

Real-World Less Frequent Dosing Schedule of Teclistamab in Patients With Relapsed or Refractory Multiple Myeloma – A US National Healthcare Claims Analysis

Matthew J Planko¹, Jinghua He², Dee Lin³, Hsien-Yen Chang³, Nina Kim³, Jennifer S Harper³, Jessica Fowler³, Mariana Fernandez⁴, Margaret Doyle⁵, Laura Hester⁶, Dina Gifkins⁶, Bingcao Wu³

¹Department of Internal Medicine, Division of Hematology/Oncology, University of Michigan, Ann Arbor, MI, USA; ²Janssen Scientific Affairs, LLC, Titusville, NJ, USA; ³Janssen Scientific Affairs, LLC, Horsham, PA, USA; ⁴Janssen-Cilag S.A., Madrid, Spain; ⁵Janssen Sciences Ireland, Dublin, Ireland; ⁶Janssen Research & Development, LLC, Raritan, NJ, USA

Conclusions

MajesTEC-1, with > 2 years of follow-up, demonstrated deep and durable responses for patients who switched to Q2W dosing after sustained CR

In this real-world population, preliminary data on TTNT was promising despite the population being heavily pretreated and including patients with prior BCMA exposure, renal failure, and frailty

In real-world settings, switching to less frequent dosing (e.g. Q2W) was observed in some patients (median time to switch was not reached with a median follow-up of 4.2 months). Future research with longer follow-up is needed

Limitations

This study has limitations associated with administrative claims data. It only included patients who had health insurance and available clinical data, which limited the generalizability of the findings. Additionally, less frequent dosing was evaluated based on treatment patterns instead of confirmed clinical decisions. By the time of data analysis, death information was not available and therefore not considered as an event in evaluating treatment effectiveness



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Introduction

- Teclistamab is the first-in-class B-cell maturation antigen (BCMA)-directed CD3 T-cell bispecific therapy approved for multiple myeloma (MM) treatment in the US
- The approved teclistamab dosing schedules start with a step-up dosing phase (includes 2 step-up doses [0.06 mg/kg and 0.3 mg/kg] and the first full treatment dose of 1.5 mg/kg), followed by once-weekly (QW) full treatment doses or every-other-week (Q2W) doses for patients who achieve and maintain a complete response or better for ≥6 months for adult patients with relapsed/refractory MM (RRMM).^{1,2} All doses are given subcutaneously
- The pivotal MajesTEC-1 trial allowed transitioning teclistamab treatment doses from QW to less frequent dosing (e.g., Q2W). With the longest follow-up of any bispecific antibody in MM, teclistamab continues to demonstrate deep and durable responses and reduced grade ≥3 infections over time, including in patients who switched to less frequent dosing³
- This study aimed to describe real-world dosing schedule of teclistamab, time to less frequent dosing (i.e., switching from QW to Q2W), and time to next treatment (TTNT) in patients with RRMM treated with teclistamab

Methods

Study design and data source

- This was a real-world retrospective observational study of patients treated with teclistamab for MM using Komodo Healthcare Map™, which includes health claims from more than 150 private insurers in the US

Patient population and cohort identification

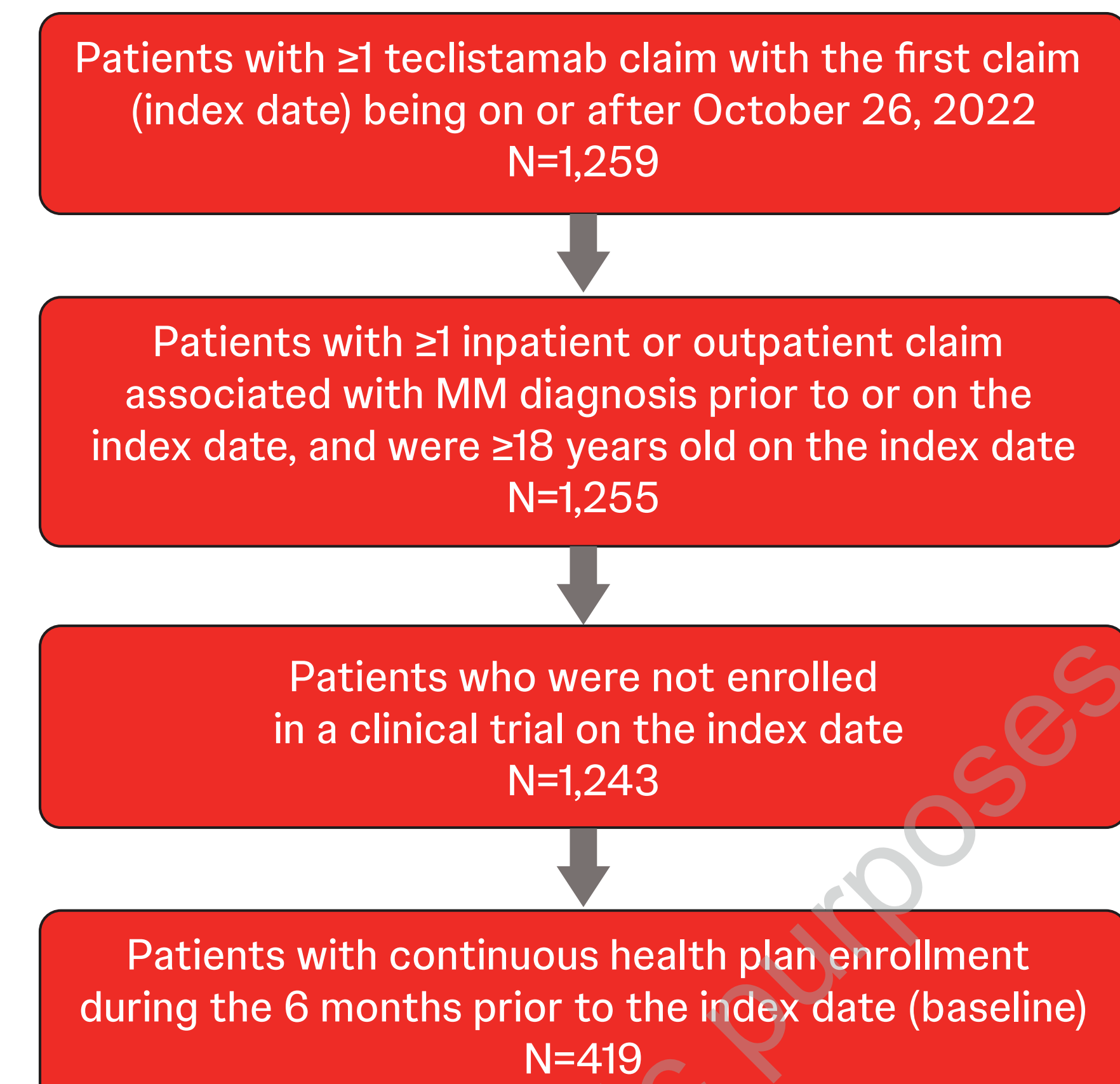
- This study included patients treated with teclistamab between October 26, 2022 (after FDA approval of teclistamab in the US), and December 31, 2023. Patients were included for the analysis if they met all the criteria below (FIGURE 1):
 - Had ≥1 teclistamab claim with the first claim being on or after October 26, 2022; the date of the first teclistamab claim was defined as the index date
 - Had ≥1 inpatient or outpatient claim for MM diagnosis prior to or on the index date
 - Were ≥18 years of age on the index date
 - Did not receive teclistamab in a clinical trial and was not enrolled in a clinical trial on the index date
 - Had continuous health plan enrollment during the 6 months prior to the index date (the baseline period)

Data analysis

- This is a descriptive analysis. Patient characteristics were captured during the 6 months of baseline period. Prior exposure to BCMA therapies was captured at any time prior to the index date where data were available
- Patients were followed until the earliest of the initiation of a next line of therapy (LOT), the end of continuous health plan enrollment, or the end of the study (December 31, 2023)
- Switch to less frequent dosing was defined as having ≥3 consecutive teclistamab claims with a dose interval ≥14 days (Q2W dosing schedule) or ≥28 days (Q4W dosing schedule)
- TTNT was estimated as a proxy for disease progression
- Median TTNT and switch to less frequent dosing at 3, 6, and 9 months were evaluated in a subset of patients with ≥1 cycle of teclistamab use (≥28 days) after the index date using the Kaplan-Meier (KM) survival analyses
- For the less frequent dosing analysis, patients were censored at the earliest date of the following: end of continuous enrollment, end of the study period, treatment discontinuation (defined as the date of the last teclistamab claim +7 days before the earliest 90-day teclistamab treatment gap), and the initiation of the next LOT
- For the analysis of TTNT, patients were censored at the earliest of the end of continuous enrollment or the end of the study period; initiating a new LOT was considered an event

Results

Figure 1: Patient attrition



MM, multiple myeloma.

Patient baseline characteristics

- 419 patients met the study criteria and were included in the analysis. The median age was 65 (interquartile range [IQR] 58-73) years with 20.3% of patients ≥75 years old; 56.3% of patients were male, 63.4% of patients were White and 31.2% were Black or African American. A majority of patients had commercial insurance (52.3%) or Medicare (31.7%) (TABLE 1)
- During the 6-month baseline period, 53.0% of patients had any type of infection, 49.2% had renal failure/impairment, 39.1% had anemia, 35.8% had lytic bone lesions, 30.0% had lymphopenia, 29.8% had hypogammaglobulinemia, 11.9% had neutropenia, and 14.6% were frail based on the International Myeloma Working Group algorithm
- Prior BCMA therapy use before the index date was observed in 24.3% of patients, including 12.2% who had prior BCMA-directed CAR T-cell therapy (TABLE 1)

Table 1: Baseline patient characteristics (N = 419)

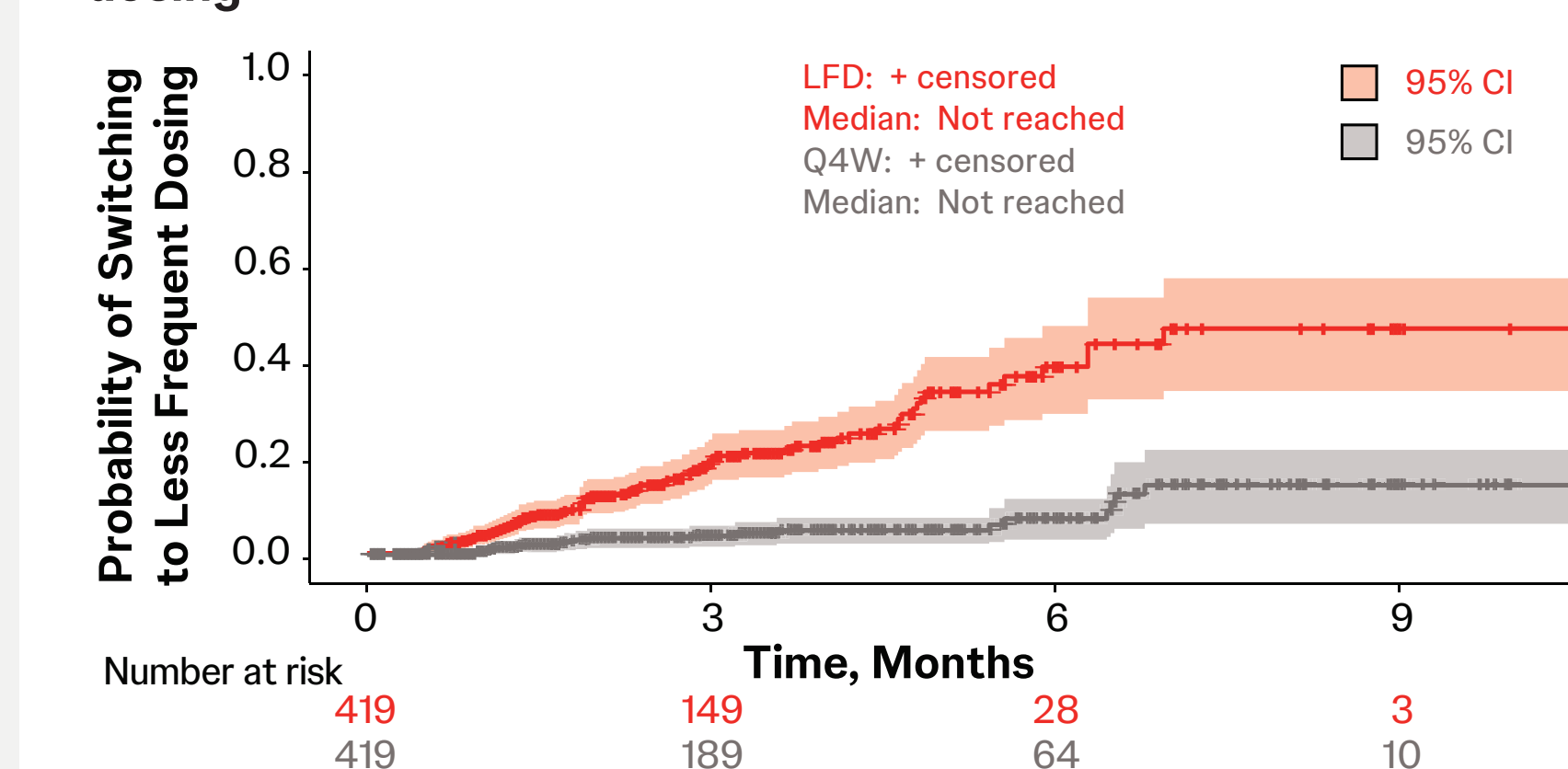
| Patient demographics (on the index date) | |
|---|------------------------|
| Age, years, median (IQR) | 65 (58-73) |
| Age categories, years, n (%) | |
| <65 | 207 (49.4) |
| ≥65 to <75 | 127 (30.3) |
| ≥75 | 85 (20.3) |
| Sex, n (%) | |
| Female | 183 (43.7) |
| Male | 236 (56.3) |
| Race, n (%) of 292 patients with data available | |
| White | 185 (63.4) |
| Black or African American | 91 (31.2) |
| Asian or Pacific Islander | 16 (5.4) |
| Ethnicity, n (%) of 220 patients with data available | |
| Hispanic or Latino | 45 (20.5) |
| Non-Hispanic or Latino | 175 (79.5) |
| Insurance type, n (%) | |
| Commercial | 219 (52.3) |
| Medicare | 133 (31.7) |
| Medicaid | 39 (9.3) |
| Multiple insurance | 28 (6.7) |
| Clinical characteristics (6-month baseline period) | |
| Prevalent comorbidities and conditions of interest, n (%) | |
| Infection | 222 (53.0) |
| Renal impairment/failure | 206 (49.2) |
| Anemia | 164 (39.1) |
| Lytic bone lesions | 150 (35.8) |
| Lymphopenia | 113 (30.0) |
| Hypogammaglobulinemia | 125 (29.8) |
| Neutropenia | 50 (11.9) |
| Frailty, yes, n (%) | 61 (14.6) ^a |
| QCCI score excluding MM, mean (SD) | 4.2 (3.4) |
| Treatment history (any time prior to index) ^b | |
| Prior LOT, median (IQR) | 5 (3-6) ^c |
| Prior BCMA exposure, n (%) | 102 (24.3) |
| CAR-T therapy (cilta-cel, ide-cel) | 51 (12.2) |
| ADC (belantamab) | 71 (16.9) |
| Other bispecific antibodies | 0 |

ADC, antibody drug conjugate; BCMA, B-cell maturation antigen; CAR-T, chimeric antigen receptor T-cell; IQR, interquartile range; LOT, line of therapy; QCCI, Quan-Charlson Comorbidity Index; SD, standard deviation.
^aBased on the International Myeloma Working Group algorithm.⁴
^bBased on available data in the database, which may not reflect a patient's complete treatment history.
^cDetermined based on a claims-based algorithm.

Less frequent dosing schedule

- At a median follow-up of 4.2 (IQR, 1.6-7.1) months, less frequent dosing schedule was observed in 78 patients. Most of these patients switched to Q2W (N=58).
- Based on the KM survival analysis, the probability of switching to less frequent dosing at 3, 6, and 9 months post-index was 19.0% (95% CI, 14.9%–24.2%), 38.6% (95% CI, 30.3%–48.3%), and 46% (95% CI, 35.7%–58.6%), respectively. Switching to Q4W during the first 6 months was rare (FIGURE 2)
- At data cut-off date, the median time to switching to less frequent dosing was not reached

Figure 2: Probability of switching from weekly to less frequent dosing

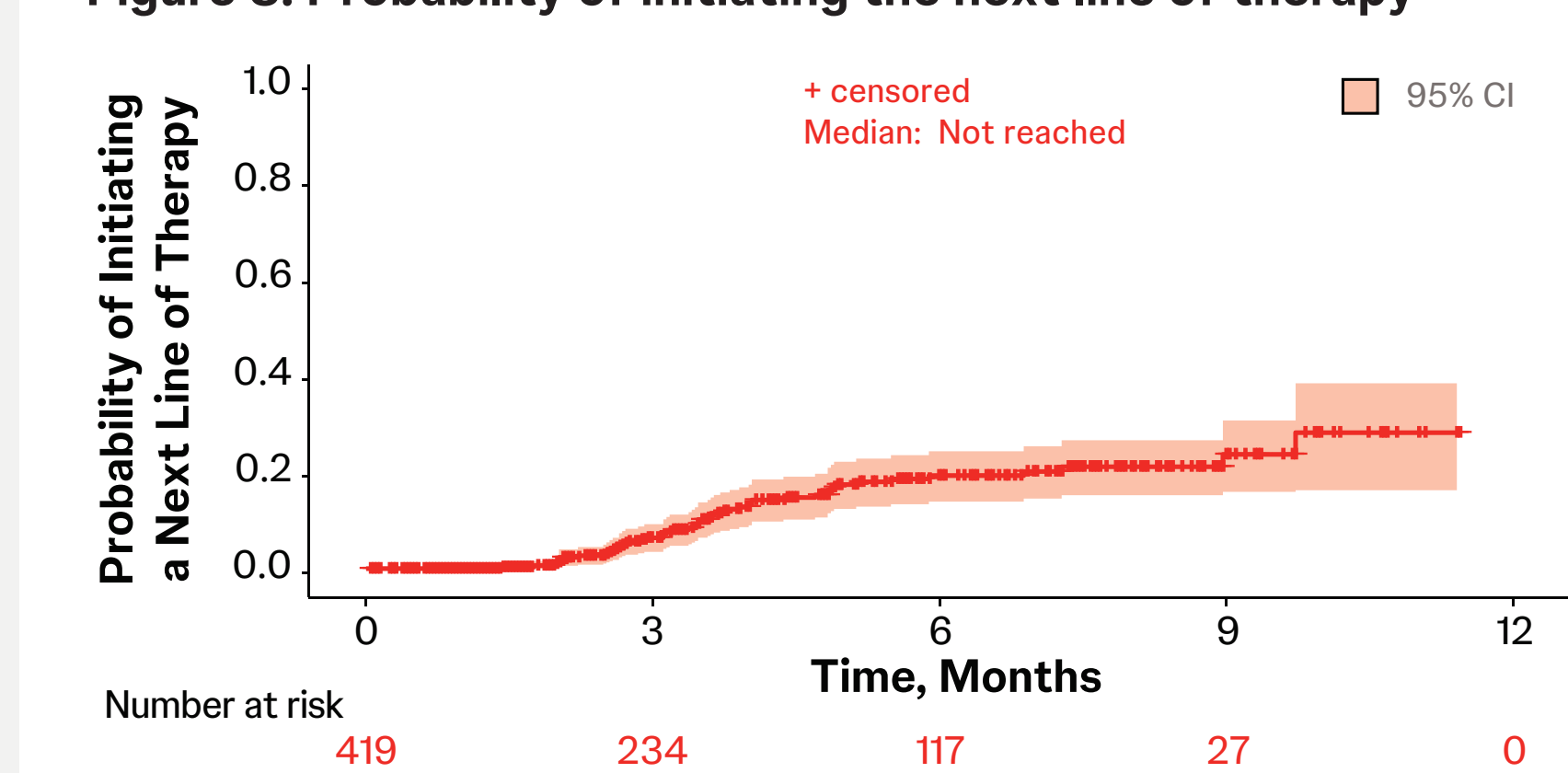


LFD, less frequent dosing (Q2W or Q4W).

Time to the next treatment

- Among the 419 patients, 49 (11.7%) patients received a subsequent LOT after teclistamab by the data cut-off date. The probability of receiving the next LOT at 3, 6, and 9 months post-index was 6.4% (95% CI, 4.1%–9.9%), 19.2% (95% CI, 14.6%–25.1%), and 23.6% (95% CI, 17.2%–32.0%), respectively (FIGURE 3). The median TTNT was not reached
- Among the 78 patients who switched to a less frequent dosing schedule, 3 (3.8%) patients received a subsequent LOT at data cut-off

Figure 3: Probability of initiating the next line of therapy



References

- FDA approves teclistamab-cqyv for relapsed or refractory multiple myeloma. <https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-teclistamab-cqyv-relapsed-or-refractory-multiple-myeloma>. Accessed April 2, 2024.
- TECVAYLI™ US prescribing information. <https://www.janssenlabels.com/package-insert/product-monograph/prescribing-information/TECVAYLI-pi.pdf>. Accessed April 1, 2024. 3. Garfall AL, et al. Presented at 2024 ASCO Annual Meeting, May 31–June 4, 2024; Chicago, IL, USA. 4. Durie BG, et al. *Leukemia* 2006; 20(9):1467-1473.

Multiple Myeloma

