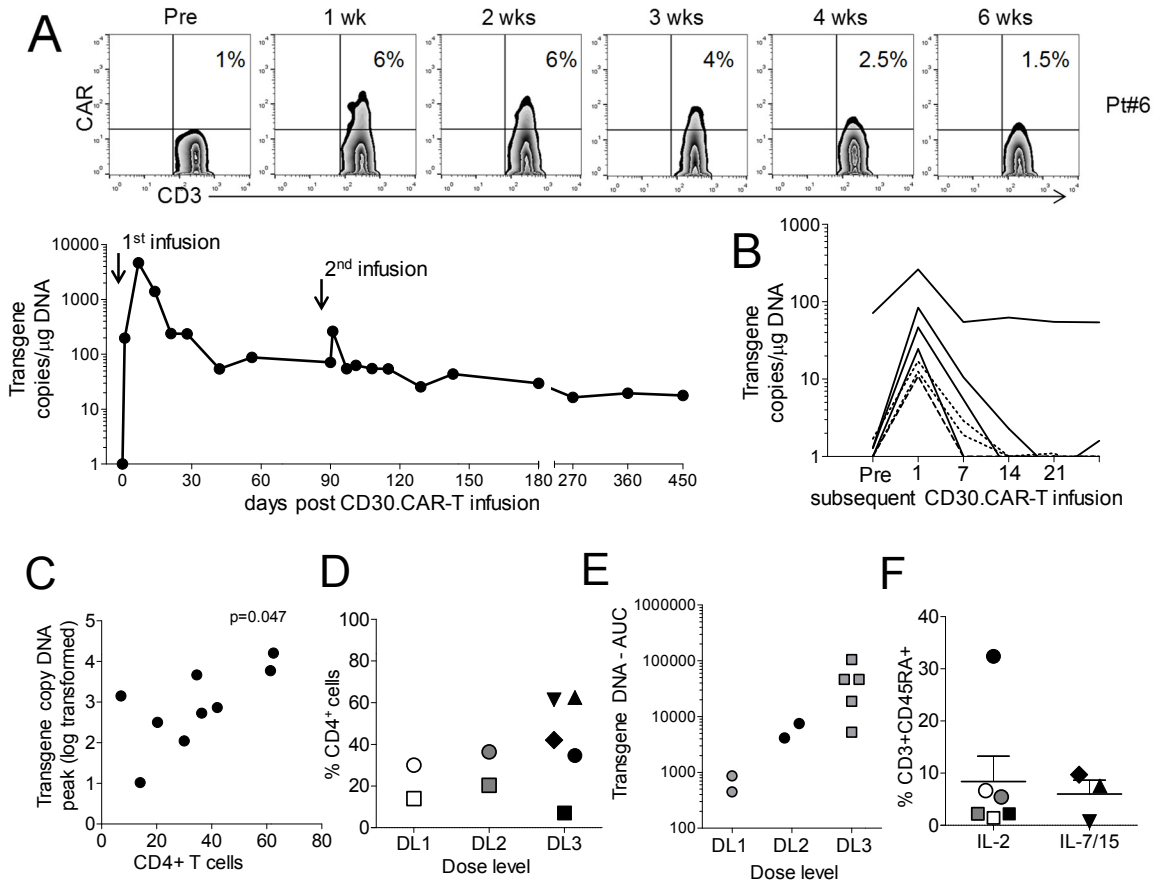
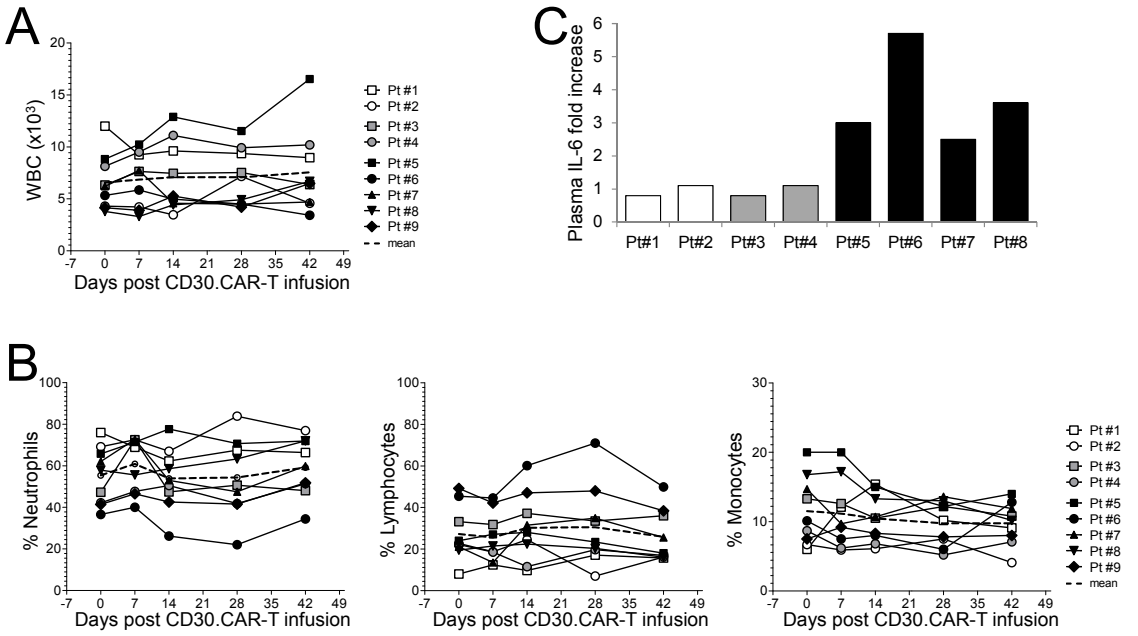
Suppl. Table 1. Characteristics of the generated CD30.CAR-T lines

	IL-2 (N = 11)	IL-7 and IL-15 (N = 11)	P value
Days in culture	15 ± 4	15 ± 2	NS
Cell numbers at time of clinical freeze	$6.5\times10^8 \pm 3.3\times10^8$	$1.2\times10^9 \pm 5.5\times10^8$	p=0.018
Transduction (% CAR$^+$ cells)	89.7 ± 0.6	89.4 ± 1.63	NS
CD3$^+$ CD8$^+$ cells (%)	65 ± 14	43 ± 18	p= 0.006
CD3$^+$ CD45RO$^+$ cells (%)	93 ± 9	96 ± 3	NS
CD3$^+$ CD127$^+$ (%)	9 ± 5.5	1.6 ± 1.4	NS
CD4$^+$ CD45RO$^+$ CD62L$^+$ (%)	7.8 ± 6.8	17.3 ± 14	NS
CD4$^+$ CD45RO$^+$ CCR7$^+$ cells (%)	3.8 ± 7.2	13 ± 9	p=0.015
CD8$^+$ CD45RO$^+$ CCR7$^+$ cells (%)	4.7 ± 6.4	8.3 ± 5.2	NS
CD3$^-$ CD56$^+$ cells (%)	0.4 ± 0.4	0.3 ± 0.3	NS
CD3$^+$ CXCR3$^+$ cells (%)	44.7 ± 40	74.1 ± 35	NS
CD3$^+$ CXCR4$^+$ cells (%)	19.3 ± 12.1	30.5 ± 18.4	NS

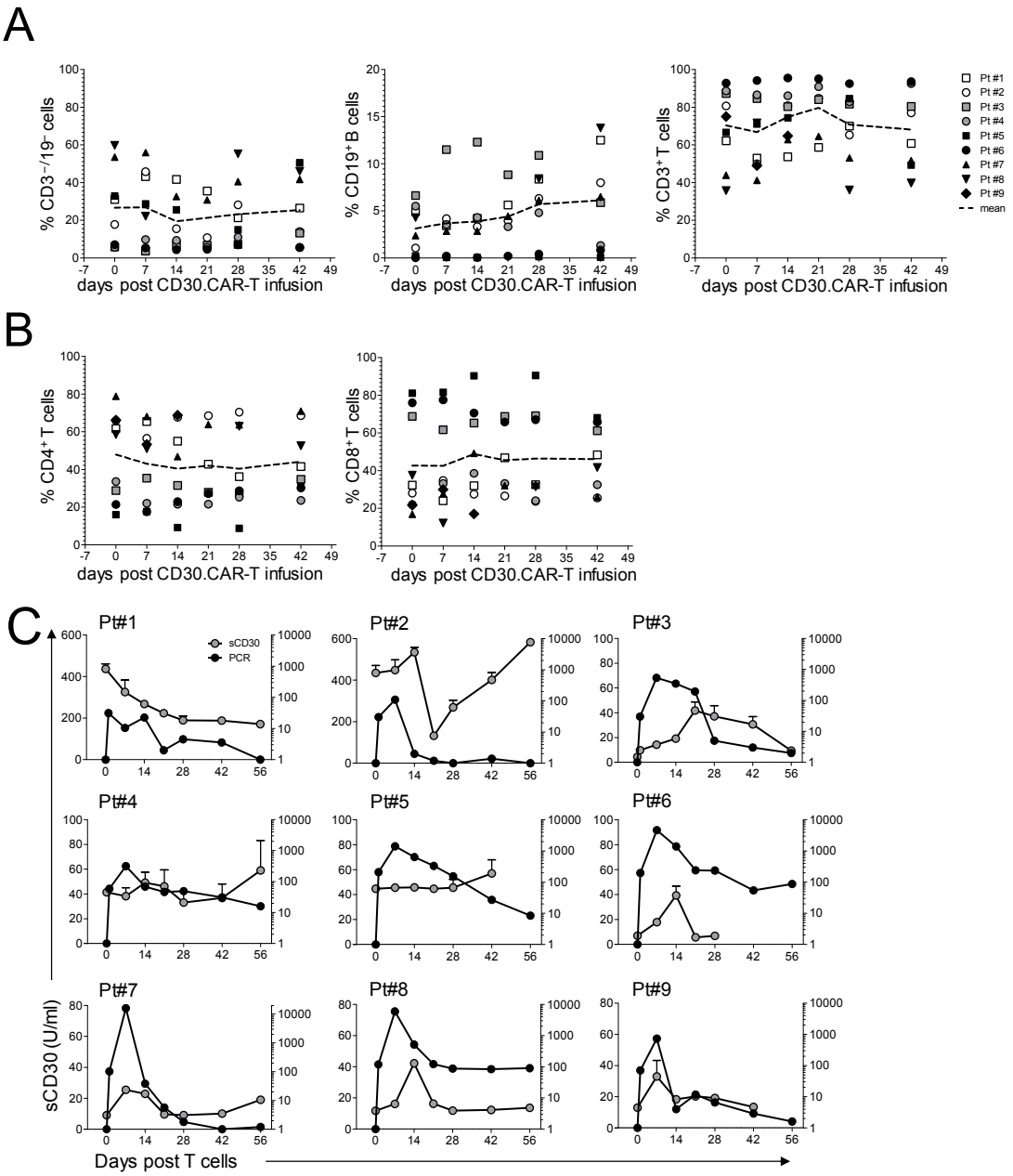
NS = Not significant



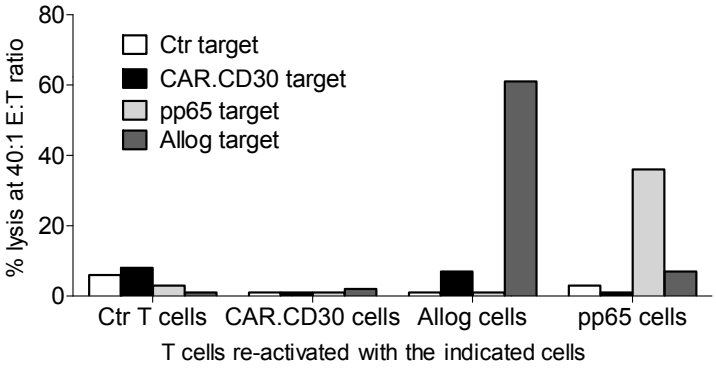
Supplemental Figure 1. Expansion of CD30.CAR-Ts. Panel A shows the detection of CAR-T by flow cytometry in the peripheral blood of patient #6. Cells were gated on lymphocyte using human CD45 and CD3. The graph shows the long term detection of CD30.CAR-T molecular signals by qPCR for patient #6. Samples “0 wks” and “2 wk” are also shown as the “Pre” and “Post” flow plots in Figure 3B. **Panel B** shows the detection of CD30.CAR-T molecular signals by qPCR for patients receiving a subsequent infusion. The dashed line is from the patient on DL1; the dotted lines for the patients on DL2 and continuous line for those on DL3. **Panel C** shows the correlation between the % of $CD4^+$ cells in the infused product and the peak of DNA (log transformed) for the 9 patients infused. **Panel D** shows the % of $CD4^+$ cells in the infused product for the 9 infused patients according to the dose level. **Panel E** shows the qPCR evaluated as area under the curve (during the first 4 weeks period post infusion) for each patient vs the dose level of CAR-Ts each patient received. **Panel F** shows the % of CD3+CD45RA+ cells in products infused into patients and generated with IL-2 or IL-7 and IL-15.



Supplemental Figure 2. In vivo safety of CD30.CAR-T infusion. No significant differences were observed in hematological parameters. **Panel A** shows the white blood cells counts for the infused patients. Each line denotes one patient (legend shows universal patient identifier numbers, UPINs) and the dashed line indicates the mean expansion and persistence. **Panel B** shows the % of neutrophils (left graph), of lymphocytes (middle graph) or monocytes (right graph) for the infused patients. Each line denotes one patient (legend shows universal patient identifier numbers, UPINs) and the dashed line represents the mean expansion and persistence. **Panel C** shows the fold increase for IL-6 after CD30.CAR-T infusion for each patient. White bars are for patients on DL1, gray bars for patients on DL2 and black bars for patients on DL3.



Supplemental Figure 3. In vivo effect of CD30.CAR-T infusion. Panel A shows the frequency of cell subsets in the PB of treated patients before and at different time-points after T cell infusion. Shown are % of CD3-/CD19- (left graph), CD19+ (middle graph) and CD3+ (right graph) cells. Each line denotes one patient (legend shows universal patient identifier numbers, UPINs) and the dashed line indicates the mean values. **Panel B** shows the % of CD4+ (left graph), and CD8+ T lymphocytes (right graph) for the infused patients. Each line denotes each patient (legend shows universal patient identifier numbers, UPINs) and the dashed line represents the mean expansion and persistence. **Panel C** shows the evaluation of sCD30 in plasma samples of the indicated patients before and after CAR.CD30-Ts.



Supplemental Figure 4. No evidence of immunogenicity against CD30.CAR-T components. Shown are the results of cytotoxicity assay for T cells generated ex vivo from healthy donors and using DC loaded with autologous apoptotic T cells (Ctr; white bar), apoptotic T cells expressing CD30.CAR (black bar), allogeneic T cells (dark gray bar) or loaded with pp65 pepmixes (light gray bar) against the indicated target cells. Shown is the 40:1 ratio for 1 of 3 representative donors.