Supplemental Fig. S1

A.

Relative expression of HOTAIR

400 —
300 —
200 —
100 —
0 —

Control   HOTAIR

B.

OVCAR3   Control   HOTAIR
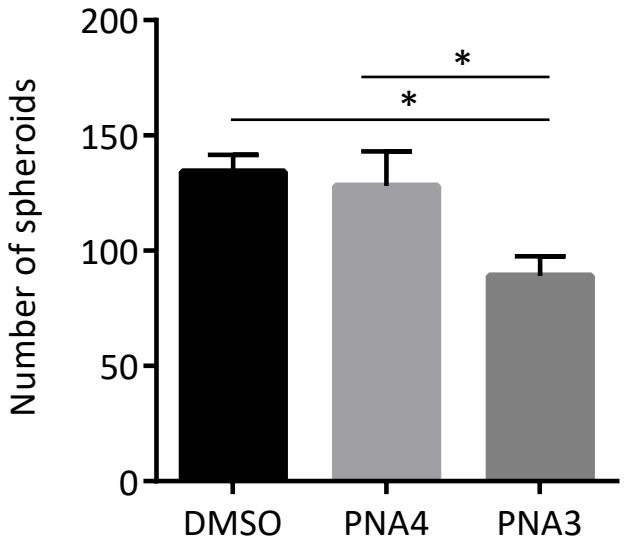
Snail

p-NF-kB

p-β-catenin

GAPDH

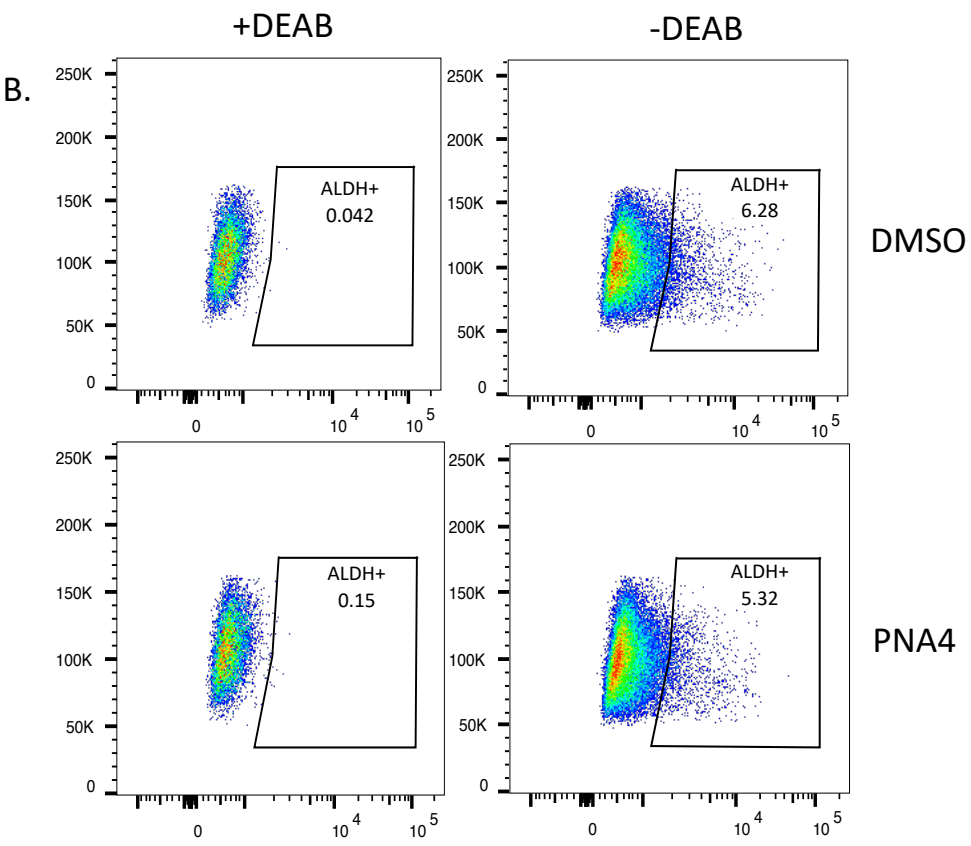**Supplemental Figure S1. Validation of ectopic HOTAIR overexpression:**
A) Relative gene expression of HOTAIR in the overexpressed and empty vector control cells was validated by qPCR. **B)** HOTAIR regulated gene expression was determined by immunoblot in HOTAIR overexpressed and control cells. GAPDH was used as the loading control. Error bars represent SEM; n = 3 independent experiments of triplicate assays. Data are presented as mean ± SEM with $p < 0.05$ (*), $p < 0.01$ (**), and $p < 0.005$ (***).
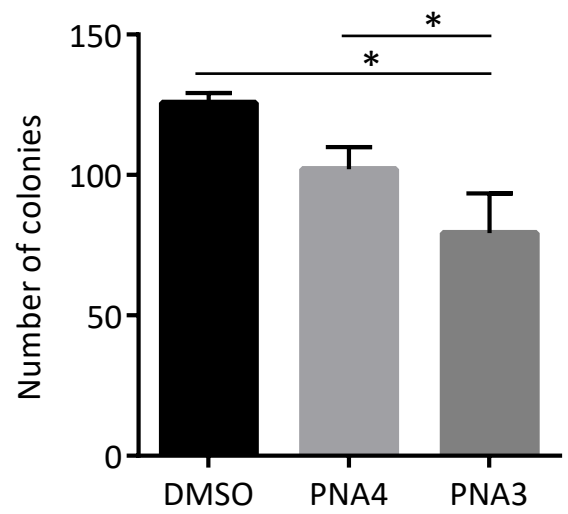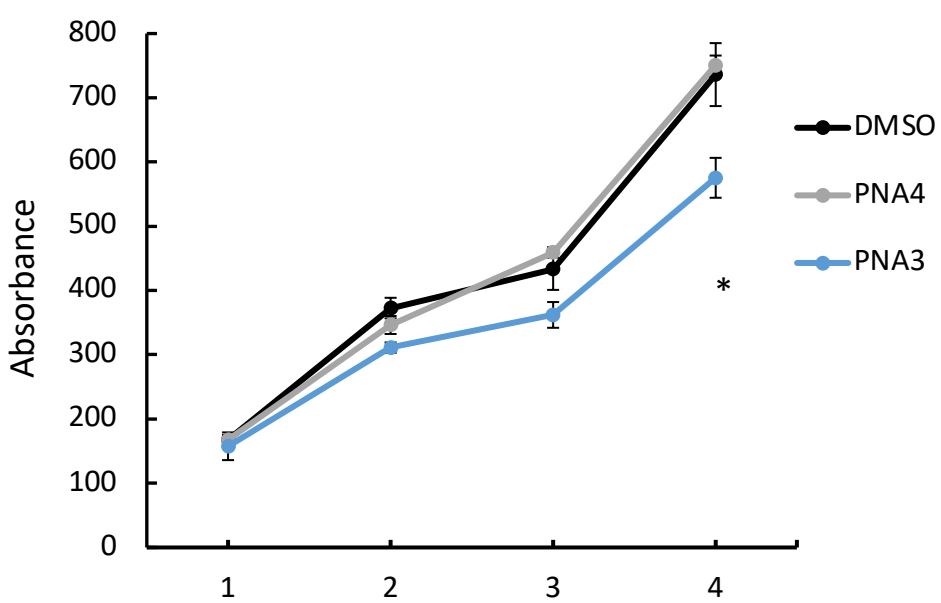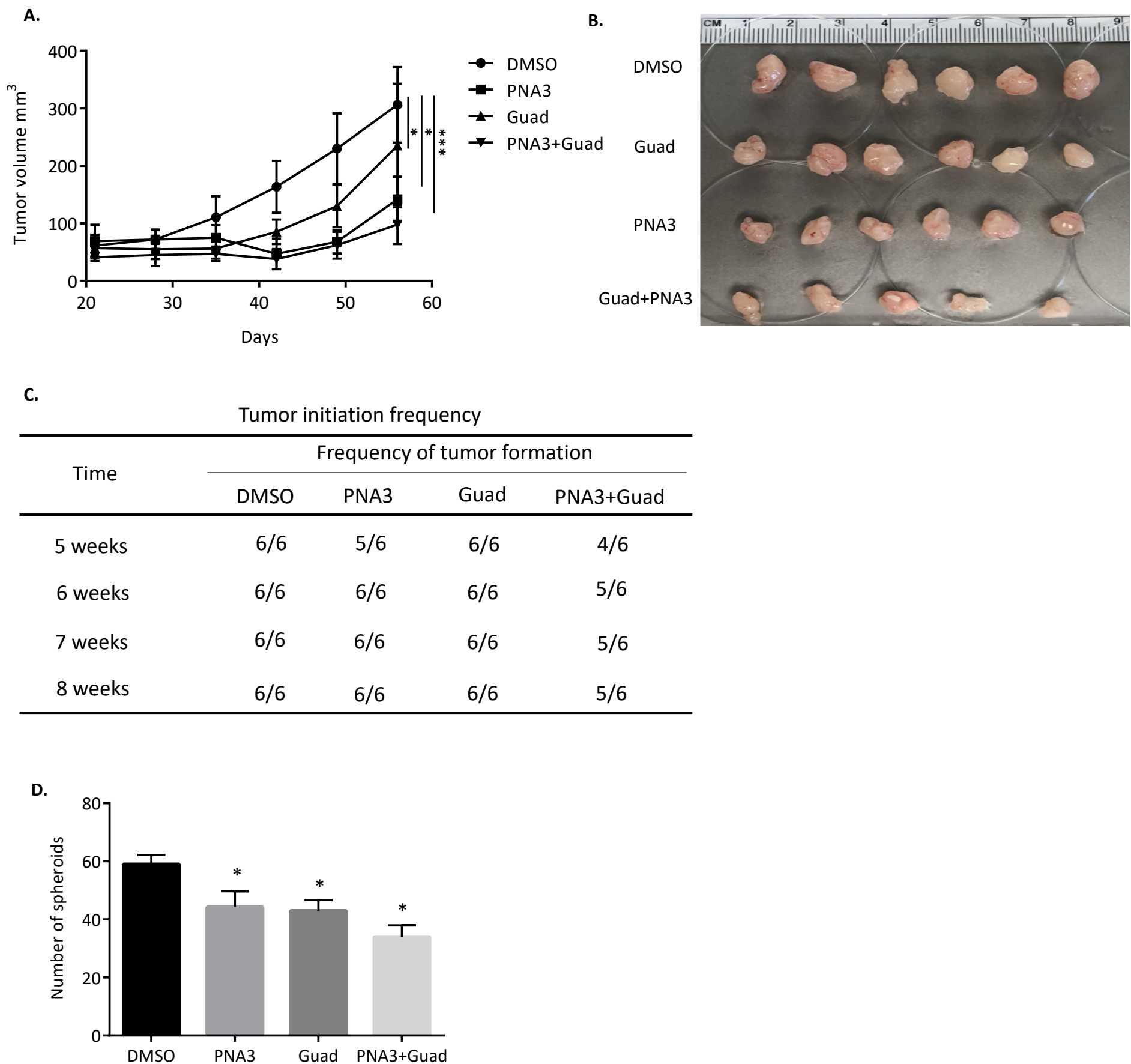
Supplemental Fig. S2

Supplemental Figure S2. PNA4 treatment has no effect on functional characteristics of OC cells *in vitro*. A) Quantification of spheroid treated with PNA4 compared with DMSO. **B)** Representative images and quantification of clonogenic survival assay after PNA3 treatment compared to PNA4. **C)** ALDH (+) population were determined by ALDEFLUOR assay using flow cytometry in DMSO compared to PNA4. **D)** Cell proliferation determined by MTT assay, PNA4 versus DMSO.

Supplemental Fig. S3

A.

B.

C.

Tumor initiation frequency

Time	Frequency of tumor formation			
	DMSO	PNA3	Guad	PNA3+Guad
5 weeks	6/6	5/6	6/6	4/6
6 weeks	6/6	6/6	6/6	5/6
7 weeks	6/6	6/6	6/6	5/6
8 weeks	6/6	6/6	6/6	5/6

D.

Supplemental Figure S3. Effect of inhibiting HOTAIR and DNA methylation on ovarian tumors initiated with 50,000 OVCAR3 cells. A) Xenograft tumor growth curve of different treatment groups. OVCAR3 sorted ALDH+ cells were treated with guadecitabine alone or with PNA3 treatment. 50,000 ALDH+ cells were injected s.c. into mice. **B)** Images of tumors collected at end of study. **C)** Quantification of tumor formation. **D)** Quantification of spheroid formation by tumor cells collected from mice at end of study. Data are presented as mean $\pm$ SEM with $p < 0.05$ (*) and $p < 0.005$ (***).