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Abstract Title : Real-world efficacy and safety of teclistamab in relapsed or refractory multiple myeloma: Results from 87 patients treated by the polish myeloma group

Category: 600s - Hematologic Malignancy

Review Category: Multiple Myeloma: Pharmacologic Therapies

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Abstract Body

BACKGROUND: Multiple myeloma (MM) is a hematologic malignancy with limited treatment options for patients with relapsed/refractory disease (RRMM). Teclistamab, a bispecific antibody targeting both B-cell maturation antigen (BCMA) and CD3, has demonstrated promising efficacy in treating RRMM in both clinical trials and real-world practice.

METHODS: This multicenter retrospective study included patients with RRMM who initiated teclistamab treatment between August 2023 and March 2025 at 16 Polish hematology/oncology centers. High-risk cytogenetic abnormalities (HRCA) were defined as 1q+, t(4;14), t(14;16), t(14;20), and/or del(17p). Response was assessed using the International Myeloma Working Group (IMWG) consensus criteria. Adverse events (AEs) were graded based on CTCAE v5.0. Cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS) were graded per ASTCT guidelines. Patient characteristics were summarized using frequencies (percentages) or medians (interquartile range [IQR] or range). Kaplan-Meier methods were used to estimate progression-free survival (PFS) and overall survival (OS).

RESULTS: A total of 87 patients naïve to anti-BCMA therapy were included. The median age was 66 (range, 40–86), with 17.2% >75 years; 47.1% male; 70.6% with HRCA; and 18.7% with creatinine clearance <40 ml/min. Patients received a median of 4 (IQR, 3–10) prior lines of therapy, with 86% refractory to triple-class treatment, including 23% refractory to all three IMiDs (thalidomide, lenalidomide, pomalidomide)

and 25.3% refractory to two proteasome inhibitors. Autologous stem cell transplantation (ASCT) had been performed in 63.2% of patients. Among 75 patients evaluable for treatment efficacy, the overall response rate (ORR) was 77.3%, including ≥VGPR in 54.7% and ≥CR in 25.3%. After a median follow-up of 4 months (95% CI, 4.02–5.93), median PFS and OS were 13 months (95% CI, 8.0–not reached [NR]) and 33 months (95% CI, 13–not reached [NR]), respectively. The estimated 12-month PFS was 65% (95% CI, 44%–79%), and the 12-month OS rate was 77% (95% CI, 55%–89%). The most common AEs (any grade) were infections (51.7%, predominantly respiratory tract infections) and hematologic toxicities: neutropenia (21.8%), anemia (18.4%), thrombocytopenia (16.1%). CRS and ICANS occurred in 32.2% and 5.7% of patients, respectively, with all cases being grade 1–2.

CONCLUSIONS: In this multicenter real-world study, teclistamab demonstrated a favorable ORR of 77.3%, with a notable proportion of patients (25.3%) achieving ≥CR. It is important to note that CR rates may be underestimated due to the limited frequency of bone marrow biopsies in routine clinical practice. Teclistamab's safety profile was consistent with previous reports, with no new safety signals identified. Although infection rates appeared relatively low, this finding should be interpreted cautiously given the relatively short median follow-up duration. Overall, these results support the effectiveness and manageable safety profile of teclistamab in heavily pretreated patients with RRMM.

Keywords: Bispecific Antibody Therapy, Treatment Considerations, Biological Therapies

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