# Characteristics, Treatment Patterns, and Outcomes of Patients with Multiple Myeloma Retreated with Daratumumab in Real-world Clinical Practice in the USA

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# Introduction

- Daratumumab (DARA) has demonstrated clinical benefit in multiple myeloma (MM) and is approved for the treatment of both newly diagnosed MM and relapsed refractory MM.[1,2]
- Single-center studies have shown the benefit of retreatment with DARA in patients that became refractory to DARA during first exposure.[3,4]
- However, there is a lack of real-world data on the characteristics of patients who are retreated with DARA across multiple lines of treatment (LOTs).

**AIMS:** To examine the characteristics of patients retreated with DARA, patterns of retreatment with DARA, and outcomes among patients who are refractory or sensitive to DARA after first exposure in real-world clinical practice in the USA.



1. Sonneveld P, et al. N Engl J Med. 2024;390(4):301-313. 2. US Food & Drug Administration (2024, July 30). Retrieved from: https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-daratumumab-and-hyaluronidase-fihj-bortezomib-lenalidomide-and-dexamethasone-multiple 3. Abdallah AO, et al. Eur J Haematol. 2023;110(6):626-632. 4. Tan CRC, et al. J Clin Oncol. 2024;42(16_suppl):7570

# Methods

- **Data source:** Flatiron MM Core Registry
- **Inclusion criteria:** patients with MM treated with a DARA-containing regimen in ≥2 separate LOTs between November 1, 2015, and March 31, 2024.[1]

**Definitions**

**D1**: first DARA-based line of treatment

**D2**: DARA retreatment LOT (second DARA-based line of treatment)

**D-Sens**: patients that did not progress during (or within 60 days of discontinuing) D1

**D-Ref**: patients that progressed during (or within 60 days of discontinuing) D1

**Time to next treatment**: time from initiation of D2 to initiation of the next LOT, or death. Next LOT could be initiated due to adverse events or disease evaluation with or without meeting criteria of progressive disease.



1.Jagannath S, et al. Oncol Ther. 2022;10:411-420

# Characteristics of patients retreated with DARA

| | D-Sens (N=150) | D-Ref (N=51) |
|---|---|---|
| Female, n (%) | 66 (44.0) | 23 (45.1) |
| Age at D1 initiation, median (IQR) years | 68 (13) | 62 (12) |
| Received treatment in community practice, n (%) | 130 (86.7) | 40 (78.4) |
| Follow-up from D2 initiation, median (IQR), months | 12.9 (12.7) | 6.2 (14.7) |
| ECOG PS 0-1[a], n (%) | 106 (70.7) | 33 (64.7) |
| Frailty, n (%)[b] | 97 (64.7) | 31 (60.8) |
| Quan-Charlson Comorbidity Index ≥3, n (%) | 84 (56.0) | 27 (52.9) |
| Gain or amplification 1q21, n (%) | 30 (20.0) | 10 (19.6) |
| High cytogenetic risk[c], n (%) | 47 (31.3) | 16 (31.4) |
| Received transplant prior to D2, n (%) | 63 (42.0) | 25 (49.0) |

[a]Data was unknown/missing for 7 D-Ref patients and 21 D-Sens patients [b]Frailty was defined per the simplified IMWG frailty score (using age, ECOG PS, and Quan-Charlson Comorbidity Index).[1] [c]High cytogenetic risk was defined as presence of markers in del17, t(4,14), t(14,16), t(14,20) or amplification 1q21.

1. Facon T, et al. Leukemia. 2020;34:224-233.



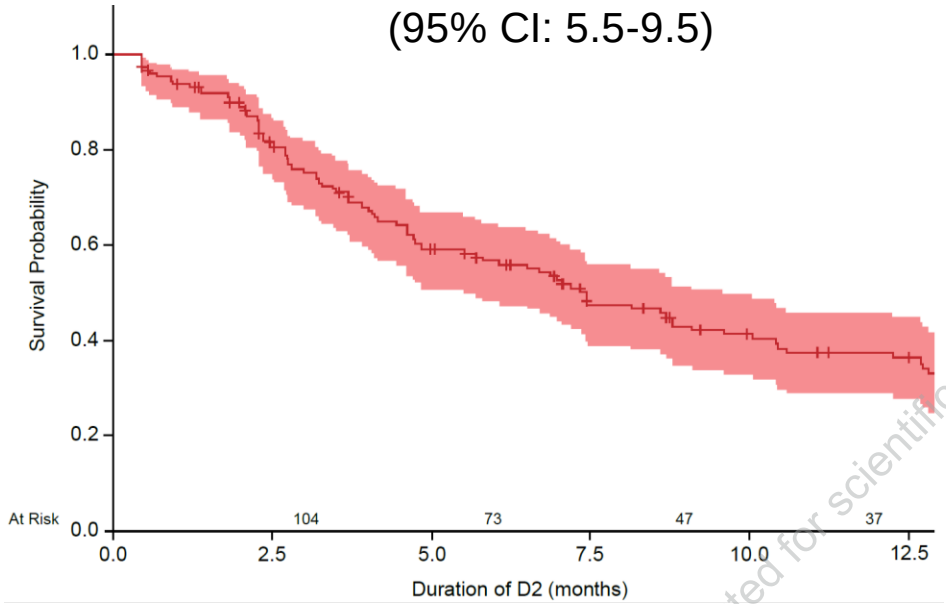
# Patterns of retreatment with DARA

- The most common treatment regimen used for D1:
  - **D-Sens group**: DARA + lenalidomide + dexamethasone (DRd; 18.7%) and DARA + bortezomib + dexamethasone (DVd; 18.7%)
  - **D-Ref group**: DARA + pomalidomide + dexamethasone (DPd; 23.5%)
- The most common treatment regimen used for D2:
  - **D-Sens group**: DARA monotherapy (31.3%)
  - **D-Ref group**: DARA monotherapy (17.6%) and DARA + carfilzomib + dexamethasone (DKd; 17.6%)
- 32.0% of D-Sens and 35.3% of D-Ref patients received agents from the same drug class in D1 and D2.
- The median gap between D1 and D2 was 9.3 months in D-Sens patients and 9.0 months in D-Ref patients.
- More D-Sens patients received D1 and D2 in consecutive LOTs compared with D-Ref patients (62.0% vs 51.0%).
- Fewer D-Sens patients received D1 in the third LOT or later compared with D-Ref patients (30.0% vs 45.1%). The median number of LOTs before D2 was three in both groups.

# Patterns of retreatment with DARA: duration of treatment

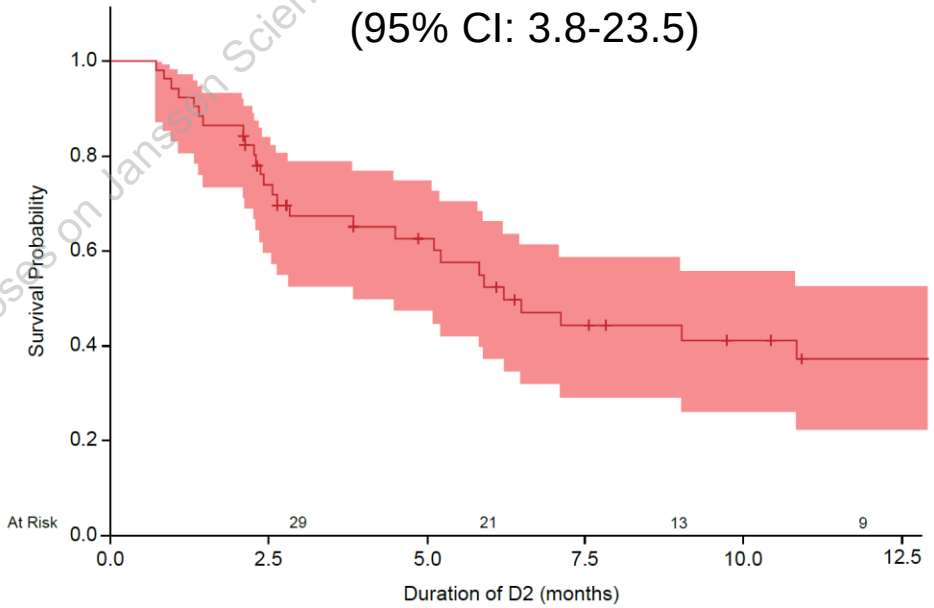
**D-Sens**

Median: 7.4 months
(95% CI: 5.5-9.5)




**D-Ref**

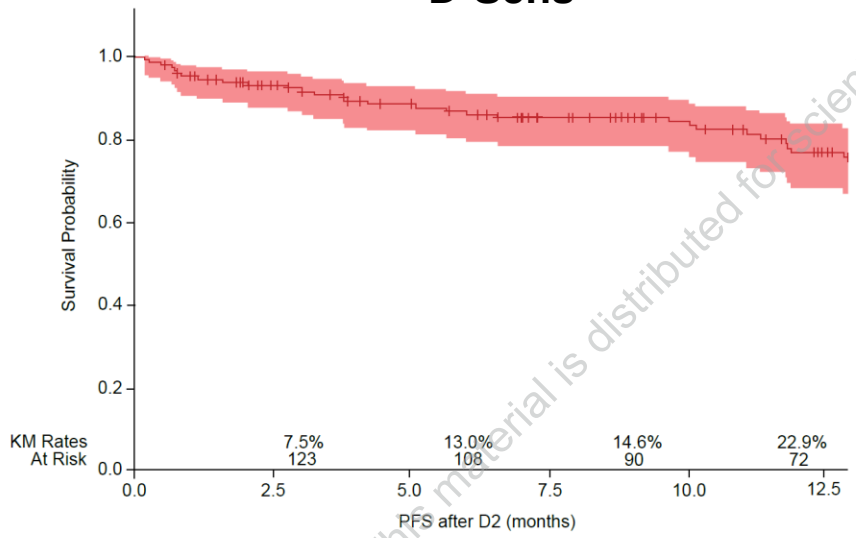
Median: 6.4 months
(95% CI: 3.8-23.5)



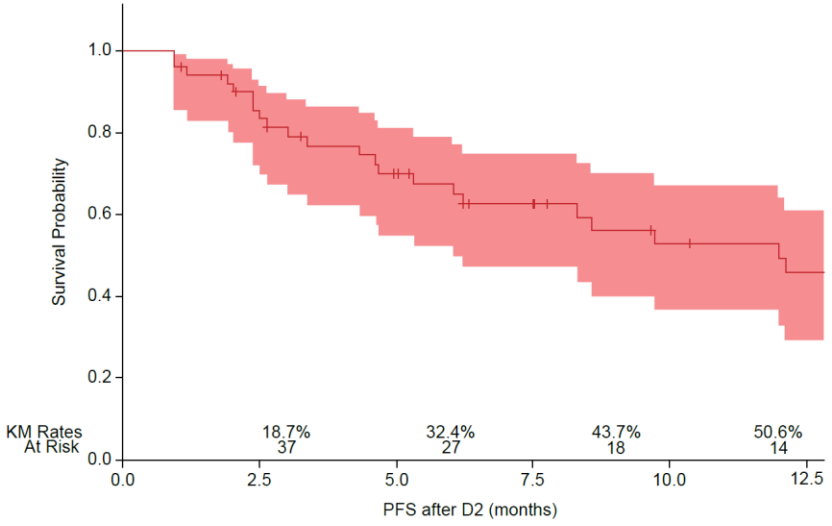

# Retreatment with DARA: progression-free survival

- The percentage of patients that had not received subsequent treatment after D2 was 38.7% and 29.5% at 12 months in D-Sens and D-Ref patients, respectively.
- The median time to next treatment was 7.0 months for D-Sens patients and 3.3 months for D-Ref patients.
- At 12 months, more D-Sens patients were alive or progression-free after initiation of D2 than D-Ref patients (77.1% vs 49.4%).

**D-Sens**




**D-Ref**




# Conclusions

This largest real-world study of retreatment with DARA showed that DARA retreatment is utilized frequently in real world clinical practice and suggests that it could be an effective strategy to reuse DARA in subsequent lines of therapy among patients with relapsed refractory multiple myeloma.

Based on the findings of this study, it could be hypothesized that DARA retreatment may be more effective when used as early as possible after first DARA exposure. Further research is warranted.

Ongoing clinical studies assessing the efficacy of retreatment with DARA in combination with novel drugs with different mechanisms of action will further demonstrate the benefit of DARA-retreatment

**KEY TAKEAWAY:**

**Retreatment with DARA may provide clinical benefit, regardless of whether patients are sensitive or refractory to DARA after first exposure**

https://www.congresshub.com/ASH2024/Oncology/Daratumumab/Ailawadhi

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