# Temporal Patterns of Infectious Complications Following BCMA-Directed CAR-T Therapy in Multiple Myeloma: A Propensity-Matched Real-World Analysis

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## BACKGROUND

- BCMA-directed CAR-T therapy has transformed outcomes in relapsed/refractory multiple myeloma.
- Infectious complications remain a major cause of morbidity and mortality.
- Data regarding longitudinal infectious patterns and differences ide-cel and cilta-cel are limited.

## METHODS

- Study design – Retrospective propensity score-matched cohort study
- January 2015 – May 2026
- Population N = 2511 BCMA CAR-T recipients (Ide-cel or Cilta-cel)
- Ide-cel and Cilta-cel after propensity match, N = 453

## CONCLUSION

- Infection burden peaked during 31-90 days after BCMA CAR-T
- Late infections were significantly more common with Ide-cel
- Ide-cel recipients experienced more persistent cytopenias
- One-year mortality was significantly higher after Ide-cel

## RESULTS

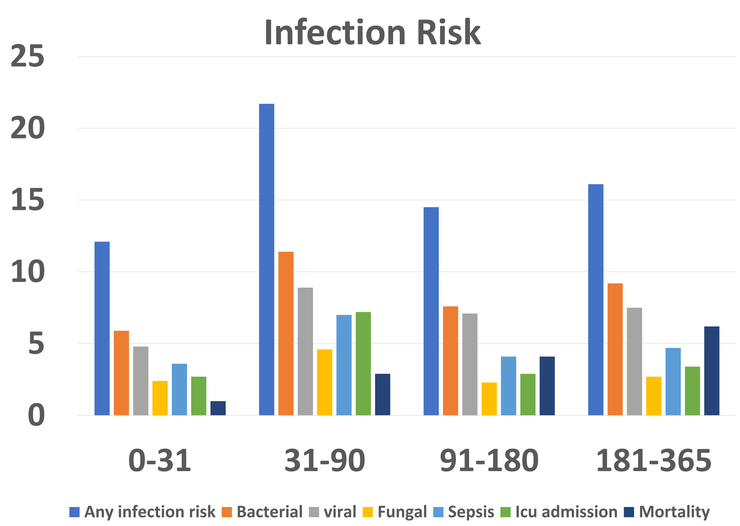


**Figure 1: Infectious Complications after BCMA CAR-T**

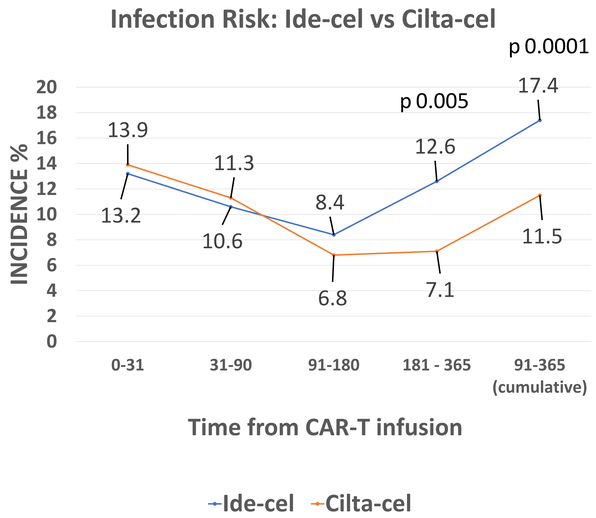


**Figure 2: Infection Risk: Ide-cel vs Cilta-cel**

**Table 1: Clinical Outcomes by CAR-T Product**

| Time from infusion | CAR-T product | Infection | Anemia | Thrombocyto-penia | Leuko-penia | Neutro-penia |
|---|---|---|---|---|---|---|
| 0-31 d | Ide-cel | 13.2 | 20.8 | 92.3 | 93.4 | 93.4 |
| | Cilta-cel | 13.9 | 13.5 | 86.8 | 93.2 | 92.5 |
| 31-90 d | Ide-cel | 10.6 | 11 | 80.8 | 81.9 | 77.7 |
| | Cilta-cel | 11.3 | 8.8 | 74 | 79.7 | 72.8 |
| 91-180 d | Ide-cel | 8.4 | 7.1 | 69.8 | 70.4 | 61.8 |
| | Cilta-cel | 6.8 | 3.1 | 58.1 | 62 | 52.8 |
| 181-365d | Ide-cel | 12.6 | 7.5 | 64 | 64.9 | 59.7 |
| | Cilta-cel | 7.1 | 2.4 | 41.3 | 43 | 37.5 |