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CoMMitmenTT-Tec: A Global Real-world Platform Study Of Teclistamab In Relapsed/Refractory Multiple Myeloma

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Key Takeaway

In this pooled multi-national cohort, teclistamab was safe and effective in a broad RRMM population with diverse clinical profiles; favorable safety results may reflect increasing adoption of best practices to mitigate and manage treatment-related adverse events (TRAEs)

Conclusions

Real-world effectiveness outcomes were consistent with MajesTEC-1 across a range of treatment contexts and clinically challenging patient profiles, including elderly patients, those with renal impairment, and those with high-risk cytogenetics.

Safety outcomes were numerically favorable compared with MajesTEC-1, potentially reflecting evolution of infection and CRS prophylaxis and management strategies over time

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Introduction

- Teclistamab (Tec) is a B-cell maturation antigen (BCMA) x CD3 bispecific therapy and the most widely used BCMA bispecific for relapsed/refractory multiple myeloma (RRMM) worldwide
- Since first regulatory approval in 2022, multiple single-center or single-country real-world studies have reported safety and effectiveness outcomes consistent with the MajesTEC-1 clinical trial[1]. However, large global real-world (RW) studies are needed to characterize treatment strategies and clinical outcomes across multiple regions and in clinically challenging populations
- We report initial pooled results from three teclistamab-treated patient cohorts in the United States (US), Europe/Middle East/Africa (EMEA), and Canada along with subgroup analyses of patients with high-risk cytogenetic abnormalities (HRCA), renal impairment, and elderly patients (≥75 years)

Methods

Patient-level data were pooled from two retrospective, company-sponsored chart reviews in the US (data collection March 2024–May 2025) and EMEA (Dec 2023–Aug 2024), and aggregate data from the Canadian Myeloma Research Group (CMRG) registry (May 2023–Dec 2025) **(Table 1)**

- Eligibility criteria included confirmed RRMM diagnosis, initiation of teclistamab monotherapy outside of clinical trial, adult age (≥18 years), and ≥1 month follow-up (unless the patient died within one month of treatment initiation)
- Subgroup analyses were conducted among patients with the following difficult-to-treat clinical features: renal impairment, high-risk cytogenetic abnormalities (HRCA), and elderly patients (≥75 years)

Naïve pooling methods were used to combine individual patient data from chart reviews with aggregate data from the CMRG registry.

Table 1: Description of CoMMitmenTT pooled cohorts

Cohort	N	Data Collection	Description
EMEA site-based chart review	113	Dec 2023 - Aug 2024	Multi-country, site-based chart review of Tec pts outside of clinical trials (88% PAA, 12% commercial) in 23 sites across 8 countries
US panel-based chart review	101	Mar 2024 - May 2025	Panel-based chart review of commercial Tec pts in USA (70% treated in community settings)
Canadian Myeloma Research Group (CMRG) Registry	142	May 2023 - Dec 2025	Prospectively maintained registry of RRMM patients receiving Tec in RW settings across Canada

Results

Patient Characteristics

- 356 patients met all study criteria and were included in the pooled analysis (mean age 67 years, mean prior lines of therapy 5, 66% triple-class refractory, 15% prior anti-BCMA exposure); high-risk subgroup patient characteristics were comparable to the overall cohort **(Table 2)**
- Median follow-up was 13.8 months in the US cohort, 15.1 in the EMEA cohort, and 9.9 in the CMRG cohort.

Table 2: Patient Baseline Characteristics

	Pooled Cohort (n=356)	Renal Impairment* (n=66)	HRCA† (n=104)	Elderly‡ (n=59)
Patient demographics				
Age, mean ± SD	66.5 ± 9.1	70.7 ± 8.6	66.4 ± 8.6	79.7 ± 3.9
Male, n (%)	195 (55%)	42 (64%)	49 (47%)	33 (56%)
Mean follow-up, months	10.6 ± 7.6	10.4 ± 7.5	11.0 ± 8.1	10.3 ± 7.7
Clinical characteristics, among those with available assessment				
ECOG ≥2, n (%)	18 (12%)	5 (15%)	10 (19%)	0 (0%)
HRCA, n (%)	104 (35%)	11 (23%)	104 (100%)	6 (13%)
EMD§, n (%)	34 (16%)	7 (14%)	10 (15%)	2 (8%)
Prior treatment history				
# prior LOTs, mean ± SD	5.2 ± 2.4	5.8 ± 2.9	5.0 ± 2.3	5.0 ± 2.5
Triple-class exposed, n (%)	336 (94%)	63 (96%)	99 (95%)	58 (98%)
Prior BCMA exposure, n (%)	54 (15%)	12 (18%)	18 (17%)	7 (12%)
Triple-refractory, n (%)	234 (66%)	44 (68%)	78 (75%)	42 (71%)
Penta-refractory, n (%)	104 (29%)	22 (34%)	35 (34%)	13 (22%)

** Renal impairment defined as recorded and collected within each cohort: EMEA: CrCL <40 mL/min or BSA-adjusted GFR <60 mL/min/m². US: as recorded by physician. CMRG: eGFR ≥10 and <60 mL/min/1.73m²*

† HRCA defined as presence of at least one of the following: del(17p), t(4;14), t(14;16), amp(1q), del(1p)

‡ Elderly defined as age ≥75 years

§ EMD defined as recorded and collected within each cohort: EMEA: isolated extraosseous plasmacytomas not associated with bone lesions. US: As recorded by physician. CMRG: Data not available.

Real-World Effectiveness

- ORR in the overall cohort was 73% (57% ≥VGPR); 12-mo PFS and OS 54% and 68%. Results were comparable across subgroups:
  - ORR/≥VGPR: 68%/57% among patients with renal impairment, 75%/65% among patients with HRCA, 80%/74% among elderly patients **(Figure 1)**
  - 12-month PFS: 45% among patients with renal impairment, 55% among patients with HRCA, 59% among elderly patients **(Figure 2, top panel)**
  - 12-month OS: 60% among patients with renal impairment, 63% among patients with HRCA, 62% among elderly patients **(Figure 2, bottom panel)**

Figure 1: Best response (%), overall and by subgroup

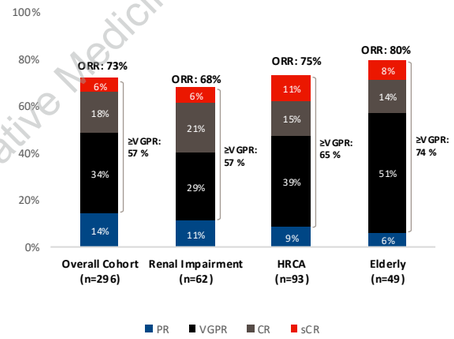
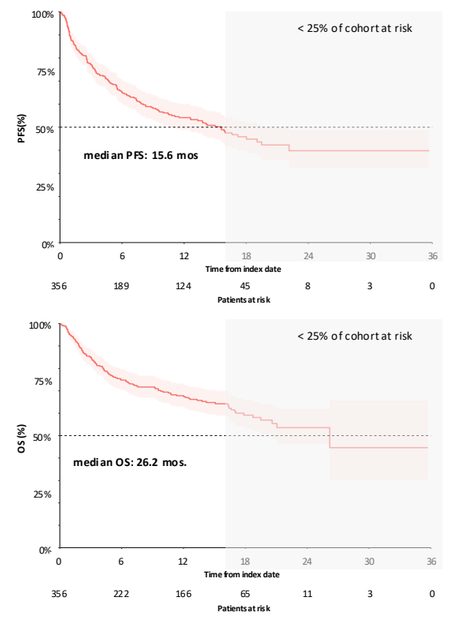


Figure 2: PFS and OS, overall cohort



Real-World Safety (Table 3)

- Incidence of all-grade CRS was 39% (10% Gr2, 0.8% Gr≥3) in the overall cohort; the incidence of all-grade ICANS was 6% (0.6% Gr3)
  - The incidence and severity of CRS and ICANS did not differ substantially across subgroups
- Among patients for whom infection data were available, 24% of patients experienced at least one severe infection (21% Gr3, 0.9% Gr4, 2.8% Gr5); 42% received at least one dose of IVIG/SCIG prophylaxis.
  - Severe infection rates were 29%, 30%, and 28% in the renal impairment, HRCA, and elderly subgroups
  - Across all groups, most severe infections occurred within 6 months of teclistamab initiation.

Table 3: Real-World Safety Outcomes

Patients with at least one event, n (%)		Pooled Cohort (n=356)	Renal Impairment (n=66)	HRCA (n=104)	Elderly (n=59)
CRS, any-grade†		139 (39%)	27 (41%)	40 (38%)	25 (42%)
CRS, Grade 2		34 (10%)	8 (12%)	7 (7%)	4 (7%)
CRS, Grade 3		3 (0.8%)	2 (3%)	1 (1%)	2 (3%)
ICANS, any-grade†		21 (6%)	6 (9%)	7 (7%)	6 (10%)
ICANS, Grade 3		2 (0.6%)	1 (2%)	1 (1%)	0 (0%)
Infection, Grade 3+§		52/214 (24%)	15/51 (29%)	21/69 (30%)	7/25 (28%)
Infection, Grade 3-4		46/214 (21%)	11/51 (22%)	18/69 (26%)	6/25 (24%)
Infection, Grade 5		6/214 (3%)	4/51 (8%)	3/69 (4%)	1/25 (4%)
At least one dose of IVIG/SCIG prophylaxis		89/214 (42%)	19/51 (37%)	34/69 (49%)	15/25 (60%)
Time to First Gr3+ infection	*SUD*	5/52 (10%)	1/15 (7%)	2/21 (10%)	1/7 (14%)
	0-3 mo.	22/52 (42%)	7/15 (47%)	11/21 (52%)	5/7 (71%)
	4-6 mo.	14/52 (27%)	3/15 (20%)	4/21 (19%)	0/7 (0%)
	6+ mo.	11/52 (21%)	4/15 (27%)	4/21 (19%)	1/7 (14%)

† No Grade 4–5 CRS or ICANS events were observed. CTCAE grade data were missing for 3 patients who experienced ≥1 CRS event and for 1 patient who experienced ≥1 ICANS event.

§ 6 patients had a fatal infection (3 septic shock and 3 pneumonia).

References

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Multiple Myeloma