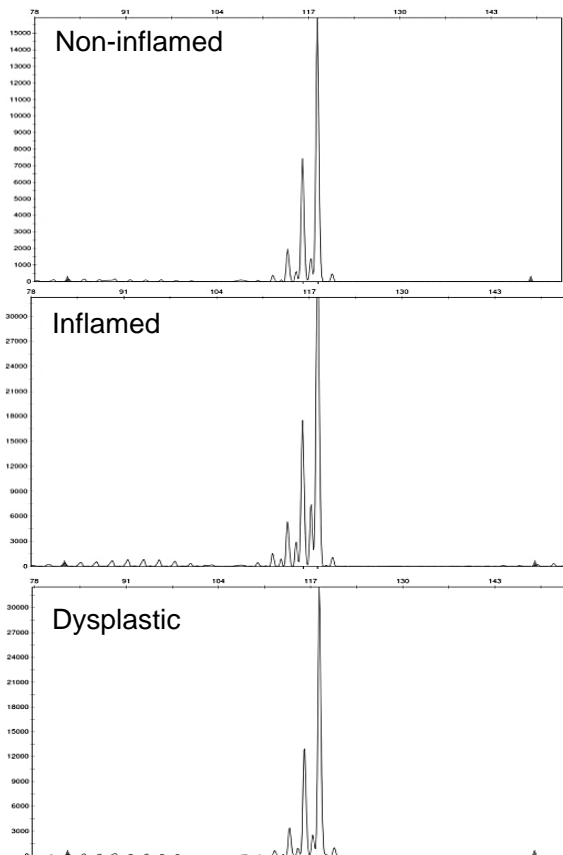


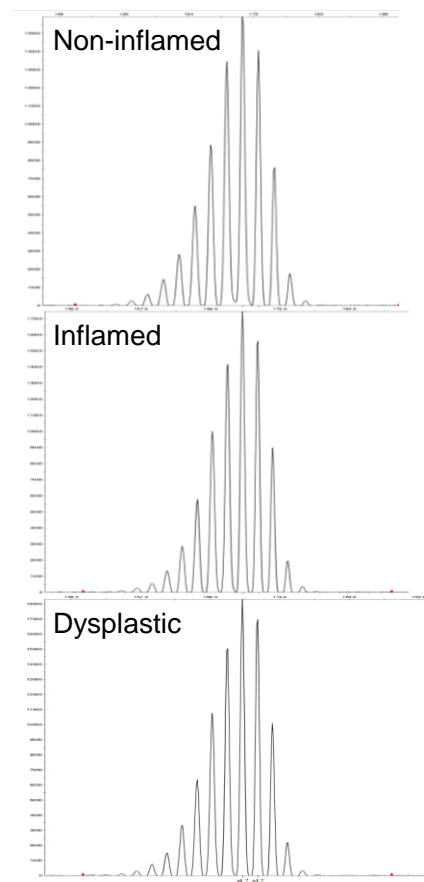
Supplementary Figure 1: Tumor burden and inflammation in IL-10 KO mice.

A: Piroxicam fed mice with and without dysplastic lesions are shown with their respective grade of inflammation. The number of dysplastic lesions was positively correlated to the grade of inflammation ($R=0.728$, $p<0.01$)

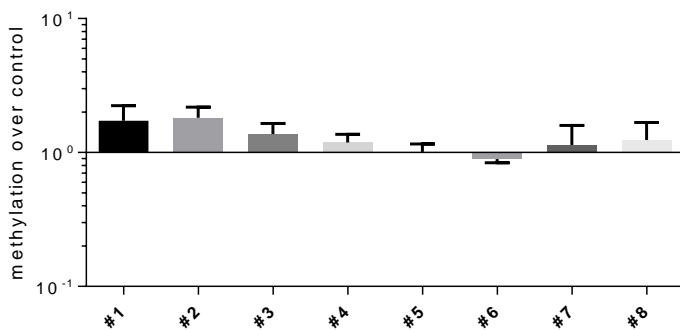
A



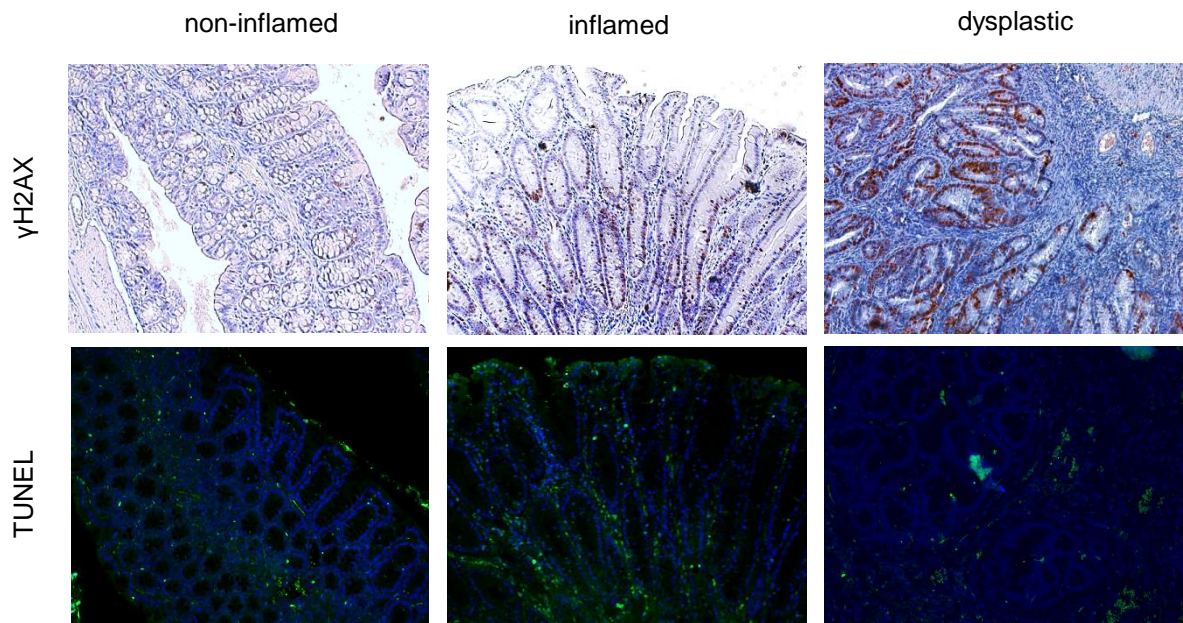
B



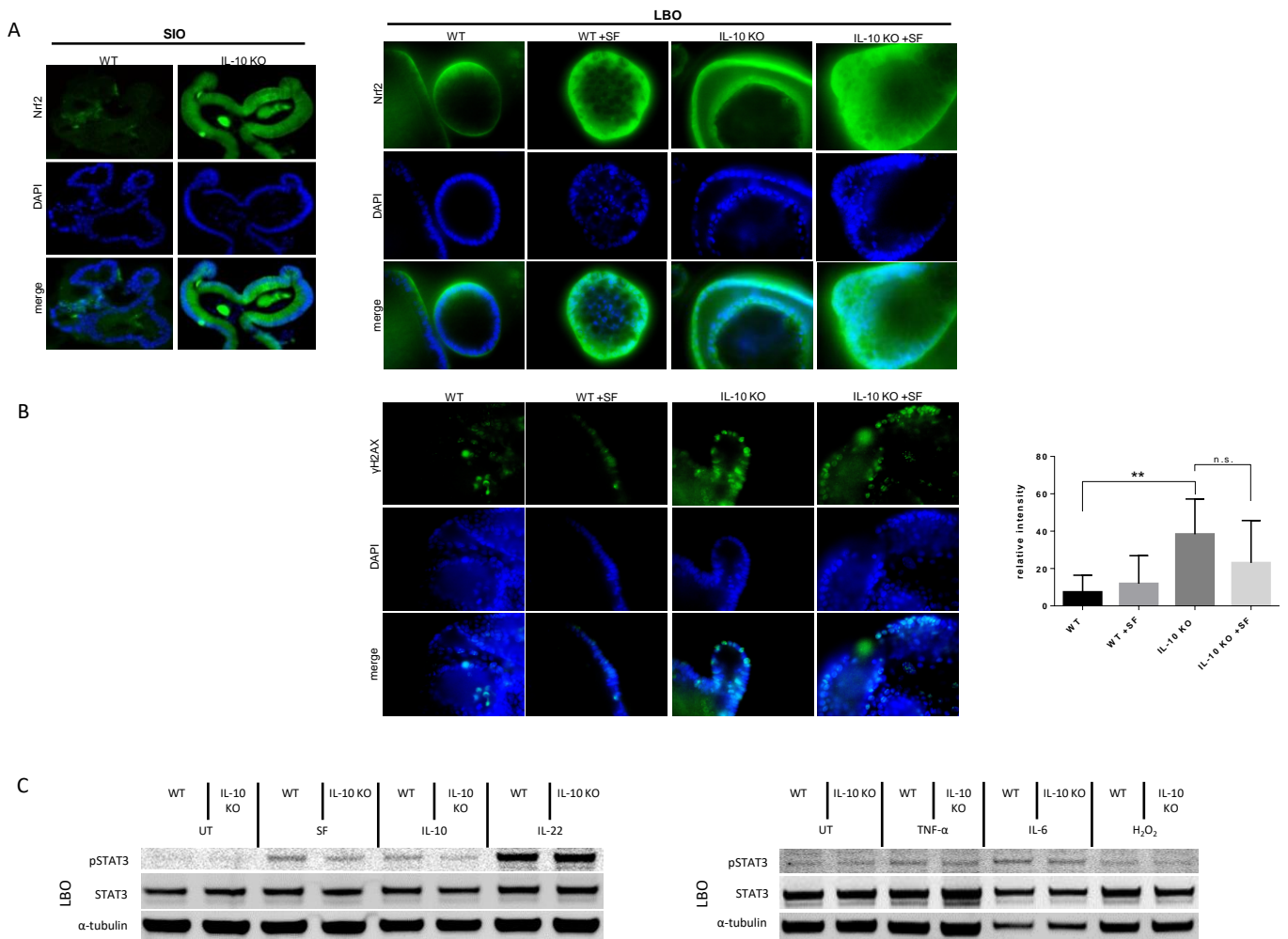
C



Supplementary Figure 2: LOH, MSI and CIMP in IL-10 KO mice: **A.** Fragment analysis of p53 aligning marker (D11mit86), showing exemplary result in non-inflamed, inflamed, and dysplastic tissue samples of the same mouse; no change in peak height or fragment length in neither of the samples was detected. **B.** MSI analysis showing an exemplary samples of the polyA marker A27. No change in fragment length was detected between any of the samples. **C.** CIMP analysis revealed no significant change in the methylation levels of dysplastic samples compared to non-inflamed samples. CIMP: CpG island methylator phenotype, LOH: Loss of heterozygosity, MSI: Microsatellite instability



Supplementary Figure 3: DNA damage and apoptosis in IL-10KO mice. Comparison of γ H2AX stained slides (upper panel) with TUNEL staining (lower panel).



Supplementary Figure: Nrf2 is increased in IL-10 KO small and large intestinal organoids.

A: IF of Nrf2 in WT- and IL-10 KO small and large bowel organoids indicates an overall increased and aberrant localization in IL-10 KO compared to WT. Treatment with Nrf2 activator indicates increase and translocation of Nrf2 into the nucleus in both WT and IL-10 KO LBOs. **B:** IF of γ H2AX in WT- and IL-10 KO LBOs, with- and without sulforaphane treatment (10 μ M). Nrf2 activation using SF did not result in reduced γ H2AX as indicated by IF and imageJ-analysis. Statistical analysis was done with ANOVA using Dunnet post hoc analysis. **C:** WB analysis of WT- and IL-10 KO LBOs, showing STAT3 phosphorylation after cytokine treatment. SF showed no change in STAT3 phosphorylation in IL-10 KO compared to WT. IF: immunofluorescence, LBO: large bowel organoids, SF: sulforaphane, SIO: small intestinal organoids