

Figure S1. Representative tumor images from different treatment groups of xenografts. Scale bars, 10 mm. LNCaP cells transfected with recombinant lentiviral vectors (*OPHN1* overexpression, OPHN1-OE) were injected into mice subcutaneously (20 mice/group), and then the tumor growth was monitored, while the LNCaP cells transfected with empty vectors were injected as controls. *OPHN1*, oligophrenin 1.



Table SI. Clinical variables of the cohorts.

Characteristics	Datasets			
	MCTP (59 cases)	SU2C/PCF Dream Team (429 cases)	MSK (424 cases)	Provisional (53 cases)
Age (years, mean \pm SD)	70.71 \pm 7.53	61.34 \pm 8.11	65.56 \pm 9.18	60.07 \pm 7.8
Race (cases)				
Caucasian	N/A	N/A	312	72
African American	N/A	N/A	26	
Other	N/A	N/A	85	3
Total PSA (ng/ml)	1,142.19 \pm 1,818.16	164.47 \pm 941.90	244.8 \pm 972.58	N/A
Gleason score (cases)				
\leq 6	0	29	19	6
7	2	107	85	18
$>$ 8	9	222	280	51
NA	50	86	40	0
Overall survival (months)	36.45 \pm 31.96	20.62 \pm 12.53	30.09 \pm 22.21	N/A
Therapy (cases)				
ADT	48	N/A	332	66
Prostatectomy	17	444	N/A	51
Chemotherapy	45	350	N/A	25
Radiotherapy	27	N/A	N/A	N/A
AR amplification (cases)	27	208	27	3
OPHN1 amplification (cases)	16	166	0	1

MCTP data adapted from Ref (16); SU2C/PCF data adapted from Ref (17); MSK data adapted from Ref (18); and Provisional data adapted from The Metastatic Prostate Cancer Project (provisional, November 2019). ADT, androgen deprivation therapy; MCTP, Michigan Center for Translational Pathology; SU2C/PCF, Stand Up to Cancer/Prostate Cancer Foundation; MSK, Memorial Sloan Kettering; N/A, not available.