SOHC
SWISS ONCOLOGY & HEMATOLOGY CONGRESS

Association of CAR T-Cell Area Under the Curve with Clinical Outcomes in Patients Treated with Tisa-cel: A Real-World Study

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Abstract Category: Clinical hemato-oncology

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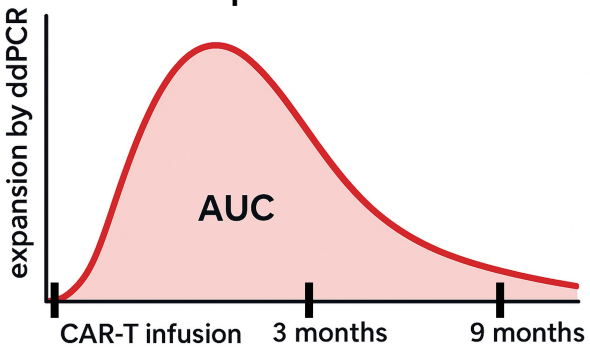
Schematic Representation:
CAR-T Expansion and AUC Measurement



Background:

- Kymriah® can induce durable remission in r/r B-cell malignancies
- Outcomes vary; CAR T-cell expansion kinetics may indicate efficacy and toxicity
- CAR transgene AUC could reflect in vivo exposure.

Objective:

- Assess if CAR T-cell AUC measured by ddPCR is linked to remission or survival.

Methods:

- Retrospective single-center study (Inselspital Bern, 2018–2023).
- CAR transgene copies measured by ddPCR; calculated AUC at day 100, day 280, and last follow-up.
- Statistical comparisons and Spearman correlations performed.

Results:

- 71 patients (DLBCL 82%, FL 10%, ALL 9%).
- AUC values similar across remission categories at 3 and 9 months.
- Survivors trended toward higher AUC at last measurement (160 vs. 102; p=0.06).
- Weak, time-dependent correlation between transduction efficiency and AUC (strongest at 9 months).

Conclusion:

- CAR T-cell AUC alone does not reliably predict remission or survival.
- Combining AUC with disease, immune, and product characteristics may improve predictive models.

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