American College of Radiology ACR Appropriateness Criteria®

Pretreatment Detection, Surveillance, and Staging of Prostate Cancer

Variant 1: Clinically suspected prostate cancer. No prior biopsy (biopsy naïve). Initial diagnosis. Initial imaging.

	Appropri	iateness	GOT							I	inal	Tabu	latio	ns		
Procedure	Categ	gory	SOE	Adults RRI	L Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI pelvis without and with IV contrast	Usua approp	ally oriate	Strong	O 0 mSv	O 0 mSv [ped]	9	9	0	1	0	0	0	0	1	5	7
			References		Stu	ly Quality				•				•		
			49 (26215604)			M										
			48 (30667329)			3										
			47 (27439401)			3										
			46 (26395278)			2										
			45 (27488931)			3										
			44 (28336078)			Good										
			43 (30268722)			2										
			42 (29341356)			2										
			41 (28570099)			2										
			40 (27101772)			3										
			39 (28196723)			Good								_		
TRUS-guided biopsy prostate	Usua approp		Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	3	0	3	3	5
			References		Stu	ly Quality										
			72 (27864107)			2										
			71 (21632511)			3										
			70 (19154461)			3										

		69 (22110983)			4										
		68 (2659827)			4		1								
		18 (26481576)			4										
MRI-targeted biopsy prostate	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	1	0	1	7	5
		References		Study	Quality										
		64 (27305918)			3										
		63 (28165653)			3										
		62 (27500389)			3										
		61 (27574821)			1										
		60 (25862143)			2										
		59 (32925739)			2										
		58 (30527787)			2										
		57 (30522912)			3										
		56 (24262102)			2										
		55 (25869459)			4										
		30 (31204311)			ood										
		28 (31022301)		G	ood		_								
		26 (32130814)			3										
		25 (30470502)			1		_								
		24 (30477981)			1										
		23 (29552975)			2										
MRI pelvis without IV contrast	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	7	7	0	1	0	0	2	4	1	6	0
		References		Study	Quality										
		54 (30240296)		G	ood										
		53 (26900904)			3										
		52 (27133703)			2										
		51 (26427566)			4										
		50 (22623539)			4										

TRUS prostate	Usually approp	Limited	O 0 mSv	O 0 mSv [ped]	2	2	6	4	3	0	0	0	0	0	0
		References		Stud	y Quality										
		67 (15247717)			3										
		66 (30534650)			3										
		65 (22595778)			4										
CT abdomen and pelvis with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	999993- 10 mSv [ped]	1	1	8	4	1	0	0	0	1	0	0
CT abdomen and pelvis without IV contrast	Usually approp	Expert Consensus	≎≎≎ 1-10 mSv	0	1	1	10	3	0	0	1	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually approp	Expert Consensus	���� 10-3 mSv	30	1	1	9	4	0	0	0	0	1	0	0
CT chest abdomen pelvis with IV contrast	Usually approp	Expert Consensus	���� 10-3 mSv	30	1	1	10	3	0	0	0	0	0	1	0
CT chest abdomen pelvis without IV contrast	Usually approp	Expert Consensus	≎≎≎≎ 10-3 mSv	30	1	1	10	3	0	0	1	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually approp	Expert Consensus	���� 10-3 mSv	30	1	1	10	3	0	0	0	0	1	0	0
MRI abdomen and pelvis without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	3	2	0	0	1	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	3	1	0	1	0	0	1	0
MRI whole body without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	3	1	0	1	0	0	0	0
MRI whole body without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	3	0	1	1	0	0	0	0

Bone scan whole body	Usually not appropriate	Expert Consensus	≎⊛≎ 1-10 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	9	4	0	0	0	0	0	0	1
FDG-PET/CT whole body	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	11	2	0	0	0	1	0	0	0
Choline PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv		1	1	11	2	0	0	0	0	1	0	0
Fluciclovine PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	���⊕ 10-30 mSv		1	1	9	3	0	1	0	0	1	0	0
FDG-PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv		1	1	10	3	0	0	1	0	0	0	0
Fluoride PET/CT whole body	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	11	2	0	0	0	0	1	0	0
Choline PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv		1	1	11	2	0	0	0	0	1	0	0
Fluciclovine PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv		1	1	9	2	1	1	0	0	1	0	0
PSMA PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	���� 10-30 mSv		1	1	8	2	2	1	0	0	0	0	1

Variant 2: Clinically suspected prostate cancer. Negative TRUS-guided biopsy. Initial diagnosis. Next imaging study.

D 1	Appropriateness	COF	A L L DDI	D I DDI	D 41	3.6 11			F	inal '	Гabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI pelvis without and with IV contrast	Usually appropriate	Moderate	O 0 mSv	O 0 mSv [ped]	9	9	0	1	0	0	0	0	0	4	9

References	Study Quality
49 (26215604)	M
45 (27488931)	3

		44 (2022 (070)			1 1										
		44 (28336078)			Good										
		40 (27101772)			3										
MDI toursted biomer mustate		29 (22743165)			4									Ι	
MRI-targeted biopsy prostate	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	2	5	7
		References		Study	Quality										
		61 (27574821)			1										
		60 (25862143)			2										
		59 (32925739)			2										
		58 (30527787)			2										
		57 (30522912)			3										
		56 (24262102)			2										
		55 (25869459)			4										
		30 (31204311)			Good										
		28 (31022301)		C	Good										
		26 (32130814)			3										
		25 (30470502)			1										
		24 (30477981)			1										
		23 (29552975)			2				1			1		_	
TRUS-guided biopsy prostate	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	1	0	7	4	1
		References		Study	Quality										
		77 (22416859)			3										
		76 (24094934)			4										
		75 (11992052)			4										
		74 (23452046)			3										
		73 (7514690)			3			1		1					
MRI pelvis without IV contrast	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	7	7	0	1	0	0	0	6	2	5	0
		References			Quality										
		54 (30240296)		_	Good										

53 (26900904)	3
52 (27133703)	2
51 (26427566)	4
50 (22623539)	4
49 (26215604)	M
45 (27488931)	3
44 (28336078)	Good
40 (27101772)	3
29 (22743165)	4

CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	5	1	0	0	0	1	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	4	2	0	0	0	0	1	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	3	0	0	1	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	❤❤❤ 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	9	4	0	0	0	0	1	0	0
CT chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	3	0	0	0	0	0	1	0
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	11	2	0	0	0	1	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	10	3	0	0	0	0	1	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	3	2	0	0	1	0	0	0
MRI whole body without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	3	1	0	1	0	0	0	0

MRI whole body without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	3	1	0	1	0	0	0	0
Bone scan whole body	Usuall approp	Expert Consensus	��⊕ 1-1 mSv	0	1	1	9	3	0	0	1	0	0	0	1
FDG-PET/CT whole body	Usuall approp	Expert Consensus	���� 10- mSv	-30	1	1	11	2	0	0	0	1	0	0	0
TRUS prostate	Usuall approp	Limited	O 0 mSv	O 0 mSv [ped]	1	1	9	2	1	0	1	0	0	1	0
		References		Stud	y Quality										
		66 (30534650)			3										
		65 (22595778)			4										
Choline PET/CT skull base to mid-thigh	Usuall approp	Expert Consensus	��� 1-1 mSv	0	1	1	11	2	0	0	0	0	1	0	0
Fluciclovine PET/CT skull base to mid-thigh	Usuall approp	Expert Consensus	���� 10- mSv	-30	1	1	9	3	0	1	0	0	1	0	0
FDG-PET/MRI skull base to mid-thigh	Usuall approp	Expert Consensus	��� 1-1 mSv	0	1	1	10	3	0	0	1	0	0	0	0
Fluoride PET/CT whole body	Usuall approp	Expert Consensus	���� 10- mSv	-30	1	1	10	2	0	1	0	0	1	0	0
Choline PET/MRI skull base to mid-thigh	Usuall approp	Expert Consensus	��� 1-1 mSv	0	1	1	11	2	0	0	0	0	1	0	0
Fluciclovine PET/MRI skull base to mid-thigh	Usuall approp	Expert Consensus	��� 1-1 mSv	0	1	1	9	2	1	1	0	0	1	0	0
PSMA PET/CT skull base to mid-thigh	Usuall approp	Expert Consensus	���� 10- mSv	-30	1	1	8	2	1	1	0	1	0	0	1

Variant 3: Clinically established low-risk prostate cancer. Active surveillance.

ъ .	Appropriateness	COF	A L L DDI	D I DDI	D 41	3.7.11			I	inal	Tabu	latio	ıs		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI pelvis without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	1	0	0	0	0	0	11	2
		References		Study	Quality										
		84 (30179620)			3										
		83 (26482887)			2										
		82 (31825297)			3										
		81 (30487646)		Inac	lequate										
MRI-targeted biopsy prostate	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	2	0	1	9	2
		References		Study	Quality					•					
		92 (26920465)			3										
		91 (26699628)			1										
		90 (27236496)			3										
		89 (30017404)			3										
		88 (29339663)			3										
		87 (31479660)			3										
		86 (30577395)			3										
		85 (29645347)			3										
		84 (30179620)			3										
		83 (26482887)			2										
		82 (31825297)			3										
		81 (30487646)		Inac	dequate										
		59 (32925739)			2										
		58 (30527787)			2										
		57 (30522912)			3										
		56 (24262102)			2										
		55 (25869459)			4						1				
TRUS-guided biopsy prostate	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	2	2	2	2	3	3

	Γ														
	-	References		Study	y Quality										
		92 (26920465)			3										
	-	91 (26699628)			1										
		82 (31825297)			3				1			1			
MRI pelvis without IV contrast	Usual appropi	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	1	0	0	1	2	5	4	1
		References		Study	y Quality										
		84 (30179620)			3										
		83 (26482887)			2										
		82 (31825297)			3										
	Ī	81 (30487646)		Inac	dequate										
CT abdomen and pelvis with IV contrast	Usually appropi	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	5	1	0	0	0	1	0	0
MRI whole body without IV contrast	Usually appropi	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	5	1	0	1	0	0	0	0
MRI whole body without and with IV contrast	Usually appropi	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	4	2	0	1	0	0	0	0
Bone scan whole body	Usually appropi	Strong	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	3	3	0	0	0	0	0	1
		References		Study	y Quality										
		80 (28958581)			Good										
		79 (29043431)			2										
		78 (28317247)			3										
CT abdomen and pelvis without IV contrast	Usually appropi	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	4	0	0	1	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually appropi	Expert Consensus	ଡ଼େଡ଼େଡ଼ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	1	1	10	3	0	0	0	0	1	0	0

CT chest abdomen pelvis with IV contrast	Usually no appropriat	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	3	0	0	0	0	0	1	0
CT chest abdomen pelvis without IV contrast	Usually no appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	3	0	0	1	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually no appropriat	Expert Consensus	ଡେଡଡିଡି 10-30 mSv	❤️❤️❤️❤️ 10-30 mSv [ped]	1	1	10	3	0	0	0	0	1	0	0
MRI abdomen and pelvis without IV contrast	Usually no appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	3	2	0	0	0	0	1	0
MRI abdomen and pelvis without and with IV contrast	Usually no appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	3	2	0	0	1	0	0	0
FDG-PET/CT whole body	Usually no appropriat	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	11	2	0	0	0	1	0	0	0
TRUS prostate	Usually no appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	8	2	1	1	1	0	0	1	0
		References		Study	y Quality										
		94 (27117443)			4										
		93 (22920360)			2										
		67 (15247717)			3										
		 65 (22595778)			4										
Choline PET/CT skull base to mid-thigh	Usually no appropriat	Expert Consensus	��� 1-10 mSv		1	1	9	3	0	0	0	1	1	0	0
Fluciclovine PET/CT skull base to mid-thigh	Usually no appropriat	Expert Consensus	���� 10-30 mSv		1	1	9	2	1	0	0	1	1	0	0
FDG-PET/MRI skull base to mid-thigh	Usually no	Expert Consensus	��� 1-10 mSv		1	1	11	2	0	0	1	0	0	0	0
Fluoride PET/CT whole body	Usually no appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	3	1	0	0	0	0	1	0

Choline PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	��� 1-10 mSv	1	1	9	3	0	0	0	1	1	0	0
Fluciclovine PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	��� 1-10 mSv	1	1	9	2	1	0	0	1	1	0	0
PSMA PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	���� 10-30 mSv	1	1	7	4	0	1	1	0	0	0	0

Variant 4: Clinically established intermediate-risk prostate cancer. Staging or surveillance.

ъ .	Appropriateness	opropriateness Category SOE Adults RRL Peds RRL Rating Median							F	inal	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT chest abdomen pelvis with IV contrast	Usually appropriate	Limited	≎≎≎≎ 10-3 mSv	0	8	8	0	0	0	0	1	1	3	8	0
		References		Study	Quality										
		20 (23271765)			4										
MRI pelvis without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	1	2	1	7	3
		References		Study	Quality										
		49 (26215604)			M										
		115 (22109291))		3										
		114 (15197809))		3										
		112 (30759371))		3										
		111 (31909690))		4										
		110 (26181182))		3										
		109 (21115873))		4			_							
CT abdomen and pelvis with IV contrast	Usually appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	7	7	0	0	1	0	1	5	2	5	0
		References		Study	Quality										
		20 (23271765)			4										

MRI abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	1	0	3	6	3	0
		References		Study	Quality										
		20 (23271765)			4										
		113 (27043655))		3										
		112 (30759371))		3										
		111 (31909690))		4										
		110 (26181182))		3										
		109 (21115873))		4			1			1				
MRI-targeted biopsy prostate	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	0	1	8	4	0
		References		Study	Quality										
		112 (30759371))		3										
		111 (31909690))		4										
		110 (26181182))		3										
		109 (21115873))		4										
Fluciclovine PET/CT skull base to mid-thigh	Usually appropriate	Strong	≎≎≎≎ 10-30 mSv		7	7	0	0	0	1	4	1	7	0	0
		References		Study	Quality										
		106 (32347780))		2										
		105 (29294158))		2										
		104 (27817158))		2										
		103 (28986510))		3										
		102 (29147764))		2										
		98 (31358294)			Good										
PSMA PET/CT skull base to mid- thigh	Usually appropriate	Strong	≎≎≎≎ 10-30 mSv		7	7	0	0	0	0	0	2	9	1	1
		References		Study	Quality										
		19 (30226456)			2										
		123 (31562225)			3										
		122 (29794224))		3										

	101 (0.5500000)			•										
	` '													
	`		G											
	117 (28957842))	T	2										
May be appropriate	Limited	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	6	6	0	1	1	0	5	6	1	0	0
	References		Study	Quality										
	20 (23271765)			4										
May be appropriate	Limited	❤❤❤❤ 10-30 mSv	���� 3- 10 mSv [ped]	6	6	0	0	0	1	5	6	1	0	0
	References		Study	Quality										
	20 (23271765)			4										
May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	0	6	6	1	0	0
	References		Study	Quality										
	113 (27043655))		3										
	112 (30759371))		3										
	111 (31909690))		4										
	110 (26181182))		3										
	109 (21115873))		4										
May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	2	2	4	2	1	3
	References		Study	Quality		-								
	49 (26215604)			M										
	115 (22109291))		3										
	114 (15197809))		3										
	112 (30759371))		3										
	111 (21000600)			1										
	111 (31909090))		4										
	May be appropriate May be appropriate May be appropriate May be appropriate	120 (30120038) 119 (32209449) 118 (29678358) 117 (28957842) 117 (28957842)	References 20 (23271765)	120 (30120038) 119 (32209449) 118 (29678358) Company Co	120 (30120038)	120 (30120038)	120 (30120038) 2	120 (30120038)	120 (30120038)	120 (30120038)	120 (30120038)	120 (30120038)	120 (30120038) 2	120 (30120038)

		109 (21115873))		4										
Bone scan whole body	May be appropriate	Strong	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	6	6	0	0	1	0	3	4	2	2	2
		References		Study	Quality										
		80 (28958581)		(Good										
		97 (30972933)			4										
		96 (30519933)			2										
		95 (31127357)		(Good										
		79 (29043431)			2										
		78 (28317247)			3										
		20 (23271765)			4										
Choline PET/CT skull base to mid-thigh	May be appropriate	Strong	��� 1-10 mSv		6	6	0	0	0	1	4	7	1	0	0
		References		Study	Quality						•	•			•
		100 (30448957))		3										
		99 (25649494)			3										
		98 (31358294)		(Good										
		96 (30519933)			2										
Fluoride PET/CT whole body	May be appropriate	Strong	���⊕ 10-30 mSv	���� 3- 10 mSv [ped]	6	6	0	2	0	0	4	6	1	0	0
		References		Study	Quality										
		108 (30382380))		3										
		107 (30877561))	(Good										
		79 (29043431)			2										
		20 (23271765)			4										
Fluciclovine PET/MRI skull base to mid-thigh	May be appropriate	Strong	��� 1-10 mSv		6	6	0	0	0	2	3	4	4	0	0
		References		Study	Quality										
		106 (32347780))		2										
		105 (29294158))		2										

			<u> </u>													
		103 (28986510))			3										
		102 (29147764))													
		98 (31358294)			G	ood	T									
approp	oriate	Expert Opinion	���� 10- mSv	30 10- m	-30 Sv	5	5	9	1	0	0	1	0	2	0	0
		Limited	O 0 mSv			5	5	0	1	0	1	7	1	2	1	1
		References			Study	Quality										
		111 (31909690))			4										
		110 (26181182))			3										
		109 (21115873))			4										
approp	oriate	Expert Opinion	O 0 mSv			5	5	0	1	1	0	9	0	2	0	0
		References			Study	Quality										
		49 (26215604)				M										
		96 (30519933)				2										
		117 (28957842))			2										
		116 (28216327))			3										
		115 (22109291))			3										
		114 (15197809))			3										
		112 (30759371))			3										
		111 (31909690))			4										
		110 (26181182))			3										
		108 (30382380))			3	i		ı	ı						
approp	oriate	Expert Opinion	O 0 mSv			5	5	0	1	1	0	3	5	2	1	0
		References			Study	Quality										
		49 (26215604)				M										
	approp (Disagree May approp (Disagree	May be appropriate (Disagreement) May be appropriate (Disagreement) May be appropriate (Disagreement) May be appropriate (Disagreement)	May be appropriate (Disagreement) Expert Opinion	Expert Opinion	May be appropriate (Disagreement)	May be appropriate (Disagreement)	102 (29147764) 2 98 (31358294) Good	May be appropriate (Disagreement) Expert Opinion Properties (Disagreement) Expert Opinion O 0 mSv O 0 m	102 (29147764) 2 Good	May be appropriate (Disagreement)	May be appropriate Limited O 0 mSv D 0 mSv Expert Opinion Co mSv Expert Opinion O 0 mSv D 0 mSv Expert Opinion O 0 mSv O 0 mSv Expert Opinion O 0 mSv O 0 mSv Expert Opinion O 0 mSv O 0 mSv Expert Opinion O 0 mSv Expert Opinion O 0 mSv O 0 mSv Expert Opinion O 0 mSv Expert Opinion O 0 mSv O 0 mSv Expert Opinion O 0 mSv O 0 mSv Expert Opinion O 0 mSv Expert Opinion O 0 mSv O 0 mSv	May be appropriate (Disagreement)	May be appropriate (Disagreement)	102 (29147764) 2 Good	102 (29147764) 98 (31358294) Good	May be appropriate (Disagreement)

			117 (28957842))		2										
			116 (28216327))		3										
			115 (22109291))		3										
			114 (15197809))		3										
			112 (30759371))		3										
			111 (31909690))		4										
			110 (26181182))		3										
			109 (21115873))		4										
			108 (30382380))		3										
			96 (30519933)			2										
Choline PET/MRI skull base to mid-thigh	May approp		Strong	≎≎≎ 1-10 mSv		5	5	0	0	0	1	6	4	2	0	0
			References		Study	Quality										
			101 (29323548))		2										
			100 (30448957))		3										
			99 (25649494)			3										
			98 (31358294)		C	lood										
			96 (30519933)			2										
FDG-PET/MRI skull base to mid- thigh	Usually approp	y not oriate	Expert Consensus	≎≎≎ 1-10 mSv		2	2	7	3	2	1	0	1	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually approp		Expert Consensus	ଡଡ଼େଡ 10-30 mSv	⊕⊕⊕⊕⊕ 0 10-30 mSv [ped]	1	1	11	0	0	0	1	0	1	0	0
FDG-PET/CT whole body	Usually approp		Expert Consensus	���� 10-30 mSv	0	1	1	8	2	2	1	0	1	0	0	0
TRUS prostate	Usually approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	2	1	0	2	0	0	1	0

Variant 5: Clinically established high-risk prostate cancer. Staging.

	Appropri	ateness	207								F	inal	Tabu	latio	ns		
Procedure	Categ		SOE	Adults RRI	L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT abdomen and pelvis with IV contrast	Usua approp		Limited	��� 1-10 mSv)	���� 3- 10 mSv [ped]	8	8	0	0	0	0	0	1	3	6	4
			References			Study	Quality										
			20 (23271765)				4										
CT chest abdomen pelvis with IV contrast	Usua approp		Limited	≎≎≎≎ 10-3 mSv	30	���� 3- 10 mSv [ped]	8	8	0	0	1	0	1	1	2	7	2
			References			Study	Quality										
			20 (23271765)				4										
MRI pelvis without and with IV contrast	Usua approp		Limited	O 0 mSv		O 0 mSv [ped]	8	8	0	0	0	0	2	1	3	5	3
					Study	Quality								•			
		References 49 (26215604)					M										
		49 (26215604) 115 (22109291))			3										
			114 (15197809))			3										
Bone scan whole body	Usua approp		Strong	≎≎≎ 1-10 mSv)	���� 3- 10 mSv [ped]	8	8	0	0	0	0	0	0	2	6	6
			References			Study	Quality										
			80 (28958581)			C	Good										
			20 (23271765)				4										
			97 (30972933)				4										
			96 (30519933)				2										
			95 (31127357)			G	Good										
			79 (29043431)				2										
						3											
PSMA PET/CT skull base to mid-thigh	Usua approp	riate		���� 10-3 mSv	30		8	8	0	0	0	0	0	1	3	4	6
		References				Study	Quality										
			References 121 (26682756)				2										

		120 (30120038))		2										
		119 (32209449))		2										
		117 (28957842))		2										
MRI abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	2	2	6	3	1
		References		Study	Quality										
		113 (27043655))		3										
		112 (30759371))		3										
		111 (31909690))		4										
		110 (26181182))		3										
		109 (21115873))		4										
		20 (23271765)			4										
Choline PET/CT skull base to mid-thigh	Usually appropriate	Strong	≎≎≎ 1-10 mSv		7	7	0	0	0	0	1	0	7	4	2
		References		Study	Quality										
		100 (30448957))		3										
		99 (25649494)			3										
		98 (31358294)		C	lood										
		96 (30519933)			2					_					
Fluciclovine PET/CT skull base to mid-thigh	Usually appropriate	Strong	���� 10-30 mSv		7	7	0	0	0	0	2	1	5	5	1
		References		Study	Quality										
		98 (31358294)		G	lood										
		102 (29147764))		2										
		106 (32347780))		2										
Fluoride PET/CT whole body	Usually appropriate	Strong	���� 10-30 mSv	���� 3- 10 mSv [ped]	7	7	0	1	0	0	1	0	6	5	1
		References		Study	Quality										
		79 (29043431)			2										
		108 (30382380))		3										

		107 (30877561))		Good										
Choline PET/MRI skull base to mid-thigh	Usually appropriate	Strong	��� 1-10 mSv		7	7	0	0	0	0	1	1	6	4	2
		References		Study	Quality										
		101 (29323548))		2										
		100 (30448957))		3										
		99 (25649494)			3										
		98 (31358294)		C	Good										
		96 (30519933)		_	2										
Fluciclovine PET/MRI skull base to mid-thigh	Usually appropriate	Strong	��� 1-10 mSv		7	7	0	0	0	0	1	3	5	4	1
		References		Study	Quality										
		98 (31358294)		C	Good										
		102 (29147764))		2										
		105 (29294158))		2										
,		106 (32347780))		2										
CT abdomen and pelvis without IV contrast	May be appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	6	6	0	0	1	0	4	4	3	2	0
		References		Study	Quality										
		20 (23271765)			4										
CT chest abdomen pelvis without IV contrast	May be appropriate	Limited	⊕⊕⊕⊕ 10-30 mSv	���� 3- 10 mSv [ped]	6	6	0	1	0	0	5	3	3	2	0
		References		Study	Quality]								
		20 (23271765)			4										
MRI abdomen and pelvis without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	0	3	7	2	1	0
		References		Study	Quality										
		20 (23271765)			4										
		113 (27043655))		3										
		112 (30759371))		3]								

			111 (31909690)				4										
			110 (26181182)	1			3										
			109 (21115873)				4										
MRI pelvis without IV contrast	May be appropriate		Limited	O 0 mSv	/	O 0 mSv [ped]	6	6	0	0	1	1	3	4	2	1	2
		•	References			Study	Quality										
			49 (26215604)				M										
			115 (22109291)	1			3										
			114 (15197809)	1			3										
MRI whole body without and with IV contrast	May be appropriate				/	O 0 mSv [ped]	6	6	0	0	1	0	1	6	2	2	1
						Study	Quality										
		49 (26215604)					M										
			96 (30519933)				2										
			117 (28957842)	ı			2										
			115 (22109291)	1			3										
			114 (15197809)	1			3										
			108 (30382380)	1			3										
CT abdomen and pelvis without and with IV contrast	May be appropriate (Disagreeme	108 (30382380) y be priate Expert Opinion			30	����� 10-30 mSv [ped]	5	5	10	1	0	0	0	0	1	1	0
MRI whole body without IV contrast	May be appropriate		O 0 mSv	/	O 0 mSv [ped]	5	5	0	0	1	0	6	1	3	2	0	
		References				Study	Quality										
		49 (26215604)					M										
		96 (30519933)					2										
			108 (30382380)	1			3										
			117 (28957842)				2										
			115 (22109291)	<u> </u>			3										

3

114 (15197809)

FDG-PET/CT whole body	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	3	3	4	1	6	0	0	1	1	0	0
FDG-PET/MRI skull base to midthigh	Usually not appropriate	Expert Consensus	��� 1-10 mSv		3	3	4	1	6	0	1	0	1	0	0
TRUS-guided biopsy prostate	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	6	7	0	0	0	0	0	0	0
MRI-targeted biopsy prostate	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	4	6	1	0	1	1	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	❤❤❤ 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	10	1	0	0	1	0	0	1	0
TRUS prostate	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	3	1	0	1	0	1	0	0

Appendix Key

A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

Appropriateness Category: The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

SOE: Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References:** The citation number and PMID for the reference(s) associated with the recommendation.
- Study Quality: The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

RRL: Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

Rating: The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Median: The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Final tabulations: A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at www.acr.org/ac.