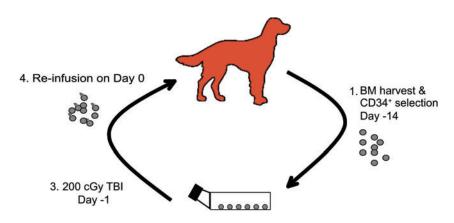
## **Supplementary Data**



 CLAD CD34⁺ transduction - 18 hours Day -1 -LV vector - hPGK-cCD18 or MSCV-cCD18 -hGCSF, cIL-6, hFlt3-L, cSCF, hTPO (50 ng/ml) -RetroNectin™ 5 µg/cm²

**SUPPLEMENTARY FIG. 1.** Schematic of treatment regimen for CLAD with lentiviral vectors. Day -14 Bone marrow was harvested and CLAD CD34<sup>+</sup> cells were isolated using an anticanine CD34 antibody (clone 1H6, Fred Hutchinson Cancer Research Center, Seattle, WA) and purified on MACS separation columns (Miltenyi Biotec, Auburn, CA) using the AutoMacs system (Miltenyi Biotec, Auburn, CA). CLAD CD34<sup>+</sup> cells were cryopreserved using Nalgene<sup>®</sup> Mr. Frosty<sup>™</sup> 1 °C Freezing Containers at -85°C for 24 hours and then transferred to liquid nitrogen until needed. At Day -1 CLAD CD34<sup>+</sup> cells were thawed, washed and resuspended in X-VIVO15/1%HSA and transduced for 18 hours at an MOI of 10 in RetroNectin<sup>™</sup> coated 250ml non-tissue culture treated flasks with LV vectors and the cytokine cocktail described above. Also on Day -1 the dogs received a single, non-myeloablative dose of 200 cGy TBI. Day 0 The cells were harvested, washed and resuspended in Plasmalyte A/1% heat-inactivated autologous serum and infused intravenously over 15 minutes.