# Idecabtagene Vicleucel (ide-cel) Shows Similar Efficacy and Toxicity in Patients with Multiple Myeloma Aged 70 and Older Compared to Younger Patients: a Multicenter Cohort Study.


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## INTRODUCTION

B-cell maturation antigen (BCMA) directed chimeric antigen receptor-T (CAR-T) cell therapies have revolutionized the treatment landscape of relapsed/ refractory (r/r) multiple myeloma (MM). Data on the efficacy and safety in older patients - who often have more co-morbidities and are often underrepresented - remain limited.

## OBJECTIVE

To evaluate the efficacy and toxicity profiles of patients aged 70 and older compared to their younger counterparts in a real-world setting.

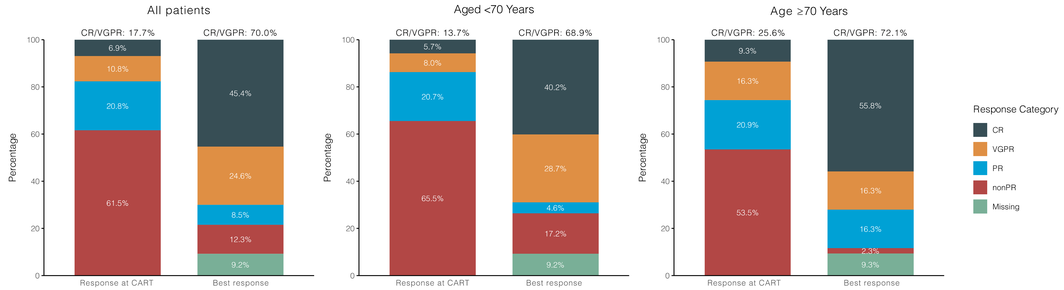
## METHODS

Multicenter retrospective analysis including 132 relapsed/refractory MM pts without CNS manifestation undergoing CAR-T cell treatment with ide-cel between March 2022 and May 2024 at seven tertiary german centers. Patients were grouped by age at CAR-T infusion ((<70 vs. ≥70 years (yrs)). Subsequently, descriptive and survival analyses, including propensity score matching (nearest neighbor 1:1 matching with Charlson combordity index, triple-class refractoriness, and remission status as co-variates), were performed to compare outcomes between both age groups.

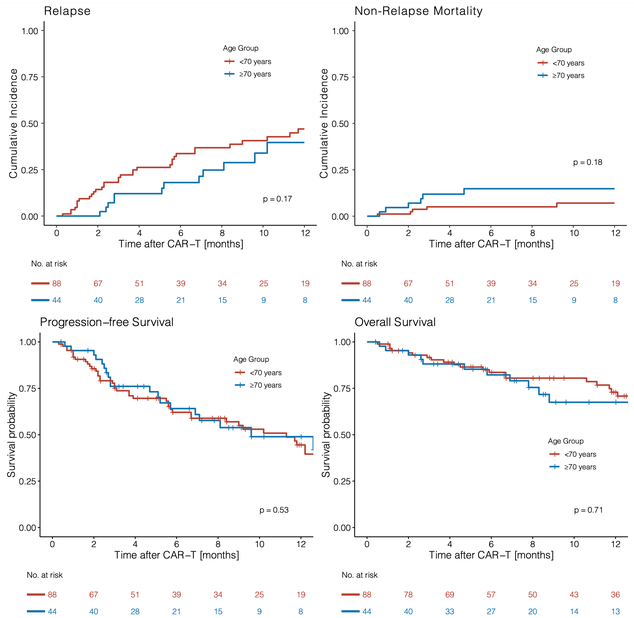
## RESULTS

| Variable | <70 years (N=88) | ≥ 70 years (N=44) | P-value |
|---|---|---|---|
| **Median age at CAR-T infusion [range]** | 60.8 [37.0, 69.3] | 72.6 [70.0, 82.6] | <0.001 |
| **Female** | 37 (42.0%) | 16 (36.4%) | 0.576 |
| **ECOG** | | | |
| 0 | 29 (36.3%) | 10 (26.3%) | 0.518 |
| 1 | 43 (53.8%) | 25 (65.8%) | |
| 2 | 7 (8.8%) | 2 (5.3%) | |
| 3 | 1 (1.3%) | 1 (2.6%) | |
| Missing | 8 | 6 | |
| **Charlson Comorbidity Index (CCI)** | | | |
| 0-1 | 14 (15.9%) | 1 (2.3%) | <0.001 |
| 2-3 | 49 (55.7%) | 10 (22.7%) | |
| ≥4 | 25 (28.4%) | 33 (75.0%) | |
| **R-ISS Stage at Diagnosis** | | | |
| I | 18 (24.3%) | 11 (27.5%) | 0.304 |
| II | 31 (41.9%) | 11 (27.5%) | |
| III | 25 (33.8%) | 18 (45.0%) | |
| Unknown | 0 (0%) | 0 (0%) | |
| Missing | 14 | 4 | |
| **High-Risk Cytogenetics** | | | |
| High risk with 1q gain | 26 (29.5%) | 6 (13.6%) | 0.159 |
| High risk without 1q gain | 16 (18.2%) | 7 (15.9%) | |
| No high risk | 39 (44.3%) | 25 (56.8%) | |
| Unknown | 7 (8.0%) | 6 (13.6%) | |
| **Plasma cell leukemia** | 1 (1.1%) | 0 (0%) | 1 |
| **Extramedullary disease** | 33 (37.5%) | 12 (27.3%) | 0.33 |
| **MyCARe score** | | | |
| low (0-1) | 23 (26.1%) | 14 (31.8%) | 0.714 |
| intermediate (2-3) | 53 (60.2%) | 26 (59.1%) | |
| high (4) | 12 (13.6%) | 4 (9.1%) | |
| **Median previous therapy lines** [range] | 5.00 [3.00, 15.0] | 5.00 [3.00, 12.0] | 0.772 |
| **Lenalidomide refractory** | 74 (84.1%) | 36 (81.8%) | 0.806 |
| **Triple refractory** | 69 (78.4%) | 28 (63.6%) | 0.093 |
| **Penta refractory** | 43 (51.2%) | 29 (65.9%) | 0.135 |
| **Previous BCMA-directed Therapy** | 12 (13.8%) | 7 (15.9%) | 0.795 |
| **Previous HDCT/ASCT** | 82 (93.2%) | 38 (86.4%) | 0.213 |
| **Previous alloSCT** | 6 (6.8%) | 2 (4.5%) | 0.718 |
| **Response status at CAR-T** | | | |
| sCR | 1 (1.1%) | 1 (2.3%) | 0.454 |
| CR | 4 (4.6%) | 3 (7.0%) | |
| VGPR | 7 (8.0%) | 7 (16.3%) | |
| PR | 18 (20.7%) | 9 (20.9%) | |
| < PR | 57 (65.5%) | 23 (53.5%) | |
| Missing | 1 | 1 | |
| **Bridging therapy prior to Abecma** | | | |
| Coventional MM regimens | 47 (71.2%) | 22 (75.9%) | 0.928 |
| Chemotherapy-based | 14 (21.2%) | 5 (17.2%) | |
| Bispecific antibodies | 5 (7.6%) | 2 (6.9%) | |
| Other | 0 (0%) | 0 (0%) | |
| Missing | 22 | 15 | |
| **Number of applied bridging therapies** | | | |
| 0 | 18 (20.7%) | 15 (34.1%) | 0.361 |
| 1 | 62 (71.3%) | 27 (61.4%) | |
| 2 | 6 (6.9%) | 2 (4.5%) | |
| 3 | 1 (1.1%) | 0 (0%) | |
| Missing | 1 | 0 | |
| **Median Time Diagnosis to CAR-T (years) [range]** | 6.85 [0, 26.2] | 7.90 [0, 19.5] | 0.233 |
| Median | | | |
| **Median follow-up of survivors (months) [range]** | 11.9 [0.400, 24.4] | 8.55 [0.400, 26.5] | 0.401 |

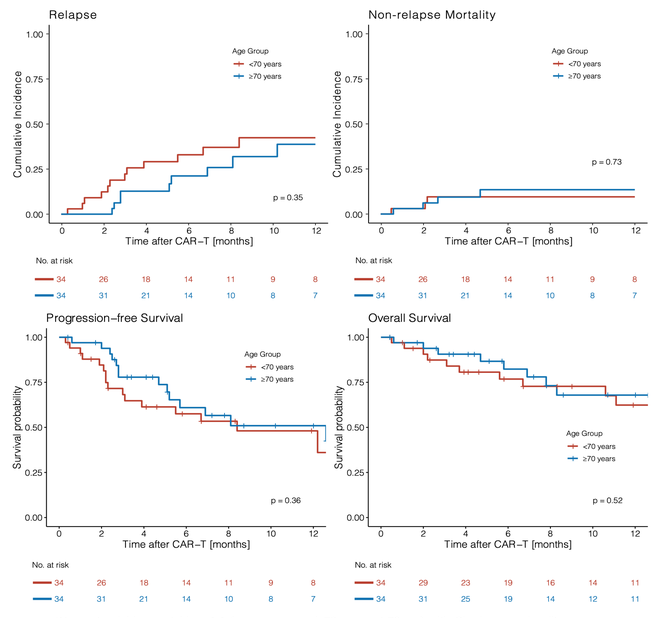
## RESPONSE RATES




## OUTCOMES AFTER IDE-CEL BEFORE MATCHING




## OUTCOMES AFTER IDE-CEL AFTER MATCHING*




*Nearest neighbor matching: 1:1 for age groups (<70 yrs vs. ≥70 yrs) with Charlson combordity index, triple-class refractoriness, and remission status as co-variates

## CONCLUSIONS

Our real-world analysis provides additional support that CAR-T cell therapy is feasible and effective in patients with r/r MM aged 70 yrs or older, demonstrating outcomes and toxicities comparable to those observed in younger patients. Therefore, CAR-T cell therapy should not be withheld for eligible patients above 70 yrs with r/r MM.

## DISCLOSURE

No relationships relevant to the contents of this work to disclose.