

Cite this as: Tianning GU, Meng ZHU, He HUANG, Yongxian HU. Relapse after CAR-T cell therapy in B-cell malignancies: challenges and future approaches[J]. Journal of Zhejiang University Science B, 2022, 23(10): 793-811.
<https://doi.org/10.1631/jzus.B2200256>

Relapse after CAR-T cell therapy in B-cell malignancies: challenges and future approaches

Key words: Chimeric antigen receptor T (CAR-T), B cell Malignancies, Mechanisms of relapse, Strategy

Research Summary

This review mainly focused on the mechanisms of relapse after CAR-T cell therapy in B cell malignancies, and provided corresponding strategy in the future.

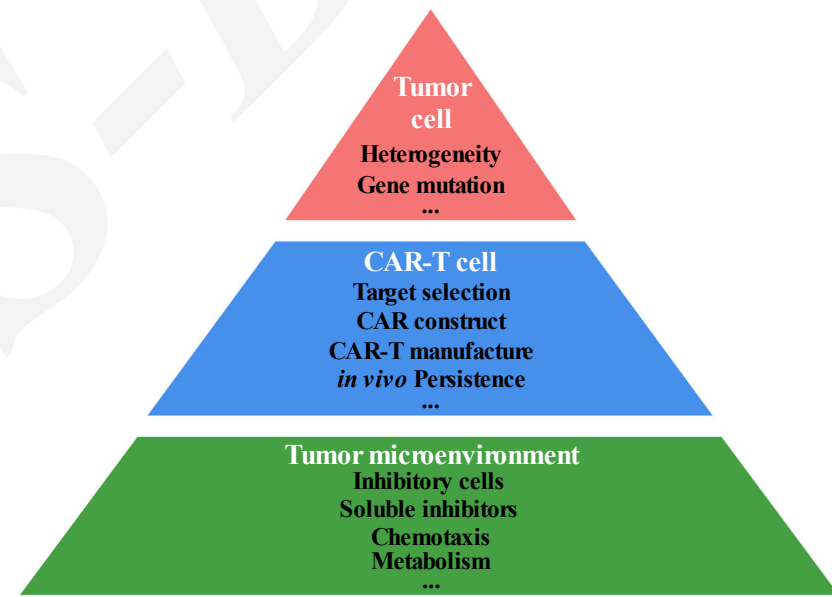
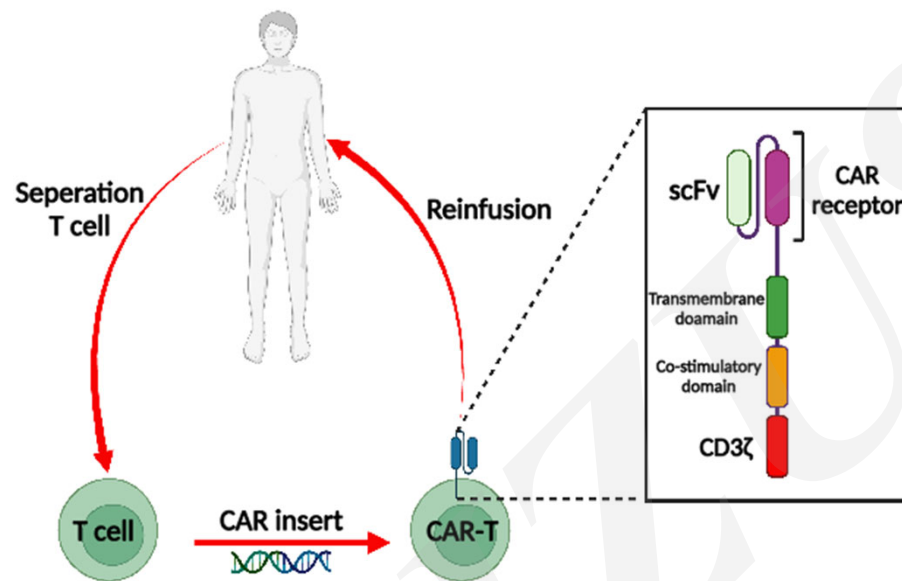


Figure 1
Mechanisms of relapse

- **Introduction** of the CAR-T cell therapy and clinical relevance of the relapse after treatment in patients with dismal outcomes.
- **Mechanisms** of relapse from the aspects of tumor cell, CAR-T cell, and tumor microenvironment.

Research Summary

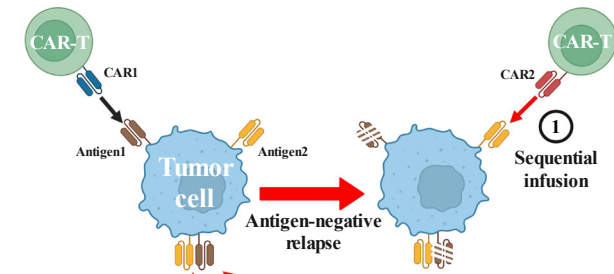


Figure 3
Multi-target strategy

- Strategy of developing multi-target CAR-T cell product to effectively eradicate tumor cells.

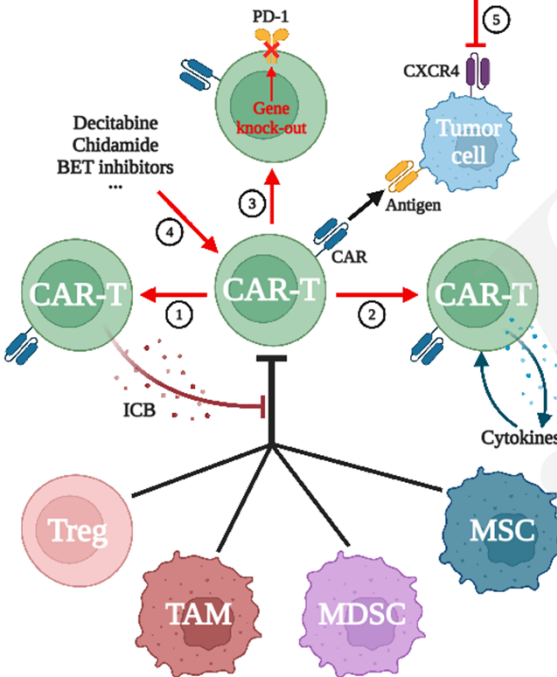
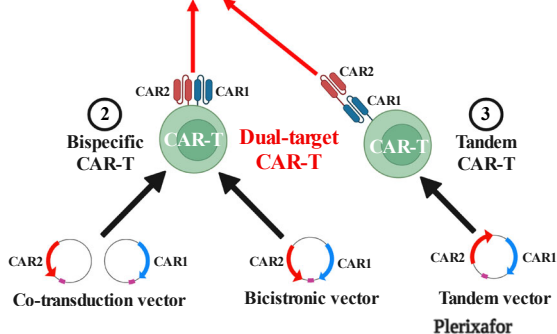


Figure 4
Combinational strategy

- Strategy of enhancing CAR-T cell function and persistence.

- Strategy of combining CAR-T therapy with other target therapies to overcome the immunosuppression by tumor microenvironment.