T-LIVEN IMPROVES TUMOR CELL KILLING FUNCTION OF CAR T CELLS

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CHOICE OF SERUM FOR EX VIVO EXPANSION DETERMINES IN VIVO CAR T CELL FUNCTION

Adapted from poster presentation at 2019 3rd Annual Clinical Application of CART cells Conference at MSKCC.

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PATHOGEN-REDUCED HPL

T-LIVEN PR
T-LIVEN PR SUPPORTS EXPANSION OF CAR T CELLS

- PSCA-CAR T (prostate stem cell antigen) cell generation was initiated in 10% fetal bovine serum (FBS) supplemented media.
- On Day 3 post transduction cells were split into 3 conditions: 10% FBS, 10% human AB serum (ABS) or 10% T-Liven PR and maintained with IL-2 (50U/mL) for 7 more days.
- Data are a mean ± S.E. of n=6 donors.

T-LIVEN PR SUPPORTS IN VITRO CYTOTOXIC EFFECT OF CAR T CELLS

- The cytotoxicity of CAR T cells expanded for 7 days with different media supplements was tested against a PSCA positive cell line (Capan-1) using a 51Cr-release assay.
- Data are a mean ± S.E. of n=4 donors, NT = nontransduced cells, CAR = PSCA transduced cells, E:T = Effector to Target cell ratio.

T-LIVEN PR IMPROVES MAINTENANCE OF LESS DIFFERENTIATED CAR T CELLS

- CAR T cell phenotype was analyzed measuring CCR7 expression by FACS on day 7 of expansion.
- The combined total percentage of T naïve (TN) and T central memory (TCM) cells for both CD4+ and CD8+ T cells are shown.
- Data are a mean ± S.E. of n=3 donors, *:p<0.05 **:p<0.01, ***:p<0.001.

CONCLUSION

T-LIVEN PR, COMPARED TO FETAL BOVINE SERUM AND HUMAN AB SERUM LEADS TO EXPANSION OF T CELLS, IMPROVED MAINTENANCE OF THE NAÏVE AND CENTRAL MEMORY PHENOTYPES AND EFFICIENT TUMOR CELL KILLING.