**ABSTRACT:**

Adoptive immune cell therapy has been proven to be effective in the treatment of several cancers. However, toxicities associated with high-dose chemotherapy or radiotherapy have limited its widespread application. In particular, the use of virus-specific T cells has been associated with high rates of toxicity and the need for continual administration.

**METHODS:**

ERBV transferred T cells lines (EREB CTLs) were generated in 10/20 (50%) CMV/EBV dual specific T cells within dual CMV/EBV lines established from the same HLA allele(s). T cells were used as stimulators either immortalized or loaded with the total pools of WT1 PEptide pools or EBV/PEptide pools.

**RESULTS:**

Characterization of the antigen specificities of T cells in this study included T cell expansion in IL-2 in vitro, CD4 and CD8 surface marker analysis, and fresh versus frozen T cell comparisons. The CD4 and CD8 surface marker analysis revealed that the majority of T cells were CD8+ and the majority of CD8+ T cells were TCRαβ+. Fresh T cells exhibited higher expression of CD25, CD45RA, CD49b, and CD122 compared to frozen T cells. Fresh T cells were also more cytolytic than frozen T cells.

**CONCLUSIONS:**

In conclusion, the results of this study demonstrate that T cells isolated from patients with both CMV and EBV infections can be successfully expanded and characterized. These results suggest that T cells from patients with dual infections may be more effective in the treatment of dual infections, and that the use of dual-specific T cells may be more effective in the treatment of dual infections.

**DISCLOSURE:**

No conflicts of interest were declared.

**REFERENCES:**


