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Characteristics and Treatment Patterns of Nontransplanted Patients With Newly Diagnosed Multiple Myeloma Treated With Daratumumab, Bortezomib, Lenalidomide, and Dexamethasone (DVRd) or Daratumumab, Lenalidomide, and Dexamethasone (DRd) in the Frontline Setting

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Key Takeaway

DVRd and DRd are being increasingly adopted as foundational FL treatment for nontransplanted patients with NDMM, regardless of age, frailty, cytogenetic risk, or ISS stage

Conclusions

Daratumumab-based regimens, either as quadruplet (DVRd) or triplet (DRd), are being increasingly used as FL treatment for nontransplanted patients with NDMM

Patients receiving FL DVRd were generally younger and less frail but more likely to have high cytogenetic risk than those treated with DRd

Data suggest that DVRd and DRd may be considered foundational for the treatment of nontransplanted patients with NDMM regardless of age, frailty, cytogenetic risk, and ISS stage

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Poster

https://www.congresshub.com/ASH2025/Oncology/Daratumumab/Ailawadhi

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Disclosures

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Introduction

- DRd is the standard of care for frontline (FL) treatment of transplant-ineligible (TIE) patients with newly diagnosed multiple myeloma (NDMM), supported by its superior efficacy and tolerable safety profile vs Rd (phase 3 MAIA clinical trial[1]) and VRd (real-world data[2])
- Recent data from the phase 3 CEPHEUS[3] and IMROZ[4] trials have demonstrated significant improvements in efficacy outcomes in TIE patients with DVRd and isatuximab/VRd, respectively, vs VRd
- As a result, the treatment paradigm is shifting toward the use of such quadruplet therapy for suitable TIE patients with NDMM
  - DVRd and isatuximab/VRd are now listed as National Comprehensive Cancer Network (NCCN) Category 1 preferred regimens for the treatment of transplant-deferred or TIE patients with NDMM who are <80 years of age and are not considered frail[5]
- The objective of this study was to evaluate real-world usage patterns of FL DVRd and FL DRd in nontransplanted patients with NDMM and to assess the characteristics of patients treated with these regimens

Methods

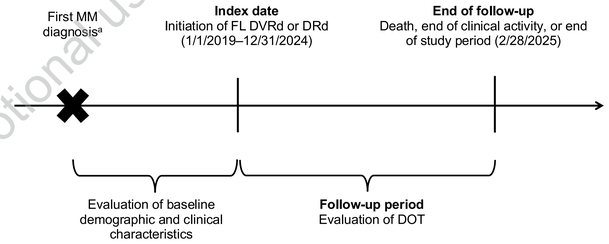
Study population and design

- Inclusion criteria: FL treatment with DVRd or DRd for the treatment NDMM between January 1, 2019, and December 31, 2024
- Exclusion criteria: age <18 years; hematopoietic stem cell transplant at any time during the study period; enrollment in a clinical trial; presence of other cancers; use of chimeric antigen receptor T-cell therapy; diagnosed with amyloid light-chain amyloidosis before the index date
- Index date was defined as the date of initiation of FL DVRd or FL DRd (**Figure 1**)
- High cytogenetic risk was defined as the presence of abnormalities including del(17p), t(4;14), or t(14;16)

Statistical analyses

- Descriptive statistics were used to report demographic and clinical characteristics
- Kaplan-Meier methods were used to estimate duration of therapy (DOT)

Figure 1: Study design scheme



[a]Patients with MM (*ICD-9-CM*: 203.0x or *ICD-10-CM*: C90.0x coded in structured electronic health records) between beginning of cohort (January 1, 2011) and the latest dataset cut-off (February 28, 2025). *ICD-9-CM, International Classification of Diseases, Ninth Revision, Clinical Modification*; *ICD-10-CM, International Statistical Classification of Diseases, Tenth Revision, Clinical Modification*; MM, multiple myeloma.

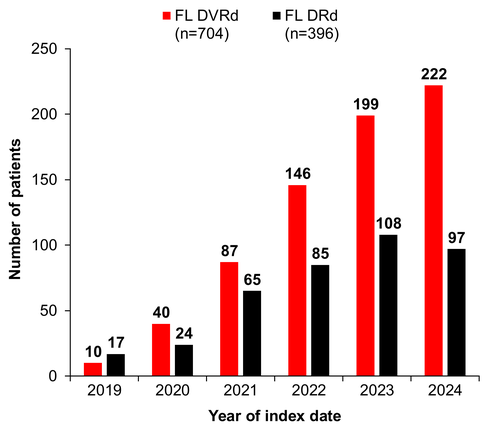
Results

- Of the 20,250 patients included in the Flatiron Health Research database, 704 patients were included in the DVRd cohort and 396 were included in the DRd cohort
- Use of both DVRd and DRd increased during the study period (**Table 1** and **Figure 2**)
  - FL DVRd was initiated in 10 patients in 2019; 146 in 2022; and 222 in 2024
  - FL DRd was initiated in 17 patients in 2019; 85 in 2022; and 97 in 2024
- At index, FL DVRd patients were generally younger, more likely to be male, and less likely to have Medicare coverage than FL DRd patients; the 2 cohorts had similar proportions of Black/African American patients (**Table 1**)
- High cytogenetic risk was more frequently observed in the FL DVRd cohort than in the FL DRd cohort (**Table 2**)
- Fewer FL DVRd patients had International Staging System (ISS) stage III vs stage I disease, whereas a higher proportion of FL DRd patients had ISS stage III vs stage I disease (**Table 2**)
- FL DVRd patients were more likely to be nonfrail (Intergroupe Francophone du Myélome simplified frailty score <2) than FL DRd patients (**Table 2**)
- Bortezomib as part of the DVRd regimen was given once weekly or less frequently in most (65.6%) patients
- Median follow-up was 15.6 months for DVRd and 20.3 months for DRd
- Median DOT was 18.5 months for DVRd and 23.5 months for DRd

Table 1: Patient demographics

n (%)	FL DVRd (n=704)	FL DRd (n=396)
Age (years), mean ± SD, median [Q1–Q3]	65.9 ± 9.8, 68 [60–73]	76.7 ± 6.5, 78 [73.8–82]
Age group		
<65	269 (38.2)	17 (4.3)
65 to <70	139 (19.7)	28 (7.1)
70 to <75	167 (23.7)	72 (18.2)
≥75	129 (18.3)	279 (70.5)
Male	389 (55.3)	196 (49.5)
Race		
White	421 (59.8)	251 (63.4)
Black or African American	133 (18.9)	74 (18.7)
Other	61 (8.7)	27 (6.8)
Unknown	89 (12.6)	44 (11.1)
Insurance type		
Commercial	322 (45.7)	157 (39.6)
Medicare	59 (8.4)	68 (17.2)
Patient assistance program	74 (10.5)	51 (12.9)
Others (Medicaid, Government, self pay, other type)	78 (11.1)	37 (9.3)
Unknown	171 (24.3)	83 (21.0)
Region		
Northeast	104 (14.8)	48 (12.1)
Midwest	59 (8.4)	31 (7.8)
South	247 (35.1)	181 (45.7)
West	83 (11.8)	40 (10.1)
Unknown	211 (30.0)	96 (24.2)
Practice type		
Academic	166 (23.6)	80 (20.2)
Community	538 (76.4)	316 (79.8)
Time from index date to last clinic visit (days), mean ± SD, median [Q1–Q3]	591.3 ± 424.0, 474 [259.8–849.3]	669.7 ± 490.1, 617 [246–977.5]
Time from initial diagnosis date to index date (days), mean ± SD, median [Q1–Q3]	46.2 ± 107.6, 32 [21–47]	67.3 ± 174.9, 34 [21–54.3]

Figure 2: Number of patients treated with DVRd or DRd by year of index date (2019–2024)



Limitations

- Transplant eligibility is not captured in the Flatiron dataset; no transplant during the study period was used as a proxy
- Limited follow-up in real-world patients as well as right censoring may have affected the observed treatment duration
- Missing cytogenetic data may have influenced the results

Table 2: Clinical characteristics at baseline

n (%)	FL DVRd (n=704)	FL DRd (n=396)
ISS stage		
I	184 (26.1)	65 (16.4)
II	152 (21.6)	106 (26.8)
III	125 (17.8)	84 (21.2)
Unknown/not documented	243 (34.5)	141 (35.6)
ECOG PS score		
0	178 (25.3)	76 (19.2)
1	237 (33.7)	167 (42.2)
2	103 (14.6)	71 (17.9)
3	20 (2.8)	22 (5.6)
4	1 (0.1)	1 (0.3)
Missing	165 (23.4)	59 (14.9)
CCI score		
0	490 (69.6)	259 (65.4)
1	70 (9.9)	47 (11.9)
2	37 (5.3)	26 (6.6)
≥3	107 (15.2)	64 (16.2)
CCI score, mean ± SD	1.1 ± 2.2	1.2 ± 2.2
Frailty score		
0	245 (34.8)	39 (9.8)
1	210 (29.8)	73 (18.4)
≥2	249 (35.4)	284 (71.7)
Cytogenetic risk 1 – del17, t(4;14), or t(14;16)		
High	158 (22.4)	51 (12.9)
Non-high	383 (54.4)	241 (60.9)
Missing	163 (23.2)	104 (26.3)
t(14;20)		
Present	18 (2.6)	7 (1.8)
Absent	235 (33.4)	158 (39.9)
Unknown/not documented	451 (64.1)	231 (58.3)
Cytogenetic risk 2 – del17, t(4;14), t(14;16), or t(14;20)		
High	163 (23.2)	53 (13.4)
Non-high	379 (53.8)	239 (60.4)
Missing	162 (23.0)	104 (26.3)
Gain or amplification 1q21		
Present	205 (29.1)	82 (20.7)
Absent	266 (37.8)	158 (39.9)
Unknown/not documented	233 (33.1)	156 (39.4)
Cytogenetic risk 3 – del17, t(4;14), t(14;16), t(14;20), or amplification 1q21		
High	288 (40.9)	118 (29.8)
Non-high	271 (38.5)	182 (46.0)
Missing	145 (20.6)	96 (24.2)
Cytogenetic risk 4 – del17, t(4;14), t(14;16), t(14;20), or amplification 1q21		
>1 high risk	90 (12.8)	23 (5.8)
1 high risk	198 (28.1)	95 (24.0)
No high risk	271 (38.5)	182 (46.0)
Missing/unknown	145 (20.6)	96 (24.2)
Patients with CRAB symptoms		
Hypercalcemia	100 (14.2)	44 (11.1)
Renal impairment	117 (16.6)	87 (22.0)
Anemia	306 (43.5)	193 (48.7)
Bone disease	45 (6.4)	20 (5.1)
Any	385 (54.7)	233 (58.8)
Patients with diabetes	75 (10.7)	44 (11.1)
Patients with peripheral neuropathy	22 (3.1)	29 (7.3)
Patients with COVID-19	5 (0.7)	2 (0.5)

CCI, Charlson Comorbidity Index; CRAB, calcium elevation, renal insufficiency, anemia, bone abnormality; ECOG PS, Eastern Cooperative Oncology Group performance status.

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Multiple Myeloma

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