

Table 1. Patient Summary of FUSCC prostate cancer cohort.

Patient Characteristics		All Patients (n = 175)	
		N	%
Age, years	Median (Range)	68(38-86)	
PSA, ng/mL	Median (Range)	154(10-5000)	
Hemoglobin, g/L	Median (Range)	135(79-164)	
Albumin, g/L	Median (Range)	43.2(26.8-71.4)	
LDH, U/L	Median (Range)	173(103-891)	
ALP, U/L	Median (Range)	119.1(36.5-3000)	
ECOG performance status	<2	144	82.29
	>=2	31	17.71
	<=7	10	5.71
Gleason score	8	49	28.00
	>=9	116	66.29
Metastatic site	Lymph node	34	19.43
	Bone	161	92.00
	Viscera	4	2.29
M stage	M1a	13	7.83
	M1b	157	89.71
	M1c	5	2.86
Metastatic volume	Low	72	41.14
	High	103	58.86
Perineural invasion	Absent	96	54.86
	Present	79	45.14
Progression to CRPC	Yes	116	66.29
	No	59	33.71
Overall survival	Alive	109	62.19
	Death	66	37.71
Treatment after Progression	Abiraterone	36	42.86
	Docetaxel	27	32.14
	Other	21	25.00

PSA = prostate specific antigen; LDH = lactate dehydrogenase; ALP = alkaline phosphatase; ECOG =Eastern Cooperative Oncology Group.

Table 2. Association between LAG-3⁺ cell infiltration and patients' clinicopathologic features

Patient characteristics		LAG-3 ⁺ cell infiltration		p value
		High(n=84),n(%)	Low(n=91),n(%)	
Age(years)	Median	68.44 (8.16)	67.32 (9.61)	0.408
Pretreatment	<=154	41(48.8)	47(51.6)	0.763
PSA, ng/mL	>154	43(51.2)	44(48.4)	
Hemoglobin, g/L	Normal ($\geq$ 120)	66(78.6)	78(85.7)	0.216
	Decreased (< 120)	18(21.4)	13(14.3)	
Albumin, g/L	Normal ($\geq$ 40)	65(77.4)	74(81.3)	0.520
	Decreased (< 40)	19(22.6)	17(18.7)	
LDH, U/L	Normal ($\leq$ 250)	74(88.1)	83(91.2)	0.498
	Elevated (> 250)	10(11.9)	8(8.8)	
ALP, U/L	Normal ($\leq$ 160)	54(64.3)	64(70.3)	0.394
	Elevated (> 160)	30(35.7)	27(29.7)	
ECOG score	<2	66 (78.6)	78 (85.7)	0.299
	$\geq$ 2	18 (21.4)	13 (14.3)	
Gleason Score	$\leq$ 8	22 (26.2)	37 (40.7)	0.063
	>8	62 (73.8)	54 (59.3)	
Metastatic Volume	High	54(64.3)	49 (53.8)	0.212
	Low	30(35.7)	42 (46.2)	
Perineural invasion	Absent	44 (48.5)	52 (62.0)	0.631
	Present	40 (51.5)	39 (38.0)	

PSA = prostate specific antigen; LDH = lactate dehydrogenase; ALP = alkaline phosphatase; ECOG =Eastern Cooperative Oncology Group.

Table 3. Univariate and Multivariate Analysis of Each Factor’s Value in Predicting CRPC-FS and OS

Factors		CRPC-FS				OS			
		Univariate analyses		Multivariate analyses		Univariate analyses		Multivariate analyses	
		HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P
Age, y	≤68(Ref)	1	0.486			1	0.538		
	> 68	0.87(0.60-1.26)				1.16(0.72-1.89)			
HGB, g/L	≥120(Ref)	1	0.072			1	0.322		
	< 120	1.52(0.96-2.41)				1.35(0.75-2.44)			
ALB, g/L	≥40(Ref)	1	0.003	1	0.010	1	0.005	1	0.020
	< 40	1.91(1.24-2.95)		1.80(1.15-2.80)		2.16(1.26-3.70)		1.98(1.11-3.51)	
LDH, mg/dl	≤250(Ref)	1	0.014	1	0.051	1	0.108		
	> 250	2.06(1.16-3.69)		1.97(1.00-3.89)		1.84(0.88-3.86)			
ALP, mg/dl	≤160(Ref)	1	0.014	1	0.939	1	0.397		
	> 160	1.60(1.10-2.33)		0.98(0.61-1.58)		1.24(0.75-2.06)			
Pretreatment PSA, ng/mL	≤154(Ref)	1	0.040	1	0.343	1	0.183		
	> 154	1.47(1.02-2.13)		1.22(0.81-1.86)		1.40(0.85-2.29)			
Total GS	≤8(Ref)	1	0.056			1	0.233		
	> 8	1.48(0.99-2.21)				1.38(0.81-2.34)			
ECOG-PS	< 2(Ref)	1	0.018	1	0.409	1	0.006	1	0.066
	≥2	1.71(1.10-2.67)		1.22(0.76-1.94)		2.16(1.25-3.73)		1.71(0.97-3.02)	
Metastatic volume	Low(Ref)	1	0.002	1	0.169	1	0.041	1	0.522
	High	1.88(1.27-2.78)		1.40(0.87-2.27)		1.72(1.02-2.90)		1.20(0.69-2.10)	
PNI	Intact(Ref)	1	0.025	1	0.074	1	0.046	1	0.300
	Present	1.52(1.06-2.20)		1.42(0.97-2.08)		1.64(1.01-2.67)		1.31(0.79-2.19)	
Intratumoral LAG3+ cell infiltration	Low(Ref)	1	0.001	1	0.001	1	<0.001	1	<0.001
	High	1.90(1.31-2.75)		1.90(1.30-2.77)		2.97(1.75-5.02)		2.82(1.65-4.80)	

PSA = prostate specific antigen; LDH = lactate dehydrogenase; ALP = alkaline phosphatase; ECOG =Eastern Cooperative Oncology Group; CRPC-FS = c castration-resistant prostate cancer-free survival; OS = overall survival; HR =hazard ratio; CI = confidential interval.

