American College of Radiology ACR Appropriateness Criteria®

Staging and Follow-Up of Leukemia

Variant 1: Child. Male. Asymptomatic. Initial staging of acute lymphoblastic leukemia.

	Appropriateness	GOT	4.1.1. PD7		3.5.31			F	inal	Tabul	atioi	ıs			
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
US scrotum	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	2	0	0	0	2	0	2	1	3
	-	References		Study	Quality		<u> </u>								
		4 (31910389)		_	3										
Radiography chest	May be appropriate (Disagreement)	Expert Opinion	⊕ <0.1 mSv		5	5	2	0	0	0	2	0	3	2	1
		References		Study	Quality										
		10 (32711740)		_	3										
MRI head without IV contrast	Usually not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	3	3	4	0	2	1	2	0	1	0	0
		References		Study	Quality		<u> </u>								
		9 (27555087)			3										
		8 (32743972)			3										
		7 (32769417)			3										
4		6 (27763327)			2										
MRI head without and with IV contrast	Usually not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	3	3	3	0	3	1	2	0	1	0	0
·		References		Study	Quality										
		9 (27555087)			3										
		8 (32743972)			3										

		7 (32769417)				3										
		6 (27763327)				2										
CT abdomen and pelvis with IV contrast	Usually approp	Limited	��� 1-1 mSv	0	≎≎≎≎ 3- 10 mSv [ped]	2	2	4	2	1	2	0	0	1	0	0
	•	References			Study	y Quality		•			•			•		
		3 (31173414)				3										
CT abdomen and pelvis without IV contrast	Usually approp	Expert Consensus	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually approp	Expert Consensus mSv Expert Consensus mSv		≎≎≎≎≎ 10-30 mSv [ped]	1	1	10	0	0	0	0	0	0	1	0	
CTA chest abdomen pelvis with IV contrast	Usually approp	Expert Consensus Expert Consensus Expert Consensus 100 mSv		99999 10-30 mSv [ped]	1	1	10	0	0	0	0	0	0	1	0	
CT chest with IV contrast	Usually approp	Expert Consensus 100 mSv			1	1	8	0	1	1	0	0	0	1	0	
CT chest without IV contrast	Usually approp	Expert Consensus	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	9	1	0	0	1	0	0	0	0
CT chest without and with IV contrast	Usually approp	Expert Consensus	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	1	0
CT chest abdomen pelvis with IV contrast	Usually approp	Limited	≎≎≎≎ 10- mSv	-30	���� 3- 10 mSv [ped]	1	1	6	2	0	0	1	0	1	0	0
		References			Study	y Quality									_	_
		4 (31910389)				3										
CT chest abdomen pelvis without IV contrast	Usually approp	Expert Consensus	≎≎≎≎ 10- mSv	-30	���� 3- 10 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0

CT chest abdomen pelvis without and with IV contrast	Usually approp	Expert Consensus	���� 10-30 mSv	₩₩₩₩ 10-30 mSv [ped]	1	1	8	0	1	0	1	0	0	1	0
CT head with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	2	0	0	1	0	1	0	0
CT head without IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
CT head without and with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
MRI abdomen without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually approp	Moderate	O 0 mSv	O 0 mSv [ped]	1	1	6	0	1	0	2	0	1	0	0
		References		Study	y Quality										
		5 (29718744)			2										
MRI abdomen and pelvis without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
Bone scan whole body	Usually approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	2	0	1	1	0	0	0	0
Nuclear medicine ventriculography	Usually approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	0	3	0	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually approp	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	8	1	2	0	0	0	0	0	0
FDG-PET/CT whole body	Usually approp	Limited	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	8	2	0	0	0	0	0	1	0
		References		Study	y Quality										

		4 (31910389)			3										
Radiography chest abdomen pelvis	Usuall approp	Expert Consensus	��� 1-1(mSv) \$\pi \pi \pi \pi \pi \pi \pi \pi \pi \pi	1	1	6	2	1	2	0	0	0	0	0
Radiography skeletal survey	Usuall approp	Expert Consensus	��� 1-10 mSv	0	1	1	6	2	1	1	1	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mS ^o [ped]	1	1	6	3	0	0	1	0	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mS [ped]	1	1	10	1	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mS ⁻ [ped]	1	1	10	1	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usuall approp	Limited	���� 10-3 mSv	30		1	7	1	0	0	1	0	1	0	0
		References		St	udy Quality										
		4 (31910389)			3										
CT neck and chest without IV contrast	Usuall approp	Expert Consensus	≎≎≎≎ 10-3 mSv	30		1	9	1	0	0	1	0	0	0	0
CT neck and chest without and with IV contrast	Usuall approp	Expert Consensus	���� 10-3 mSv	30 \$\$\$\$ 3 10 mSv [ped]		1	9	0	0	0	2	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mS ¹ [ped]	1	1	10	1	0	0	0	0	0	0	0

Variant 2: Child. Female. Asymptomatic. Initial staging of acute lymphoblastic leukemia.

D 1	Appropriateness	COF	A L L DDI	D I DDI	D 41	3.6 19			F	inal '	Гаbи	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
Radiography chest	May be appropriate (Disagreement)	Expert Opinion	 		5	5	2	0	0	0	2	0	3	1	2

		References		Study	Quality										
		10 (32711740)			3			1				1			
CT abdomen and pelvis with IV contrast	Usuall approp	Limited	��� 1-10 mSv	ଡେଡଡ 3- 10 mSv [ped]	3	3	4	1	1	3	0	0	0	1	0
		References		Study	Quality										
		3 (31173414)			3										
MRI head without IV contrast	Usuall approp	Strong	O 0 mSv	O 0 mSv [ped]	3	3	5	0	0	2	2	0	1	0	0
		References		Study	Quality										
		9 (27555087)			3										
		8 (32743972)			3										
		7 (32769417)			3										
		6 (27763327)			2										
CT abdomen and pelvis without IV contrast	Usuall; approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	1	0	0	2	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approp	Expert Consensus	୫୫୫୫ 10-30 mSv	***	1	1	9	0	0	0	0	0	0	1	0
CTA chest abdomen pelvis with IV contrast	Usuall approp	Expert Consensus	����� 30- 100 mSv	- \$\partial \partial	1	1	9	0	0	0	0	0	0	1	0
CT chest with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	0	1	1	1	0	0	0	0
CT chest without IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	8	1	0	0	1	0	0	0	0
CT chest without and with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0

CT chest abdomen pelvis with IV contrast	Usually appropri	Limited	���� 10- mSv	30	���� 3- 10 mSv [ped]	1	1	6	1	0	1	1	0	0	1	0
		References		•	Study	Quality		•		•		•			•	
		4 (31910389)				3										
CT chest abdomen pelvis without IV contrast	Usually appropri	Expert Consensus	���� 10- mSv	30	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually appropri	Expert Consensus	���� 10- mSv	30	\$\$\$\$\$ 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT head with IV contrast	Usually appropri	Limited mSv References		��� 0.3- 3 mSv [ped]	1	1	6	1	0	1	1	0	1	0	0	
				Study	Quality											
		4 (31910389)		_	3											
CT head without IV contrast	Usually appropri	4 (31910389)		��� 0.3- 3 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0	
CT head without and with IV contrast	Usually appropri	Expert Consensus	��� 1-10 mSv	0	≎≎≎≎ 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen without IV contrast	Usually appropri	Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually appropri	Expert Consensus	O 0 mSv	′	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually appropri	Consensus		O 0 mSv [ped]	1	1	6	0	1	0	2	0	1	0	0	
		References			Study	Quality		-	_							
		5 (29718744)			•	2										
MRI abdomen and pelvis without and with IV contrast	Usually appropri	Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

MRI head without and with IV contrast	Usually approp	Strong	O 0 mSv	/	O 0 mSv [ped]	1	1	5	1	2	0	1	0	0	0	0
		References			Study	Quality										
		9 (27555087)				3										
		8 (32743972)				3										
		7 (32769417)				3										
		6 (27763327)				2										
Bone scan whole body	Usually approp	Expert Consensus	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	1	1	7	2	0	1	1	0	0	0	0
Nuclear medicine ventriculography	Usually approp	Expert Consensus	Consensus mSv Expert ⊕⊕⊕ 1-10 mSv		���� 3- 10 mSv [ped]	1	1	8	0	1	1	0	0	0	0	0
FDG-PET/CT skull base to mid- thigh	Usually approp	Expert Consensus	Consensus mSv Expert		���� 3- 10 mSv [ped]	1	1	8	1	1	0	0	0	0	0	0
FDG-PET/CT whole body	Usually approp	Limited	Consensus mSv		���� 3- 10 mSv [ped]	1	1	6	2	0	0	1	0	0	1	0
		References			Study	Quality										
		4 (31910389)				3		_								
Radiography chest abdomen pelvis	Usually approp	Expert Consensus	��� 1-10 mSv	0	��� 0.3- 3 mSv [ped]	1	1	6	2	1	1	0	0	1	0	0
Radiography skeletal survey	Usually approp	Expert Consensus	��� 1-10 mSv	0	��� 0.3- 3 mSv [ped]	1	1	6	2	1	1	0	0	1	0	0
MRA chest abdomen pelvis with IV contrast	Usually approp	Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	6	2	0	1	1	0	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually approp	Expert Consensus	O 0 mSv	/	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

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CT neck and chest with IV contrast	Usuall approp		Limited	���� 10-3 mSv	30	���� 3- 10 mSv [ped]	1	1	7	0	0	0	2	0	1	0	0
			References			Study	Quality										
			4 (31910389)				3										
CT neck and chest without IV contrast	Usuall approp	y not oriate	Limited	���� 10-3 mSv	30	���� 3- 10 mSv [ped]	1	1	7	1	1	0	1	0	0	0	0
			References			Study	Quality										
			4 (31910389)				3										
CT neck and chest without and with IV contrast	Usuall approp		Expert Consensus	���� 10-30 mSv		���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usuall approp		Expert Consensus	O 0 mSv		O 0 mSv [ped]	1	1	6	1	1	1	1	0	1	0	0

Variant 3: Adult. Asymptomatic. Initial staging of acute lymphoblastic leukemia.

	Appropri	iateness	GOT		_	B 1 BB1	- ·	36.31			F	inal '	Tabu	latio	ns		
Procedure	Categ	gory	SOE	Adults RR	L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT chest without IV contrast	May approp (Disagre	riate	Expert Opinion	≎≎≎ 1-10 mSv	0	���� 3- 10 mSv [ped]	5	5	2	0	0	1	3	3	1	0	0
			References			Study	Quality										
			11 (28737208)				3										
CT chest with IV contrast	Usuall approp		Limited	≎≎≎ 1-10 mSv	0	���� 3- 10 mSv [ped]	3	3	3	2	0	1	3	1	0	0	0
	•		References			Study	Quality										
			11 (28737208)				3										
FDG-PET/CT skull base to mid-thigh	Usuall approp		Expert Consensus	��� 10∹ mSv	30	���� 3- 10 mSv [ped]	3	3	3	2	2	1	1	1	0	0	0

CT head with IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	5	1	1	0	2	0	1	0	0
		References		Study	y Quality									•	
		4 (31910389)			3										
FDG-PET/CT whole body	Usually not appropriate	Expert Consensus	≎≎≎≎ 10-3 mSv	0	2	2	4	2	1	1	1	1	0	0	0
CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-3 mSv	0 \$€\$\$\$ 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫୫ 30 100 mSv	- 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	8	1	0	0	0	0	0	1	0
CT chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎≎ 10-3 mSv	0	1	1	9	0	0	0	1	0	0	0	0
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎≎ 10-3 mSv	0	1	1	9	1	0	0	0	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-3 mSv		1	1	8	0	1	0	0	0	0	1	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

CT head without and with IV contrast	Usually not appropriate	Expert Consensus	ଡ଼େଡ଼ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
Bone scan whole body	Usually not appropriate	Expert Consensus	ଡ େଫ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	2	1	1	0	0	0	0	0
Nuclear medicine ventriculography	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	1	1	1	0	0	0	0	0
Radiography chest	Usually not appropriate	Expert Consensus	≎ <0.1 mSv		1	1	7	1	0	1	0	0	0	1	0
Radiography chest abdomen pelvis	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	3	0	1	1	0	0	0	0
Radiography skeletal survey	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	3	0	1	1	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	6	2	1	0	1	1	0	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT neck and chest without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT neck and chest without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

Variant 4: Adult. Posttherapy evaluation of acute lymphoblastic leukemia with extra medullary disease at diagnosis.

	Appropri	iateness	COT	414.00		n 1 nnr		3.5.11			F	inal '	Tabu	latio	ns		
Procedure	Categ	gory	SOE	Adults RR	RL .	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT chest abdomen pelvis with IV contrast	Usua approp		Limited	���� 10- mSv	30	���� 3- 10 mSv [ped]	8	8	0	0	0	0	1	0	4	4	1
			References			Study	Quality										
			12 (34551384)				4										
FDG-PET/CT skull base to midthigh	Usua approp		Limited	���� 10- mSv	30	���� 3- 10 mSv [ped]	7	7	0	0	0	0	2	1	3	3	2
			References			Study	Quality										
			13 (34920453)				2										
			12 (34551384)				4										
FDG-PET/CT whole body	Usua approp		Limited	���� 10- mSv	30	���� 3- 10 mSv [ped]	7	7	0	0	0	0	2	1	5	1	2
			References			Study	Quality										
			12 (34551384)				4										

			13 (34920453)			2					ı		ı		1	
CT head with IV contrast	May b appropri (Disagreer	iate	Expert Opinion	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	5	5	1	1	0	0	3	1	3	1	0
			References		Study	y Quality										
			12 (34551384)			4										
CT neck and chest with IV contrast	May b appropri (Disagree	iate	Expert Opinion	���� 10-3 mSv	0	5	5	1	0	1	0	2	0	5	1	0
			References		Study	y Quality										
			12 (34551384)			4										
Radiography chest	Usually		Expert Consensus	� <0.1 mSv		2	2	5	2	0	1	2	0	0	1	0
CT abdomen and pelvis with IV contrast	Usually appropri		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	6	1	0	1	2	0	0	0	0
CT abdomen and pelvis without IV contrast	Usually appropri		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually		Expert Consensus	୫୫୫୫ 10-3 mSv		1	1	9	0	0	0	0	0	0	1	0
CTA chest abdomen pelvis with IV contrast	Usually		Expert Consensus	ଡଡ଼ଡଡ଼ 30 100 mSv	- 10-30 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0
CT chest with IV contrast	Usually appropri		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	0	0	2	0	0	0	1	0
CT chest without IV contrast	Usually appropri		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	8	2	0	0	0	0	0	0	0
CT chest without and with IV contrast	Usually appropri		Expert Consensus	��� 1-10 mSv		1	1	9	0	0	0	1	0	0	0	0

CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	₩₩₩₩ 10-30 mSv [ped]	1	1	8	0	0	0	1	0	0	1	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
Bone scan whole body	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	8	2	0	1	0	0	0	0	0
Radiography chest abdomen pelvis	Usually not appropriate	Expert Consensus	��� 1-10 mSv	≎≎≎ 0.3- 3 mSv [ped]	1	1	6	3	0	1	1	0	0	0	0
Radiography skeletal survey	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	3	0	1	1	0	0	0	0

MRA chest abdomen pelvis with IV contrast	Usuall approp	Expert Consensus	O 0 mSv		O 0 mSv [ped]	1	1	8	1	0	0	1	0	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv		O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usuall approp	Expert Consensus	O 0 mSv		O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT neck and chest without IV contrast	Usuall approp	Limited	⊕⊕⊕⊕ 10-3 mSv	30	���� 3- 10 mSv [ped]	1	1	6	0	0	0	3	0	0	1	0
	•	References			Study	Quality										
		12 (34551384)				4										
CT neck and chest without and with IV contrast	Usuall approp	Expert Consensus	୫୫୫୫ 10-3 mSv	30	��� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usuall approp	Expert Consensus	O 0 mSv		O 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

Variant 5: Adult. Asymptomatic. Initial staging for acute myeloid or promyelocytic leukemia.

D 1	Appropri	ateness	COF	4 1 14 DE		D I DDI	D (1	3.5.11			F	inal	Tabu	latio	ns		
Procedure	Categ		SOE	Adults RR	KL .	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
FDG-PET/CT skull base to mid-thigh	Usua approp		Limited	≎≎≎≎ 10- mSv	-30	���� 3- 10 mSv [ped]	7	7	0	0	1	0	3	1	5	0	0
			References			Study	Quality										
			21 (21685468)				3										
			20 (23470093)				3										
FDG-PET/CT whole body	Usua approp		Limited	≎≎≎≎ 10- mSv	-30	���� 3- 10 mSv [ped]	7	7	0	0	1	0	3	1	5	0	0
			References			Study	Quality										
			21 (21685468)				3										

			20 (23470093)			3										
CT chest with IV contrast	May approp		Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	5	5	0	0	1	0	6	1	2	0	0
	·		References		Study	y Quality										
			16 (27858899)			3										
			15 (27642861)			4										
			14 (30855077)			3										
			11 (28737208)			3										
CT chest without IV contrast	May approp (Disagre	riate	Expert Opinion	��� 1-10 mSv	���� 3- 10 mSv [ped]	5	5	1	0	1	0	6	1	1	0	0
			References		Study	y Quality										
			16 (27858899)			3										
			15 (27642861)			4										
			14 (30855077) 3													
			11 (28737208)		3											
CT head without IV contrast	May approp (Disagree	riate	Expert Opinion	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	5	5	5	0	2	0	1	1	1	0	0
			References		Study	y Quality										
			19 (32808672)			4										
			18 (33406488)			4										
Radiography chest	May approp (Disagree	riate	Expert Opinion	≎ <0.1 mSv		5	5	0	0	2	1	3	0	3	1	0
			References		Study	y Quality										
			16 (27858899)			3										
CT head with IV contrast	Usually approp		Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	5	0	2	1	1	0	1	0	0
			References		Study	y Quality										
			18 (33406488)			4										
			17 (32171751)			4										

CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	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	0	0	0	1	0	0	0	0
CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	����� 30- 100 mSv	99999 10-30 mSv [ped]	1	1	9	0	0	1	0	0	0	0	0
CT chest without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0
CT chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	ଡ଼େଡ଼େଡ଼ 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	8	0	0	1	1	0	0	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

MRI abdomen and pelvis without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
Bone scan whole body	Usuall approp	Expert Consensus	≎≎≎ 1-10 mSv	⊕⊕⊕⊕ 3- 10 mSv [ped]	1	1	7	3	0	1	0	0	0	0	0
Nuclear medicine ventriculography	Usuall approp	Limited	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	6	2	1	1	0	0	0	0	0
		References		Study	y Quality		_								
		12 (34551384)			4										
		18 (33406488)			4		_								
Radiography chest abdomen pelvis	Usuall approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	3	0	1	1	0	0	0	0
Radiography skeletal survey	Usuall approp	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	3	0	2	0	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	7	2	0	0	1	1	0	0	0
MRI chest abdomen pelvis without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usuall approp	Expert Consensus	���� 10-3 mSv	30	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest without IV contrast	Usuall approp	Expert Consensus	ଡେଡଡଡ 10-3 mSv	30	1	1	10	0	0	0	0	0	0	0	0

CT neck and chest without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

Variant 6: Adult. Asymptomatic. Initial staging for chronic myeloid leukemia.

D 1	Appropriateness	COL	A L L DDI	D I DDI	D (1	3.6.11			F	inal '	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	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	0	0	0	1	0	0	0	0
CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	ଡ଼େଡ଼େଡ଼େଡ଼ 30- 100 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	1	1	7	2	0	0	1	0	1	0	0
CT chest with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT chest without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT chest without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	���≎ 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0

CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	ଡଡ଼େଡ 10-30 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	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	9	1	0	0	0	0	0	0	0
CT head with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	2	0	0	2	0	1	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
Bone scan whole body	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	7	3	0	1	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	���⊕ 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

FDG-PET/CT whole body	Usually not appropriate	Expert Consensus	୭୭୭୭ 10-30 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
Radiography chest	Usually not appropriate	Expert Consensus	≎ <0.1 mSv		1	1	10	0	0	0	0	0	0	0	0
Radiography chest abdomen pelvis	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	3	0	0	2	0	0	0	0
Radiography skeletal survey	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	3	0	1	1	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	7	2	0	0	1	1	0	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

Variant 7: Adult. Asymptomatic. Initial staging for chronic lymphocytic leukemia.

	D 1	Appropriateness	305	A L L DDY	n i nni	D	3.5 31			I	inal	Tabı	ulatio	ons		
	Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
ſ																

D 1	Appropri	iateness	COE	4 1 14 DD	. T	n i nnr	D 4	3.6.11			F	inal '	Tabu	latio	ıs		
Procedure	Categ		SOE	Adults RR	L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT chest abdomen pelvis with IV contrast	May approp (Disagre	riate	Expert Opinion	���� 10- mSv	30	���� 3- 10 mSv [ped]	5	5	2	0	0	0	2	0	3	3	0
			References			Study	Quality										
			22 (23553682)				3										
FDG-PET/CT skull base to mid-thigh	May approp (Disagre	riate	Expert Opinion	���� 10- mSv	30	���� 3- 10 mSv [ped]	5	5	2	0	2	1	1	2	2	0	0
			References			Study	Quality										
			23 (25650091)				3		_								
FDG-PET/CT whole body	May approp (Disagre	riate	Expert Opinion	���� 10- mSv	30	���� 3- 10 mSv [ped]	5	5	2	0	2	1	1	2	2	0	0
			References			Study	Quality										
			23 (25650091)				3										
MRI head without and with IV contrast	Usuall approp		Limited	O 0 mSv	/	O 0 mSv [ped]	3	3	3	1	2	0	3	0	1	0	0
			References			Study	Quality										
			24 (26819053)				4										
CT chest abdomen pelvis without IV contrast	Usuall approp		Expert Consensus	���� 10- mSv	30	���� 3- 10 mSv [ped]	2	2	5	1	0	0	3	0	1	0	0
CT abdomen and pelvis with IV contrast	Usuall approp		Expert Consensus	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT abdomen and pelvis without IV contrast	Usuall approp		Expert Consensus	��� 1-1 mSv	0	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approp		Expert Consensus	ଫଫଫଫ 10- mSv	30	����� 10-30 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	ଡ଼େଡ଼ଡ଼ଡ଼ 30- 100 mSv	\$\$\$\$\$ 10-30 mSv [ped]	1	1	8	0	1	0	1	1	0	0	0
CT chest with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT chest without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT chest without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	8	1	0	0	0	0	1	0	0
CT head with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

Bone scan whole body	Usually not appropriate	Expert Consensus	��� 1-10 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	8	2	0	0	1	0	0	0	0
Radiography chest	Usually not appropriate	Expert Consensus	 		1	1	7	1	0	2	0	0	0	1	0
Radiography chest abdomen pelvis	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	7	2	0	2	0	0	0	0	0
Radiography skeletal survey	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	7	2	0	2	0	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	1	0	1	0	0	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usually not appropriate	Expert Consensus	���⊕ 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

Variant 8: Adult. Surveillance of chronic lymphocytic leukemia with suspected histologic transformation (ie, Richter syndrome).

D 1	Appropriateness	COE	A L L DDI	D I DDI	D 41	3.6 11	Final Tabulations
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1 2 3 4 5 6 7 8 9

ъ.	Appropriateness	COF	4 1 1/ PDI	D I DDI	D //	3.7.11			F	inal '	Tabu	latior	ıs		
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	���� 10-30 mSv	���� 3- 10 mSv [ped]	7	7	0	0	0	0	1	0	8	1	0
		References		Study	Quality										
		25 (31236702)			3										
		26 (29947976)			3		_								
FDG-PET/CT skull base to mid-thigh	Usually appropriate	Limited	���� 10-30 mSv	���� 3- 10 mSv [ped]	7	7	0	0	0	0	1	0	6	3	0
		References		Study	Quality										
		30 (24286263)			3										
		29 (23656196)			3										
		28 (30923097)			3										
		27 (24615780)			3										
		27 (24615780) 23 (25650091)			3										
FDG-PET/CT whole body	Usually appropriate	Limited	���� 10-30 mSv	���� 3- 10 mSv [ped]	7	7	0	0	0	0	1	1	5	3	0
		References		Study	Quality										
		23 (25650091)			3										
		27 (24615780)			3										
		28 (30923097)			3										
		29 (23656196)			3										
		30 (24286263)			3		_								
CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	��⊕ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	8	1	0	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	9	1	0	0	0	0	0	0	0

CT abdomen and pelvis without and with IV contrast	Usually approp	Expert Consensus	���� 10- mSv	-30	����� 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CTA chest abdomen pelvis with IV contrast	Usually approp	Expert Consensus	����� 3 100 mSv		≎≎≎≎≎ 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest without IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0
CT chest without and with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest abdomen pelvis without IV contrast	Usually approp	Limited	���� 10- mSv	30	���� 3- 10 mSv [ped]	1	1	7	1	0	0	2	0	0	0	0
		References			Study	Quality										
		26 (29947976)				3			ı	ı	ı					
CT chest abdomen pelvis without and with IV contrast	Usually approp	Expert Consensus	���� 10- mSv	-30	����� 10-30 mSv [ped]	1	1	8	0	0	1	1	0	0	0	0
MRI abdomen without IV contrast	Usually approp	Expert Consensus	O 0 mSv	/	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	/	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually approp	Expert Consensus	O 0 mSv	/	O 0 mSv [ped]	1	1	10	0	0	0	0	0	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	10	0	0	0	0	0	0	0	0

Bone scan whole body	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	7	3	0	1	0	0	0	0	0
Radiography chest	Usually not appropriate	Expert Consensus	ᢒ <0.1 mSv		1	1	7	1	1	1	0	0	0	1	0
Radiography chest abdomen pelvis	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	7	2	1	1	0	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	7	2	0	0	1	1	0	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT neck and chest without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT neck and chest without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
Gallium scan whole body	Usually not appropriate	Expert Consensus	���� 10-30 mSv		1	1	7	2	1	0	0	1	0	0	0

Variant 9: Adult. Asymptomatic. Initial staging for hairy cell leukemia.

	Appropriateness	COF	A L L DDI	D 1 DD1	D (1	3.6.11]	Final	Tab	ulatio	ons		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9

	Appropri	iateness	GOT		_	D 1 DD1	- ·	3.5.31			F	inal	Tabu	latio	ns		
Procedure	Categ		SOE	Adults RRI		Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT chest abdomen pelvis with IV contrast	May approp		Limited	���� 10-3 mSv	30	���� 3- 10 mSv [ped]	5	5	4	0	0	0	5	0	0	1	0
			References			Study	Quality										
			31 (22111844)				4										
CT chest abdomen pelvis without IV contrast	May approp		Limited	���� 10-3 mSv	30	���� 3- 10 mSv [ped]	5	5	4	0	0	0	5	0	0	1	0
			References			Study	Quality										
			31 (22111844)			_	4										
FDG-PET/CT skull base to mid-thigh	Usuall: approp		Limited	���� 10-3 mSv	30	���� 3- 10 mSv [ped]	3	3	3	1	2	0	3	0	0	1	0
			References			Study	Quality										
			32 (32533250)				4										
			33 (25783506)				4										
FDG-PET/CT whole body	Usuall: approp		Limited	���� 10-3 mSv	30	���� 3- 10 mSv [ped]	3	3	4	0	2	0	3	0	0	1	0
			References			Study	Quality										
			32 (32533250)				4										
			33 (25783506)				4										
CT abdomen and pelvis with IV contrast	Usuall approp		Expert Consensus	��� 1-10 mSv)	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT abdomen and pelvis without IV contrast	Usuall _i		Expert Consensus	��� 1-10 mSv)	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approp		Expert Consensus	���� 10-3 mSv	30	***** 10-30 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	ଡ଼େଡ଼ଡ଼ଡ଼ 30- 100 mSv	����� 10-30 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT chest with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT chest without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	6	2	0	1	1	0	1	0	0
CT chest without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	6	2	0	0	2	0	1	0	0
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫୫ 10-30 mSv	≎≎≎≎≎ 10-30 mSv [ped]	1	1	9	0	0	1	0	0	0	0	0
CT head with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	6	1	1	1	1	0	0	1	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	ଡ େଡ 1-10 mSv	≎≎≎ 0.3- 3 mSv [ped]	1	1	6	1	1	1	1	0	1	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	6	2	0	1	1	0	1	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

MRI head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
Bone scan whole body	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	6	3	1	0	1	0	0	0	0
US abdomen	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	8	0	1	0	1	0	0	0	0
Radiography chest	Usually not appropriate	Expert Consensus	⊕ <0.1 mSv		1	1	7	1	0	2	0	0	0	1	0
Radiography chest abdomen pelvis	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	7	2	0	1	1	0	0	0	0
Radiography skeletal survey	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	7	2	0	2	0	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	7	1	1	0	1	1	0	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	6	1	0	1	2	0	1	0	0
CT neck and chest without IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	6	2	0	0	2	0	1	0	0
CT neck and chest without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	6	2	0	0	2	0	1	0	0
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	0	0	0	0	0	0	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.