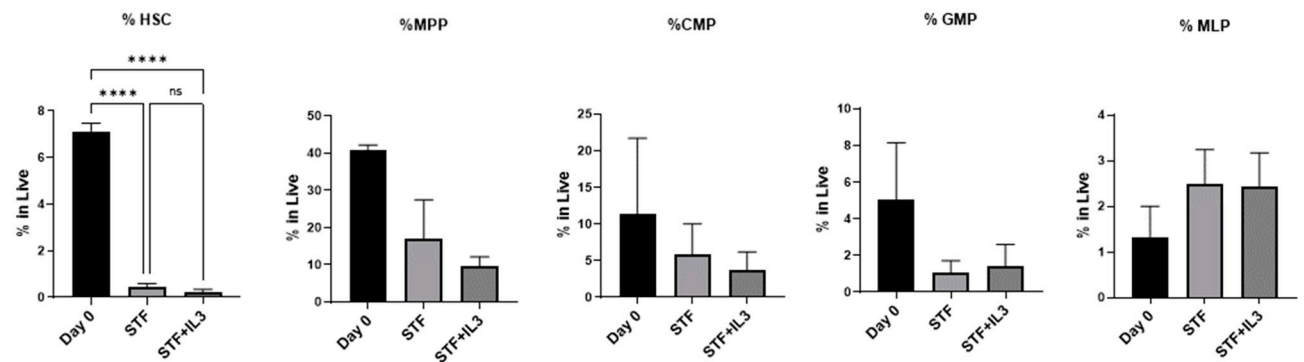
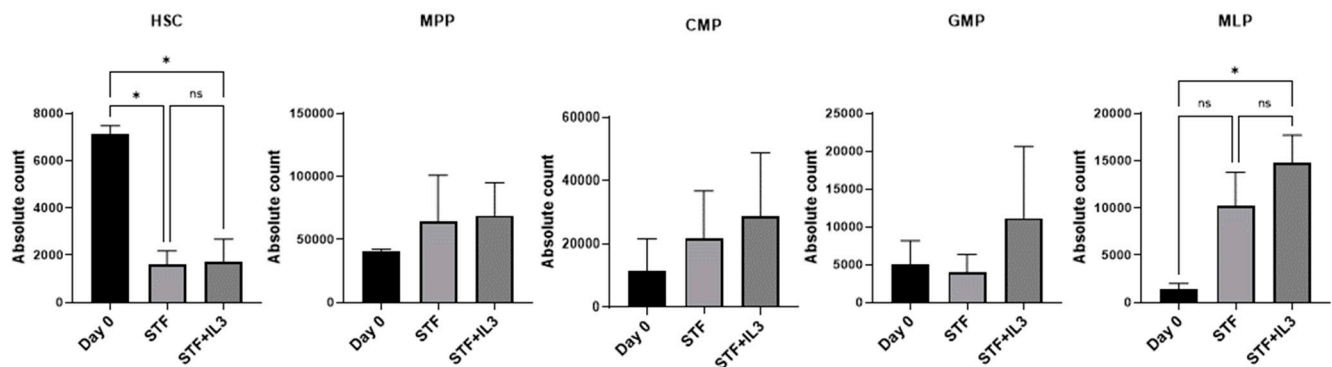


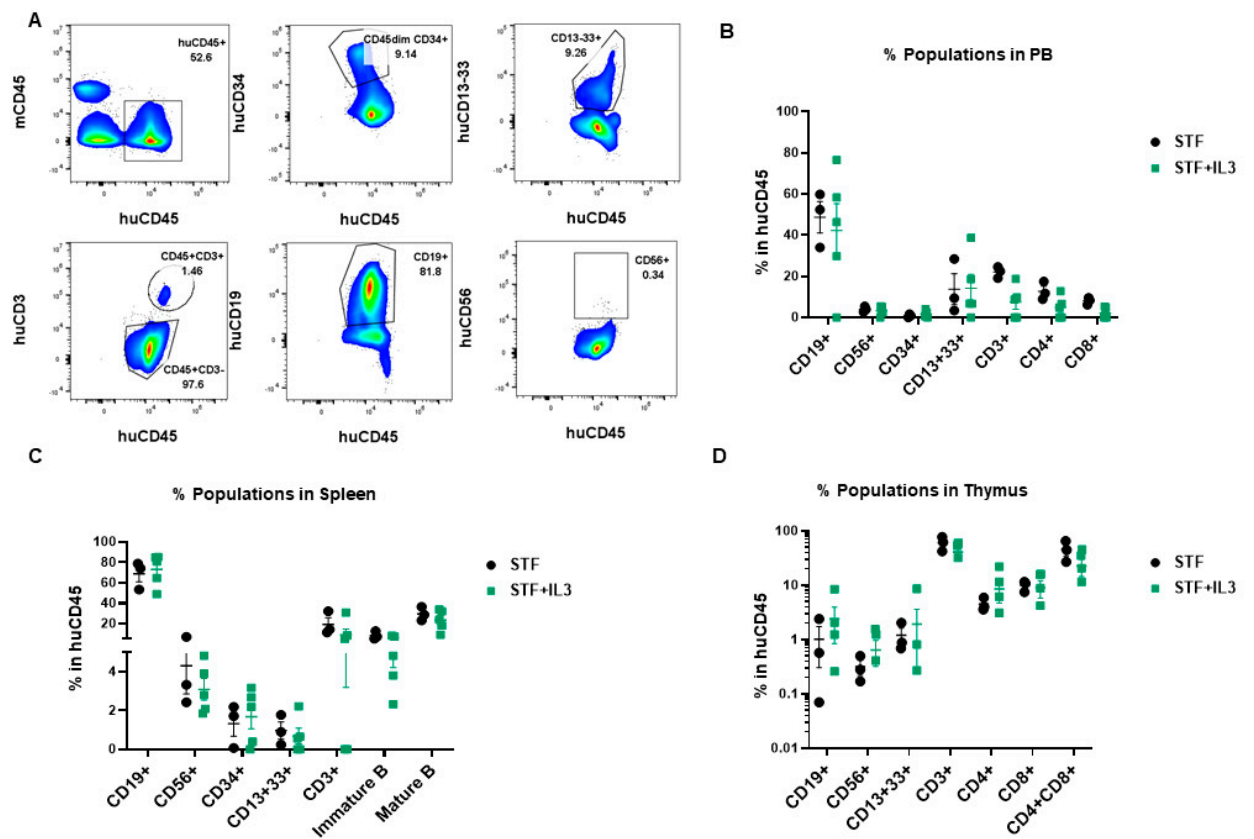
B



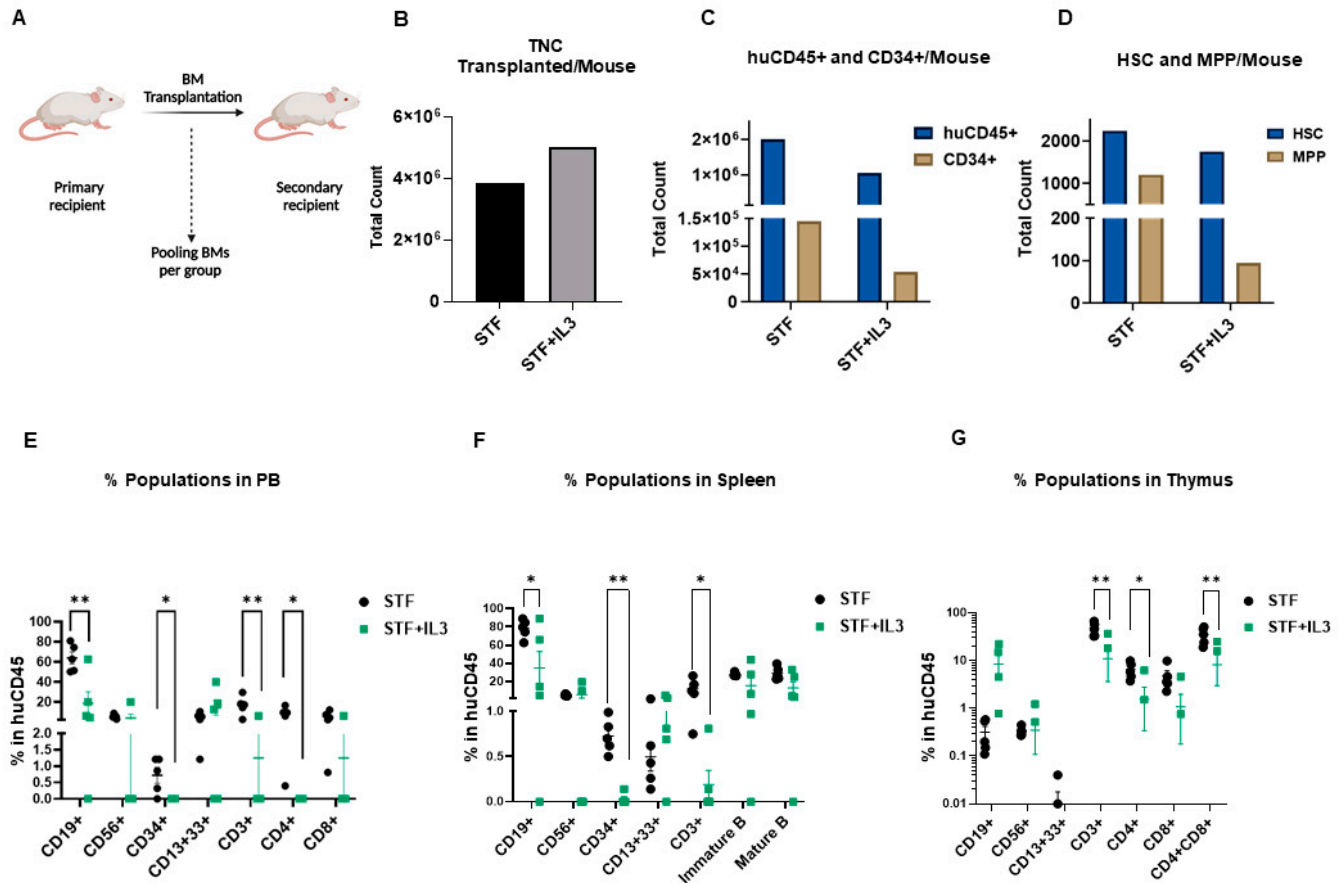
C



**Supplementary Figure S1. Percentages and absolute count of hematopoietic stem cells and progenitors (HSPCs).** (A) Representative gating strategy for phenotypic analysis of HSPCs. Hematopoietic stem cell (HSC): CD34<sup>+</sup>CD38<sup>-</sup>CD90<sup>+</sup>CD45RA<sup>-</sup>CD201<sup>+</sup>, Multipotent Progenitor (MPP): CD34<sup>+</sup>CD38<sup>-</sup>CD45RA<sup>-</sup>CD90<sup>-</sup>, Multi-lymphoid Progenitor (MLP): CD34<sup>+</sup>CD38<sup>-</sup>CD45RA<sup>+</sup>CD90<sup>-</sup>CD10<sup>+</sup>CD7<sup>+</sup>, Common Myeloid Progenitor (CMP): CD34<sup>+</sup>CD38<sup>+</sup>CD45RA<sup>+</sup>CD10<sup>-</sup>CD7<sup>-</sup>, Granulocyte-Macrophage Progenitor (GMP): CD34<sup>+</sup>CD38<sup>+</sup>CD45RA<sup>+</sup>CD10<sup>-</sup>CD7<sup>-</sup>. (B) Percentage (C) and absolute cell counts of the different progenitor populations at day 0 and day 4 (n=3, \*p<0,05, \*\*p<0,01 and \*\*\*p<0,001, one-way Anova).



**Supplementary Figure S2. Human engraftment in organs from primary transplanted NSG mice.** (A) Representative of flow cytometry analysis strategy in bone marrow at week 20 post-transplantation of different populations within huCD45<sup>+</sup>. (B-D) Percentages of different populations in PB, Thymus and Spleen.



**Supplementary Figure S3. Human engraftment in organs from secondary transplanted NSG mice.** (A) Schematic picture of secondary transplantation. (B) Total nucleated cells (TNC) transplanted per mouse in each group. (C) Total count of huCD45<sup>+</sup> and CD34<sup>+</sup> cells that each mouse received per group. (D) Graph shows total count of HSC and MPP each mouse received per group at the time of secondary transplantation. (E-G) Engraftment of different populations in PB, Thymus and Spleen at week 20 post-transplantation (n=5; \*p<0,05, \*\*p<0,01 and \*\*\*p<0,001, unpaired t-test).

Name	Fluorochrome	Clone	Source
hCD1a	APC	HI149	BD Biosciences
hCD3	BV786	SK7	BD Biosciences
hCD4	BUV805	SK3	BD Biosciences
hCD5	BV480	UCHT2	BD Biosciences
hCD7	Pe-Cy5	CD7-6B7	Biolegend
hCD8	BV650	RPA-T8	Biolegend
hCD8	BUV496	RPA-T8	BD Biosciences
hCD10	APC-Cy7	HI10a	Biolegend
hCD13	PerCP-Cy5.5	WM15	BD Biosciences
hCD19	PE-Cy7	HIB19	Invitrogen
hCD19	BV421	HIB19	Biolegend
hCD20	BV570	2H7	Biolegend
hCD33	PerCP-Cy5.5	WM53	BD Biosciences
hCD34	Pe-CF594	581	BD Biosciences
hCD34	BV650	561	Biolegend
hCD38	Pe-Cy7	HIT2	Biolegend
hCD41	BV421	HIP8	Biolegend
hCD45	V450	HI30	BD Biosciences
hCD45RA	BV711	HI100	Biolegend
hCD45RA	BV510	HI100	BD Biosciences
hCD49f	PerCP-ef710	ebioGoH3	Invitrogen
hCD56	PE-Cy5	B159	BD Biosciences
hCD56	APC-Cy7	HCD-56	Biolegend
hCD62L	BV605	DREG-56	BD Biosciences
hCD71	AF700	M-A712	BD Biosciences
hCD90	APC	5 e10	Biolegend

hCD201	PE	RCR-401	Biolegend
hIgM	BV650	MHM-88	BD Biosciences
hIgD	BV480	IA6-2	BD Biosciences
hTCRgd	BV510	11F2	BD Biosciences
hTCRab	PE	MHM-88	BD Biosciences
mCD45	FITC	30-F11	BD Biosciences
Zombie NIR	NIR	-	Biolegend

**Supplementary Table S1: List of antibodies used.**