

Table 2. Efficacy of Ga-68 PSMA-11 imaging in detecting BCR of PCa.

STUDY	N	POST-RADIATION OR POST-RP	BCR DEFINITION	MODALITY	REGION	SENSITIVITY (%)	SPECIFICITY (%)	PPV (%)	NPV (%)	CHANGE IN CLINICAL MANAGEMENT (%)	MEAN SUV _{MAX}
Abghari-Gerst et al, 2022 ¹²²	2005	Both	Not defined	PET/CT	Full body			82 (lb) 83 (pb) 72 (ln)			
Abufaraj et al, 2019 ⁸⁹	65	Post-RP	2 consecutive increases in PSA above 0.2 ng/mL	PET/CT, PET/MRI	Lymph node	72-100	96-100	95-100	93-100		
Afshar-Oromieh et al, 2015 ⁸³	42	Both	Not defined	PET/CT	Prostate, lymph node	77	100	100	91		13.3 ± 14.6
Calais et al, 2019 ⁷⁰	15	Post-RP	Not defined	PET/CT	Prostate, lymph node	67		100			8.21 ± 4.1
15	Post-RP	Not defined	PET/CT	Prostate, lymph node	67		100			8.21 ± 4.1	
Cerci et al ⁸⁸	1004	Either	PSA >0.2 ng/mL after RP, or absolute increase in PSA of 2 ng/mL above nadir after RT	PET/CT	Full body or prostate					57	
Deandreis et al, 2020 ⁸⁹	17	Both	Not defined	PET/CT	Prostate					35	
Emmett et al, 2019 ⁷¹	11	Post-RP	Not defined	PET/CT	Prostate, lymph node	67	100	50	100	46	
Farolfi et al, 2019 ⁹⁰	119	Post-RP	Not defined	PET/CT	Prostate, lymph node					30	
Fendler et al, 2017 ²⁸	25	Both	Not defined	PET/CT	Prostate, lymph node	93 (ln)	85 (ln)				
Fendler et al, 2019 ⁷²	87	Both	PSA ≥0.2 ng/mL more than 6 weeks after prostatectomy or PSA rise of ≥0.2 above nadir after RT	PET/CT	Prostate, lymph node	92 (pb) 90 (lb)		84 (pb) 84 (lb)			5.1
Fourquet et al, 2021 ⁷³	294	Both	2 consecutive rising PSA values >0.2 ng/mL or PSA rise of ≥0.2 above nadir after RT	PET/CT	Prostate, lymph node	70	70			68	5.3 (p) 5.9 (ln)

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Table 2 (cont). Efficacy of Ga-68 PSMA-11 imaging in detecting BCR of PCa.											
STUDY	N	POST-RADIATION OR POST-RP	BCR DEFINITION	MODALITY	REGION	SENSITIVITY (%)	SPECIFICITY (%)	PPV (%)	NPV (%)	CHANGE IN CLINICAL MANAGEMENT (%)	MEAN SUV _{MAX}
Grubmuller et al, 2018 ⁸²	117	Post-RP	Not defined	PET/CT, PET/MRI	Prostate, lymph node					75	
Hamed et al, 2019 ⁷⁴	151	Both	Rising PSA >0.2 ng/mL	PET/CT	Prostate, lymph node	99	100	100	91		
Herlemann et al, 2016 ³³	14	Post-RP	Not defined	PET/CT	Lymph node	83	63	86	56		
Jilg et al, 2017 ⁷⁵	28	Both	Not defined	PET/CT	Lymph node	93 (mr) 81 (sr)	100 (mr) 100 (sr)	100 (mr) 99 (sr)	89 (mr) 93 (sr)		
Kunikowska et al, 2022 ⁹¹	108	Either	PSA ≥2 ng/mL after RT	PET/CT	Prostate, torso					16	
Lawhn-Heath et al, 2019 ⁷⁶	72	Both	Not defined	PET/CT, PET/MRI	Prostate, lymph node	89	31	91	21		
Mandel et al, 2020 ⁷⁷	23	Post-RP	Not defined	PET/CT, PET/MRI	Lymph node	90 (sb) 76 (fb)	74 (sb) 88 (fb)	71 (sb) 69 (fb)	91 (sb) 91 (fb)		
Morigi et al, 2015 ⁹²	9	Both	Not defined	PET/CT, PET/MRI	Prostate, lymph node					54	
Pfister et al, 2016 ⁷⁸	28	Both	Not defined	PET/CT	Prostate, lymph node	87	93	76	97		
Radzina et al, 2020 ⁷⁹	8	Both	Not defined	PET/CT	Prostate, lymph node, bone	64 (lr) 83 (ln) 83 (bm)	74 (lr) 80 (ln) 92 (bm)	58 (lr) 80 (ln) 71 (bm)	78 (lr) 100 (ln) 96 (bm)		
Rauscher et al, 2016 ⁸⁰	48	Both	PSA >0.2 ng/mL	PET/CT, PET/MRI	Lymph node	78 (lb) 100 (pb)	97 (lb) 50 (pb)	95 (lb) 93 (pb)	88 (lb) 100 (pb)		12.7±10.8
Rousseau et al, 2019 ⁹³	8	Post-RP	Not defined	PET/CT	Prostate					73	
Sahlmann et al, 2016 ⁵³	23	Both	Not defined	PET/CT	Prostate, lymph node	94 ^a	99 ^a	89 ^a	100 ^a		
Zacho et al, 2018 ⁸¹	10	Both	Not defined	PET/CT	Prostate	80 ^b	98 ^b	89 ^b	97 ^b	44	

Abbreviations: BCR, biochemical recurrence; bm, bone metastasis; CT, computed tomography; fb, field based; lb, lesion based; ln, lymph node; lr, local recurrence; M1, bone metastasis present; mr, main region; MRI, magnetic resonance imaging; NPV, negative predictive value; p, prostate; pb, patient based; PCa, prostate cancer; PET, positron emission tomography; PPV, positive predictive value; PSA, prostate-specific antigen; PSMA, prostate-specific membrane antigen; RP, radical prostatectomy; sb, side based; sr, subregion.

^aResults pooled data over patients with primary PCa and BCR of PCa.

^bPessimistic analysis considered equivocal as M1.

Collation of publicly available data. Cross-trial comparisons not based on head-to-head studies should be interpreted with caution.