

Background

- Multiple myeloma (MM) is a clonal plasma cell neoplasm with substantial morbidity and mortality, characterized by end organ damage.
- Daratumumab has shown good results in the setting of transplant-ineligible newly diagnosed MM (NDMM) and relapsed/refractory MM (RRMM) patients, and several combination treatments are approved by both the FDA and EMA.¹
- The burden of MM on patients' health-related quality of life (HRQoL) is significant and should be considered for evaluating treatment patterns.

Objectives

- The objective of this targeted literature review (TLR) was to assess the existing data on HRQoL for patients with TIE NDMM and RRMM receiving daratumumab combination regimens.

Methods

- Eligibility criteria are provided in **Table 1** and was applied to identify relevant HRQoL data.

Table 1: Eligibility criteria

| | |
|---------------------|--|
| Population | Adults aged ≥18 years with diagnosis of multiple myeloma |
| Intervention | Daratumumab (D) combination regimen |
| Comparator | Lenalidomide–dexamethasone (Rd) or bortezomib–dexamethasone (Vd) or bortezomib–melphalan–dexamethasone (VMP) |
| Outcome | All HRQoL outcomes |
| Study design | Randomized controlled trial (RCT) |
| Others | 2011 to 2021; Full-text; English language |

Results

- A total of 251 records were identified, of which four open-label, phase III RCTs reporting daratumumab combination regimens in TIE NDMM and RRMM patients were selected for Inclusion (**Figure 1**).

Figure 1: PRISMA flow diagram for study selection

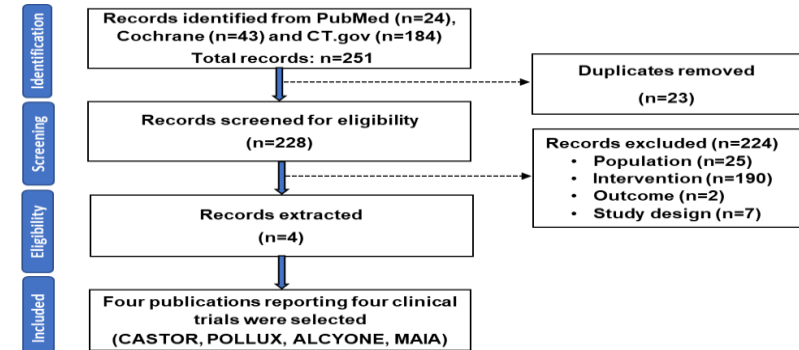


Table 2: Patient baseline characteristic across selected studies

| Characteristic | RRMM | | | | TIE NDMM | | | |
|---|-----------------|---------------|-----------------|---------------|------------------|----------------|-----------------|---------------|
| | CASTOR | | POLLUX | | ALCYONE | | MAIA | |
| | D-Vd (n=251) | Vd (n=247) | D-Rd (n=286) | Rd (n=283) | D-VMP (n=350) | VMP (n=356) | D-Rd (n=368) | Rd (n=369) |
| Age, years, n (%) | | | | | | | | |
| <65 | 132 (52.6) | 125 (50.6) | 133 (46.5) | 140 (49.5) | 36 (10.3) | 24 (6.7) | - | - |
| 65–74 | 96 (38.2) | 87 (35.2) | 124 (43.4) | 108 (38.2) | 210 (60.0) | 225 (63.2) | 208 (56.5) | 208 (56.4)* |
| ≥75 | 23 (9.2) | 35 (14.2) | 29 (10.1) | 35 (12.4) | 104 (29.7) | 107 (30.1) | 160 (43.5) | 161 (43.6) |
| Gender, n (%) | | | | | | | | |
| Female | 114 (45.4) | 100 (40.5) | 113 (39.5) | 119 (42.0) | 190 (54.3) | 189 (53.1) | 179 (48.6) | 174 (47.2) |
| Male | 137 (54.6) | 147 (59.5) | 173 (60.5) | 164 (58.0) | 160 (45.7) | 167 (46.9) | 189 (51.4) | 195 (52.8) |
| EORTC QLQ-C30 GHS score, mean (SD) | 59.1 (20.2) | 58.4 (23.3) | 60.6 (22.9) | 62.3 (20.6) | 50.74 (21.0) | 52.40 (22.7) | 56.7 (24.8) | 56.2 (24.2) |
| EQ-5D-5L VAS score, mean (SD) | 64.2 (19.1) | 64.6 (20.3) | 66.1 (20.4) | 66.5 (19.6) | 57.72 (20.3) | 60.32 (20.6) | 62.6 (22.3) | 62.7 (21.6) |

*Age <75 years

- Baseline patient characteristics of selected four trials^{2,3,4,5} are summarized in **Table 2**.
- HRQoL was measured using EORTC QLQ-C30 and the EQ-5D-5L instruments.
- Both, ALCYONE and MAIA trials, showed evidence of HRQoL benefits for daratumumab combination versus respective comparators and maintained clinically meaningful improvements in global health status (GHS) (**Figure 2** and **Figure 3**) and function and symptoms scales.
- In POLLUX trial, mean changes from baseline were significantly greater in D-Rd group, however the magnitude of PRO change suggested no meaningful clinical impact on HRQoL. In CASTOR trial, no significant between-group differences were observed for the first eight cycles of therapy, after which PROs result were recorded only for D-Vd group which showed improvements in GHS and VAS scales from baseline (**Figure 2** and **Figure 3**) as well as pain symptom subscale.

Figure 2: Least squares (LS) mean change from baseline in EORTC QLQ-C30 GHS score and EQ-5D-5L VAS score through end of the treatment

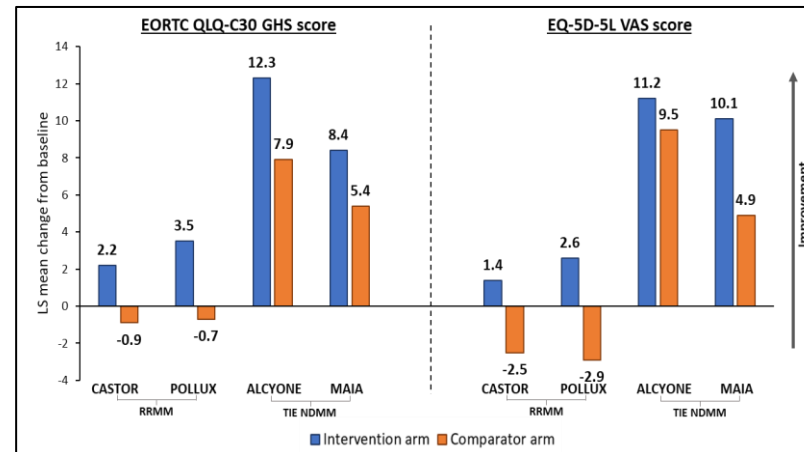
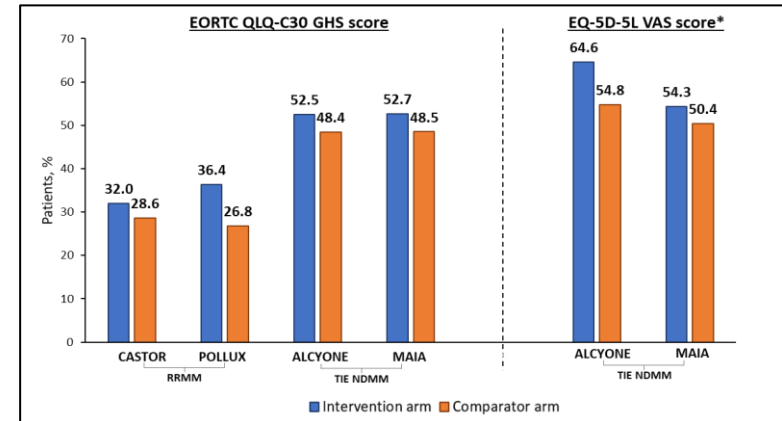


Figure 3: Proportion of patients with ≥10-point improvement from baseline in EORTC QLQ-C30 GHS score and EQ-5D-5L VAS score through end of the treatment



*EQ-5D-5L mean change from baseline for CASTOR and POLLUX trials did not meet the respective clinically meaningful threshold.

Conclusion

Treatment of TIE NDMM and RRMM with daratumumab in combination with other chemotherapy options has shown encouraging results in the improvement of HRQoL, however further research is suggested to make any firm conclusion.

References

- (1) [Offidani M et al. 2021](#), (2) [Hungria et al. 2021](#), (3) [Plesner et al. 2021](#), (4) [Knop et al. 2021](#), (5) [Perrot et al. 2020](#)

Conflict of Interest

Charu R, Manupati R, Singh JA, Rai MK, Gautam R, Kalsey MS, Prasanna R are employees of EVERSANA, India.