Use of novel therapies for multiple myeloma in the United States: important differences in patient characteristics, access to care, and real-world treatment challenges

Alpana Kaushiva[1], Shiyin Jiao[1], Rajesh Kamalakar[1], Kavita Sail[1]

[1]AbbVie Inc., North Chicago, IL, USA

OBJECTIVE

To evaluate sociodemographic and clinical characteristics of recipients of novel treatments for multiple myeloma (MM) in the US real-world setting

CONCLUSIONS

Descriptively, these results suggest important differences in sociodemographic and clinical characteristics among patients who received novel treatments for MM

Uptake of bispecific antibodies (BsAbs) was higher when compared with chimeric antigen receptor T-cell therapy (CAR-T) usage, suggesting greater treatment accessibility for BsAbs

Patients who received novel treatments experienced extended wait time, especially for CAR-T

This warrants further investigation into barriers to access and strategies to potentially ameliorate existing health disparities in patients with MM in the US

For additional information or to obtain a PDF of this poster

Scan QR code or to download an electronic version of this presentation and other AbbVie ISPOR 2025 scientific presentations

QR code expiration date: April 16, 2026

To submit a medical question, please visit www.abbviemedinfo.com

Funding

AbbVie funded this study and participated in the study design, research, analysis, data collection, interpretation of data, and the review and approval of the publication. All authors had access to relevant data and participated in the drafting, review, and approval of this publication. No honoraria or payments were made for authorship.

Medical writing support was provided by Atreju Lackey, PhD, of Avalere Health Global Ltd, which was funded by AbbVie.

Disclosures

AK, **SJ**, **RK**, and **KS** are employees/contractors of AbbVie, and may hold AbbVie stock or options.

References

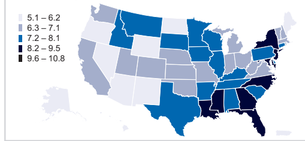
1. National Cancer Institute. Cancer Stat Facts: Myeloma. 2024. Accessed at https://seer.cancer.gov/statfacts/html/mulmy.html on March 12, 2025.
2. Rodriguez-Otero P, et al. *Cancer Treat Rev*. 202;100:102284.
3. Padala SA, et al. *Med Sci (Basel)*. 2021;9(1):3.
4. Rafae A, et al. *Oncologist*. 2024;29(3):200-212.
5. Gasoyan H, et al. *Clin Lymphoma Myeloma Leuk*. 2023;23(11):e420-e427.
6. Gagelmann, Nico, et al. *The Lancet Haematology*. 2022;9(10): e786-e795.
7. Gasoyan H, et al. *Clin Lymphoma Myeloma Leuk*. 2023;23(11):e420-e427.
8. Wang R, et al. *Cancer Med*. 2024;13(3):e6915.

Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR), May 13–16, 2025, Montreal, QC, Canada [Ref DV-014669]

INTRODUCTION

- MM is a very heterogeneous clonal plasma cell disorder that accounts for 2% of all new cancer cases and 2% of all cancer-related deaths in the US,[1] with incidence varying across the US:
- Despite recent advances in treatment that have improved response rates and survival, MM remains incurable, with a majority of patients relapsing and requiring additional treatment[2]
- Due to the heterogeneous nature of the disease, the treatment landscape is complex[3]
- Novel immunotherapies recently approved in the US for treatment of MM include CAR-Ts and BsAbs,[4] but varying access to these treatments and disparities in care have been reported previously with mixed results, requiring further investigation[5]
- Many patients cannot access these novel therapies due to insufficient time for referral to specialized centers prior to disease worsening, limited referral availability, and logistical challenges; even treated patients often face delays

Myeloma Cancer Incidence Rates by State of Residence, 2017-2021



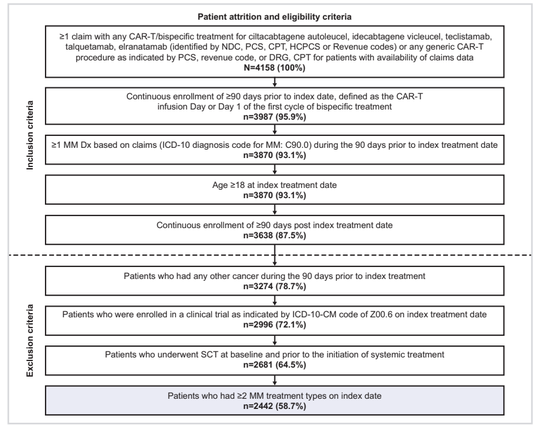
©American Cancer Society, 2024
Data Source: North American Association of Central Cancer Registries, 2024
Rate per 100,000, age-adjusted to the 2000 US standard population. Incidence is adjusted for delays when possible. Puerto Rico rates are not adjusted for delay.
https://cancerstatisticscenter.cancer.org/types/myeloma

METHODS

- This retrospective observational study used data from the PurpleLab open claims database to assess the characteristics of patients with MM who received a novel treatment from March 2021 to October 2024
- Index date was defined as the CAR-T infusion day, or day 1 of the first BsAb treatment cycle
- All patients had ≥1 claim for a CAR-T/BsAb treatment and continuous enrollment ≥90 days before and after index date

Study analysis

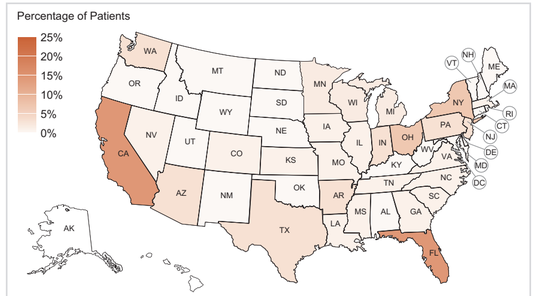
- Descriptive statistics were used to assess continuous and categorical variables
  - Distributions across groups were examined using T-tests or ANOVA for continuous variables, and Chi-square tests for categorical variables
- Negative binomial regression was used to calculate incidence rate ratios for time to treatment receipt (days), while logistic regression was used to calculate odds ratios for treatment type to assess the relationship between patient characteristics and type of novel therapy received
- Time to treatment receipt was defined as the estimated time from the specialist office visit when the physician initially ordered the medication, proxied using date with ICD-10 diagnosis codes for "MM not having achieved remission" and/or "encounter for antineoplastic immunotherapy", to date of receipt of the CAR-T or BsAb[6-8]



The baseline period was >90 days prior to the index date.
CAR-T, chimeric antigen receptor T-cell therapy; CM, clinical modification CPT, current procedural terminology; DRG, diagnosis-related group; Dx, diagnosis; HCPCS, healthcare common procedure coding system; ICD, International Classification of Diseases; MM, multiple myeloma; NDC, national drug code; PCS, procedure coding system; SCT, stem cell transplant.

RESULTS

The distribution of patients with MM who received any novel therapy by state of residency (N=2442)



MM, multiple myeloma.

Demographics and characteristics by type of novel MM therapy received

- Full demographic and clinical characteristics are detailed in **Supplemental Table 1**
- Of the 2442 patients included in the analysis, 1490 (61%) received BsAbs and 952 (39%) received CAR-Ts (*P*<.0001)
- The percentage of patients receiving BsAb treated in a rural hospital setting was almost double that of patients receiving CAR-T (25% vs 13%; *P*<.0001)
- Mean Charlson Comorbidity Index (CCI) score was significantly higher for patients receiving BsAb versus patients receiving CAR-T (4.6 vs 3.9; *P*<.0001)

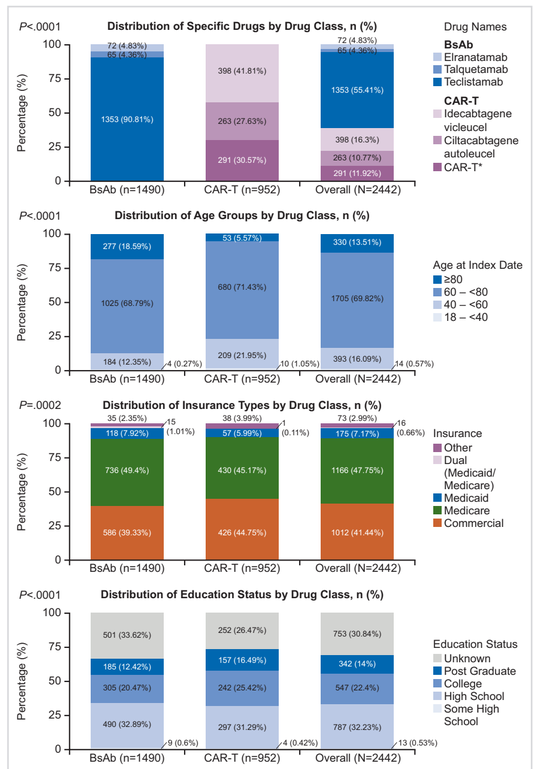
Demographic and clinical characteristics

Variables	BsAb (n=1490)	CAR-T (n=952)	Overall (N=2442)	*P*-value
Age at index (year)				
Mean (SD)	70.5 (9.3)	66.2 (9.7)	68.9 (9.7)	**<.0001**
Median (IQR)	72 (65–78)	67 (60–73)	70 (63–76)	
Sex				
Female	735 (49.3)	422 (44.3)	1157 (47.4)	**.0158**
Race				
White	904 (60.7)	642 (67.4)	1546 (63.3)	
Black	166 (11.1)	98 (10.3)	264 (10.8)	**.0066**
Other	4 (0.3)	1 (0.1)	5 (0.2)	
Insurance				
Commercial	586 (39.3)	426 (44.8)	1012 (41.4)	
Medicare	736 (49.4)	430 (45.2)	1166 (47.8)	**.0002**
Medicaid	118 (7.9)	57 (6.0)	175 (7.2)	
Income amount				
Mean (SD)	50,963 (44,712)	55,484 (50,858)	52,774 (47,308.1)	**.0541**
Median (IQR)	40,000 (20,833–66,667)	40,000 (22,500–68,750)	40,000 (22,500–66,667)	

Data are displayed as n (%) unless stated otherwise. Not all categories are shown.
BsAb, bispecific antibody; CAR-T, chimeric antigen receptor T-cell therapy.

Distribution of key patient demographics of age, insurance type, and level of educational attainment by therapy type

- On average, patients receiving CAR-Ts were younger than patients receiving BsAbs (66 vs 71 years; *P*<.0001)
  - This was further evidenced by the greater proportion of patients in the ≥80 years of age category among patients who received BsAbs vs CAR-Ts (18.6% vs 5.6%)



BsAb, bispecific antibody; CAR-T, chimeric antigen receptor T-cell therapy.

Distribution of treatment type, age, insurance type, and level of educational attainment by race

- Among the overall sample who received a novel treatment, 63% were White and 11% were Black (**Supplement**)
- The distribution of age categories, insurance types, and education status also varied by race (**Supplement**)

Time to treatment receipt

- Mean time to treatment receipt was 79 days for CAR-Ts and 16 days for BsAbs, indicating a significantly longer average time to treatment receipt for patients who received CAR-Ts vs those who received BsAbs (*P*<.0001)

Time to treatment receipt

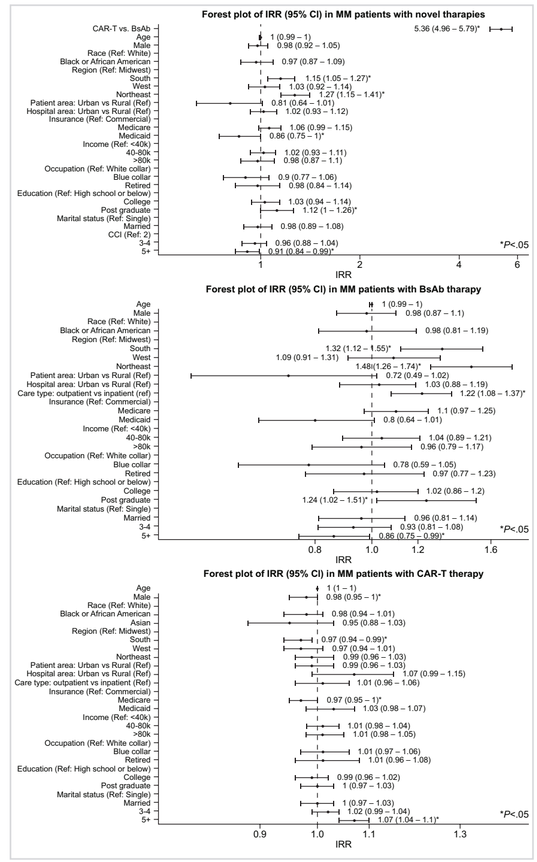
Variables	BsAb (n=1490)	CAR-T (n=952)	Overall (N=2442)	*P*-value
Time to treatment receipt (days)				
Mean (SD)	15.9 (18.6)	79.2 (12.4)	40.4 (35.0)	**<.0001**
Median (IQR)	9 (2–21)	84 (74–88)	27 (7–80)	
Min–Max	1–90	22–90	1–90	
Missing	4 (0.3)	12 (1.3)	16 (0.7)	

Data are displayed as n (%) unless stated otherwise.
BsAb, bispecific antibody; CAR-T, chimeric antigen receptor T-cell therapy.

Sociodemographic and clinical characteristics associated with time to treatment receipt

- Overall, patients who received CAR-T experienced longer time to treatment receipt than those who received BsAb
- Results from multivariable negative binomial regression analyses indicated that among BsAb patients, those with a higher CCI had a shorter time to treatment receipt compared to those with a lower CCI, whereas among CAR-T patients, those with a higher CCI had a longer time to treatment receipt compared to those with a lower CCI
- Among BsAb patients, those with Medicaid insurance had a shorter time to treatment receipt compared to those with commercial insurance, whereas among CAR-T patients, those with Medicare insurance had a longer time to treatment receipt compared to those with commercial insurance

Incidence rate ratios of time to treatment receipt in days, stratified by novel therapy type



Negative binomial regression of time to treatment receipt (days) with the following predictors: treatment type (BsAb vs CAR-T), age (continuous), sex, race, patient area, hospital area, care setting (inpatient/ outpatient), insurance, income, education, marital status, and Charlson Comorbidity Index score.
BsAb, bispecific antibody; CAR-T, chimeric antigen receptor T-cell therapy; IRR, incidence rate ratio(s).

Sociodemographic and clinical characteristics associated with receipt of BsAb vs CAR-T

- Results from multivariable logistic regression analyses indicated that treatment in an urban hospital and attainment of college/post-graduate education were associated with a higher odds of receiving CAR-T treatment, while being retired and having a higher CCI score were associated with a higher odds of receiving BsAb treatment (**Supplement**)