

**Table S1. Summary of T cell Lymphoma in Id3<sup>-/-</sup> mice**

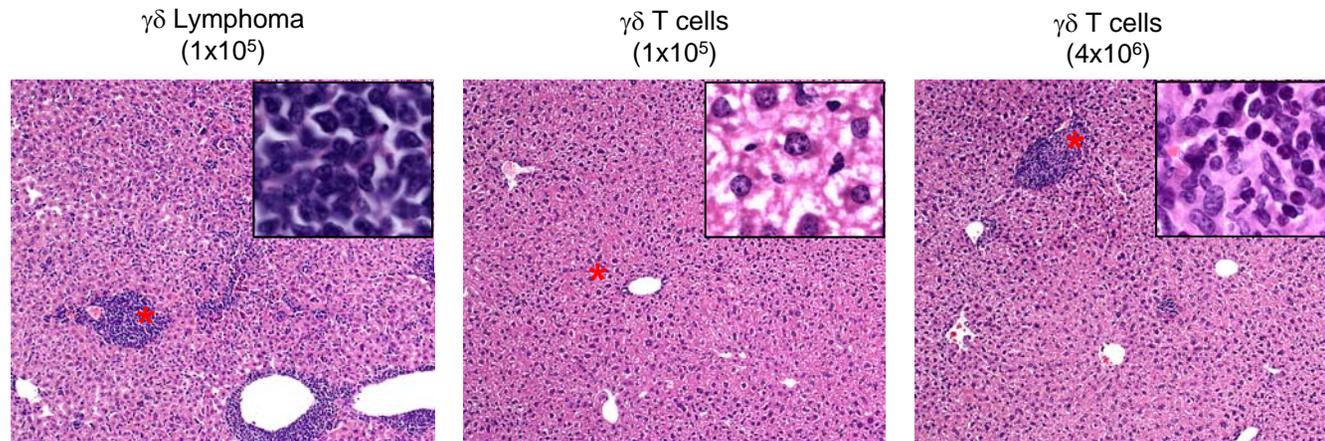
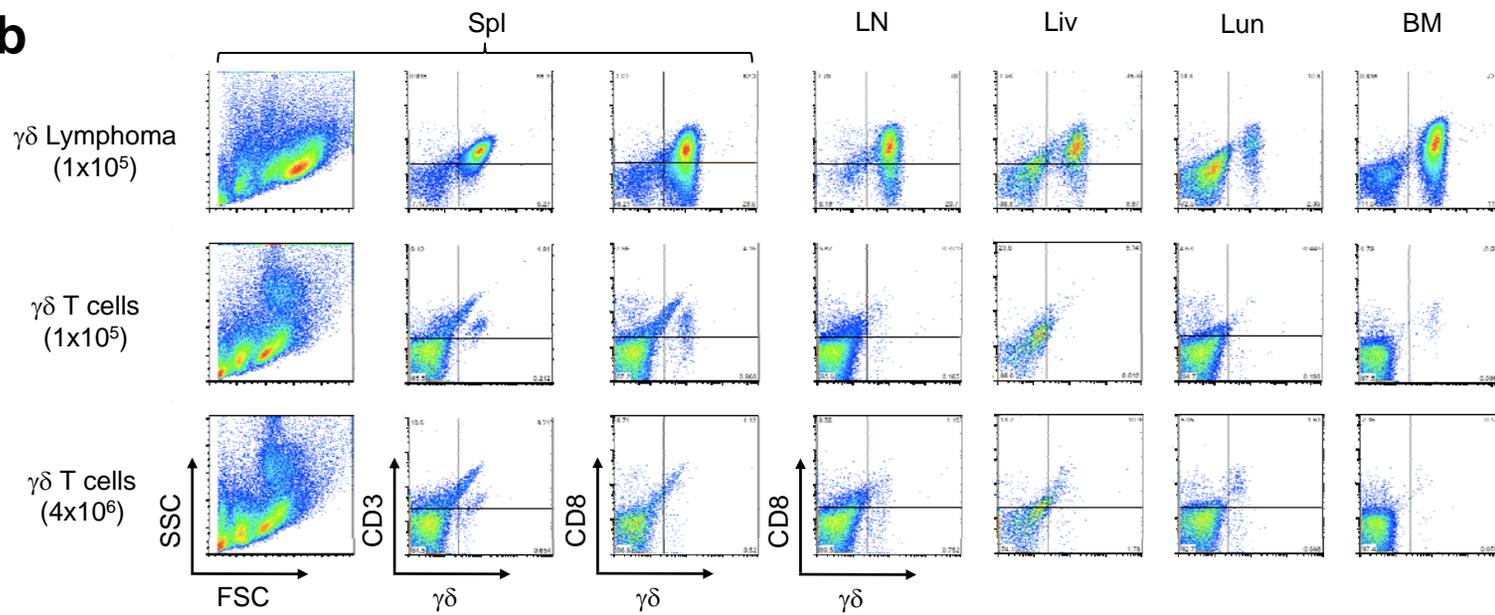
Mouse	Sex	Age (w)	Involvement	Cell type	T cell marker	TCRV $\gamma$	C-myc	Notch 1	Other marker	Other symptom
#6	F	51	Thy, Liv, Spl, LN	T ( $\alpha\beta$ - $\gamma\delta$ +)	CD3+CD4-CD8+	ND	ND	ND	CD25-CD34-CD44 <sup>int</sup> CD62L <sup>low</sup> CD69-C-kit-	Der, WL, HP, Lis
#12	F	50	Liv, Spl, LN	ND	ND	ND	ND	ND	ND	Der, WL, HP, Lis
#38	F	55	Spl, LN	B (B220+ CD19+) T ( $\alpha\beta$ - $\gamma\delta$ -) T ( $\alpha\beta$ - $\gamma\delta$ +)	CD3-CD4-CD8-	ND	-	-	CD25-CD34+CD44 <sup>int</sup> C-kit-	WL, HP, Lis
#39	F	66	Thy, Liv, Spl, LN, SG	T ( $\alpha\beta$ - $\gamma\delta$ +)	CD3+CD4+ and CD3+CD8+	ND	+	-	CD25-CD34-CD44 <sup>int</sup> C-kit-	WL, HP, Lis
#43	F	63	Thy, Liv, Spl, LN, SG, Lun, BM	T ( $\alpha\beta$ - $\gamma\delta$ +)	CD3+CD4+CD8-	V $\gamma$ 2- V $\gamma$ 3+	+	-	CD25-CD34-CD44 <sup>int</sup> C-kit-	WL, HP, Lis
#44	F	63	Thy, Liv, Spl, LN, SG, Lun, BM	T ( $\alpha\beta$ - $\gamma\delta$ +)	CD3+CD4-CD8+	V $\gamma$ 2- V $\gamma$ 3+	+	-	CD25- CD34-CD44 <sup>int</sup> C-kit-	Der, WL, Lis
#46	F	61	Liv, Spl, BM	B (B220+ CD19+) T (ND)	CD3-CD4-CD8-	ND	-	-	CD25-CD34-CD44 <sup>hi</sup> C-kit-	Der, WL, HP, Lis
#47	F	50	Liv, Spl, LN	T (ND)	CD3+CD4+CD8-	ND	-	-	CD25-CD34-CD44 <sup>hi</sup> C-kit-	Der, WL, HP, Lis
#48	F	50	Liv, Spl, LN	T (ND)	CD3+CD4+CD8+	ND	-	-	CD25-CD34-CD44 <sup>int</sup> C-kit-	Der, WL, HP, Lis
#49	F	47	Liv, Spl, LN	T (ND)	CD3+CD4+CD8-	ND	-	-	CD25-CD34-CD44 <sup>hi</sup> C-kit-	Der, WL, HP, Lis
#50	M	47	Thy, Spl	T (ND)	CD3+CD4-CD8+	ND	-	-	CD25-CD34-CD44 <sup>hi</sup> C-kit-	Der, WL, HP, Lis
#53	M	54	Thy, Spl, LN, Lun, SG	B (B220+ CD19+) T ( $\alpha\beta$ - $\gamma\delta$ -) T ( $\alpha\beta$ - $\gamma\delta$ +)	CD3-CD4-CD8-	ND	+	-	CD25-CD34-C-kit-	WL, HP, Lis, SOB
#55	F	59	Thy, Liv, Spl, Lun, BM	T ( $\alpha\beta$ - $\gamma\delta$ -) T ( $\alpha\beta$ - $\gamma\delta$ +)	CD3+CD4-CD8+	ND	-	-	CD25-	WL, HP, Lis, SOB
#56	F	61	Thy, Liv, Spl, LN, Lun	ND	ND	ND	ND	ND	ND	WL, HP, Lis, SOB
#61	M	74	Thy, Liv, Spl, LN, Lun, SG	T ( $\alpha\beta$ (ND) $\gamma\delta$ -)	CD3+CD4+CD8+	ND	ND	ND	CD25-	WL, HP, Lis, SOB
#63	M	72	Thy, Liv, Spl, LN	T ( $\alpha\beta$ (ND) $\gamma\delta$ +)	CD3+CD4+ and CD3+CD8+	ND	ND	ND	CD25-	WL, HP, Lis
#64	F	45	Liv, Spl, LN	T (ND)	CD4-CD8-	ND	ND	ND	CD25-CD44 <sup>int</sup> CD62L <sup>low</sup> CD69+	Der, WL, HP, Lis
#69	M	88	Spl	ND	ND	ND	ND	ND	ND	ND
#71	F	79	N/A	ND	ND	ND	ND	ND	ND	Der
#72	F	74	Liv, Spl, LN	ND	ND	ND	ND	ND	ND	WL
#76	F	69	Liv, Spl, LN, SG	T ( $\alpha\beta$ - $\gamma\delta$ +)	CD4+, CD8+ and CD4-CD8-	ND	ND	ND	ND	WL, HP, Lis
#82	F	86	Thy, Liv, Spl, LN, SG	T ( $\alpha\beta$ (ND) $\gamma\delta$ -)	CD4-CD8-	ND	ND	ND	ND	WL, HP, Lis, SOB

#83	F	87	Liv, Spl	T ( $\alpha\beta$ (ND) $\gamma\delta+$ )	CD4+ and CD8+	ND	ND	ND	ND	Der
#85	F	93	LN	ND	ND	ND	ND	ND	ND	WL, HP, Lis
#86	M	56	Spl, LN	T ( $\alpha\beta$ - $\gamma\delta+$ )	CD3+CD4+	ND	-	ND	ND	Der
#87	M	65	Spl	T ( $\alpha\beta$ - $\gamma\delta+$ )	CD3+CD4+	ND	ND	ND	ND	Der
#88	F	57	Thy, Liv, Spl, LN, Lun	ND	ND	ND	ND	ND	ND	Der
#89	F	66	Thy, Spl, LN	T ( $\alpha\beta$ - $\gamma\delta+$ )	CD8+	ND	ND	ND	ND	Der
MS0605732	F	33	Liv, Spl, LN, Lun	ND	ND	ND	ND	ND	ND	Der
MS0701895	M	51	Liv, Spl, LN, Lun, SG	ND	ND	ND	ND	ND	ND	ND
MS0702494	F	38	Thy	ND	ND	ND	ND	ND	ND	ND
MS0703466	M	54	Liv, Spl, LN	ND	ND	ND	ND	ND	ND	ND
MS0703517	M	36	Liv, Spl, LN, Kid, BM	ND	ND	ND	ND	ND	ND	ND
MS0703971	F	36	Liv, Spl, LN, Kid, AG	ND	ND	ND	ND	ND	ND	WL, HP, Lis
MS0704530	F	40	Liv, Spl, LN	ND	ND	ND	ND	ND	ND	Der, WL
MS0707748	M	79	Thy, Liv, Spl, LN, Kid, Lun	ND	ND	ND	ND	ND	ND	WL, HP, Lis, SOB
MS0706129	F	55	Spl, LN, Kid	ND	ND	ND	ND	ND	ND	Der
MS0706809	M	63	Thy, Liv, Spl, LN, Kid, Lun, SG	ND	ND	ND	ND	ND	ND	ND

Abbreviations: Spl: spleen; Thy: thymus; LN: lymph nodes; Liv: liver; BM: bone marrow; SG: salivary gland; Lun: lung; Kid: kidney; AG: adrenal gland; T: T cell;  $\alpha\beta$ :  $\alpha\beta$ TCR;  $\gamma\delta$ :  $\gamma\delta$ TCR; B: B cell; ND: not done; Der: dermatitis; WL: weight loss; HP: hunched posture; Lis: listless; SOB: short of breath

**Figure S1. Adoptive transfer of low dose of  $\gamma\delta$  T-cell lymphoma cells or purified non-lymphoma Id3<sup>-/-</sup>  $\gamma\delta$  T cells to Rag1<sup>-/-</sup> recipients**

Non-lymphoma  $\gamma\delta$  T cells ( $1 \times 10^5$  or  $4 \times 10^6$  per mouse) isolated from the spleen of Id3<sup>-/-</sup> mice (4 weeks old) or  $\gamma\delta$  T-cell lymphoma cells (CD8<sup>+</sup>,  $1 \times 10^5$ ) were injected into Rag1<sup>-/-</sup> mice for 12 weeks. (A) Histopathological analysis of the livers from a representative mouse that received T cell or lymphoma cells (H&E staining, 5 $\times$ ; the insert in each slide was an enlarged area, 100 $\times$ , n = 2-3 mice). (B) Flow cytometric analysis of  $\gamma\delta$  T cell lymphoma isolated from the spleen or other tissues of Rag1<sup>-/-</sup> mice receiving  $\gamma\delta$  T cell lymphoma cells or non-lymphoma Id3<sup>-/-</sup>  $\gamma\delta$  T cells. Data shown are dot plots of indicated markers on the transferred cells in a representative mouse of total of two-three per group. Spl: spleen; Liv: liver; LN: lymph nodes; Lun: lungs; BM: bone marrow.

**a****b****Figure S1**