

Supplemental Data

Supplemental Figure 1. NVP-CGM097 and venetoclax combination cell viability assays. Cell viability assays were performed for 16h treatment of NVP-CGM097, venetoclax, or combination at indicated concentrations, with bliss synergy scores in (A) *MYCN*-wild-type, p53-wild-type, (B) *MYCN*-amplified, p53-mutant, and (C) *MYCN*-wild-type, p53-mutant NB cell lines. Red indicates synergy, blue indicates antagonism. (D) Plot of Bliss sum of cell lines in A-C along with cell lines in Fig. 1B, calculated by the summation of the bliss synergy scores across the doses presented.

Supplemental Figure 2. PDX ex vivo model demonstrated cleavage of PARP with corresponding NOXA upregulation (A) Western blot of COG-N-561 *ex vivo* cell line treated overnight with antibodies as indicated.

Supplemental Figure 3. Chemotherapy and venetoclax combination cell viability assays. Cell viability assays were performed for 72h treatment of cyclophosphamide and topotecan, venetoclax, or combination at indicated concentrations, with bliss synergy scores in (A) *MYCN*-amplified, and (B) *MYCN*-wild-type cell lines. (C) Plot of Bliss sum of cell lines in A-B, calculated by the summation of the bliss synergy scores across the doses presented.

Supplemental Figure 4. Body Weight of Mice for *in vivo* treatments. (A) Plot of percent change in body weight from pre-treatment body weight in all *in-vivo* treatments.