



30 DAY NON-RELAPSE MORTALITY IN MULTIPLE MYELOMA PATIENTS TREATED WITH BISPECIFIC T-CELL ENGAGERS: A FAERS ANALYSIS

E. TAYAR¹, S. MASTER^{1,2} and R. KAMBLE^{1,2}

1. University of Houston/ HCA Healthcare Clear Lake, Texas, USA

2. Texas Oncology, Texas, USA



INTRODUCTION

Bispecific T-cell engagers (BiTEs) targeting BCMA or GPRC5D have become important therapies for relapsed/refractory multiple myeloma. While these agents have demonstrated meaningful clinical activity, early treatment-related mortality—particularly deaths within 30 days not attributable to disease progression—remains a concern. Real-world data on early non-relapse mortality (NRM) outside clinical trials are limited. This study evaluates 30-day NRM associated with teclistamab, elranatamab, and talquetamab using the FDA Adverse Event Reporting System (FAERS) database.

OBJECTIVES

To determine the incidence of **30-day non-relapse mortality** among multiple myeloma patients treated with bispecific T-cell engagers. To characterize the **clinical circumstances** associated with early mortality using real-world FAERS data. To identify common **treatment-related toxicities** contributing to early death.

METHODS

This was a retrospective FAERS analysis (Q4 2022–Q2 2025). Reports listing teclistamab, talquetamab, or elranatamab as the *primary suspect* drug were included. Fatal cases were identified using FAERS outcome coding and narrative review. Reports explicitly indicating disease progression were excluded to isolate treatment-related NRM. When available, therapy start dates and adverse event dates were used to determine whether death occurred within 30 days of treatment initiation. Descriptive statistics were used to summarize fatality patterns and associated toxicities.

RESULTS

A total of **2,856** BiTE-associated adverse event reports were identified; **2,199 (76.9%)** were serious and **496 (17.4%)** involved patient death.

After excluding progression-related deaths, **465 (93.8%)** were classified as non-relapse.

•**Teclistamab:** 317 non-relapse deaths (21%)

•**Elranatamab:** 91 (16.5%)

•**Talquetamab:** 54 (7.2%)

Based on available timing data, approximately **4%** of all cases experienced **30-day non-relapse mortality**.

The most common fatal co-reported toxicities included:

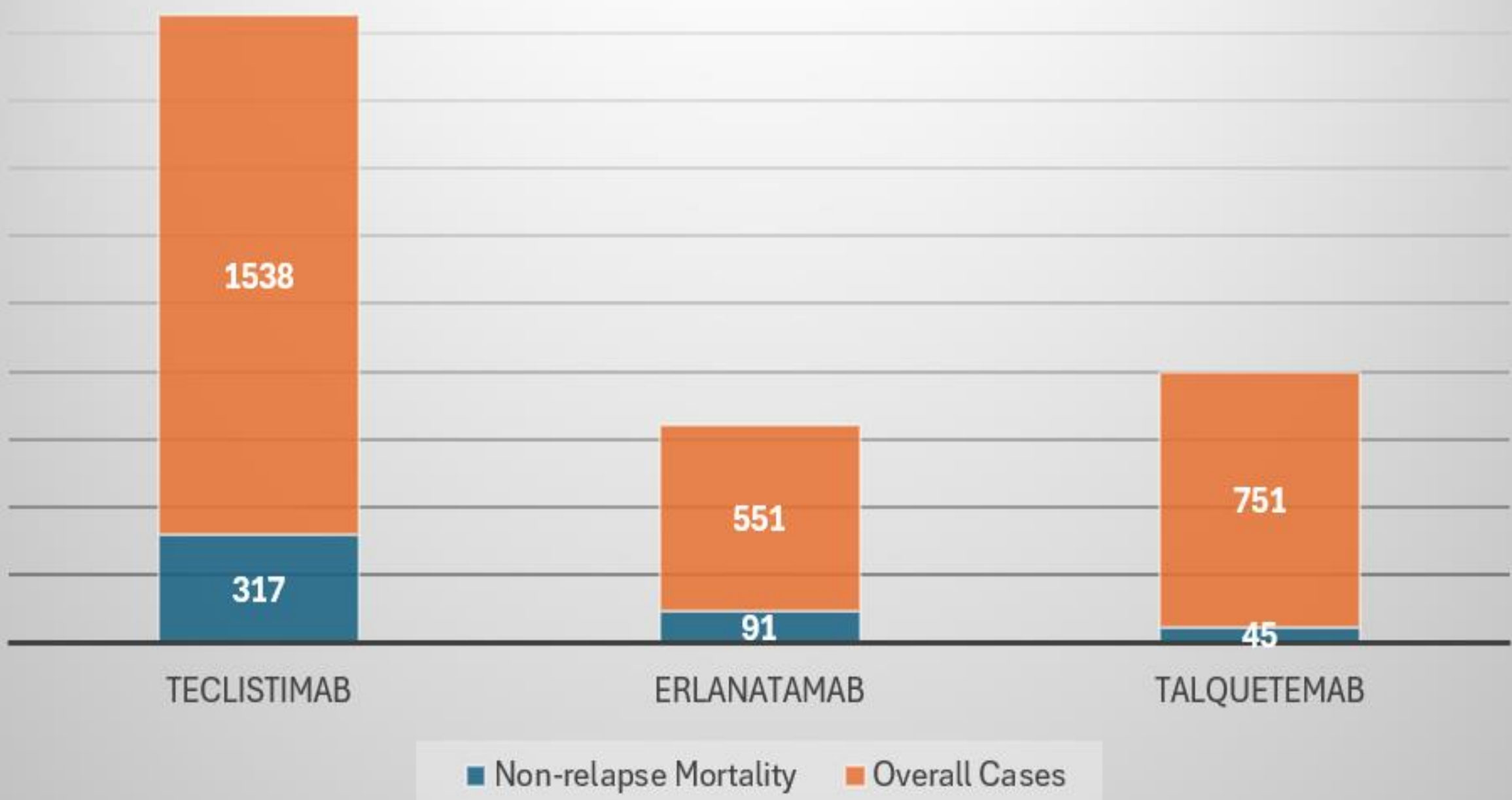
•Cytokine release syndrome (CRS)

•Immune effector cell-associated neurotoxicity (ICANS)

•Severe infections (sepsis, pneumonia, COVID-19)

•Hematologic toxicities (severe cytopenias)

Death Outcome by Bispecific T-Cell Engagers



CONCLUSIONS

Real-world FAERS data suggest that approximately **4%** of patients treated with bispecific T-cell engagers experience **non-relapse mortality within 30 days** of therapy initiation. Most deaths were related to immunotherapy-associated toxicities rather than disease progression. These findings highlight the need for **intensive early monitoring**, prompt management of CRS and infections, and strong supportive care during the first month of BiTE therapy.

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DISCLOSURES

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CONTACT INFORMATION

Elias Tayar, MD
University of Houston/
HCA Healthcare Clear Lake, TX
Email: elias.tayar@hcahealthcare.com