MM-422

Step-up Dosing Experience With Talquetamab in Multiple Myeloma: A US Real-world Analysis

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Key Takeaway

Patients are receiving Tal SUD in both inpatient and outpatient settings, with a trend toward shorter inpatient lengths of stay

CRS events during Tal SUD are predominantly low grade, suggesting that the percentage of patients who initiate Tal in an outpatient or hybrid setting may increase over time

Conclusions

This analysis represents the first investigation into patterns of Tal SUD administration in the real-world setting

While most patients completed SUD in the inpatient setting, outpatient- and hybrid-administration models were also observed

– Additionally, mean inpatient length of stay declined across the study period

The majority of reported CRS events were of low grade, and tocilizumab use was restricted to the first 3 SUD doses

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Disclosures

RB served in a consulting role for Adaptive Biotechnologies, Bristol Myers Squibb, Caribou Biosciences, Genentech, GSK, Janssen, Karyopharm, Legend Biotech, Pfizer, Sanofi, and SparkCures; and participated in research for Novartis and Pack Health. **H-YC**, **Y-HL**, **HHL**, **HP**, **SP**, and **XZ** are employees and stockholders of Johnson & Johnson.

Introduction

- Talquetamab (Tal) is a first-in-class GPRC5D-targeted bispecific monoclonal antibody approved in the United States and European Union in 2023 for the treatment of patients with relapsed/refractory multiple myeloma (RRMM) who have received ≥4 prior lines of therapy and are triple class exposed to a proteasome inhibitor, an immunomodulatory agent, and an anti-CD38 monoclonal antibody[1,2]
- Initiation of Tal treatment includes step-up dosing (SUD) before a 0.4 mg/kg weekly (QW) or 0.8 mg/kg biweekly (Q2W) dosing schedule is established[1]
- As recommended in the prescribing information, Tal SUD should be administered in the inpatient setting, with patients hospitalized for 48 hours after all SUD doses to monitor for cytokine-release syndrome (CRS)[1]
- Patterns of Tal SUD administration, including site of care and inpatient length of stay, have not yet been characterized in the real-world setting

Objective

- To describe real-world use patterns of Tal SUD administration for the treatment of patients with RRMM using US hospital chargemaster data

Methods

- This was a real-world, retrospective, observational study using the all-payer US hospital administrative Premier Healthcare Database, which includes de-identified data from inpatient and outpatient visits to geographically diverse nonprofit, nongovernmental, community, and teaching hospitals/health systems. The database represents approximately 25% of annual US inpatient admissions[3]

Study population

- Adult patients (≥18 years of age) with RRMM who had ≥1 hospital encounter (inpatient or outpatient) that included ≥1 Tal administration with an index dose using the 3 mg/1.5 mL vial between August 9, 2023, and March 7, 2024, within the Premier Healthcare Database were included in this study
  - The index hospitalization was defined as the earliest hospital encounter with Tal; the index date was defined as the date of the earliest Tal administration
- Patients enrolled in clinical trials within 1 month before the index date or anytime after the index date or who had any Tal administration before August 9, 2023, were excluded

Study objectives

- The primary objectives were (1) to describe the demographics and characteristics of patients with RRMM who received Tal, and (2) to describe the characteristics of the initial inpatient stay (eg, length of stay) and Tal SUD dosing pattern
- The secondary objective was to describe the number of events, severity, and management of CRS that occurred during the initial inpatient stay

Data analysis

- Patient characteristics; rates of CRS; and SUD site of care, dosing schedule, and inpatient length of stay (for applicable patients) were analyzed descriptively
- Patient numbers and percentages were reported for categorical variables, and means and standard deviations (SDs) were reported for continuous variables

Results

Patient characteristics

- Overall, 89 patients with RRMM met the inclusion criteria and were included in the study
- Among these, the mean (SD) age was 61.7 (10.6) years, 30 (33.7%) patients were female, and 49 (55.1%) patients were White (**Table 1**)

Table 1: Patient demographics and hospital setting of Tal administration

Characteristic	Patients with RRMM who received Tal (n=89)
Age at index, mean (SD), years	61.7 (10.6)
≥75 years, n (%)	10 (11.2)
Sex, n (%)	
Male	59 (66.3)
Female	30 (33.7)
Race, n (%)	
Black	24 (27.0)
White	49 (55.1)
Other/unknown	16 (18.0)
Payer, n (%)	
Medicare	49 (55.1)
Medicaid	10 (11.2)
Commercial	7 (7.9)
Managed care and others	23 (25.8)
Hospital setting,[a] n (%)	
Rural	0
Urban	80 (100)

RRMM, relapsed/refractory multiple myeloma; SD, standard deviation; SUD, step-up dosing; Tal, talquetamab.
[a]Includes only patients who initiated SUD in the inpatient setting (n=80).
Note: percentages may not sum to 100% due to rounding.

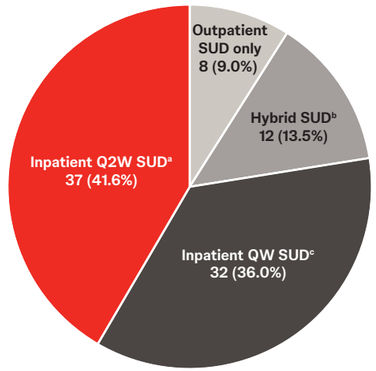
Tal SUD setting and schedule

- Of the 89 patients in this study, 8 (9.0%) received SUD in the outpatient setting, 32 (36.0%) received 3 inpatient doses (QW SUD), 37 (41.6%) received 4 inpatient doses (Q2W SUD), and 12 (13.5%) received SUD using a hybrid model that consisted of 1 to 2 inpatient doses and 1 to 2 outpatient doses (**Figure 1**)

Inpatient length of stay

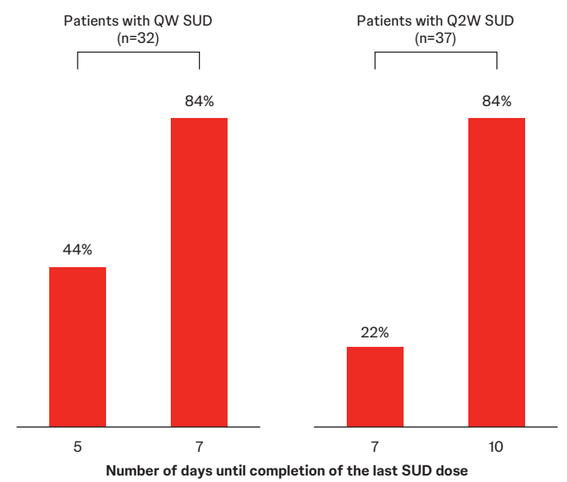
- Among the 32 patients who received inpatient QW SUD, 14 (43.8%) and 27 (84.4%) completed their last SUD dose in 5 and 7 days, respectively (**Figure 2**); of the 37 patients who received inpatient Q2W SUD, 8 (21.6%) and 31 (83.8%) completed their last SUD dose in 7 and 10 days, respectively
- Among the 81 patients who received ≥1 SUD dose in the inpatient setting, the overall mean (median) length of stay was 8.4 (8) days (**Figure 3A**)
  - The overall mean (median) length of stay declined over the course of the study from 8.9 (8) days between August and September 2023 to 7.6 (7) days between December 2023 and February 2024 (**Figure 3B**)

Figure 1: Setting of care and schedule of Tal SUD administration



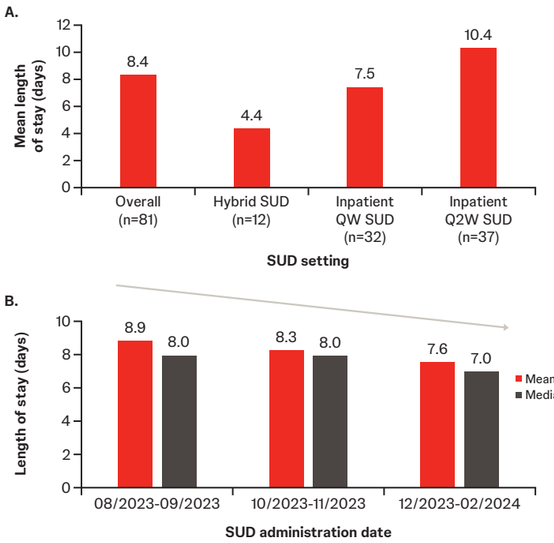
QW, weekly; Q2W, every 2 weeks; SUD, step-up dosing; Tal, talquetamab.
[a]Includes patients who received 4 inpatient SUD doses.
[b]Includes patients who received 1 to 2 inpatient SUD doses and 1 to 2 outpatient SUD doses.
[c]Includes patients who received 3 inpatient SUD doses; some of these patients may have received their last SUD dose in the outpatient setting if a Q2W SUD schedule was used.
Note: percentages may not sum to 100% due to rounding.

Figure 2: Length of SUD period by SUD schedule



QW, weekly; Q2W, every 2 weeks; SUD, step-up dosing.
Note: for patients with QW SUD, those who completed their last dose within 5 days were also counted as having completed their last dose within 7 days; for Q2W SUD, those who completed their last dose within 7 days were also counted as having completed their last dose within 10 days.

Figure 3: Mean inpatient length of stay (A) by SUD setting and (B) over time



QW, weekly; Q2W, every 2 weeks; SUD, step-up dosing.

Risk of CRS and tocilizumab use

- Among the 80 patients who initiated SUD in the inpatient setting, 47 (58.8%) experienced CRS, predominantly at grade 1 (**Table 2**)
- Tocilizumab was administered to 41 (51.3%) patients, and use of this treatment occurred only during the time period of the first 3 SUD doses

Table 2: Risk, severity, and treatment of CRS[a]

Severity and treatment of CRS	Premier Healthcare Database (n=80)
Patients experiencing CRS, n (%)	47 (58.8)
Grade 1	37 (46.3)
Grade 2	3 (3.8)
Grade 3	0
Grade unknown or unspecified	7 (8.8)
Patients administered tocilizumab, n (%)	41 (51.3)
SUD dose 1	13 (16.3)
SUD dose 2	23 (28.8)
SUD dose 3	6 (7.5)
SUD dose 4	0

CRS, cytokine-release syndrome; SUD, step-up dosing.
[a]Includes only patients who initiated SUD in the inpatient setting (n=80).

References
1. TALVEY™ (talquetamab-tgvs) [package insert]. Janssen Biotech, Inc.; 2023. 2. Chari A, et al. *N Engl J Med*. 2022;387(24):2232-2244. 3. Premier Applied Sciences®. Premier Healthcare Database: data that informs and performs. Accessed August 1, 2024. https://offers.premierinc.com/rs/381-NBB-525/images/PremierHealthcareDatabaseWhitepaper.pdf.

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