Safety, Efficacy, and Length of Stay Analysis of Outpatient CAR-T Therapy in Non-Hodgkin Lymphoma Patients at a Community-Based Medical Center

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Introduction

Since FDA approval in 2017, CAR-T therapies have transformed treatment for hematologic malignancies; however, most CAR-T infusions occur in inpatient academic centers, limiting access for over 41% of eligible patients.

Expanding delivery to community outpatient settings may improve access and reduce costs by minimizing hospital stays. Current data on outpatient administration remain scarce.

Objectives

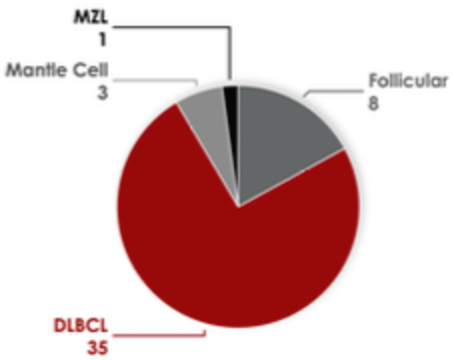
1. Assess the safety, tolerability, and outcomes of outpatient CAR-T therapy for non-Hodgkin lymphoma patients treated with:
   - Axicabtagene ciloleucel (axi-cel)
   - Lisocabtagene maraleucel (liso-cel)
   - Tisagenlecleucel (tisa-cel)
   - Brexucabtagene autoleucel (brexu-cel)
1. Evaluate feasibility and cost-effectiveness of outpatient CAR-T therapy compared with inpatient models.

Methods

Design: Retrospective cohort study, 2019–2023

Setting: Community-Based
Oncology Hematology Care
Cincinnati, OH

Population: 47 patients
Median age: 67 years
Male 30, Female 17

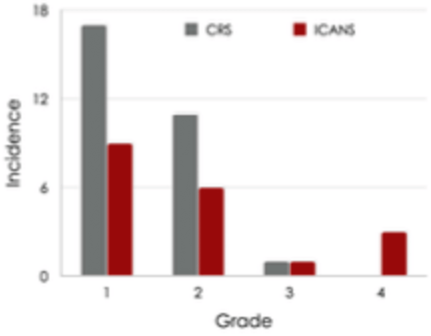


Intervention:

- Lymphodepletion followed by CAR-T infusion
- Daily outpatient monitoring for 28 days

Results

Toxicity: Evaluated through day +30
CRS 76.6%
ICANS 44.7%
No treatment-related deaths



Efficacy: ORR 63.8%
CR 42.6%
Median PFS 10.8 months
OS 17.1 months

Hospitalization:
Median 8 days vs. 15 days in ZUMA-1

Discussion

- Outpatient CAR-T therapy in a community setting is feasible and well-tolerated, increasing access for patients.
- Median hospital stay compared to ZUMA-1 suggests reduced costs and improved patient convenience.
- Structured monitoring and rapid response protocols are essential.
- Shorter hospital stays may reduce costs and improve quality of life.
- Single-center, retrospective design is a limitation; larger studies are needed.
- Findings support broader implementation of outpatient CAR-T in community settings.

References

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2. Neelapu SS, Jacobson CA, Ghobadi A, Miklos DB, et al. Five-year follow-up of ZUMA-1 supports the curative potential of axicabtagene ciloleucel in refractory large B-cell lymphoma. Blood 2023; 141 (19): 2307–2315.

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