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.

D 1	Appropriatene	SS GOF	A L L DDI	D 1 DD1	D (1	3.6.31			F	inal	Tabu	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	Strong	O 0 mSv	O 0 mSv [ped]	9	9	0	1	0	0	0	0	1	5	7
		References		Study	Quality						•		•		
		49 (26215604)			M										
		45 (27488931)			3										
		48 (30667329)			3										
		39 (28196723)		(Good										
		41 (28570099)			2										
		46 (26395278)			2										
		40 (27101772)			3										
		47 (27439401)			3										
		44 (28336078)		(Good										
		42 (29341356)			2										
		43 (30268722)			2		_		_	_	_				
TRUS-guided biopsy prostate	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	3	0	3	3	5
		References		Study	Quality										
		18 (26481576)			4										
		69 (22110983)			4										
		71 (21632511)			3										

		50 (10151151)			2		1								
		70 (19154461)			3		1								
		68 (2659827)			4		1								
		72 (27864107)			2					1					
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										
		56 (24262102)			2		<u> </u>								
		55 (25869459)			4										
		23 (29552975)			2										
		61 (27574821)			1										
		62 (27500389)			3										
		57 (30522912)			3										
		24 (30477981)			1										
		26 (32130814)			3										
		63 (28165653)			3										
		60 (25862143)			2										
		64 (27305918)			3										
		25 (30470502)			1										
		58 (30527787)			2										
		28 (31022301)			lood										
		30 (31204311)		C	lood		1								
		59 (32925739)			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										
		50 (22623539)			4										
		51 (26427566)			4										
		52 (27133703)			2										
		53 (26900904)			3										
		54 (30240296)		C	lood										

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										
		65 (22595778)			4										
		66 (30534650)			3		_								
CT abdomen and pelvis with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	9999 3- 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	⊕⊕⊕⊕ 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 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	ଡ଼େଡ଼େଡ଼ 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	34 11			·	inal '	Гаbu	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
29 (22743165)	4
49 (26215604)	M

		45 (27488931)			3										
		40 (27101772)			3										
		44 (28336078)		G	ood			1		1		1			
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										
		56 (24262102)			2										
		55 (25869459)			4										
		23 (29552975)			2										
		61 (27574821)			1										
		57 (30522912)			3										
		24 (30477981)			1										
		26 (32130814)			3										
		60 (25862143)			2										
		25 (30470502)			1										
		58 (30527787)			2										
		28 (31022301)			Good										
		30 (31204311)		G	Good										
		59 (32925739)		1	2				ı		ı	1	I		
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										
		74 (23452046)			3										
		77 (22416859)			3										
		76 (24094934)			4										
		75 (11992052)			4										
		73 (7514690)			3			1		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		Study	Quality										
		50 (22623539)			4										

51 (26427566)	4
52 (27133703)	2
29 (22743165)	4
49 (26215604)	M
45 (27488931)	3
40 (27101772)	3
44 (28336078)	Good
53 (26900904)	3
54 (30240296)	Good

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	୫୫୫୫ 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	ଡେଡେଡ 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 mS\	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 mS\	O 0 mSv [ped]	1	1	9	2	1	0	1	0	0	1	0
		References		Study	Quality										
		65 (22595778)			4										
		66 (30534650)			3										
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										
		82 (31825297)			3										
		83 (26482887)			2										
		81 (30487646)		Inac	dequate										
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										
		56 (24262102)			2										
		55 (25869459)			4										
		90 (27236496)			3										
		88 (29339663)			3										
		57 (30522912)			3										
		84 (30179620)			3										
		89 (30017404)			3										
		82 (31825297)			3										
		91 (26699628)			1										
		83 (26482887)			2										
		92 (26920465)			3										
		85 (29645347)			3										
		81 (30487646)		Inac	dequate										
		58 (30527787)			2										
		Limited O 0 mSv O 0 mSv [ped] References Study Q 84 (30179620) 3 82 (31825297) 3 83 (26482887) 2 81 (30487646) Inadeq Strong O 0 mSv [ped] References Study Q 56 (24262102) 2 55 (25869459) 4 90 (27236496) 3 88 (29339663) 3 57 (30522912) 3 84 (30179620) 3 89 (30017404) 3 82 (31825297) 3 91 (26699628) 1 83 (26482887) 2 92 (26920465) 3 85 (29645347) 3 81 (30487646) Inadeq		3											
		86 (30577395)			3										
		59 (32925739)			2										
TRUS-guided biopsy prostate	Usually appropriate	Limited	O 0 mSv		7	7	0	0	0	2	2	2	2	3	3

	Γ	References		Study	Quality										
		82 (31825297)		Siudy	3										
		91 (26699628)			1										
		92 (26920465)			3										
MRI pelvis without IV contrast	Usual appropr	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	1	0	0	1	2	5	4	1
		References		Study	Quality										
		84 (30179620)			3										
		82 (31825297)			3										
		83 (26482887)			2										
		81 (30487646)		Inac	dequate										
CT abdomen and pelvis with IV contrast	Usually appropr	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 appropr	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 appropr	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 appropr	Strong	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	3	3	0	0	0	0	0	1
		References		Study	/ Quality										
		78 (28317247)			3										
		79 (29043431)			2										
		80 (28958581)		(Good										
CT abdomen and pelvis without IV contrast	Usually appropr	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 appropr	Expert Consensus	ଡ଼େଡ଼ଡ଼ 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	Usuall approp	Expert Consensus	���� 10- mSv	-30	���� 3- 10 mSv [ped]	1	1	10	3	0	0	0	0	0	1	0
CT chest abdomen pelvis without IV contrast	Usuall approp	Expert Consensus	���� 10- mSv	-30		1	1	10	3	0	0	1	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usuall approp	Expert Consensus	���� 10- mSv	-30	����� 10-30 mSv [ped]	1	1	10	3	0	0	0	0	1	0	0
MRI abdomen and pelvis without IV contrast	Usuall approp	Expert Consensus	O 0 mSv	V	O 0 mSv [ped]	1	1	8	3	2	0	0	0	0	1	0
MRI abdomen and pelvis without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	V	O 0 mSv [ped]	1	1	8	3	2	0	0	1	0	0	0
FDG-PET/CT whole body	Usuall approp	Expert Consensus	���� 10- mSv	-30	���� 3- 10 mSv [ped]	1	1	11	2	0	0	0	1	0	0	0
TRUS prostate	Usuall approp	Limited	O 0 mSv	V	O 0 mSv [ped]	1	1	8	2	1	1	1	0	0	1	0
	•	References			Study	Quality										
		93 (22920360))			2										
		67 (15247717))			3										
		65 (22595778))			4										
		94 (27117443))			4										
Choline PET/CT skull base to mid-thigh	Usuall approp	Expert Consensus	≎≎≎ 1-1 mSv	10		1	1	9	3	0	0	0	1	1	0	0
Fluciclovine PET/CT skull base to mid-thigh	Usuall approp	Expert Consensus	≎≎≎≎ 10- mSv	-30		1	1	9	2	1	0	0	1	1	0	0
FDG-PET/MRI skull base to mid-thigh	Usuall approp	Expert Consensus	≎⊕ ⊕ 1-1 mSv	10		1	1	11	2	0	0	1	0	0	0	0
																$\overline{}$

❤❤❤ 10-30 mSv

Expert Consensus

Fluoride PET/CT whole body

Usually not appropriate

���� 3-10 mSv [ped]

9

1

3

0

1

0

0

0

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.

	Appropria	teness	g 0.7								F	inal '	Tabu	latio	ns		
Procedure	Catego		SOE	Adults RR	RL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT chest abdomen pelvis with IV contrast	Usuall appropri		Limited	≎≎≎≎ 10- mSv	30	���� 3- 10 mSv [ped]	8	8	0	0	0	0	1	1	3	8	0
			References			Study	Quality										
			20 (23271765)				4		_								
MRI pelvis without and with IV contrast	Usuall appropri	ly iate	Limited	O 0 mSv	/	O 0 mSv [ped]	8	8	0	0	0	0	1	2	1	7	3
			References			Study	Quality										
			115 (22109291))			3										
			110 (26181182))			3										
			114 (15197809))			3										
			49 (26215604)				M										
			109 (21115873))			4										
			111 (31909690))			4										
			112 (30759371))			3										
CT abdomen and pelvis with IV contrast	Usuall appropri	ly iate	Limited	��� 1-1 mSv	0	���� 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										
		110 (26181182)		3										
		109 (21115873)		4										
		113 (27043655)		3										
		111 (31909690)		4										
		112 (30759371)		3						•				
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										
		110 (26181182			3										
		109 (21115873)		4										
		111 (31909690)		4										
		112 (30759371)		3										
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										
		105 (29294158)		2										
		102 (29147764)		2										
		103 (28986510)		3										
		104 (27817158)		2										
		98 (31358294))	(Good										
		106 (32347780)	1	2										
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										
		117 (28957842			2										
		19 (30226456))		2										
		120 (30120038			2										

		100 (0070 100 1)			2										
		122 (29794224)			3										
		121 (26682756)			2										
		118 (29678358)		G	lood										
		123 (31562225)			3										
		119 (32209449))		2			1		I I					
CT abdomen and pelvis without IV contrast	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										
CT chest abdomen pelvis without IV contrast	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										
MRI abdomen and pelvis without IV contrast	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										
		110 (26181182))		3										
		109 (21115873))		4										
		113 (27043655))		3										
		111 (31909690))		4										
		112 (30759371))		3										
MRI pelvis without IV contrast	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										
		115 (22109291))		3										
		110 (26181182))		3										
		114 (15197809))		3										
		49 (26215604)			M										
		109 (21115873))		4										
	1	111 (31909690)	ſ			II									

		112 (30759371))		3										
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										
		20 (23271765)			4										
		78 (28317247)			3										
		79 (29043431)			2										
		80 (28958581)		(Good										
		95 (31127357)		(Good										
		97 (30972933)			4										
		96 (30519933)			2										
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						•				
		99 (25649494)			3										
		100 (30448957))		3										
		96 (30519933)			2										
		98 (31358294)		(Good			•							
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										
		20 (23271765)			4									0	
		79 (29043431)			2										
		107 (30877561))	(Good										
		108 (30382380))		3										
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										
		105 (29294158))		2										
		102 (29147764))		2										

		` `													
		98 (31358294)		(
		106 (32347780))		2	1		1	1		1				
approp	oriate	Expert Opinion	ଡଡ଼ଡ଼େ 10∹ mSv	30	5	5	9	1	0	0	1	0	2	0	0
		Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	1	0	1	7	1	2	1	1
		References		Stud	y Quality										
		110 (26181182))		3										
		109 (21115873))		4										
		111 (31909690))		4										
approp	oriate	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	1	1	0	9	0	2	0	0
		References		Stud	y Quality										
		115 (22109291))		3										
		110 (26181182))		3										
		114 (15197809))		3										
		49 (26215604)			M										
		109 (21115873))		4										
					2										
		108 (30382380))		3	1		I	I				1		
approp	oriate	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	1	1	0	3	5	2	1	0
		References		Stud	y Quality										
		115 (22109291))		3										
	approp (Disagree May approp (Disagree	May be appropriate (Disagreement) May be appropriate (Disagreement) May be appropriate (Disagreement) May be appropriate (Disagreement)	98 (31358294) 106 (32347780 May be appropriate (Disagreement)	Expert Opinion	98 (31358294) 106 (32347780) 106 (32347780) 106 (32347780) 107 (32347780) 108 (32347780) 108 (30382380) 116 (23216327) 108 (30382380) 12 (30759371) 108 (30382380) 106 (32347780) 106 (32347780) 109 (21115873) 111 (31909690) 112 (30759371) 108 (30382380) 109 (21115873) 111 (31909690) 112 (30759371) 108 (30382380) 109 (21115873) 111 (31909690) 112 (30759371) 108 (30382380) 109 (21115873) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690) 112 (30759371) 108 (30382380) 111 (31909690)	September Study Quality Study Quality	May be appropriate (Disagreement) Expert Opinion Co mSv Do mSv D	May be appropriate (Disagreement)	98 (31358294) Good 106 (32347780) 2						

			110 (26181182))		3										
			114 (15197809))		3										
			49 (26215604)			M										
			109 (21115873))		4										
			117 (28957842))		2										
			116 (28216327))		3										
			96 (30519933)			2										
			111 (31909690))		4										
			112 (30759371))		3										
			108 (30382380))		3										
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										
			99 (25649494)			3										
			101 (29323548))		2										
			100 (30448957))		3										
			96 (30519933)			2										
			98 (31358294)		G	Good										
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 10-3 mSv		1	1	11	0	0	0	1	0	1	0	0
FDG-PET/CT whole body	Usually approp		Expert Consensus	≎≎≎≎ 10-30 mSv	0 ���� 3- 10 mSv [ped]	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 RR	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
			References			Study	Quality		•			•			•		
			115 (22109291))			3										
			114 (15197809))			3										
			49 (26215604)				M										
Bone scan whole body	Usua approp		Strong	≎≎≎ 1-10 mSv	ס	���� 3- 10 mSv [ped]	8	8	0	0	0	0	0	0	2	6	6
			References			Study	Quality										
			20 (23271765)				4								7 8 3 6 2 7 3 5		
			78 (28317247)				3										
			79 (29043431)				2										
			80 (28958581)			G	Good										
			95 (31127357)			C	Good										
			97 (30972933)				4										
			96 (30519933)				2					_					
PSMA PET/CT skull base to mid-thigh	Usua approp		Strong	���� 10-3 mSv	30		8	8	0	0	0	0	0	1	3	4	6
			References			Study	Quality		•								
			117 (28957842))			2										

	120 (30120038))		2										
	121 (26682756))		2										
	119 (32209449)			2										
Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	2	2	6	3	1
	References		Study	Quality										
	20 (23271765)			4										
	110 (26181182))		3										
	109 (21115873))		4										
	113 (27043655))		3										
	111 (31909690))		4										
	112 (30759371)			3										
Usually appropriate	Strong	≎≎≎ 1-10 mSv		7	7	0	0	0	0	1	0	7	4	2
	References		Study	Quality										
	99 (25649494)			3										
	100 (30448957)			3										
	96 (30519933)			2										
	98 (31358294)		G	lood										
Usually appropriate	Strong	≎≎≎≎ 10-30 mSv		7	7	0	0	0	0	2	1	5	5	1
	References		Study	Quality										
	102 (29147764))		2										
	98 (31358294)		G	lood										
	106 (32347780))		2										
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										
	107 (30877561))	G	lood										
	Usually appropriate Usually appropriate Usually appropriate	121 (26682756) 119 (32209449) Usually appropriate	References 20 (23271765) 110 (26181182) 109 (21115873) 113 (27043655) 111 (31909690) 112 (30759371) Usually appropriate References 99 (25649494) 100 (30448957) 96 (30519933) 98 (31358294) Usually appropriate References 102 (29147764) 98 (31358294) 106 (32347780) Usually appropriate Usually Strong References 106 (32347780) Usually Strong References 107 (29147764) 108 (32347780) References 108 (32347780) References 109 (30519933) 109 (30519933) 109 (30519933) 100 (30448957) 100 (30488957) 100 (3048895	121 (26682756) 119 (32209449)	121 (26682756) 2 119 (32209449) 2 2 2 2 2 2 2 2 2	121 (26682756) 2 119 (32209449) 2 2	121 (26682756) 2	121 (26682756) 2	121 (26682756) 2	121 (26682756) 2	121 (26682756) 2	121 (26682756)	121 (26682756) 2 119 (32209449) 2 2	121 (26682756) 2 119 (32209449) 2 2 3 3 3 3 3 3 3 3

		108 (30382380)			3										
Choline PET/MRI skull base to mid-thigh	Usua approp	Strong	��� 1-10 mSv		7	7	0	0	0	0	1	1	6	4	2
		 References		Study	Quality				•						
		99 (25649494)			3										
		101 (29323548))		2										
		100 (30448957))		3										
		96 (30519933)			2										
		98 (31358294)			Good										
Fluciclovine PET/MRI skull base to mid-thigh	Usua approp	Strong	��� 1-10 mSv		7	7	0	0	0	0	1	3	5	4	1
		References		Study	Quality										
		105 (29294158)			2										
		102 (29147764))		2										
		98 (31358294)		(Good										
,		 106 (32347780))		2										
CT abdomen and pelvis without IV contrast	May approp	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 approp	Limited	���� 10-30 mSv	9	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 approp	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										
		110 (26181182)	1		3										
		109 (21115873)	ı		4										

	_																
			113 (27043655))			3										
			111 (31909690))			4										
			112 (30759371))			3										
MRI pelvis without IV contrast	May be appropria		Limited	O 0 mSv	,	O 0 mSv [ped]	6	6	0	0	1	1	3	4	2	1	2
			References			Study	Quality										
			115 (22109291)				3										
			114 (15197809)				3										
			49 (26215604)				M										
MRI whole body without and with IV contrast	May be appropria		Strong	O 0 mSv	,	O 0 mSv [ped]	6	6	0	0	1	0	1	6	2	2	1
			References		•	Study	Quality										
			115 (22109291)				3										
		114 (15197809)					3										
			49 (26215604)				M										
			117 (28957842))			2										
			96 (30519933)				2										
			108 (30382380))			3										
CT abdomen and pelvis without and with IV contrast	May be appropria (Disagreem	ate	Expert Opinion	���� 10-3 mSv		����� 10-30 mSv [ped]	5	5	10	1	0	0	0	0	1	1	0
MRI whole body without IV contrast	May be appropria		Strong	O 0 mSv	,	O 0 mSv [ped]	5	5	0	0	1	0	6	1	3	2	0
			References			Study	Quality										
		115 (22109291)					3										
			114 (15197809))			3										
		49 (26215604)					M										
			117 (28957842))			2										
		96 (30519933)					2										
			108 (30382380))			3										

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.