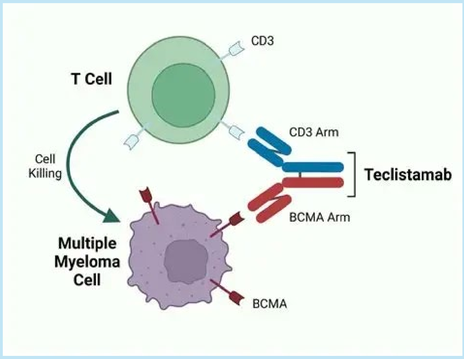
Matching Efficacy and Safety in Clinical Trials vs Real-World Studies of Teclistamab in Relapsed/Refractory Multiple Myeloma

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Introduction:



- Teclistamab is a T cell directed *bispecific antibody* that targets both CD3 expressed on the surface of T cells and B-cell maturation antigen expressed on the surface of myeloma cells. It is approved for the treatment of relapsed/refractory multiple myeloma (RRMM).[1]

-Real-world outcomes of teclistamab in RRMM differs from those of clinical trials. Clinical trials often involve highly selected populations, while real-world studies reflect broader, more diverse patient experiences.[2]

Methods:

- We conducted a meta-analysis to compare the efficacy and safety outcomes of teclistamab between single-arm clinical trials and real-world studies.

- Articles searched across PubMed, Embase, and Web of Science.

- Studies with >20 patients and data on outcomes were included.

- Meta-analyses and meta-regression were performed on pooled outcomes; overall response rate (ORR), better than very good partial response rate (VGPR+), any-grade infection, grade ≥3 infections, cytokine release syndrome (CRS), and immune effector cellassociated neurotoxicity syndrome (ICANS).

Results:

Total studies = 19 (3 single-arm clinical trials and 16 real-world observational studies)

	Single arm clinical trials	Real-world observational studies	MajesTEC-1 trial
Number of patients(n)	229	1759	165
ORR	66% (95% CI: 51%– 81%; I =76.7%)	60.4% (95% CI: 56.6%– 64.2%; I =56.4%)	63%
VGPR+	63%,(95% CI: 46%–81%; I =83.2%)	38.0%, (95% CI: 30.7–45.4%; I =89.9%)	59%
CRS	75%	51.5%	72%
ICANS	13%	8%	15%
Any grade Infection	63%	48%	76%
≥ Grade 3 infection	32%	25.8%	45%

Conclusion:

Real-world studies show *lower VGPR+ rates and less frequent adverse events(CRS,ICANS,infection including grade 3)*, reflecting the differences in the patient populations and monitoring in real-world practice.

References:

1. Moreau, Philippe, Alfred L. Garfall, Niels WCJ van de Donk, Hareth Nahi, Jesús F. San-Miguel, Albert Oriol, Ajay K. Nooka et al. "Teclistamab in relapsed or refractory multiple myeloma." *New England Journal of Medicine* 387, no. 6 (2022): 495-505.
2. Mohan, Meera, Jorge Monge, Nishi Shah, Danny Luan, Mark Forsberg, Vineel Bhatlapenumarthi, Metodi Balev et al. "Teclistamab in relapsed refractory multiple myeloma: multi-institutional real-world study." *Blood Cancer Journal* 14, no. 1 (2024): 35.