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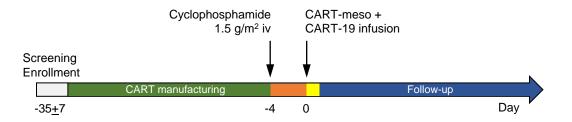
Supplemental Information

Dual Targeting of Mesothelin and CD19

with Chimeric Antigen Receptor-Modified

T Cells in Patients with Metastatic Pancreatic Cancer

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Supplementary Figure 1. Study Schema. Eligible patients underwent screening and leukopheresis. CAR T cells were manufactured. Patients then received a single dose of cyclophosphamide (1.5 g/m^2) on day -4 prior to receiving a 1:1 mixture of CART-Meso ($3x10^7 \text{ cells/m}^2$) and CART-19 ($3x10^7 \text{ cells/m}^2$) cells administered on day 0. Patients were followed for safety and blood samples were collected at defined timepoints prior to and post CART cell administration.

Patient	CD45 ⁺ CD3 ⁺	CD3 ⁺ CD4 ⁺	CD45 ⁺ CD3 ⁺ CD4 ⁺	%CD3 ⁺ CD8 ⁺	CD45 ⁺ CD3 ⁺ CD8 ⁺	CD4:CD8 ratio	% scFV	Viability
19214-01	95.80%	81.70%	78.30%	23.30%	22.30%	3.51	27.60%	95.80%
19214-03	97.20%	67.90%	66.00%	35.60%	34.60%	1.91	34.10%	97.60%
19214-04	98.00%	69.40%	68.00%	34.00%	33.30%	2.04	49.40%	100.00%

Supplementary Table 1. CART-meso cell product characteristics

Patient	CD45 ⁺ CD3 ⁺	CD3 ⁺ CD4 ⁺	CD45 ⁺ CD3 ⁺ CD4 ⁺	%CD3 ⁺ CD8 ⁺	CD45 ⁺ CD3 ⁺ CD8 ⁺	CD4:CD8 ratio	% scFV	Viability
19214-01	98.00%	80.90%	79.30%	21.60%	21.20%	3.74	5.57%	99.00%
19214-03	98.40%	66.70%	65.60%	35.80%	35.20%	1.86	29.20%	97.10%
19214-04	98.60%	71.60%	70.60%	30.10%	29.70%	2.38	31.80%	100.00%

Supplementary Table 2. CART-19 cell product characteristics

Subject	Pre-infusion	Day 21-28	Month 2
19214-01	nd	nd	nd
19214-03	26.5	9.66	6.05
19214-04	nd	nd	na

Supplementary Table 3. Human anti-mouse antibody quantification in patient sera

HAMA=ng/mL; na, not assessed; nd, not detected