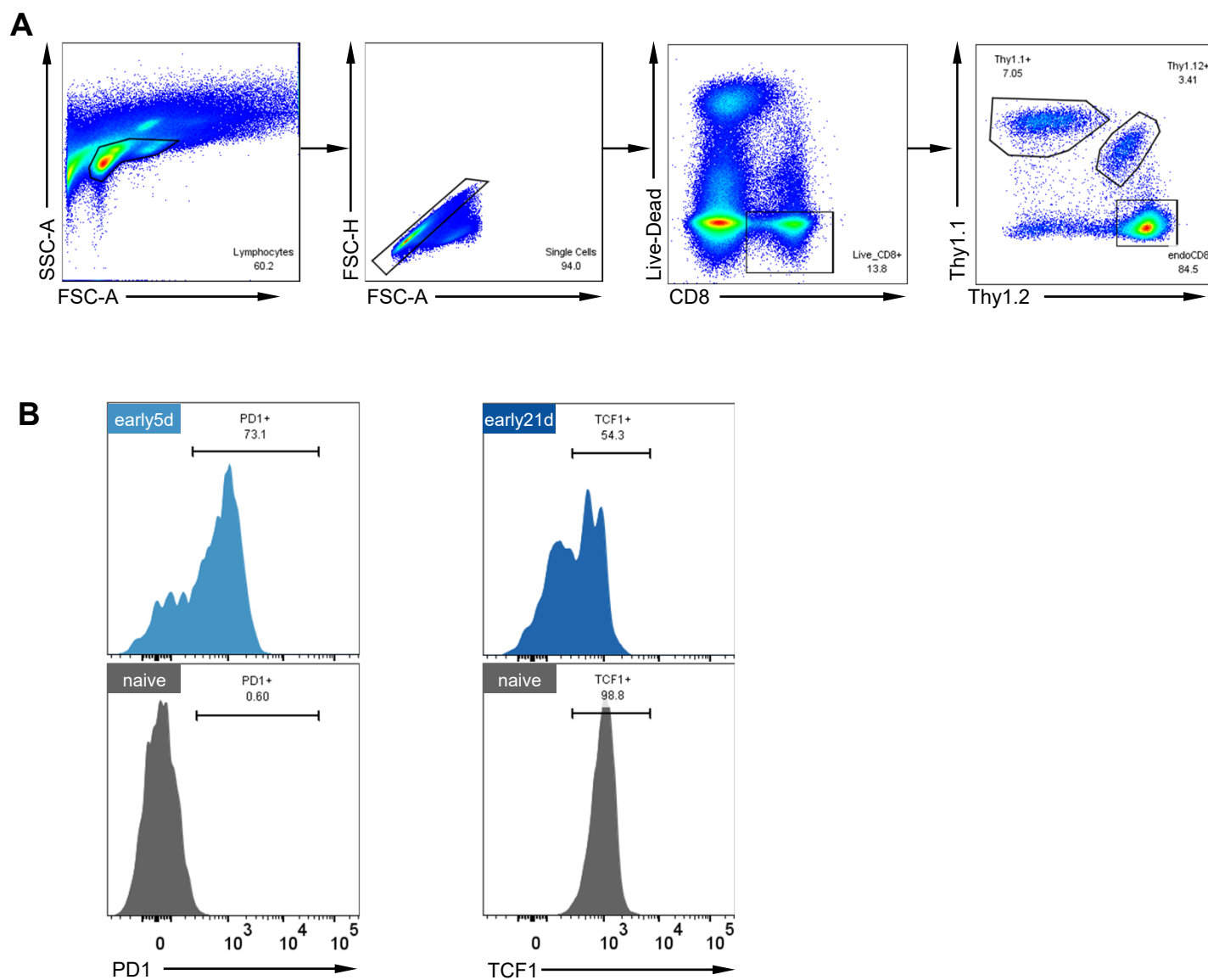
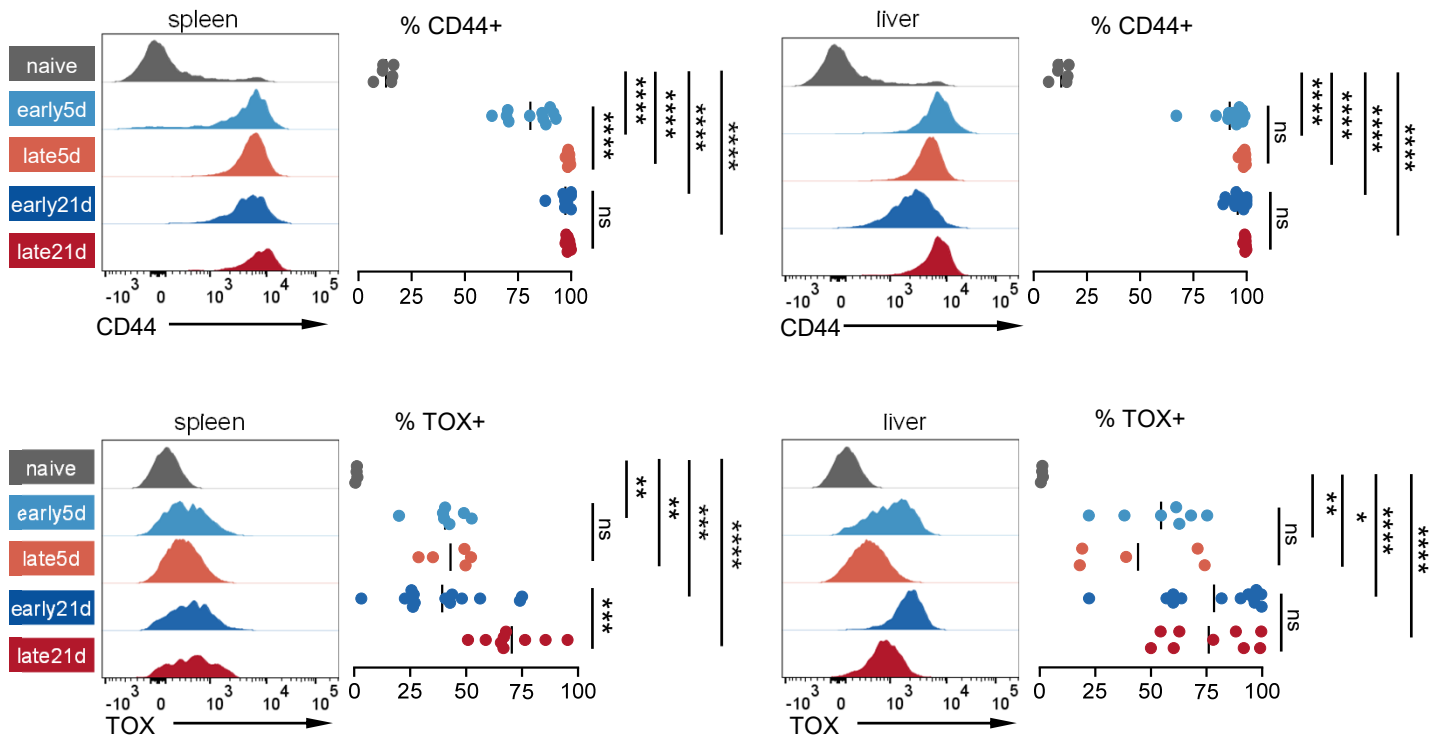


## Supplemental Figure 1



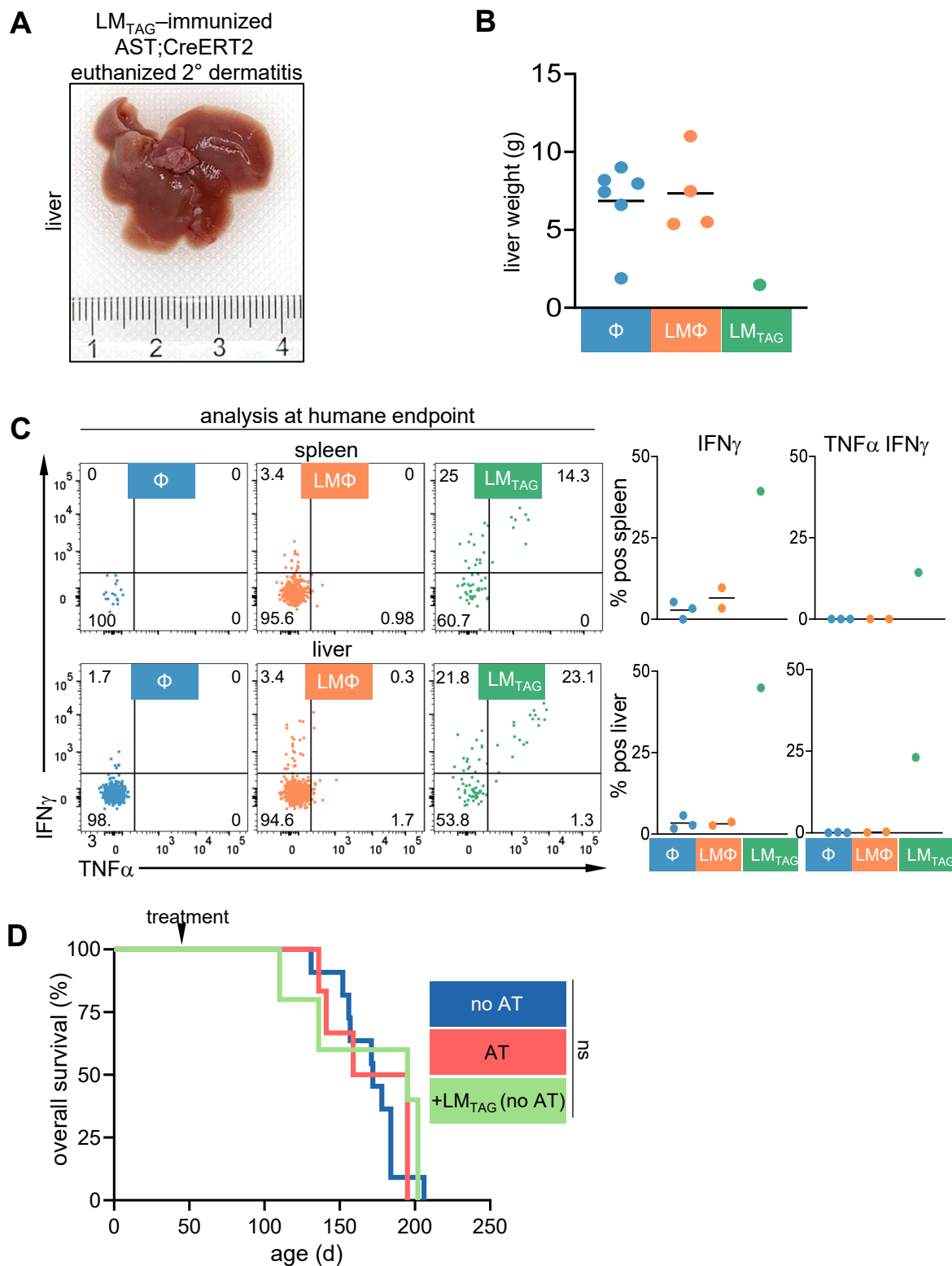
**Supplemental Figure 1: Gating strategy for flow cytometric analysis of Thy1.1 and/or Thy1.12 TCR<sub>TAG</sub>.**  
**A.** Gating scheme used to identify Thy1.1 and/or Thy1.12 TCR<sub>TAG</sub> retrieved from livers (shown) and spleen for analysis. **B.** Percentage of PD1<sup>+</sup> and TCF1<sup>+</sup> TCR<sub>TAG</sub> with positive gate set to exclude (PD1, left) or include (TCF1, right) naive TCR<sub>TAG</sub> (gray).

## Supplemental Figure 2



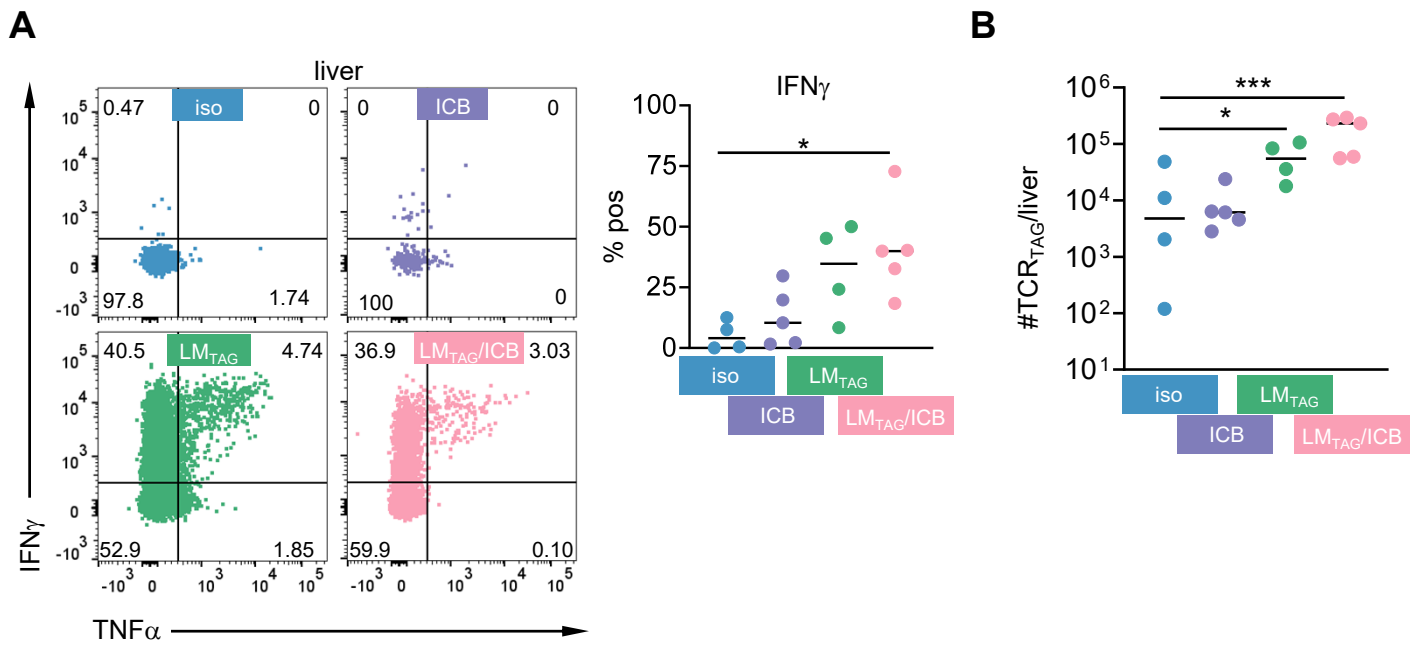
**Supplemental Figure 2: TCR<sub>TAG</sub> upregulate CD44 and TOX in mice with early and late liver lesions (as in Fig. 3A).** Left, histograms showing TCR<sub>TAG</sub> CD44 (upper) and TOX (lower) expression in spleen and liver. Right, percentage of CD44+ (upper panels) and TOX+ (lower panels) TCR<sub>TAG</sub> with positive gate set to exclude naive TCR<sub>TAG</sub> (gray). Each symbol represents an individual mouse combined from 2-3 independent experiments. \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ , \*\*\*\* $P < 0.0001$  (one-way ANOVA followed by post-hoc Tukey test).

### Supplemental Figure 3



**Supplemental Figure 3: Early vaccination prevents liver tumor progression.** A-C. Experimental setup as in Fig. 4A. **A.** Gross liver image from LM<sub>TAG</sub>-vaccinated mouse euthanized for dermatitis at age 336d (measured in cm). **B.** Liver weights. Each symbol represents an individual mouse with n=1-5/group. **C.** Left, TCR<sub>TAG</sub> TNF $\alpha$  and IFN $\gamma$  production after 4-hour *ex vivo* TAG peptide stimulation. Right, percentage of TCR<sub>TAG</sub> positive for IFN $\gamma$  and TNF $\alpha$ /IFN $\gamma$ . Each symbol represents an individual mouse with n=4-5/group. **D.** Early AST;Cre-ER<sup>T2</sup> mice (42d) were either left untreated (no AT), adoptively transferred with TCR<sub>TAG</sub> (AT), or immunized with LM<sub>TAG</sub> (+LM<sub>TAG</sub> no AT) and followed to humane endpoint. Kaplan-Meier curve showing survival of mice in each group, n=5-11/group. ns= not significant (log rank [Mantel-Cox] test).

## Supplemental Figure 4



**Supplemental Figure 4: LM<sub>TAG</sub> vaccination is superior to immune checkpoint blockade in preventing liver tumor progression.** Experimental setup as in Fig 5A. **A.** Left, liver TCR<sub>TAG</sub> TNF $\alpha$  and IFN $\gamma$  production after 4-hour *ex vivo* TAG peptide stimulation. Right, percentage of TCR<sub>TAG</sub> positive for IFN $\gamma$ . Each symbol represents an individual mouse with n=4-5. \* $P$ <0.05 (one-way ANOVA followed by post-hoc Tukey test). **B.** Number of TCR<sub>TAG</sub> cells in the liver. \* $P$ <0.05, \*\*\* $P$ <0.001 (one-way ANOVA followed by post-hoc Tukey test).