## Supplemental figures

Figure s1: Heterogeneity of PSMA expression in human prostate tumors. (A.) Additional low power fields (10x) of IHC images from prostatectomy tissue. The patient was diagnosed with ISUP Grade Group 2 disease adenocarcinoma, acinar type. 3 separate representative tumor areas are shown (top, middle, bottom rows). Hematoxylin & Eosin (H&E; left column),  $\alpha$ -methylacyl-CoA racemase (AMACR; middle column), and PSMA (right column) staining is shown for each region. Red arrows indicate malignant glands with PSMA staining; blue arrows indicate malignant glands without PSMA staining (their malignant nature is confirmed by corresponding AMACR IHC staining).

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Α

H&E

AMACR

**PSMA** 



**Figure s1: B.** Low power (<u>10x magnification</u>) IHC images from transrectal ultrasound (TRUS) – guided needle biopsies. The patient was diagnosed with ISUP Grade Group 1 disease adenocarcinoma, acinar type. Red arrows, single glands with <u>Gleason score (GS) 3</u> expressing moderate to strong PSMA; blue arrows, single glands negative for PSMA expression.

## Β.



Figure s2. Regulation of proliferation and tumor growth by radiation (RT) in prostate cancer parental 22RV1-P and radio-resistant 22RV1-RR cells and tumors. (A.) Radiation therapy (RT) (0-8Gy) effects on cell proliferation in 22RV1-P (parental) and 22RV1-RR (radio-resistant) prostate cancer cell lines. (B.) Tumor growth curves and (C.) Kaplan-Meier survival curves of untreated and irradiated (5Gy) animals grafted with parental (22RV1-P) or radio-resistant (22RV1-RR) PrCa cells (n=6 per group). Survival endpoint was set as the timepoint of animal death, or the time tumors reached the size of 2200mm3.







--- 22RV1-RR RT(5Gy)