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Modification of T lymphocytes with lentiviral vectors for expression of anti-CD19 chimeric antigen receptor (CAR)

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Scale-Up and Manufacturing of Cell-Based Therapies V
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Modification of T lymphocytes with lentiviral vectors for the expression of chimeric antigen receptors (CAR)

(Poster 70)

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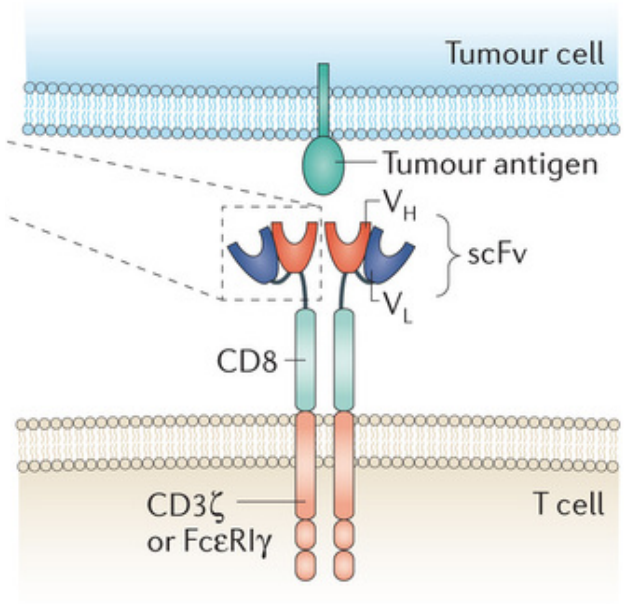
Immunotherapy against cancer

Conventional cancer therapies:

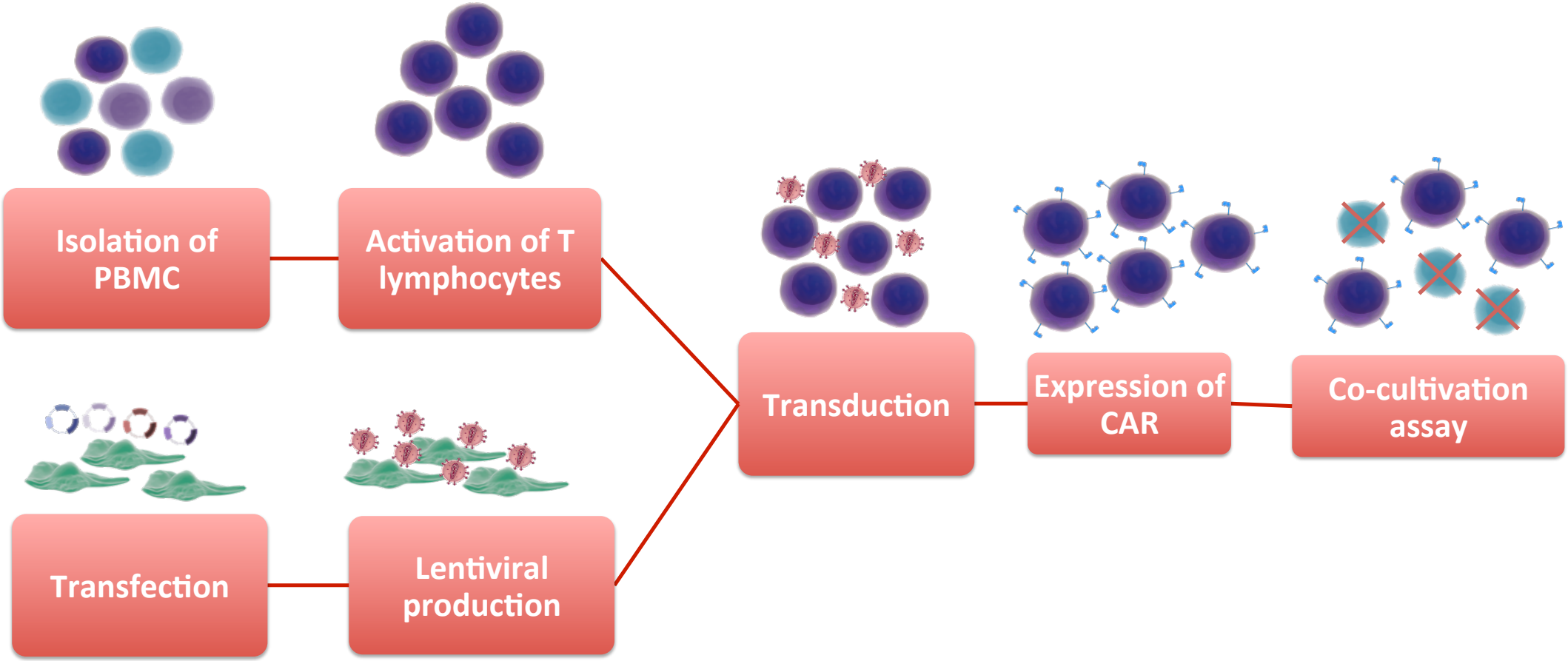
- Not specific: tumor and healthy tissue are affected;
- Not effective for all patients;
- Collateral effects;

Cellular immunotherapy – CAR-T cells.



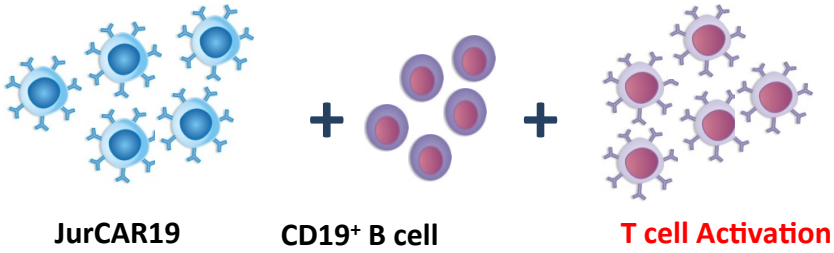
Nature Reviews | Cancer

Methodology

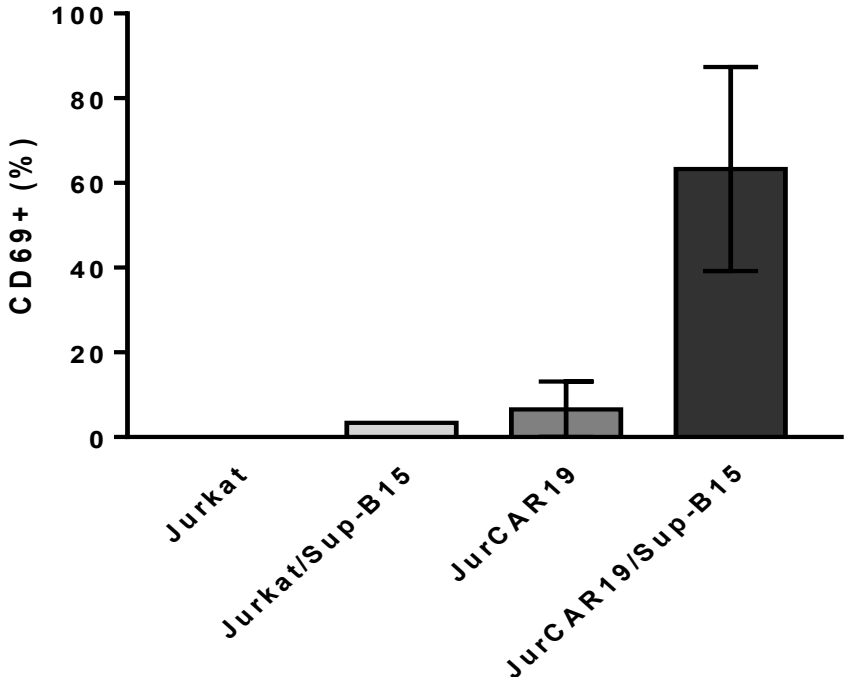


Results

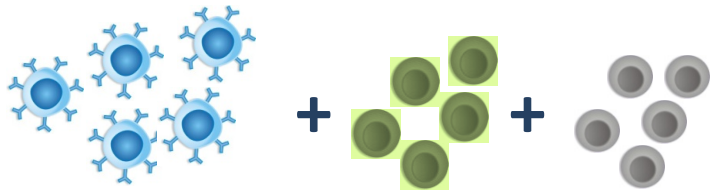
Analysis of T cell activation



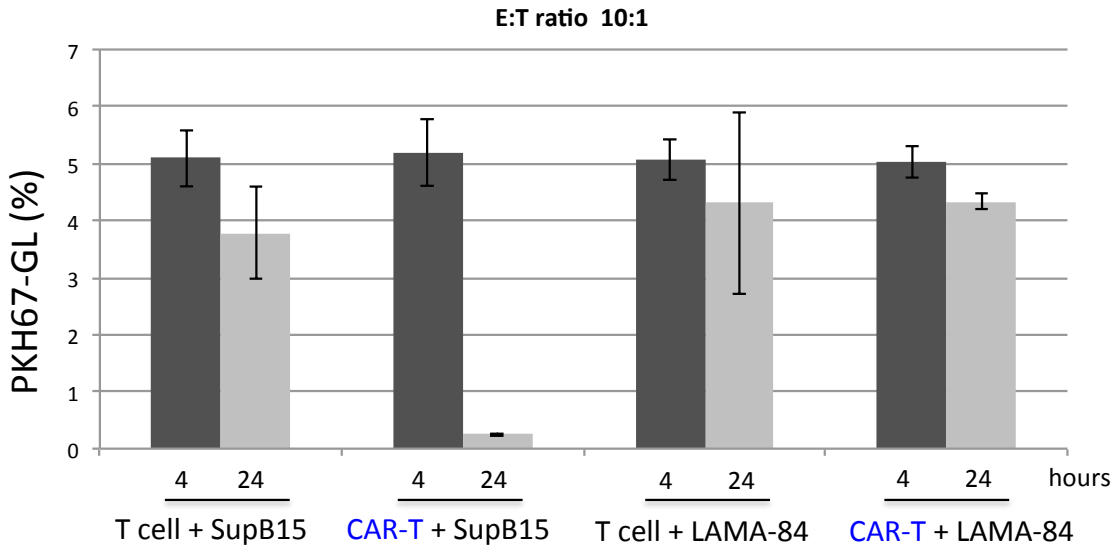
JurCAR19 + CD19⁺ B cell → T cell Activation



Cell-mediated cytotoxicity assay



CAR19-T + CD19⁺ B cell → CD19⁺ B cell Apoptosis



- Conclusion

Our CAR-T cells specifically detect B cells and lead to cell death within 24 hours of co-cultivation.

- Next Steps

-Finalize the bioprocess of CAR-t cell expansion

-Initiate the *in vivo* experiments