 4L+, were 58.9 (8.0) and 56.8 (8.0) years, respectively.
- More patients at 3L or 4L+ used recently approved agents (29.2% and 69.9%, respectively) versus patients at 1L (11.4%) and 2L (12.0%).
- More patients at 3L or 4L+ used recently approved agents for anemia, plasmapheresis, bacterial pneumonia, and fatigue.

#### Costs

- **Total mean (median) all-cause total costs** were $22,032 ($18,749) in 3L+ and $23,209 ($20,447) in 4L+.
- **Mean (median) all-cause total costs** across all LOTs were $23,209 ($20,447).
- **Median costs** were highest for 4L+ for anemia, neutropenia, and pneumonia.
- Total mean (median) all-cause total costs were $23,209 ($20,447) in 4L+.

### Conclusions

- **Patients in 3L and 4L+ of MM treatment incurred median all-cause total healthcare costs that ranged from $18,000 to $22,000 PPPM with higher median outpatient costs for patients at 4L+ versus 3L.**
- **Median costs of managing frequent MM-associated symptomatic events were broadly similar across LOTs; however, there was trend towards increased costs in later LOTs.**
- Frequent MM-associated symptomatic events and event-related costs may be a substantial driver of the cost burden among some patients with MM.
- Additional research should focus on understanding patients with high costs, and related costs associated with MM and MM-associated symptomatic events that were not analyzed in this analysis.