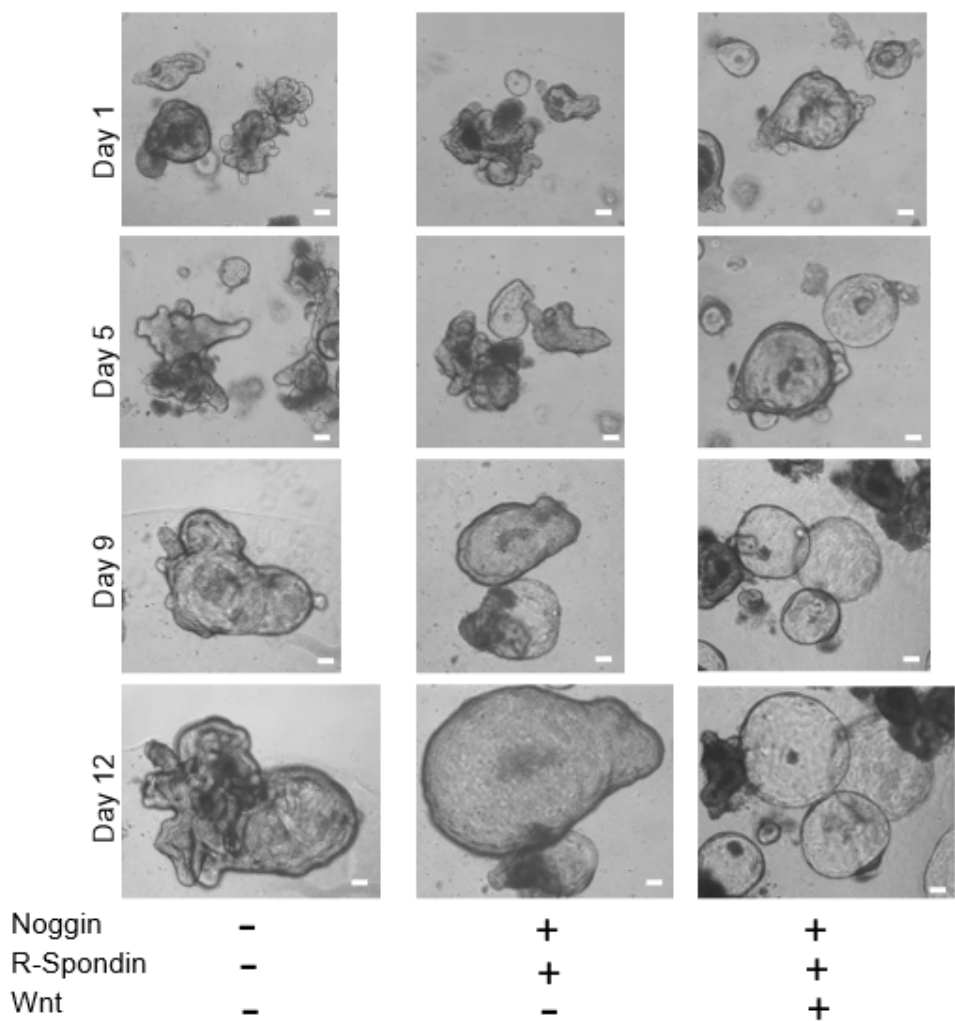
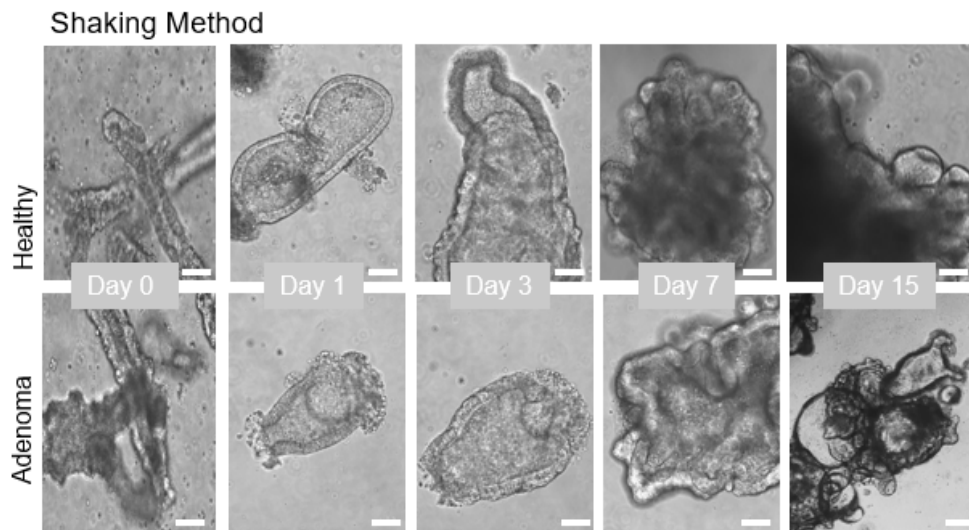
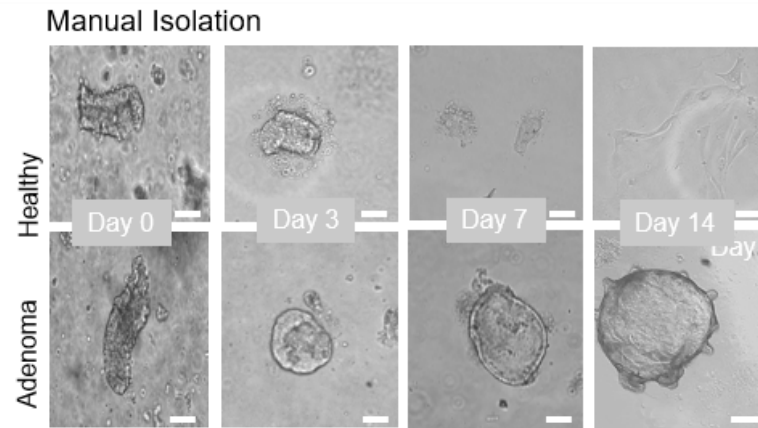


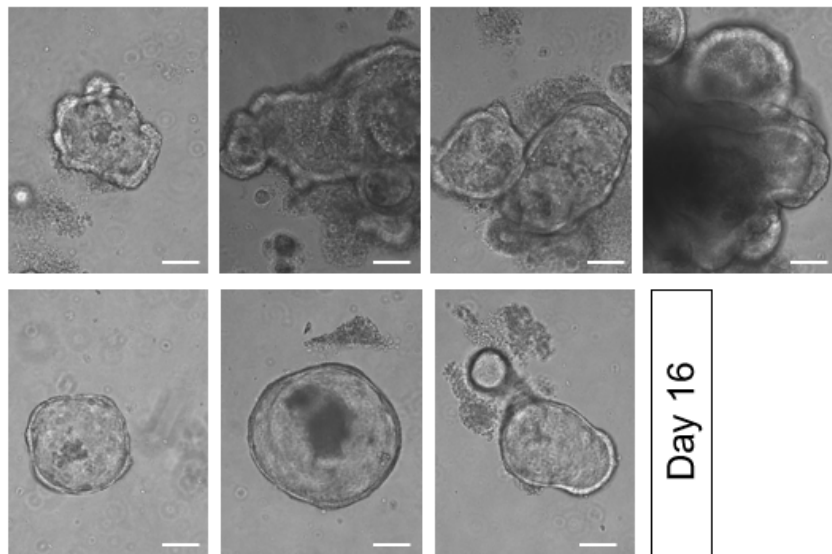
Supplementary Legends:



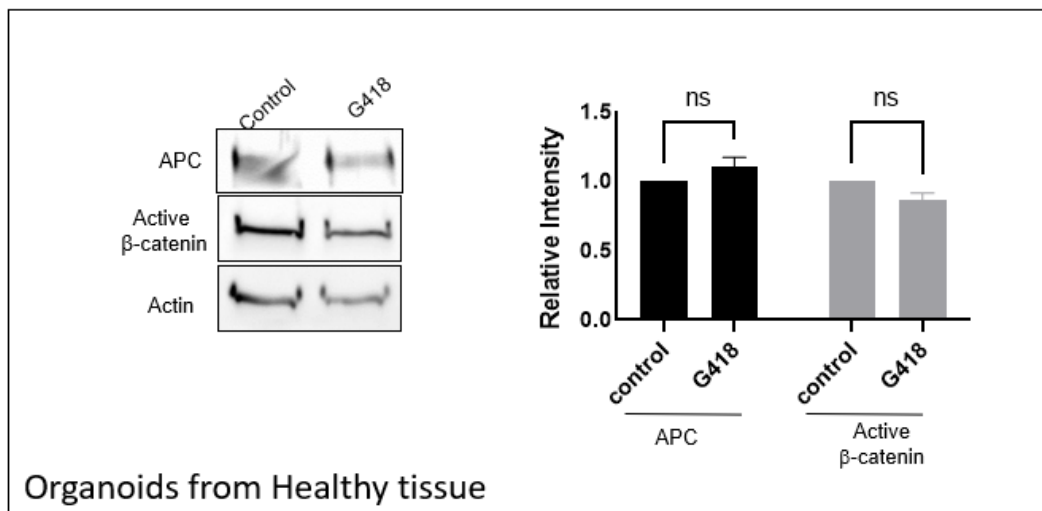
**S1: Adenomas grown in different media.** Adenoma-derived colonoids were established from patient 4 (Table 1). Colonoids were grown for 12 days with 50% Human 2X Basal medium containing 100ng/ml EGF and 100 µg/ml Primocin and the following: Left panels: 50% L-cells conditioned medium. Middle panels: 50% L-cells conditioned medium/100ng/ml Noggin/1µg/ml R-Spondin. Right panels: 50% L-Wnt3a cells conditioned medium/100ng/ml Noggin/1µg/ml R-Spondin. Medium was replaced every other day.



**S2: Adjusting crypt isolation method.** Colonic crypt isolation by manual isolation under the microscope using microscopy following tissue dissociation with Dispase (Upper panel) versus shaking crypts loose in PBS with anti-microbials (Lower panel). Scale bar, 125  $\mu\text{m}$ .



**S3: Cryogenic preservation.** Polyp-derived colonoids were thawed after cryogenic preservation. Bright-field pictures were captured on day 16 of growth. Scale bar, 125  $\mu$ m.



**S4: G418 treatment of Healthy tissue-derived colonoids.** A representative WB and protein levels quantification of Healthy tissue-derived colonoids from patient 1 (S874X), patient 3 (L77X), patient 4 (Q341X) and patient 6 (R302X), treated with G418 (150  $\mu$ g/ml) for 3-6 days.