



SUPPLEMENTAL FIGURE 1. (A) ^{68}Ga -RM26 PET of a 69-year-old man with newly diagnosed prostate cancer by biopsy (PSA-T = 16.28 ng/ml), with strong localized tracer accumulation with SUVmax of 7.01 in primary prostate-confined lesions. (B) Contrast enhanced MRI detected abnormal signal in bilateral lobes and central gland. This patient underwent radical prostatectomy in one week with confirmed postoperative pathology of prostate cancer (Gleason score=3+4).

SUPPLEMENTAL TABLE 1. Demographics of patients with newly diagnosed prostate cancer

No.	Age (yr)	PSA-T (ng/ml)	PSA-F (ng/ml)	F/T	GS	gland involvement	Clinical stage	D'Amico classification	MRI	Bone scan	⁶⁸ Ga-RM26 PET/CT	mLNs	⁶⁸ Ga-BBN PET/CT
1	72	263.60	45.78	0.17	4+4	18%	T2a	H-risk	PT	(-)	PT		PT
2	59	5.01	0.37	0.07	4+3	11%	T2a	I-risk	(-)	(-)	PT		
3	69	16.28	0.81	0.05	3+4	37%	T2b	I-risk	PT	(-)	PT		
4	79	7.51	0.66	0.09	3+3	18%	T1c	L-risk	(-)	(-)	(-)		(-)
5	64	278.10	>50	>0.18	5+3	25%	T3b	H-risk	(-)	(+/-)	PT/BM		PT/BM
6	78	13.10	0.98	0.08	4+4	12%	T2a	H-risk	(-)	(+/-)	(-)		(-)
7	68	28.70	4.12	0.14	5+3	19%	T2a	H-risk	PT	(+/-)	PT		
8	57	6.64	1.18	0.17	4+5	41%	T3b	H-risk	PT	(+/-)	PT/BM		(-)
9	73	15.00	1.04	0.07	4+3	35%	T2c	I-risk	PT/ LNs	(+/-)	PT/ LNs/BM	11, 0.8- 3.3, 4.1	PT/ LNs/BM
10	61	10.00	0.85	0.09	3+3	15%	T2a	I-risk	PT/ LN	(-)	PT/ LN	5, 1.1-2.3, 9.2	
11	69	13.39	0.79	0.06	4+3	10%	T1c	I-risk	(-)	(+/-)	PT		
12	75	7.80	0.55	0.07	4+4	11%	T2a	H-risk	PT	(+/-)	PT		
13	61	18.99	0.97	0.05	4+3	33%	T2c	I-risk	PT	(-)	PT		(-)
14	66	25.06	2.88	0.11	4+3	17%	T2a	H-risk	PT	(-)	PT		PT
15	69	193.10	32.70	0.17	5+5	17%	T3b	H-risk	PT/ LNs	(+)	PT/ LNs/BM	3, 1.1-1.8, 4.7	PT/ LNs/BM
16	69	15.30	2.90	0.19	4+3	20%	T3b	I-risk	PT	(-)	PT		(-)
17	73	28.71	4.12	0.14	5+3	18%	T2a	H-risk	PT	(-)	PT		(-)

PSA = prostate-specific antigen; PSA-T = total prostate-specific antigen; PSA-F = free prostate-specific antigen; F/T = free/total PSA ratio; GS = Gleason score; PT = primary tumor; LNs = lymph nodes involvement; BM = bone metastasis; ; H-risk = high risk; I-risk = intermediate risk; L-risk = low risk; mLNs (number, size (cm), SUVmax) = metastatic lymph nodes

SUPPLEMENTAL TABLE 2. Demographics of patients with biomedical recurrent (BCR) prostate cancer (AUA/ASTRO criteria)

No.	Age (yr)	PSA-T ¹ (ng/ml)	Initial GS	CAPRA score	Treatment	PSAn (ng/ml)	PSA-T ² (ng/ml)	Interval (months)	CT	MRI	Bone Scan	⁶⁸ Ga-RM26 PET/CT	mLNs	⁶⁸ Ga-BBN PET/CT
18	71	114.5	4+5	H-risk	BT+ADT	0.40	997.1	1.0	(+)	(+)	(+)	LN/BM	4, 0.8-1.3, 2.01	BM
19	75	45.00	5+3	H-risk	RP	0.01	771.8	36.0	(+)	/	(+)	BM		BM
20	73	50.80	4+4	H-risk	RP+RT+ADT	0.01	62.56	1.9	/	(+)	(-)	LN/BM	2, 1.7-1.8, 4.10	LN/BM
21	62	79.90	5+3	H-risk	RT+ADT	0.51	36.00	1.3	(-)	(+)	(+/-)	BM		BM
22	59	5.73	4+4	I-risk	RT	0.2	29.50	7.0	/	(+)	(+/-)	BM		(-)
23	68	1.39	3+4	I-risk	RP	0.01	72.04	96.0	(-)	/	(+)	(-)		(-)
24	73	15.58	4+5	H-risk	RT+ADT	2.4	35.61	1.7	/	(+)	(+)	(LN/BM)	2, 3.1-3.3, 5.35	(-)
25	73	38.05	5+3	H-risk	BT+ADT	1.4	28.30	1.7	/	(+)	(+/-)	(-)		(-)
26	72	33.41	4+5	H-risk	RP	0.18	119.0	101.0	(+)	(+)	(+)	BM		BM
27	69	39.5	4+5	H-risk	RP	0.01	0.76	36	/	(-)	(-)	(-)		(-)
28	73	103.0	4+5	H-risk	RT+ADT	0.3	11.0	8.0	/	(+)	(-)	BM		BM

PSA-T = total prostate-specific antigen; GS = Gleason score; LNs = lymph nodes involvement; BM = bone metastasis; RP = radical prostatectomy; BT = brachytherapy; ADT = androgen-deprivation therapy; RT = radiation therapy; CT=enhanced CT; PSA-T¹=pre-therapy PSA-T; PSA-T²=PSA-T before PET/CT; PSAn = PSA nadir; Interval = Interval from most recent treatment to imaging; H-risk = high risk; I-risk = intermediate risk; mLNs (number, size (cm), SUVmax) = metastatic lymph nodes

SUPPLEMENTAL TABLE 3. Biodistribution of ^{68}Ga -RM26 in healthy volunteers (SUV, mean \pm SD, n = 5)

Organs	Time (min)					
	5	10	15	30	45	60
Brain	0.07 \pm 0.027	0.07 \pm 0.02	0.06 \pm 0.01	0.04 \pm 0.01	0.04 \pm 0.01	0.03 \pm 0.01
Heart	2.09 \pm 0.21	1.97 \pm 0.09	1.73 \pm 0.15	1.51 \pm 0.10	1.18 \pm 0.09	1.08 \pm 0.11
Lung	0.67 \pm 0.44	0.43 \pm 0.03	0.39 \pm 0.08	0.33 \pm 0.06	0.28 \pm 0.06	0.22 \pm 0.03
Liver	1.79 \pm 0.21	1.65 \pm 0.19	1.43 \pm 0.14	1.26 \pm 0.20	0.97 \pm 0.13	0.84 \pm 0.12
Spleen	1.87 \pm 0.30	1.72 \pm 0.34	1.57 \pm 0.30	1.28 \pm 0.23	1.02 \pm 0.18	0.92 \pm 0.19
Pancreas	20.91 \pm 1.49	22.14 \pm 1.01	22.17 \pm 2.43	20.34 \pm 2.54	17.34 \pm 2.81	16.04 \pm 2.80
Kidneys	3.37 \pm 0.40	3.65 \pm 0.51	3.57 \pm 0.77	3.24 \pm 0.55	2.53 \pm 0.40	2.32 \pm 0.41
Stomach wall	1.74 \pm 0.37	1.67 \pm 0.41	1.55 \pm 0.47	1.32 \pm 0.39	0.98 \pm 0.27	0.91 \pm 0.29
Bladder	23.11 \pm 5.40	40.48 \pm 4.92	69.70 \pm 11.30	82.67 \pm 12.77	83.58 \pm 8.58	73.22 \pm 16.56
Red marrow	0.84 \pm 0.16	0.84 \pm 0.14	0.81 \pm 0.17	0.69 \pm 0.12	0.56 \pm 0.09	0.50 \pm 0.06
Muscle	0.46 \pm 0.12	0.43 \pm 0.09	0.38 \pm 0.08	0.35 \pm 0.12	0.28 \pm 0.06	0.23 \pm 0.04