

## Supplementary Materials

### Gender Differences in a Mouse Model of Hepatocellular Carcinoma Revealed Using Multi-Modal Imaging

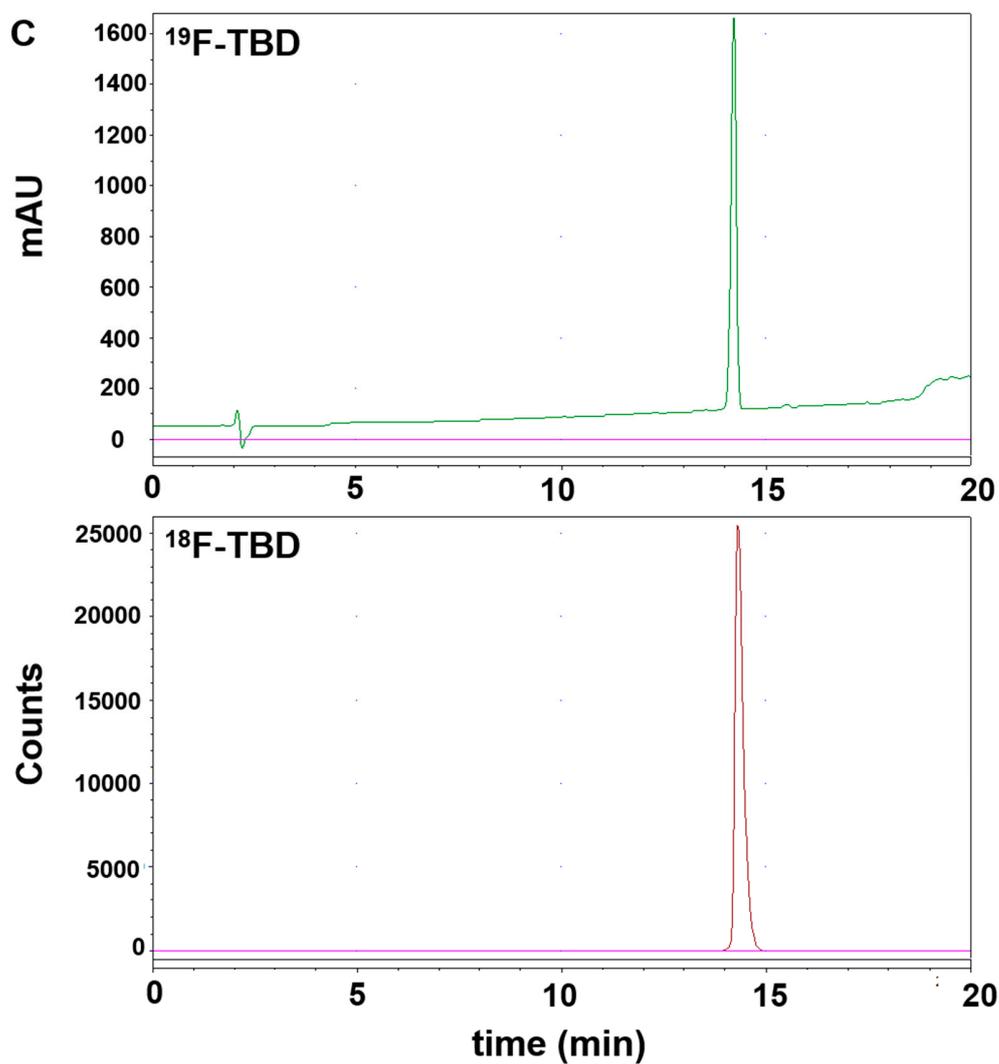
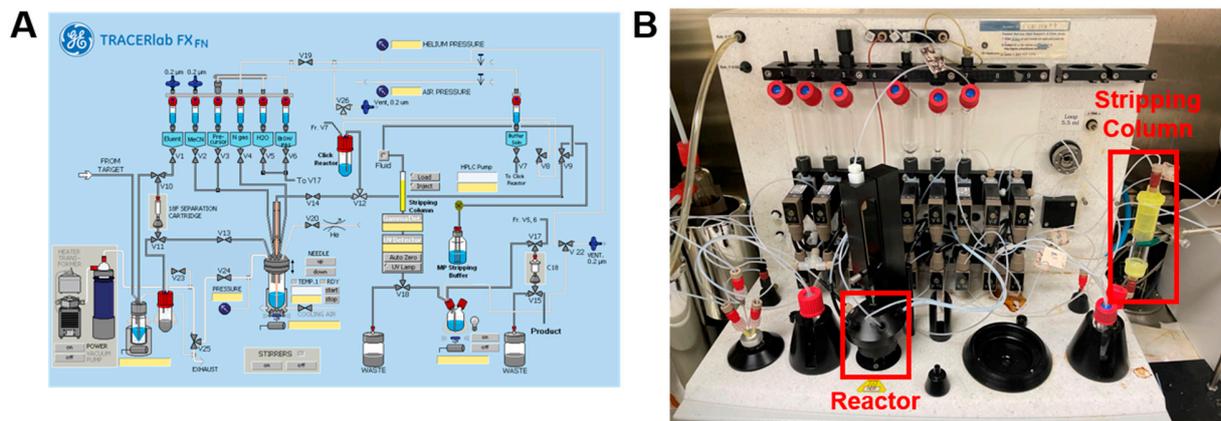
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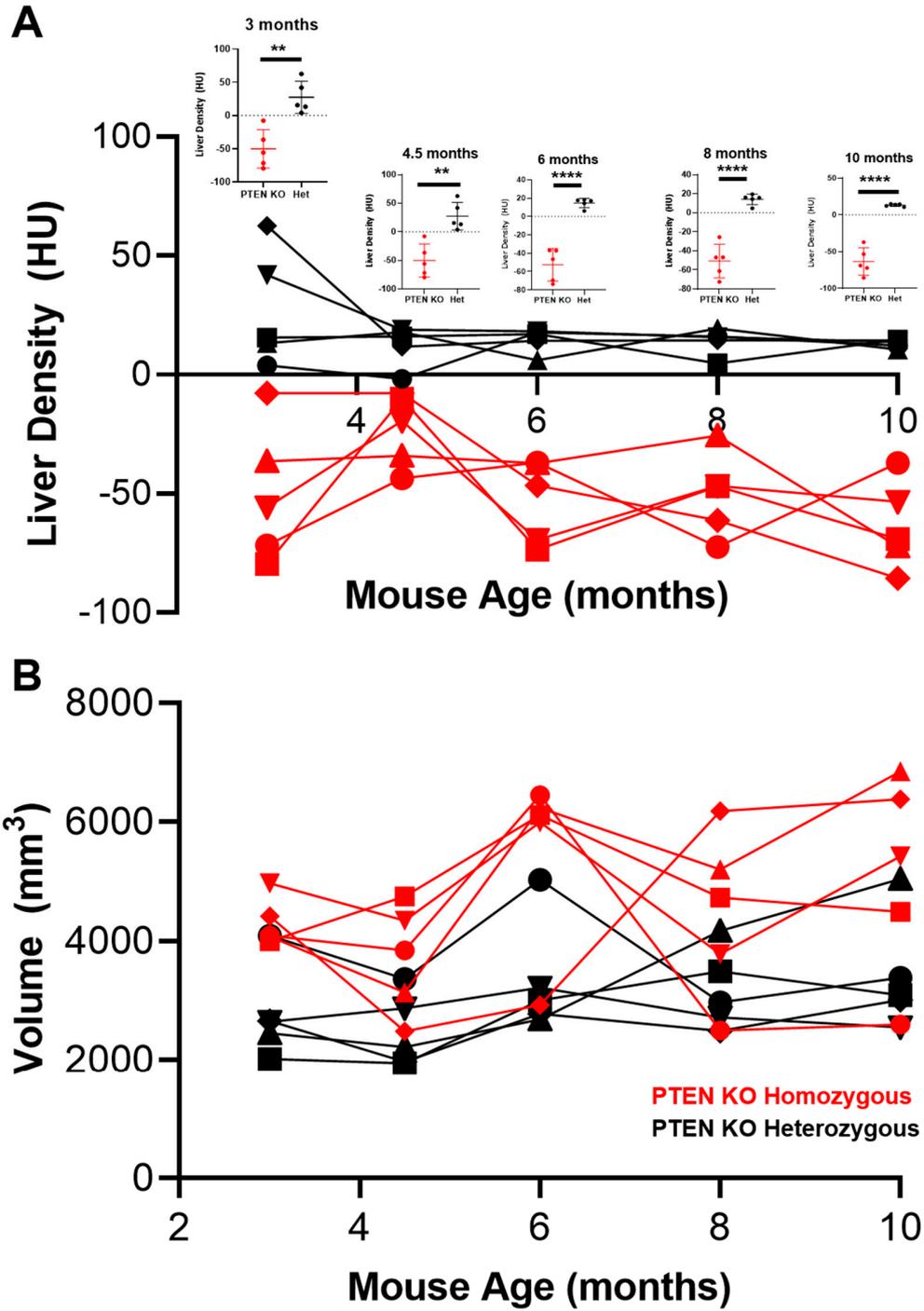
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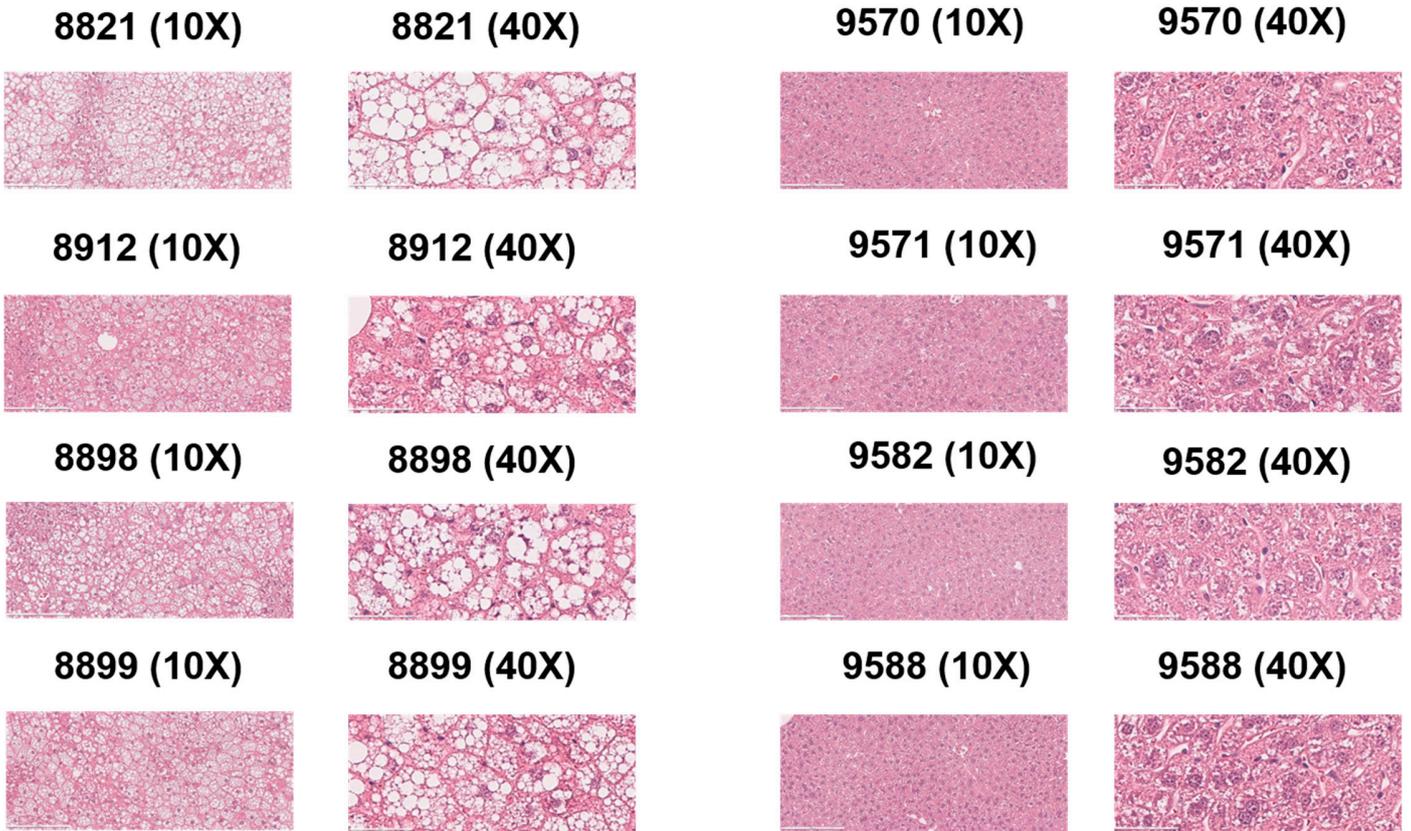
**Supplemental Figure S1:** (A) TracerLab Schematic for radiosynthesis of  $^{18}\text{F}$ -TBD. (B) Photograph of partially configured TracerLab showing the location of the reactor and the stripping resin column. (C) C18 RP HPLC chromatogram of the  $^{19}\text{F}$ -TBD cold standard (top) along with radioHPLC of purified and formulated  $^{18}\text{F}$ -TBD.



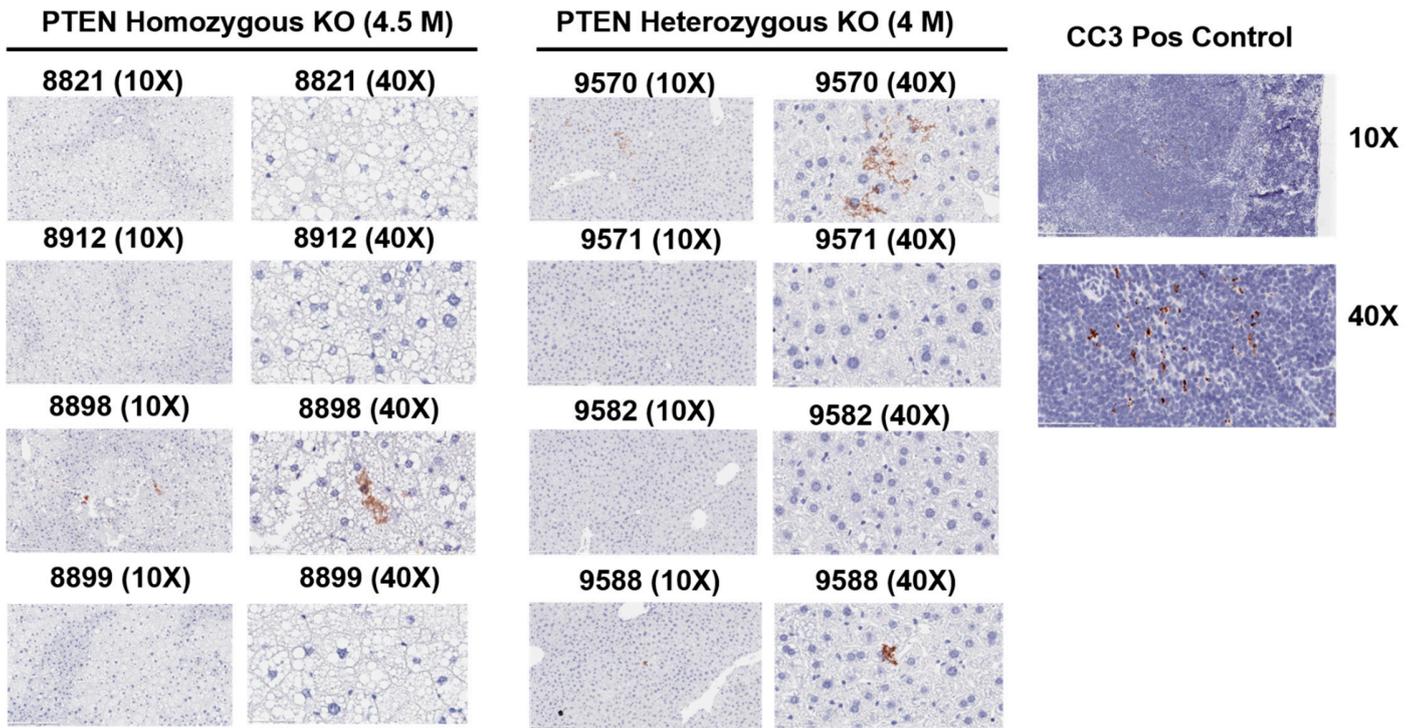
**Supplemental Figure S2: (A)** Liver Density by CT and **(B)** Liver volume by <sup>18</sup>F-TBD PET of PTEN<sup>-/-</sup> (red) and PTEN<sup>+/-</sup> (black) male mice over the timecourse of the longitudinal study.

**PTEN Homozygous KO (4.5 M)**

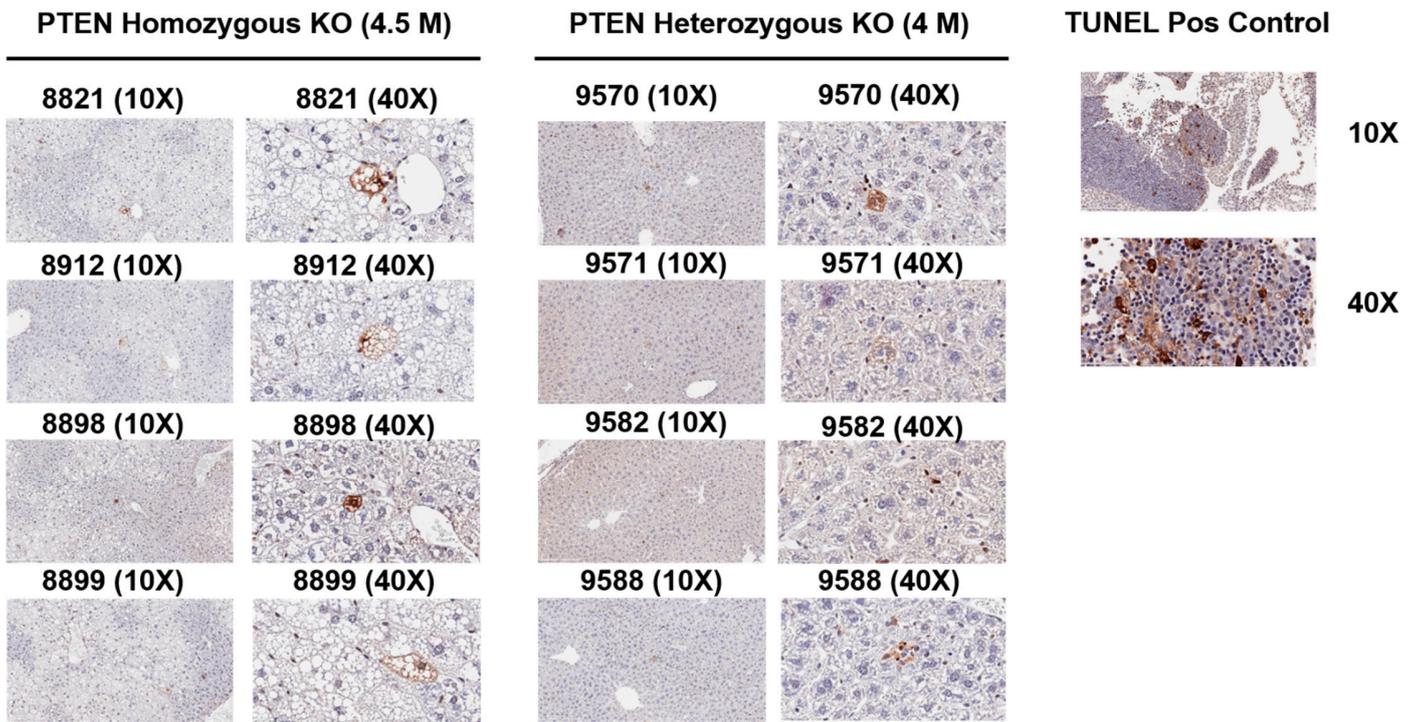
**PTEN Heterozygous KO (4 M)**



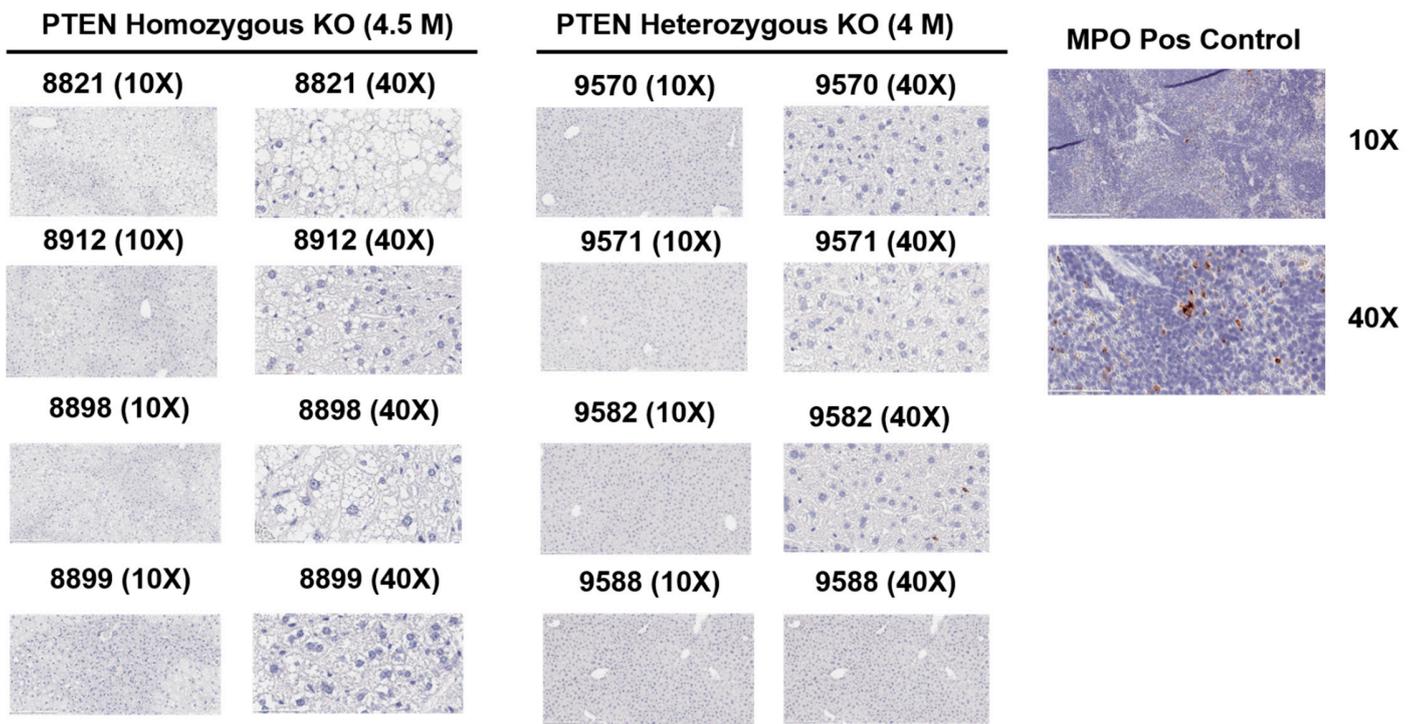
**Supplemental Figure S3:** H&E staining of livers from PTEN<sup>-/-</sup>(PTEN Homozygous KO) and PTEN<sup>+/-</sup>(PTEN heterozygous KO) male mice 4–4.5 months of age. PTEN Homozygous KO livers show extensive steatosis as evidenced by the characteristic chicken wire appearance.



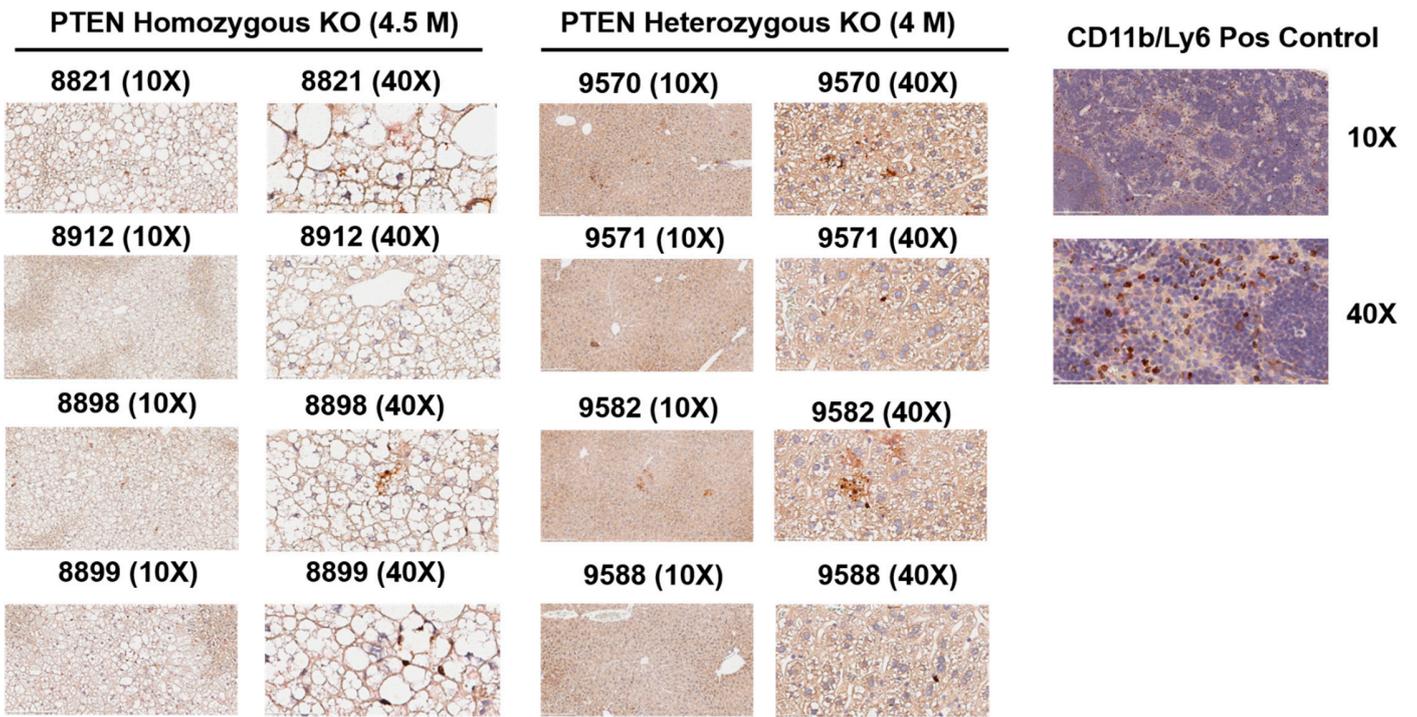
**Supplemental Figure S4:** Cleaved caspase 3 (CC3) staining of livers from  $PTEN^{-/-}$  (PTEN Homozygous KO) and  $PTEN^{+/-}$  (PTEN heterozygous KO) male mice 4–4.5 months of age. A positive control showing cleaved caspase 3 staining in mouse spleen is shown on the right.



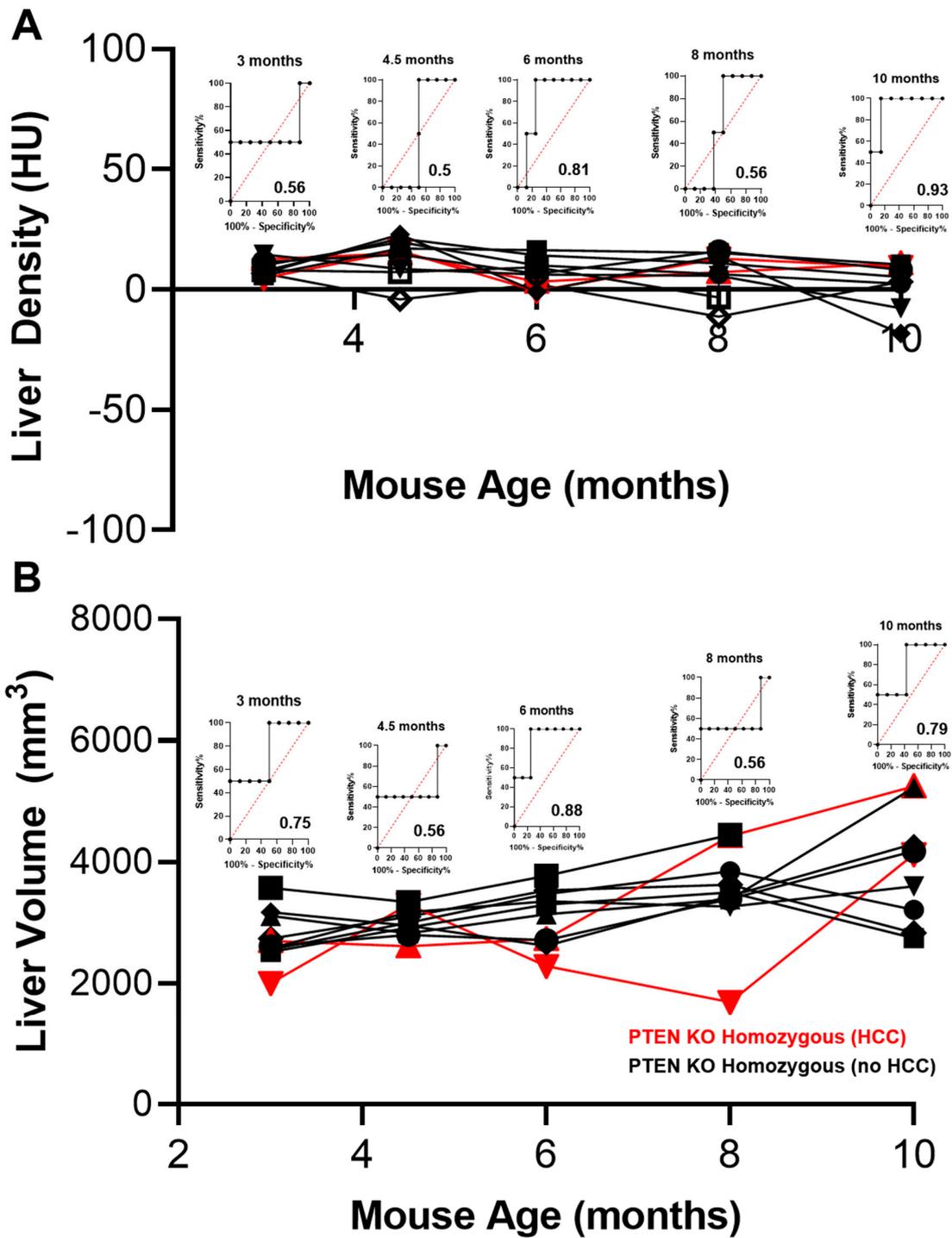
**Supplemental Figure S5:** TUNEL staining of livers from PTEN<sup>-/-</sup> (PTEN Homozygous KO) and PTEN<sup>+/-</sup> (PTEN heterozygous KO) male mice 4–4.5 months of age. A positive control showing TUNEL staining in mouse embryo is shown on the right.



**Supplemental Figure S6:** Myeloperoxidase (MPO) protein level staining of livers from PTEN<sup>-/-</sup>(PTEN Homozygous KO) and PTEN<sup>+/-</sup>(PTEN heterozygous KO) male mice 4–4.5 months of age. A positive control showing MPO staining in mouse spleen is shown on the right.



**Supplemental Figure S7:** CD11b/Ly6 staining of livers from PTEN<sup>-/-</sup> (PTEN Homozygous KO) and PTEN<sup>+/-</sup> (PTEN heterozygous KO) male mice 4–4.5 months of age. A positive control showing CD11b staining in mouse spleen is shown on the right.



**Supplemental Figure S8: (A)** Liver Density by CT and **(B)** Liver volume by PET of PTEN<sup>-/-</sup>female mice over the timecourse of the longitudinal study. ROC analyses for HCC progression point are inset above each time point.