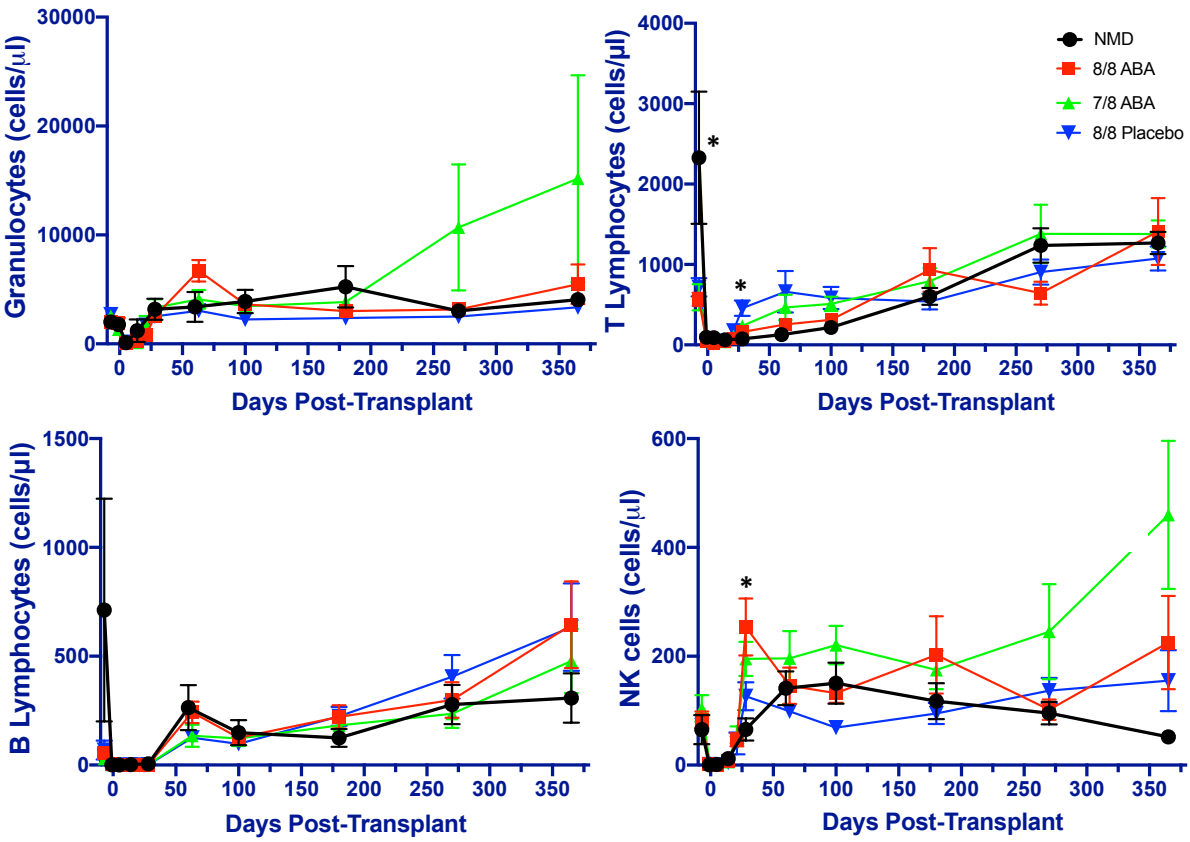
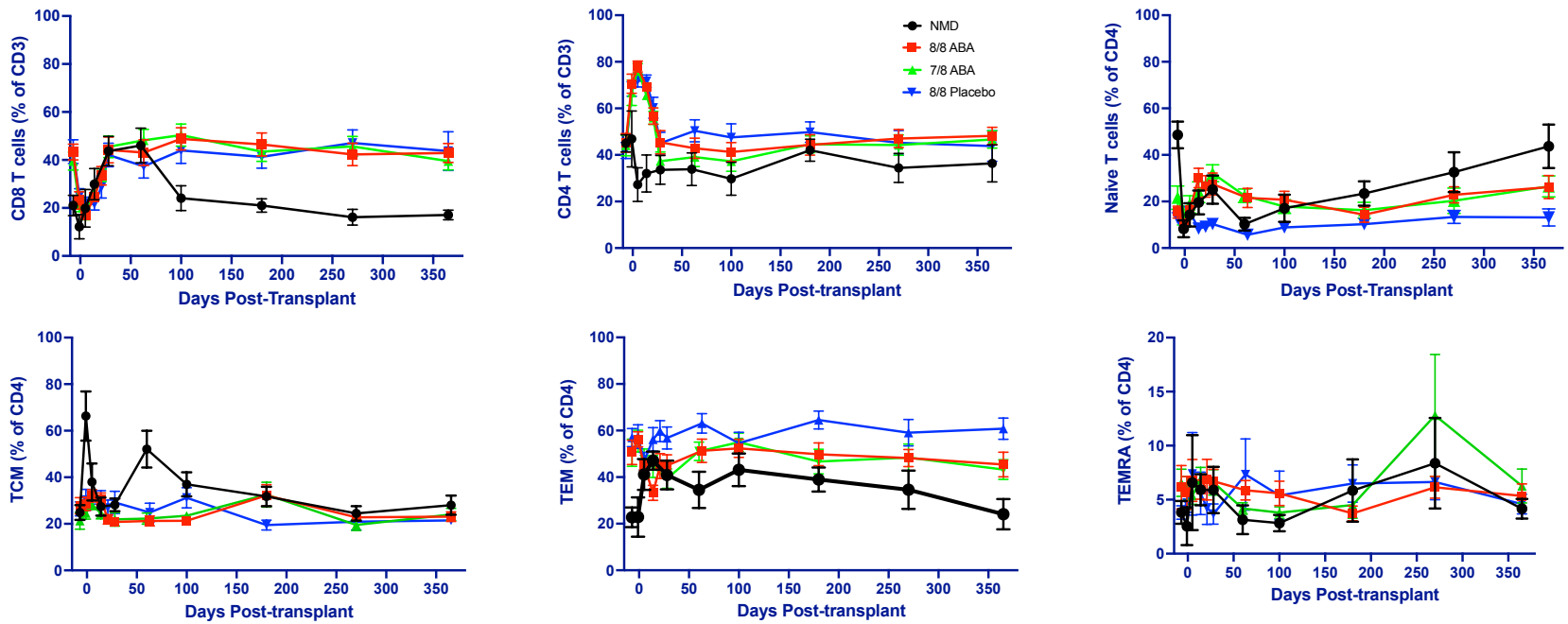
Supplemental Figure 1



Supplemental Figure 1: Longitudinal immune reconstitution following URD HCT with abatacept GVHD prophylaxis in NMD (Aba NMD) compared to malignant disease (Aba2) pediatric patients. No differences were seen in granulocyte or B cell recovery in Aba NMD patients compared to Aba2 groups, including placebo. At day 28, Aba NMD patients had significantly lower T cells (vs 7/8 Aba and 8/8 placebo), but by day 100 no difference was seen. NK cells were lower in NMD patients at day 28 ($p=0.02$ for 7/8 Aba and $p<0.0001$ for 8/8 placebo) and day 365 ($p=0.005$ for 7/8 Aba). URD denotes unrelated donor; HCT, hematopoietic cell transplantation; GVHD, graft-versus-host disease; NMD, non-malignant diseases; Aba, abatacept; and NK, natural killer.

Supplemental Figure 2



Supplemental Figure 2: Preservation of naïve CD4+ T cells in pediatric patients receiving abatacept GVHD prophylaxis. Proportion of CD8 and CD4 subsets was compared between pediatric NMD patients receiving abatacept and Aba2 groups limited to pediatric patients. (A) NMD patients had significantly lower % CD8 T cells at baseline and at 100 days post-HCT. (B) NMD patients had similar % CD4 T cells, except for day 14 when significantly lower than all groups (8/8 Aba: 0.0004; 7/8 Aba: 0.005; 8/8 Placebo: <0.0001). (C) While the proportion of naive T cells at day -7 was significantly higher in NMD patients, this difference was no longer present across groups by day +14. By day +365, naive T cells in NMD patients were at a significantly higher proportion than seen in Aba2 8/8 placebo patients (p=0.02). (D) While the proportion of central memory T cells (TCM) was higher in NMD patients at day 0 and +60, all Aba groups had a significantly higher proportion at day 180 compared to 8/8 placebo. (E) While the proportion of effector memory T cells (TEM) at day -7 was significantly lower in NMD patients, this difference was no longer present across groups by day +28. By day +180, effector memory T cells in NMD patients were at significantly lower proportions than seen in Aba2 8/8 placebo patients (+180, p=0.002; +270, p=0.02; +365, p=0.0003). (F) No significant difference was seen in proportion of TEMRA cells in NMD compared to Aba2 patients. GVHD denotes graft-versus-host disease; NMD, non-malignant disease; Aba, abatacept; and TEMRA, T effector memory CD45RA+ cells.