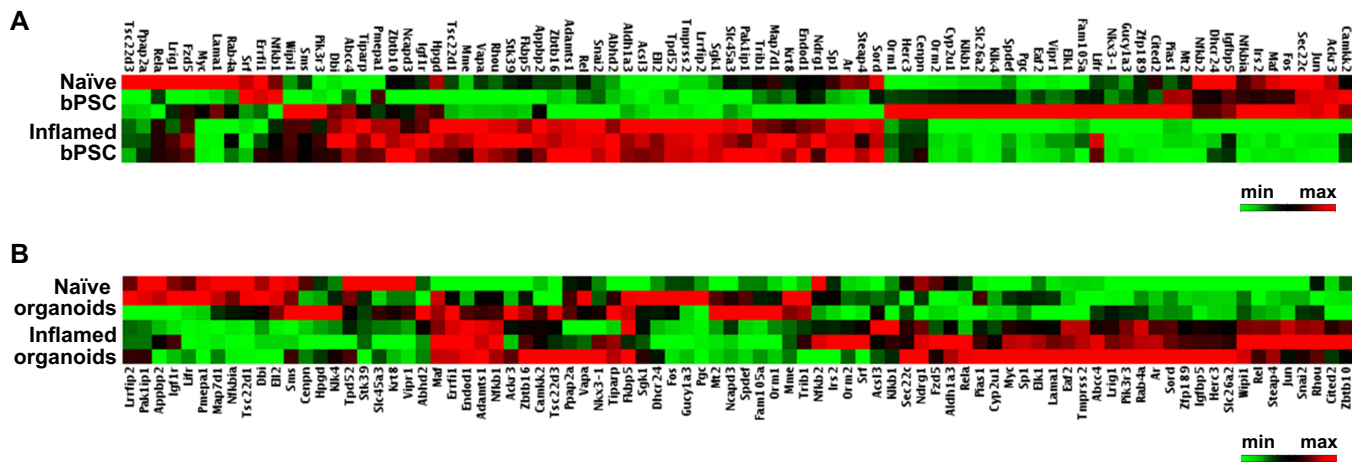
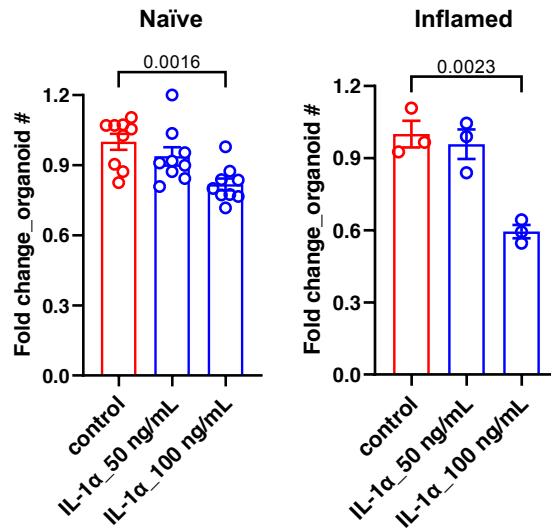
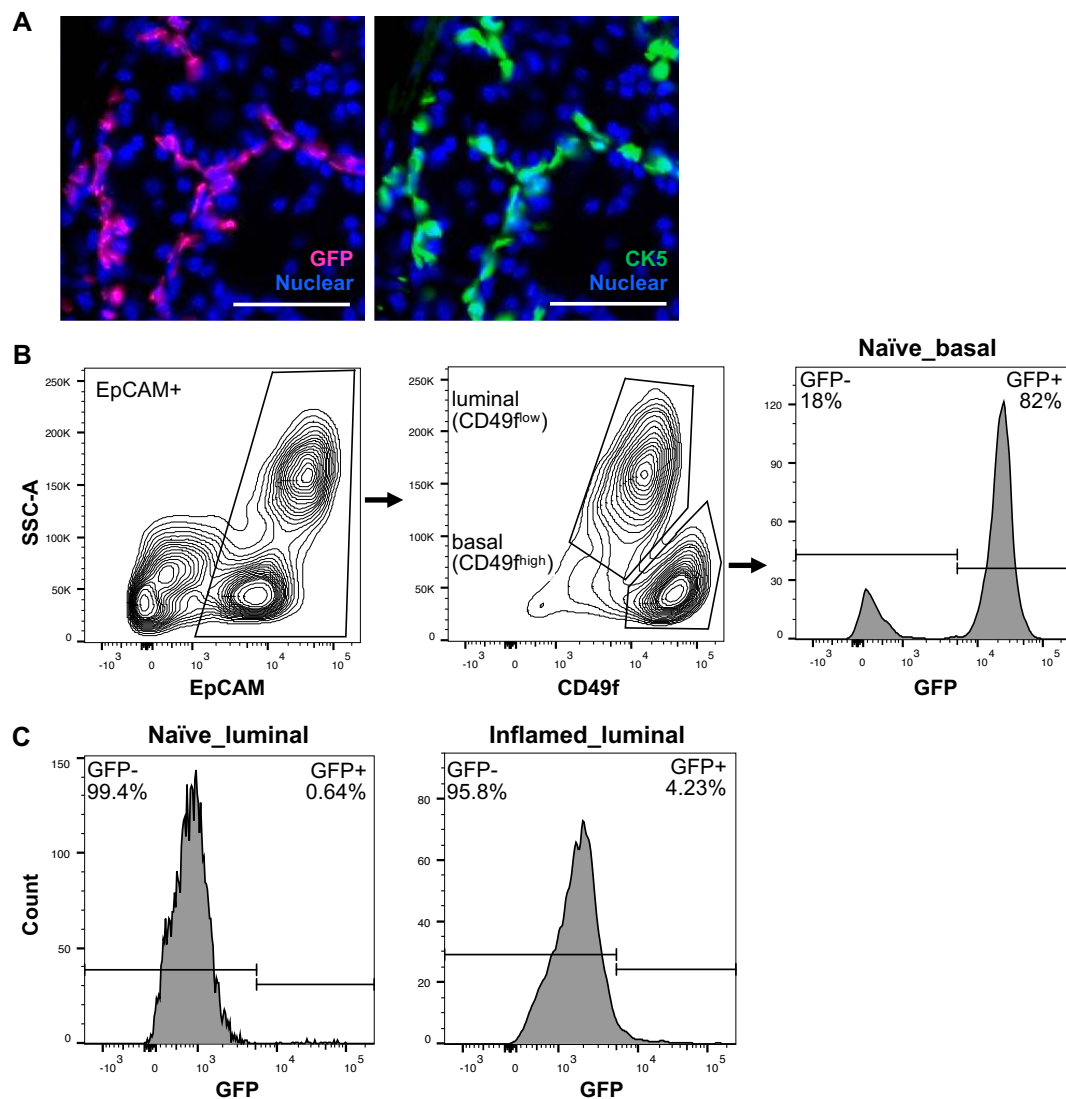




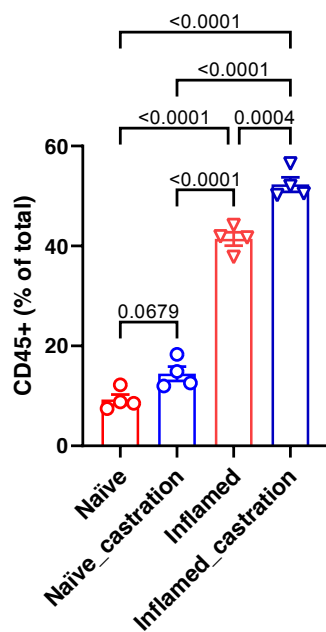
Supplemental Figure 1. Heatmaps of AR signaling target genes as analyzed with PCR Arrays. (A) Naïve and inflamed bPSC (All groups, n=3). **(B)** Naïve and inflamed organoids (All groups, n=3).



Supplemental Figure 2. IL-1 α inhibits organoid formation with both naïve and inflamed bPSC. Naïve groups, n=9; Inflamed groups, n=3.



Supplemental Figure 3. GFP induction in basal prostate epithelium and presence of GFP+ cells in luminal epithelium after inflammation. (A) Tamoxifen treatment induced GFP in CK5+ basal epithelial cells as shown with immunofluorescent staining (Scale bar, 50 μ m). **(B)** Flow cytometry confirmed the induction of GFP in EpCAM+/CD49^{high} basal cells. **(C)** GFP+ cells within the luminal epithelial population (EpCAM+/CD49^{low}) were increased with inflammation.



Supplemental Figure 4. CD45+ leukocyte infiltration was increased in inflamed POET3 prostates with or without castration. All groups, n=4.

Supplemental Table 1. AR target genes upregulated in inflamed bPSC

Gene Symbol	Fold Regulation	p-value	RefSeq
<i>Aldh1a3</i>	13.4233	0.000939	NM_053080
<i>Pmepa1</i>	9.6242	0.004442	NM_022995
<i>Tmprss2</i>	8.7746	0.000045	NM_015775
<i>Adamts1</i>	7.0128	0.000843	NM_009621
<i>Lrrfip2</i>	6.9967	0.000012	NM_027742
<i>Abhd2</i>	6.8369	0.00086	NM_018811
<i>Mme</i>	5.9932	0.004442	NM_008604
<i>Acsl3</i>	5.8835	0.000531	NM_001033606
<i>Sgk1</i>	4.5736	0.000357	NM_011361
<i>Rel</i>	3.9086	0.044072	NM_009044
<i>Ell2</i>	3.2944	0.000446	NM_138953
<i>Vapa</i>	3.1895	0.002297	NM_013933
<i>Zbtb16</i>	2.8879	0.002752	NM_001033324
<i>Fkbp5</i>	2.8089	0.035092	NM_010220
<i>Slc45a3</i>	2.8024	0.009049	NM_145977
<i>Map7d1</i>	2.7959	0.044072	NM_144941
<i>Endod1</i>	2.7638	0.044739	NM_028013
<i>Tsc22d1</i>	2.6208	0.006968	NM_009366
<i>Tpd52</i>	2.3674	0.000125	NM_009412
<i>Tiparp</i>	2.2658	0.038166	NM_178892
<i>Pak1ip1</i>	2.2553	0.000012	NM_026550
<i>Stk39</i>	2.0753	0.008354	NM_016866
<i>Snai2</i>	2.0658	0.001819	NM_011415

Supplemental Table 2. AR target genes upregulated in inflamed organoids

Gene Symbol	Fold Regulation	p-value	RefSeq
<i>Igfbp5</i>	9.9365	0.007704	NM_010518
<i>Slc26a2</i>	5.8675	0.016003	NM_010513
<i>Steap4</i>	5.2394	0.00112	NM_013584
<i>Ar</i>	3.8444	0.002925	NM_013476
<i>Zfp189</i>	2.6197	0.018571	NM_145547
<i>Sord</i>	2.4051	0.006992	NM_019928
<i>Jun</i>	2.3995	0.014287	NM_010591
<i>Lama1</i>	2.2544	0.034606	NM_008480
<i>Cited2</i>	2.1377	0.031692	NM_010828