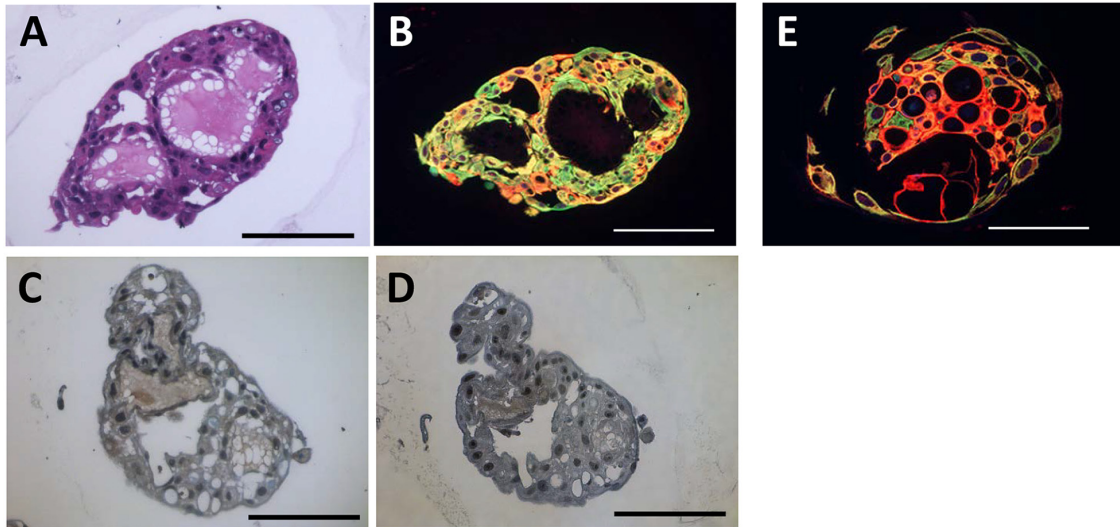
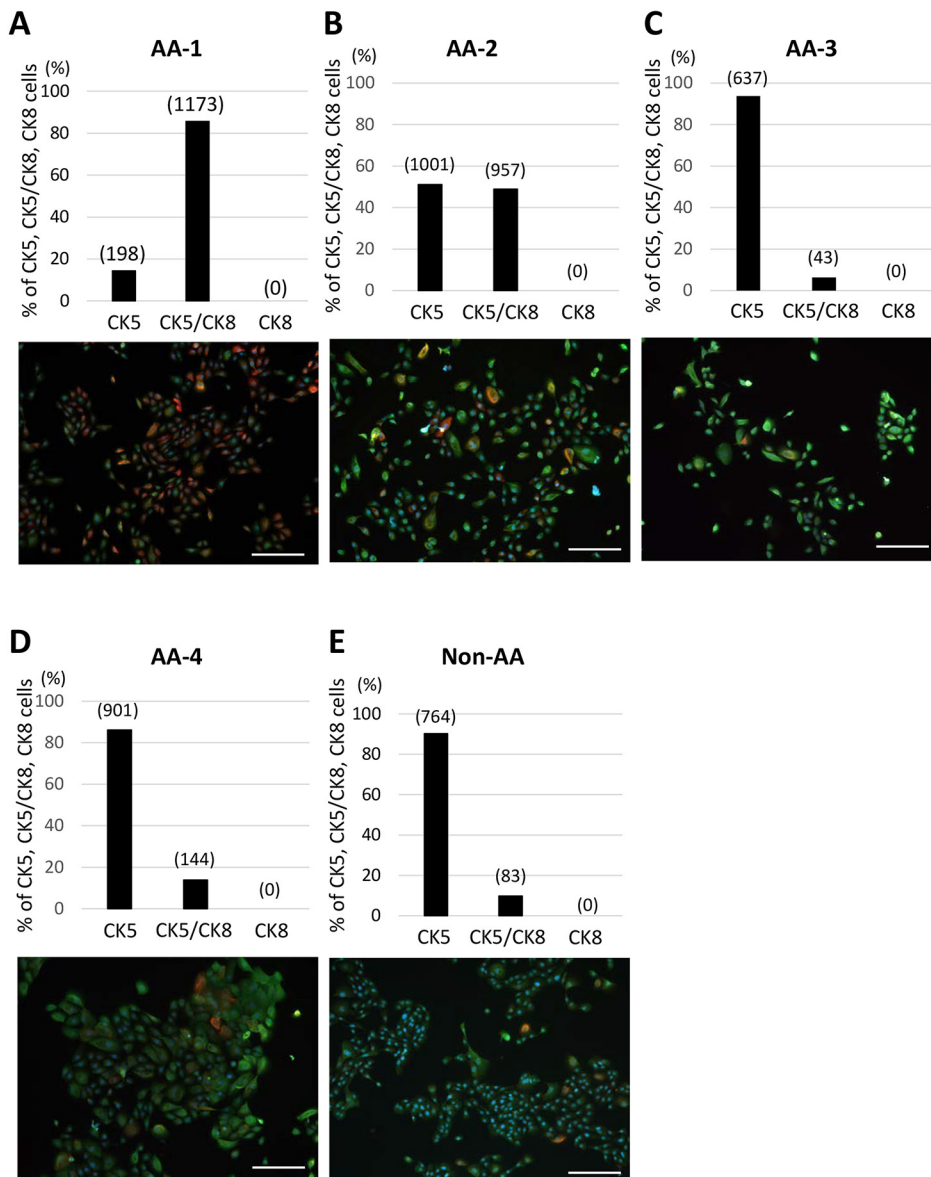


Modeling African American prostate adenocarcinoma by inducing defined genetic alterations in organoids

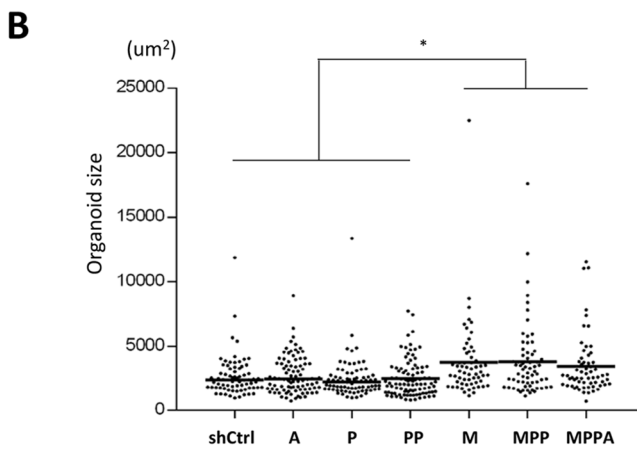
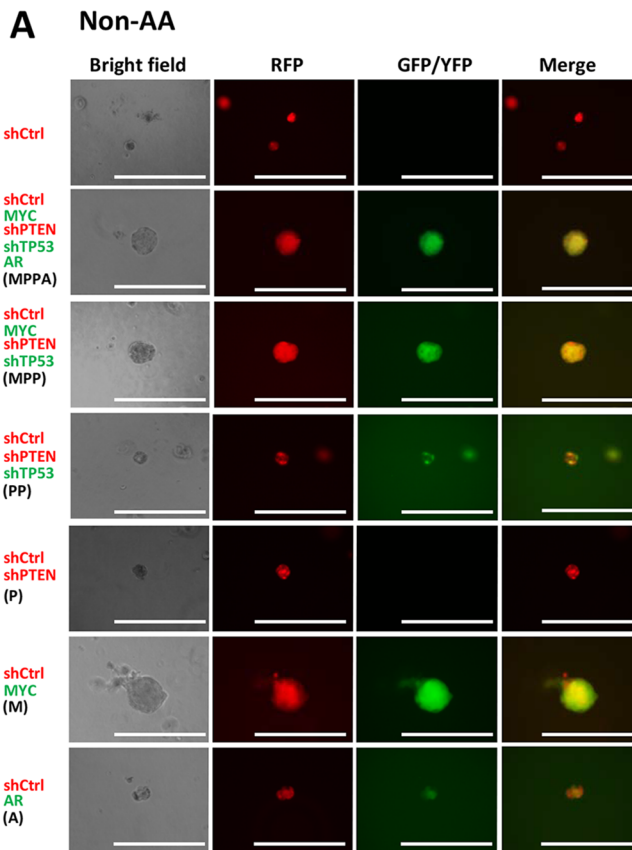
SUPPLEMENTARY MATERIAL



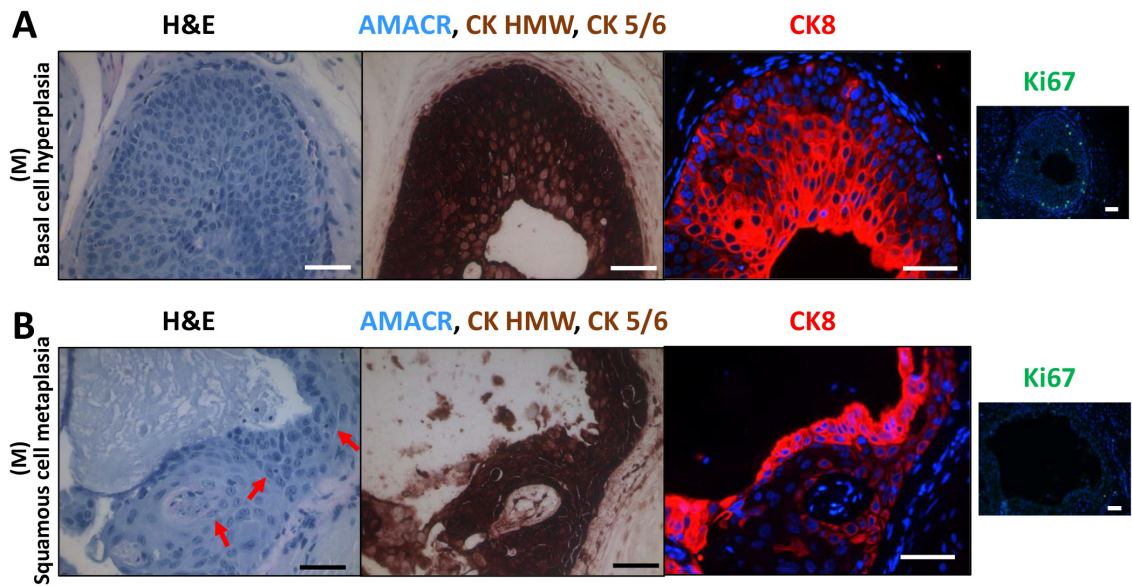
Supplementary Figure 1: Establishment of human prostate organoids from benign prostate epithelial cells. (A to E) Representative images of human prostate organoids with H&E (A), immunofluorescence staining for CK5 (green) and CK8 (red) (B), IHC staining for PSA (C) and AR (D) at day 8, and with immunofluorescence staining for CK5 (green) and CK8 (red) (E) at day 21. Scale bars 100 μ m.



Supplementary Figure 2: Initial cell populations used for organoid culture in terms of luminal and basal cell marker expression. Prior to organoid culture, AA-1 cells (A), AA-2 cells (B), AA-3 cells (C), AA-4 cells (D), and Non-AA cells (E) were stained with anti-cytokeratin 5 (CK5) pAb (green) and anti-cytokeratin 8 (CK8) mAb (red). Double-staining for CK5 and CK8 shows basal (CK5; green), intermediate (CK5/CK8; yellow), and luminal (CK8; red) cell populations. The number in parentheses is the total cell number of each population. Representative images are shown. Scale bars 200 um.



Supplementary Figure 3: The sizes of MPPA, MPP, PP, P, M, A, and shCtrl organoids derived from Non-African American tissue. (A) Representative bright field and fluorescence images of MPPA, MPP, PP, P, M, A, and shCtrl organoids at day 8. Scale bars 300 μ m. **(B)** Organoid sizes (areas) at day 8. The areas (μ m²) of organoids >25 μ m diameter were measured by ImageJ. *p < 0.05.



Supplementary Figure 4: *In vivo* development of transformed MYC-transduced (M) organoids. (A) Basal cell hyperplasia developed from M organoid transplants. Images with H&E staining; IHC staining for AMACR, CK HMW, and CK 5/6; and immunofluorescence staining for CK8 and Ki67. Blue, DAPI. (B) Squamous cell metaplasia developed from M organoid transplants. Images with H&E staining (Red arrows, squamous cells); IHC staining for AMACR, CK HMW, and CK 5/6; and immunofluorescence staining for CK8 and Ki67. Blue, DAPI. Scale bars 50 um.