SUPPLEMENTARY FIGURE LEGENDS

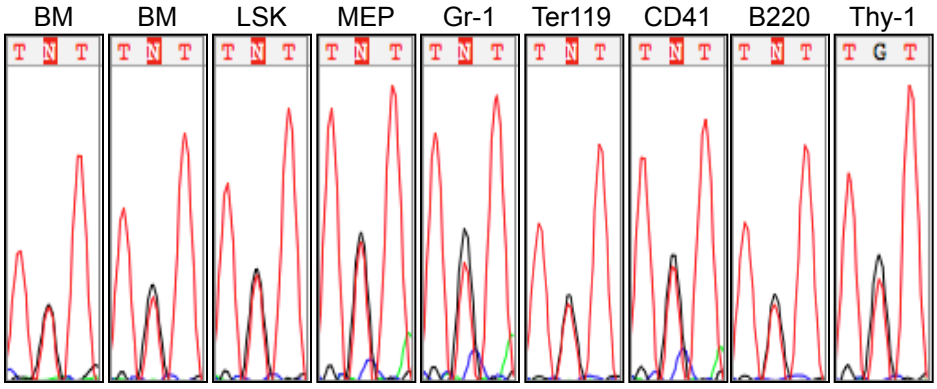
Supplementary Figure S1. Comparable expression of Jak2 WT and Jak2V617F alleles in total BM and purified LSK, MEP and late progenitors of C57BL/6 background heterozygous Jak2V617F mice.

The relative expression of wild-type Jak2 and mutant Jak2V617F was determined in the total BM as well as in sorted LSK, MEP, granulocyte (Gr-1), erythroid (Ter119), megakaryocyte (CD41), B-lymphoid (B220) and T- lymphoid (Thy-1) cells from heterozygous Jak2V617F mice (in a pure C57BL/6 background) by the T/G ratio (T-peak identifies the mutant, G-peak identifies the wild-type allele) after direct sequencing of the real-time PCR products as described previously.[10] Notably, C57BL/6 heterozygous Jak2V617F mice hematopoietic progenitors express almost equal levels of *Jak2V617F* and *Jak2WT* alleles.

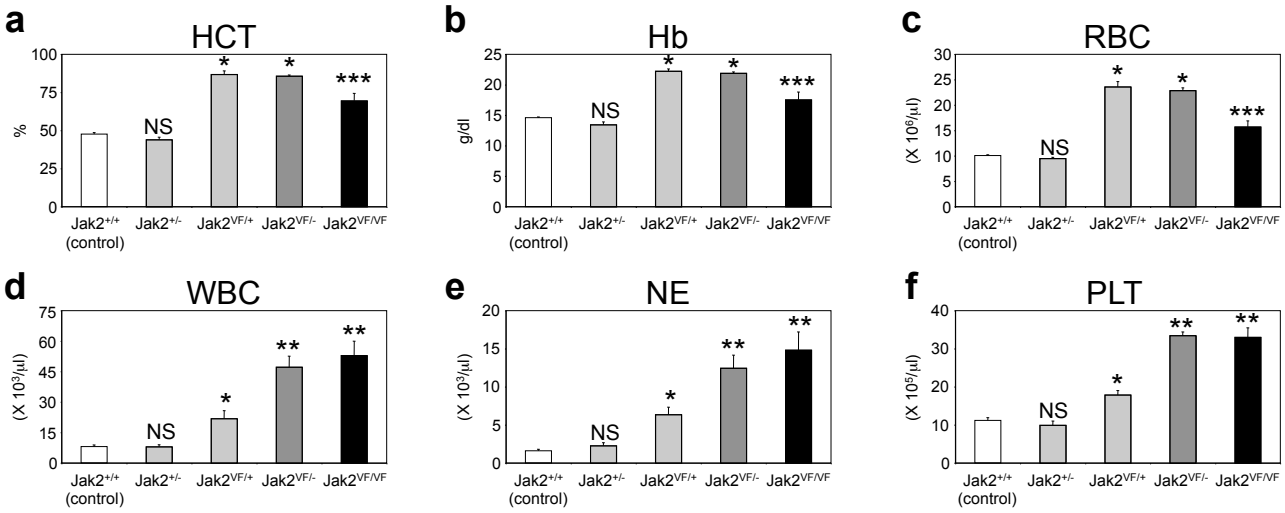
Supplementary Figure S2. Heterozygous Jak2 deletion significantly alters peripheral blood counts in Jak2V617F knock-in mice but not in wild-type background mice.

Peripheral blood hematocrit (**a**), hemoglobin (**b**), RBC (**c**), WBC (**d**), neutrophil (**e**) and platelet (**f**) counts were assessed at 12 weeks after pI-pC induction in control ($Jak2^{+/+}$), heterozygous Jak2-deleted ($Jak2^{+/-}$), and heterozygous ($Jak2^{VF/+}$), hemizygous ($Jak2^{VF/-}$) or homozygous ($Jak2^{VF/VF}$) Jak2V617F-expressing mice (n=7 for $Jak2^{+/-}$, n=10 for all other genotypes). NS indicates not significant compared with controls; asterisks indicate significant differences ($p<0.05$) (* indicates significance when compared with controls; ** indicates significance when compared with controls and $Jak2^{VF/+}$; *** indicates significance when compared with controls, $Jak2^{VF/+}$ and $Jak2^{VF/-}$). Whereas deletion of Jak2 WT allele significantly increases WBC, neutrophil and platelet counts in Jak2V617F knock-in mice, deletion of heterozygous Jak2 in

wild-type background mice ($Jak2^{+/-}$) does not significantly alter peripheral blood counts compared with control animals.



Supplementary Figure S1



Supplementary Figure S2