



### Supplementary Fig. 1

(A) Kaplan–Meier survival curves for NIC-PTEN<sup>+/+</sup> and NIC-PTEN<sup>+/-</sup> mice. (B) Western blot analysis of PI3K signaling pathways in NIC-PTEN<sup>+/+</sup> and NIC-PTEN<sup>+/-</sup> tumours. (C) Immunohistochemical analysis of pHER2 and pHER3 staining in NIC-PTEN<sup>+/+</sup> and NIC-PTEN<sup>+/-</sup> tumours showing heterogenous expression. (D) Immunohistochemical analysis of pAkt and pMAPK in NIC-PTEN<sup>+/+</sup> and NIC-PTEN<sup>+/-</sup> tumours. Arrows show lack of pAkt staining in the stroma while pMAPK staining is seen in both the stromal (black arrow) and tumour cells. Mag x20, scale bar 50 μm.