PA-430

Recent Trends in Real-World Frontline Treatment Patterns and Outcomes for Patients With Multiple Myeloma in the United States

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Key Takeaway

The steady increase in the use of Dara as 1L treatment for MM since its approval has resulted in real-world improvements in TTNT

Conclusions

Use of Dara in 1L treatment for MM has steadily increased since its approval in 2018

The TTNT benefit was higher among Dara users than non-users, regardless of SCT status, race, and cytogenetic risk

These findings confirm the translation of clinical trial findings to real-world practice and support the use of Dara in 1L for patients with MM

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Poster

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Disclosures

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Introduction

- The treatment landscape for multiple myeloma (MM) has evolved rapidly since the approval of daratumumab (Dara) in frontline (1L) in 2018
- Dara has been increasingly adopted as 1L treatment for patients with newly diagnosed multiple myeloma (NDMM)[1]
- While the efficacy of Dara has been established in clinical trials, evidence of its real-world effectiveness is still emerging
- Furthermore, the prognosis may vary depending on patients' receipt of a stem cell transplant (SCT) or presence of cytogenetic abnormalities[2,3]
- Additionally, the impact of a patient's race on treatment outcomes is unclear, as Black patients are underrepresented in clinical trials and are less likely to receive novel therapies or SCT[4,5]

Objective

- To describe recent trends of 1L Dara utilization and its impact on outcomes among patients with NDMM in the real world

Methods

Data source and study design

- Electronic health record (EHR) data from the Flatiron Health Research Database were evaluated

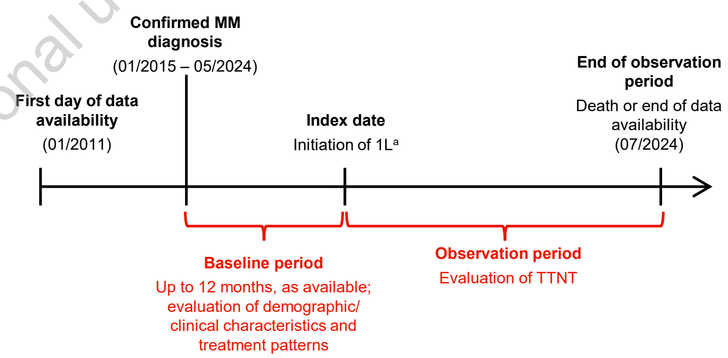
Population

- Inclusion criteria were: confirmed NDMM diagnosis; complete line of therapy (LOT) information; initiated a recommended treatment for NDMM between 1/1/2015 and 5/31/2024 within 1 year of diagnosis; ≥60 days of post-index clinical activity, unless death or progression occurred earlier; and ≥18 years old at index date
- Exclusion criteria were: SCT prior to the index date; participation in a clinical trial during 1L; and prior diagnosis of another primary cancer (excluding non-melanoma skin cancer, plasma cell leukemia, amyloidosis diagnosed after multiple myeloma, or malignancy of unspecified sites)

Statistical analyses

- Patient demographic and clinical characteristics, treatment patterns, and time to next treatment (TTNT) were described
  - TTNT was defined as the time from the index date to the earliest of initiation of next LOT or death and analyzed using a Kaplan-Meier curve
- Analyses were conducted based on use of Dara in 1L (Dara users, Dara non-users)
- Results were further stratified by race (Black, non-Black) and cytogenetic risk (standard risk, high risk [among patients with known risk])
  - High risk was defined as having a del(17p) mutation or any of the following two found together: t(4;14) or t(14;16) or t(14;20), or 1q amplification
- Analyses were conducted separately among those with and those without SCT during 1L (non-SCT cohort, SCT cohort)

Figure 1: Study design



[a]All medications received within 60 days from the date of the first MM antineoplastic agent were considered as part of the 1L therapy regimen.

Results

Sample size and patient characteristics

- The non-SCT cohort had a median age of 72 years, 47% were female, and there were 1059 Dara users and 5500 Dara non-users (**Table 1**)
  - 19% of both Dara users (n=197) and Dara non-users (n=1051) were Black
  - 15% of Dara users (n=155) and 12% of Dara non-users (n=671) had high cytogenetic risk
  - 58% of both Dara users (n=613) and Dara non-users (n=3165) had standard cytogenetic risk
- The SCT cohort had a median age of 63 years, 44% were female, and there were 332 Dara users and 1425 Dara non-users (**Table 1**)
  - 19% of Dara users (n=62) and 16% of Dara non-users (n=227) were Black
  - 18% of Dara users (n=60) and 17% of Dara non-users (n=244) had high cytogenetic risk
  - 66% of Dara users (n=218) and 64% of Dara non-users (n=919) had standard cytogenetic risk
- Use of Dara increased steadily in both the non-SCT (**Figure 2**) and SCT (**Figure 3**) cohorts since 2018

Table 1: Characteristics of patients

Characteristic, n (%)	Non-SCT cohort: Dara users n=1059	Non-SCT cohort: Dara non-users n=5500	SCT cohort: Dara users n=332	SCT cohort: Dara non-users n=1425
Age, mean ± SD [median], y	69.5 ± 10.5 [71]	70.7 ± 10.3 [72]	61.8 ± 9.0 [63]	61.7 ± 8.6 [63]
≥65 years	766 (72.3)	4,124 (75.0)	144 (43.4)	628 (44.1)
Sex				
Female	496 (46.8)	2,583 (47.0)	134 (40.4)	634 (44.5)
Race				
White	635 (60.0)	3046 (55.4)	205 (61.7)	894 (62.7)
Black or African American	197 (18.6)	1051 (19.1)	62 (18.7)	227 (15.9)
Asian	19 (1.8)	103 (1.9)	13 (3.9)	30 (2.1)
Other	58 (5.5)	500 (9.1)	10 (3.0)	108 (7.6)
Unknown	150 (14.2)	800 (14.5)	42 (12.7)	166 (11.6)
Insurance plan type				
Commercial/private	441 (41.6)	2094 (38.1)	154 (46.4)	601 (42.2)
Medicare and Medicare Advantage	90 (8.5)	439 (8.0)	21 (6.3)	97 (6.8)
Medicaid	24 (2.3)	130 (2.4)	7 (2.1)	17 (1.2)
Other	504 (47.6)	2837 (51.6)	150 (45.2)	710 (49.8)
ISS stage at index date				
I	218 (20.6)	972 (17.7)	101 (30.4)	471 (33.1)
II	233 (22.0)	1001 (18.2)	73 (22.0)	314 (22.0)
III	217 (20.5)	1079 (19.6)	56 (16.9)	245 (17.2)
Unknown	391 (36.9)	2448 (44.5)	102 (30.7)	395 (27.7)
ECOG PS				
0	233 (22.0)	1294 (23.5)	107 (32.2)	446 (31.3)
1	339 (32.0)	1451 (26.4)	98 (29.5)	379 (26.6)
≥2	153 (14.5)	912 (16.6)	27 (8.1)	100 (7.0)
Unknown	334 (31.5)	1843 (33.5)	100 (30.1)	500 (35.1)
Cytogenetic risk				
High risk[a]	155 (14.6)	671 (12.2)	60 (18.1)	244 (17.1)
del(17p)	110 (10.4)	498 (9.1)	40 (12.0)	173 (12.1)
1q amplification and any of: t(4;14) or t(14;16) or t(14;20)	56 (5.3)	223 (4.1)	26 (7.8)	97 (6.8)
Both of the above criteria met	11 (1.0)	50 (0.9)	6 (1.8)	26 (1.8)
Standard risk	613 (57.9)	3,165 (57.5)	218 (65.7)	919 (64.5)
Unknown	291 (27.5)	1,664 (30.3)	54 (16.3)	262 (18.4)
Quan-CCI, mean ± SD [median]	2.6 ± 2.0 [2.0]	2.4 ± 1.9 [2.0]	2.4 ± 1.8 [2.0]	2.2 ± 1.8 [2.0]
CRAB symptoms	511 (48.3)	2,199 (40.0)	150 (45.2)	487 (34.2)

[a]Patients were classified as high risk if they were recorded with the presence of del17p or two of the following: i. t(4;14) or t(14;16) or t(14;20); ii. 1q amplification; among patients who were not classified as high risk, those with a record of absence for any of the markers were classified into standard risk.

Percentages for baseline characteristics may not add up to 100% due to rounding.

CCI, Charlson Comorbidity Index; CRAB, high calcium, renal failure, anemia, or bone pain; Dara, daratumumab; ECOG PS, Eastern Cooperative Oncology Group performance status; ISS, International Staging System.

Figure 2: Proportion of patients in the non-SCT cohort receiving a Dara-based regimen in 1L

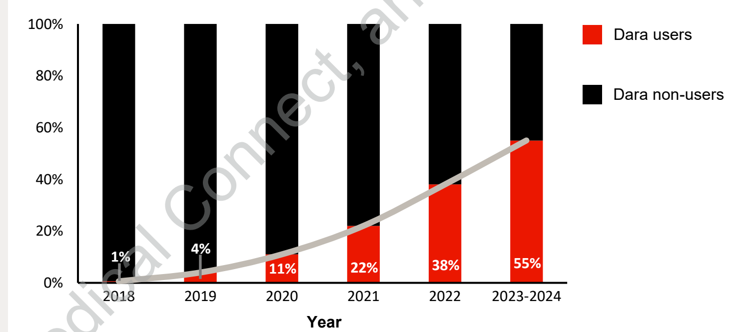
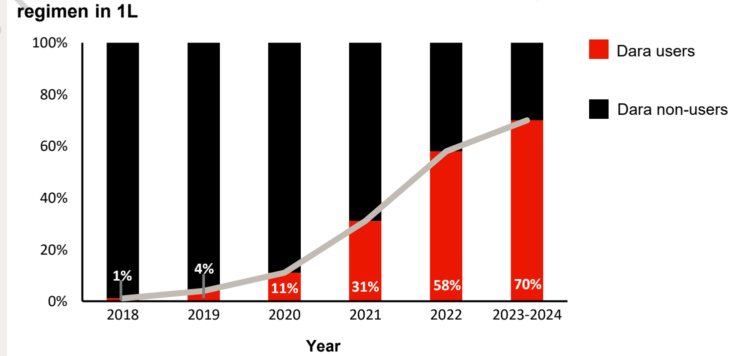


Figure 3: Proportion of patients in the SCT cohort receiving a Dara-based regimen in 1L



- Among Dara users, daratumumab with bortezomib, lenalidomide and dexamethasone (DVRd) was the most common regimen in both the non-SCT and SCT cohorts (**Table 2**)
- Among Dara non-users, the most common regimen was VRd in both the non-SCT and SCT cohorts (**Table 2**)

Time to next treatment

- Non-SCT cohort (**Table 3**)
  - Median TTNT was 23 months (Dara users) and 12 months (non-users)
  - The proportion of patients still on 1L at 48 months was 35% (Dara users) and 19% (non-users)
  - The proportion of Black patients still on 1L at 48 months was 30% (Dara users) and 24% (non-users)
  - The proportion of patients with high cytogenetic risk still on 1L at 48 months was 20% (Dara users) and 10% (non-users)
  - The proportion of patients with standard cytogenetic risk still on 1L at 48 months was 40% (Dara users) and 21% (non-users)
- SCT cohort (**Table 3**)
  - Median TTNT was not reached (Dara users) compared to 47 months (non-users)
  - The proportion of patients still on 1L at 48 months was 58% (Dara users) and 49% (non-users)
  - The proportion of Black patients still on 1L at 48 months was 70% (Dara users) and 49% (non-users)
  - The proportion of patients with high cytogenetic risk still on 1L at 48 months was 31% (Dara users) and 27% (non-users)
  - The proportion of patients with standard cytogenetic risk still on 1L at 48 months was 65% (Dara users) and 53% (non-users)

Table 2: 1L treatment patterns

	Non-SCT cohort: Dara users n=1059	Non-SCT cohort: Dara non-users n=5500	SCT cohort: Dara users n=332	SCT cohort: Dara non-users n=1425
Length of 1L, mean ± SD [median], mo	13.3 ± 12.1 [8.4]	19.1 ± 21.4 [9.9]	20.0 ± 11.8 [16.9]	38.4 ± 26.7 [32.7]
Year of index date				
≤2017	3 (0.3)	2078 (37.8)	-	569 (39.9)
2018	4 (0.4)	717 (13.0)	2 (0.6)	188 (13.2)
2019	27 (2.5)	682 (12.4)	8 (2.4)	209 (14.7)
2020	75 (7.1)	612 (11.1)	23 (6.9)	180 (12.6)
2021	156 (14.7)	548 (10.0)	63 (19.0)	141 (9.9)
2022	251 (23.7)	409 (7.4)	115 (34.6)	85 (6.0)
2023-2024	543 (51.3)	454 (8.3)	121 (36.4)	53 (3.7)
Regimens prescribed in 1L				
DVRd	574 (54.2)	-	299 (90.1)	-
DVCd	136 (12.8)	-	17 (5.1)	-
DKRd	12 (1.1)	-	8 (2.4)	-
DVTd	7 (0.7)	-	1 (0.3)	-
DRd	326 (30.8)	-	7 (2.1)	-
VRd	-	2,885 (52.5)	-	1,117 (78.4)
VCd	-	764 (13.9)	-	142 (10.0)
KRd	-	91 (1.7)	-	97 (6.8)
Vd	-	995 (18.1)	-	37 (2.6)
Rd	-	707 (12.9)	-	24 (1.7)
Number of agents in regimen, mean ± SD [median]	3.7 ± 0.5 [4]	2.7 ± 0.5 [3]	3.7 ± 0.5 [4]	3.0 ± 0.3 [3]

1L, frontline; Dara, daratumumab; DRd, daratumumab, lenalidomide, dexamethasone; DVCd, daratumumab, bortezomib, cyclophosphamide, dexamethasone; DKRd, daratumumab, carfilzomib, lenalidomide, dexamethasone; DVRd, daratumumab, bortezomib, lenalidomide, dexamethasone; DVTd, daratumumab, bortezomib, thalidomide, dexamethasone; KRd, carfilzomib, lenalidomide, dexamethasone; Rd, lenalidomide, dexamethasone; SCT, stem cell transplant; SD, standard deviation; VCd, bortezomib, cyclophosphamide, dexamethasone; Vd, bortezomib, dexamethasone; VRd, bortezomib, lenalidomide, dexamethasone.

Table 3: Kaplan-Meier rates (95% CI)[a] for time to next treatment at 48 months

	Non-SCT cohort: Dara users n=1059	Non-SCT cohort: Dara non-users n=5500	SCT cohort: Dara users n=332	SCT cohort: Dara non-users n=1425
All patients	35.4% (30.0%; 40.8%)	19.4% (18.3%; 20.6%)	58.3% (49.4%; 66.1%)	48.9% (46.0%; 51.7%)
Black patients	30.2% (16.2%; 45.5%)	24.0% (21.1%; 26.9%)	69.7% (53.7%; 81.1%)	48.7% (41.2%; 55.8%)
Patients with high cytogenetic risk	19.5% (9.4%; 32.3%)	10.4% (7.9%; 13.1%)	30.5% (13.3%; 49.7%)	27.2% (21.3%; 33.4%)

[a]These rates represent the proportion of patients who remained on the same treatment 48 months after initiation of 1L.

Sensitivity analysis

- Results were consistent after restricting analyses to patients initiating 1L therapy in May /2018 (ie, approval date of Dara in 1L) or later

Limitations

- Del(1p32) and *TP53* mutations were not available, which may have resulted in the underestimation of patients classified with high-risk cytogenetics
- This analysis combined all Dara regimens and all non-Dara regimens, and is therefore not suitable for a direct comparison with clinical trials that focus on specific regimens
- The SCT cohort in this study consisted of patients who underwent SCT, which may differ from the transplant-eligible (TE) populations in clinical trials, as some of the TE patients in the clinical trials may not have actually gone on to receive a transplant

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Multiple Myeloma

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