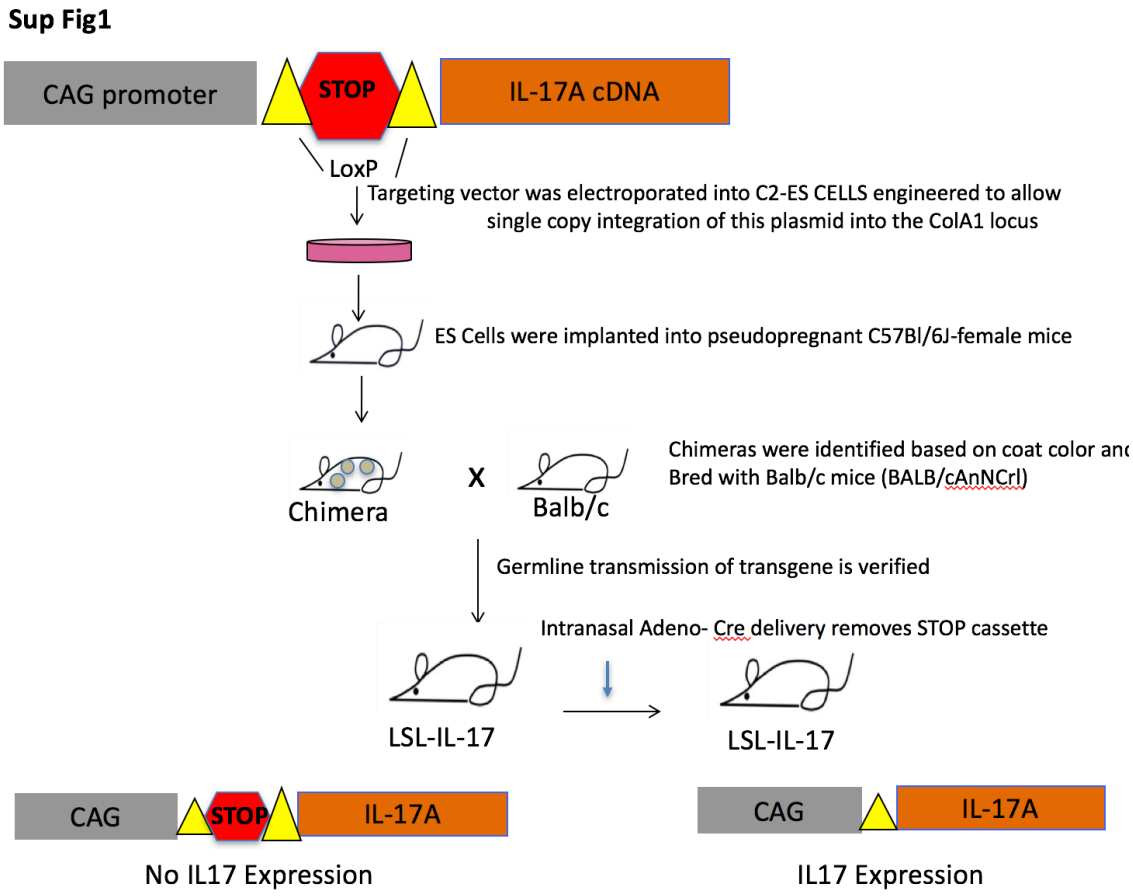
Interleukin-17A Promotes Lung Tumorigenesis Through Promoting Neutrophil Attraction to Tumor Sites

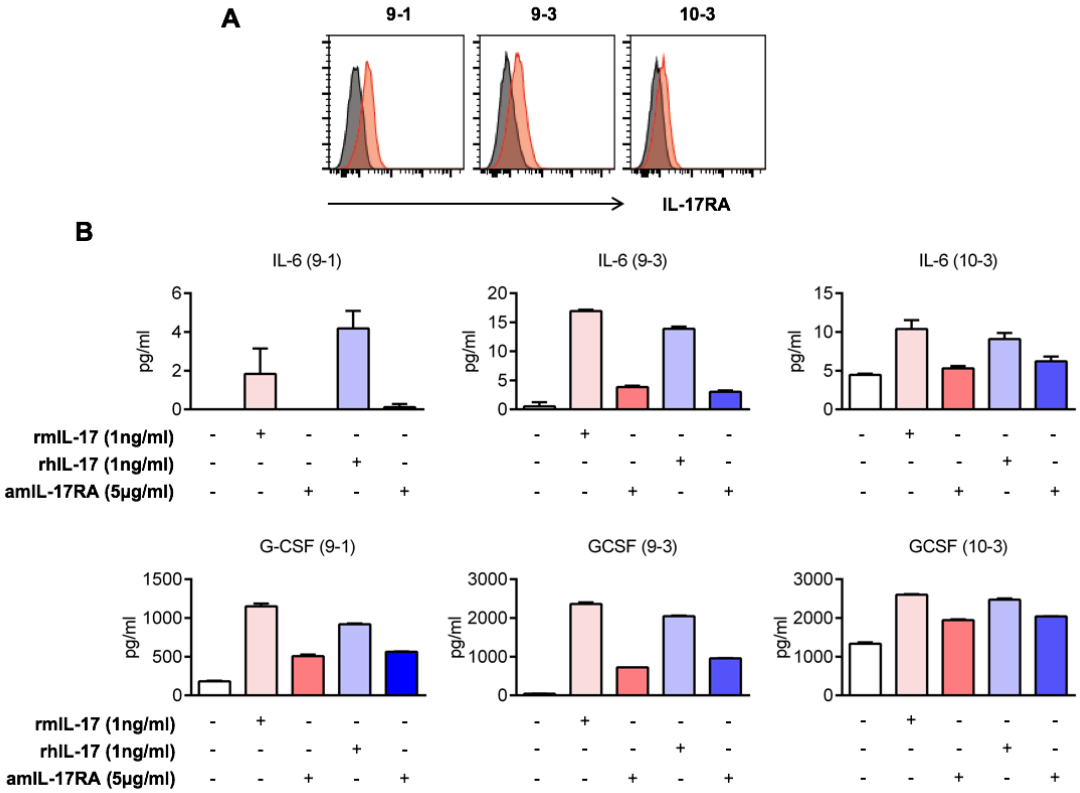
SUPPLEMENTARY DATA



Supplementary Figure 1: Generation of IL-17 transgenic mice.

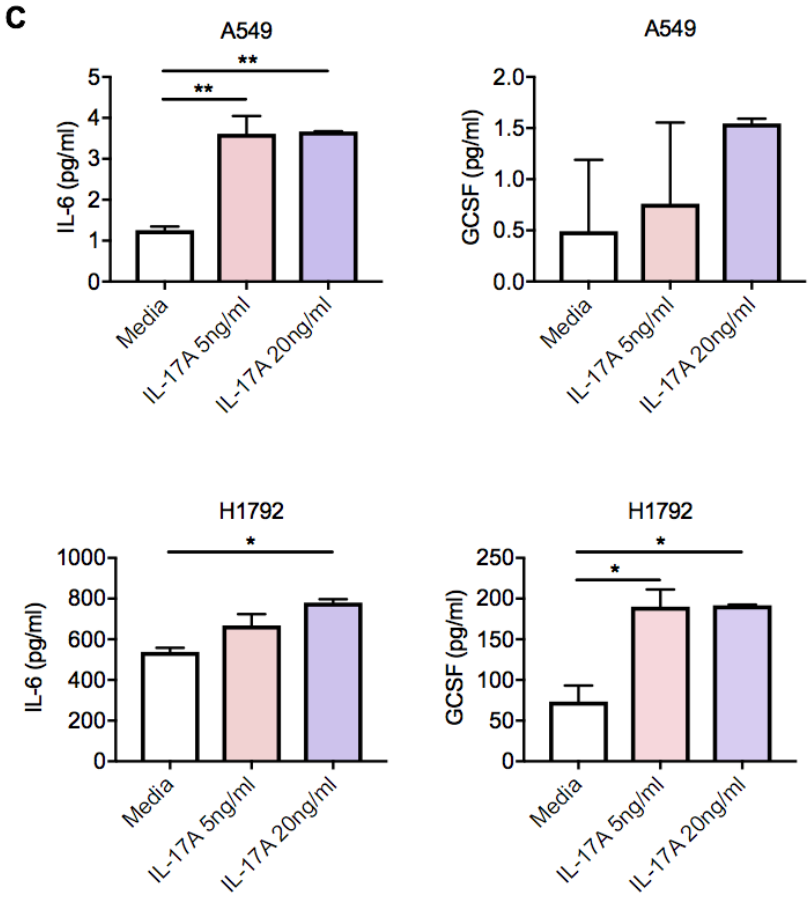
Targeting vector contains CAG promoter, a lox-stop-lox cassette followed by the human IL17A cDNA. ES cells were electroporated with the targeting vector, cells carrying the transgene were selected and injected into carrier mothers. Resulting animals- chimeras were bred with Balb/c mice to confirm the germline transmission of the transgene.

Sup Fig2



Supplementary Figure 2: Recombinant IL-17 induces IL-6 and G-CSF expression in murine lung cancer lines. A: IL-17 Receptor A expression in three different Kras driven lung cancer lines (Kras, p53 mutation). B: Induction of IL-6 and G-CSF expression in the lung cancer lines with human or mouse IL-17 recombinant protein and/or IL-17 receptor-blocking antibody. Representative result from three repeat experiments.

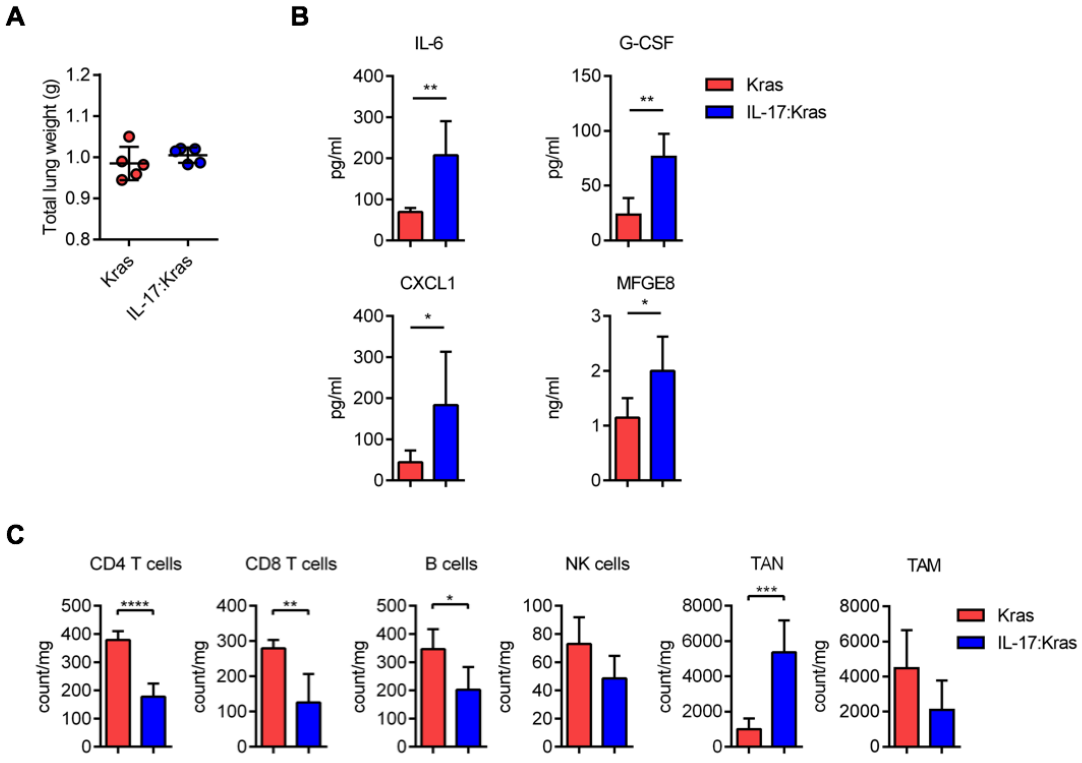
Sup Fig2



Supplementary Figure 2c: Recombinant IL-17A treatment of human lung cancer cell lines.

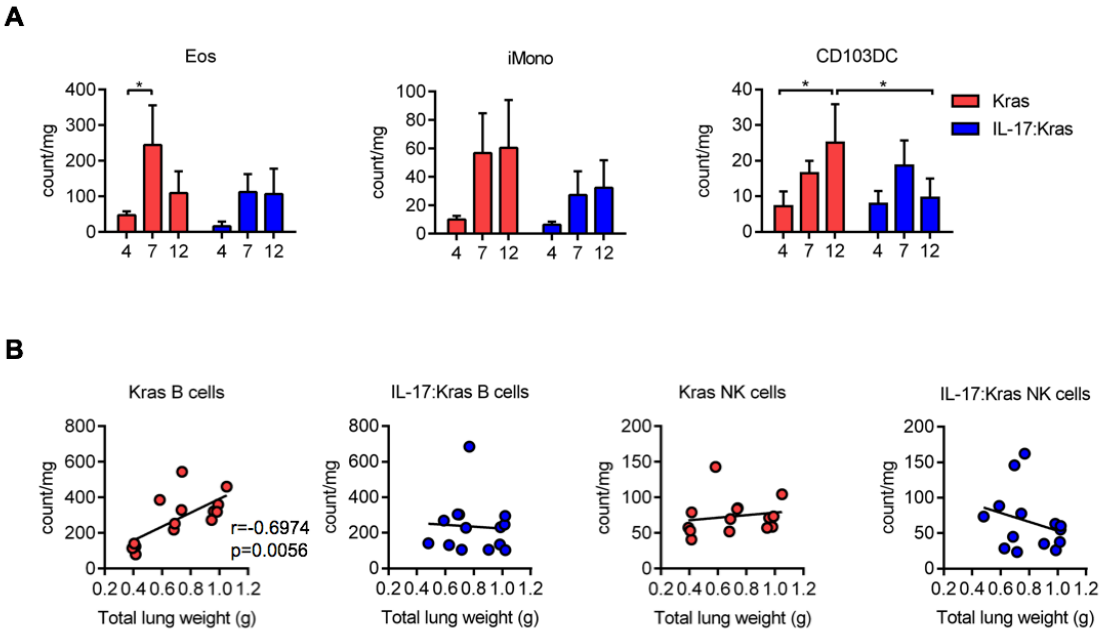
Recombinant IL-17 induces IL-6 and G-CSF expression in human lung cancer lines (*p<0.05, **p<0.01).

Sup Fig3



Supplementary Figure 3:**IL-17 Changes cytokine profiles and neutrophil counts.** Comparisons of A) lung weight (Kras:n=5, IL-17Kras:n=5). B,C) Cytokines and chemokines (IL6, G-CSF, CXCL1 and MFGE-8) (B) and immune cell counts (C) in Kras vs IL17 Kras mice with similar tumor burden. (Kras:n=5, IL-17Kras:n=5) (*p<0.05, **p<0.01, ***p<0.001).

Sup Fig4

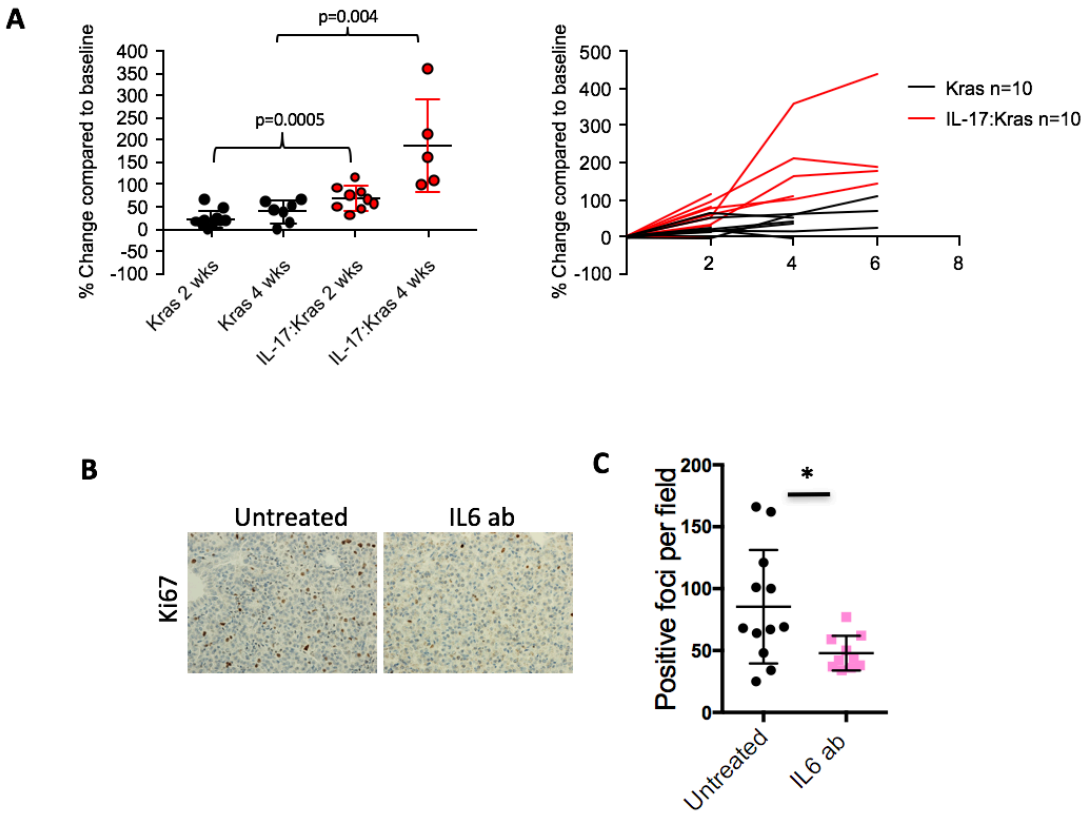


Supplementary Figure 4: IL-17 Changes Immune cell counts

A) Time course analysis (at 4,7, and 12 weeks) for counts of eosinophil (CD11b+SiglecF+Ly6G-:Eos), inflammatory monocytes (CD11b+Ly6G-SiglecF-Ly6C+:iMono), and CD103 positive dendritic cells (CD11c+CD103+CD11b-:CD103DC) (*p<0.05).

B) Correlations of NK and B cell counts and lung weight (disease burden) in IL17 Kras and Kras mice. Kras:n=14, IL-17Kras:n=14.

Sup Fig5



Supplementary Figure 5: IL-17:Kras tumors respond poorly to PD-1 blockade.

A)MRI Quantification of Kras and IL-17:Kras tumors under PD-1 antibody treatment.

B)Representative Ki67 immhunohistochemistry on untreated or IL-6 antibody treated IL17:Kras tumors. C) Quantification of Ki67 positive foci in untreated or IL-6 antibody treated IL17:Kras tumors (*p<0.05).

.