Impact of Chronic Kidney Disease on Real-World Outcomes Following CAR-T Therapy in Diffuse Large B-Cell Lymphoma

POSTER 1693

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BACKGROUND

- CAR-T therapy is effective for relapsed or refractory DLBCL.
- Patients with chronic kidney disease (CKD) are underrepresented in clinical trials and may be at increased risk for toxicity.
- Real-world comparative data in this population remain limited.

OBJECTIVE

- To evaluate the impact of CKD on toxicity, infectious complications, and mortality following CAR-T therapy in patients with DLBCL.

METHODS

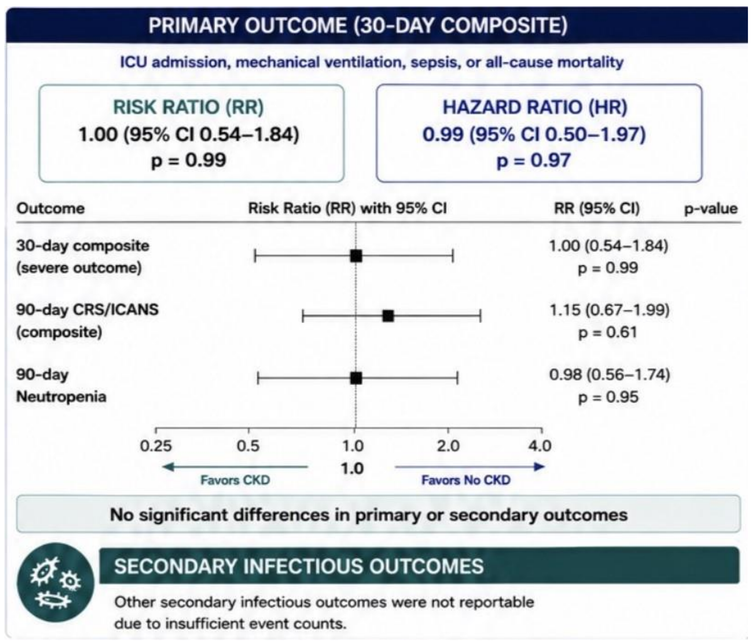
- Design: Retrospective multicenter cohort study using the TriNetX US Collaborative Network (January 2018–December 2025).
- Population: Adults with DLBCL receiving FDA-approved CAR-T therapy; patients with prior CAR-T therapy or recent hematopoietic stem cell transplantation were excluded.
- CKD definition: Diagnostic codes prior to CAR-T infusion.
- Analysis: Propensity-score matching (1:1) to reduce baseline confounding.
- Primary outcome: 30-day composite of ICU admission, mechanical ventilation, sepsis, or all-cause mortality.
- Secondary outcomes: 90-day CRS/ICANS composite and neutropenia.

CONCLUSIONS

- In this large real-world multicenter analysis, patients with DLBCL and CKD undergoing CAR-T therapy had comparable 30-day severe outcomes, 90-day CRS/ICANS, and neutropenia compared with patients without CKD.
- CKD alone may not significantly increase early CAR-T–related toxicity risk.

RESULTS

- 4,296 matched patients: CKD n=2,148 vs no CKD n=2,148.
- 30-day composite outcome: RR 1.00 (95% CI 0.54–1.84), p=0.99.
- 90-day CRS/ICANS composite: RR 1.15 (95% CI 0.67–1.99), p=0.61.
- 90-day neutropenia: RR 0.98 (95% CI 0.56–1.74), p=0.95.
- No significant differences were observed in the primary or reported secondary outcomes.
- Other secondary infectious outcomes were not reportable because of insufficient event counts.



CLINICAL IMPLICATIONS

- CKD should not automatically preclude patients from receiving standard-of-care CAR-T therapy for DLBCL.
- Careful monitoring and appropriate supportive care remain essential.
- These findings may inform shared decision-making and counseling of patients with CKD being evaluated for CAR-T therapy.

LIMITATIONS & NEXT STEPS

- Retrospective EHR-based study; residual confounding cannot be excluded.
- Reliance on diagnostic codes may lead to misclassification.
- Limited event counts for infectious outcomes.
- Future studies should include granular CKD stage/dialysis status and prospective validation.

ACKNOWLEDGEMENTS / DATA SOURCE

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