

**American College of Radiology**  
**ACR Appropriateness Criteria®**

## Staging and Follow-Up of Leukemia

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

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							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											
		4 (31910389)		3											
Radiography chest	May be appropriate (Disagreement)	Expert Opinion	☢ <0.1 mSv	☢ <0.03 mSv [ped]	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											
		9 (27555087)		3											
		8 (32743972)		3											
		7 (32769417)		3											
		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 not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	4	2	1	2	0	0	1	0	0
		References		Study Quality											
		3 (31173414)		3											
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 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 not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	10	0	0	0	0	0	0	1	0
CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼☼ 30-100 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	10	0	0	0	0	0	0	1	0
CT chest with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	8	0	1	1	0	0	0	1	0
CT chest without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	9	1	0	0	1	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	1	0
CT chest abdomen pelvis with IV contrast	Usually not appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	6	2	0	0	1	0	1	0	0
		References		Study Quality											
		4 (31910389)		3											
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0



		4 (31910389)			3										
Radiography chest abdomen pelvis	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	6	2	1	2	0	0	0	0	0
Radiography skeletal survey	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	6	2	1	1	1	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	6	3	0	0	1	0	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0
CT neck and chest with IV contrast	Usually not appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	7	1	0	0	1	0	1	0	0
		References			Study Quality										
		4 (31910389)			3										
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	1	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	2	0	0	0	0
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	1	0	0	0	0	0	0	0

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

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Radiography chest	May be appropriate (Disagreement)	Expert Opinion	☼ <0.1 mSv	☼ <0.03 mSv [ped]	5	5	2	0	0	0	2	0	3	1	2

		References		Study Quality											
		10 (32711740)		3											
CT abdomen and pelvis with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 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	Usually not appropriate	Strong	○ ○ mSv	○ ○ 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	Usually not appropriate	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	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 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	☼☼☼☼☼ 30-100 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest with IV contrast	Usually not appropriate	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	Usually not appropriate	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	Usually not appropriate	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 not appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼ 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 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	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT head with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	6	1	0	1	1	0	1	0	0
		References		Study Quality											
		4 (31910389)		3											
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	☼☼☼ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Moderate	○ 0 mSv	○ 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 not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

MRI head without and with IV contrast	Usually not appropriate	Strong	0 0 mSv	0 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 not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	7	2	0	1	1	0	0	0	0
Nuclear medicine ventriculography	Usually not appropriate	Expert Consensus	☼☼☼ 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 not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	8	1	1	0	0	0	0	0	0
FDG-PET/CT whole body	Usually not appropriate	Limited	☼☼☼☼ 10-30 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 not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	6	2	1	1	0	0	1	0	0
Radiography skeletal survey	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	6	2	1	1	0	0	1	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	6	2	0	1	1	0	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0

CT neck and chest with IV contrast	Usually not appropriate	Limited	⚠⚠⚠⚠ 10-30 mSv	⚠⚠⚠⚠ 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	Usually not appropriate	Limited	⚠⚠⚠⚠ 10-30 mSv	⚠⚠⚠⚠ 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	Usually not appropriate	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	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	6	1	1	1	1	0	1	0	0

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

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT chest without IV contrast	May be appropriate (Disagreement)	Expert Opinion	⚠⚠⚠ 1-10 mSv	⚠⚠⚠⚠ 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	Usually not appropriate	Limited	⚠⚠⚠ 1-10 mSv	⚠⚠⚠⚠ 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	Usually not appropriate	Expert Consensus	⚠⚠⚠⚠ 10-30 mSv	⚠⚠⚠⚠ 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 Quality												
		4 (31910389)	3												
FDG-PET/CT whole body	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	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	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 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	☼☼☼☼☼ 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	☼☼☼☼ 10-30 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	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	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	☼☼☼ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 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	○ 0 mSv	○ 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	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	☼ <0.03 mSv [ped]	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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0



		13 (34920453)			2												
CT head with IV contrast	May be appropriate (Disagreement)	Expert Opinion	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	5	5	1	1	0	0	3	1	3	1	0		
		References			Study Quality												
		12 (34551384)			4												
CT neck and chest with IV contrast	May be appropriate (Disagreement)	Expert Opinion	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	1	0	1	0	2	0	5	1	0		
		References			Study Quality												
		12 (34551384)			4												
Radiography chest	Usually not appropriate	Expert Consensus	☼ <0.1 mSv	☼ <0.03 mSv [ped]	2	2	5	2	0	1	2	0	0	1	0		
CT abdomen and pelvis with IV contrast	Usually not appropriate	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 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	0	0	0	1	0		
CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼☼ 30-100 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	9	0	0	0	1	0	0	0	0		
CT chest with IV contrast	Usually not appropriate	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 not appropriate	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 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 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	☼☼☼☼ 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	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ 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	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	8	1	0	0	1	0	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	9	1	0	0	0	0	0	0	0
CT neck and chest without IV contrast	Usually not appropriate	Limited	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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	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	0 0 mSv	0 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.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
FDG-PET/CT skull base to mid-thigh	Usually appropriate	Limited	⚠⚠⚠⚠ 10-30 mSv	⚠⚠⚠⚠ 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	Usually appropriate	Limited	⚠⚠⚠⚠ 10-30 mSv	⚠⚠⚠⚠ 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 be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	0	1	0	6	1	2	0	0		
		References			Study Quality												
		16 (27858899)			3												
		15 (27642861)			4												
		14 (30855077)			3												
		11 (28737208)			3												
CT chest without IV contrast	May be appropriate (Disagreement)	Expert Opinion	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	1	0	1	0	6	1	1	0	0		
		References			Study Quality												
		16 (27858899)			3												
		15 (27642861)			4												
		14 (30855077)			3												
		11 (28737208)			3												
CT head without IV contrast	May be appropriate (Disagreement)	Expert Opinion	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	5	5	5	0	2	0	1	1	1	0	0		
		References			Study Quality												
		19 (32808672)			4												
		18 (33406488)			4												
Radiography chest	May be appropriate (Disagreement)	Expert Opinion	☼ <0.1 mSv	☼ <0.03 mSv [ped]	5	5	0	0	2	1	3	0	3	1	0		
		References			Study Quality												
		16 (27858899)			3												
CT head with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	2	2	5	0	2	1	1	0	1	0	0		
		References			Study 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	☼☼☼☼☼ 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	☼☼☼☼ 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	☼☼☼☼ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 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	○ 0 mSv	○ 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
Nuclear medicine ventriculography	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	6	2	1	1	0	0	0	0	0

References	Study Quality
12 (34551384)	4
18 (33406488)	4

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	2	0	0	0	0	0
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0

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

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							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	☼☼☼☼☼ 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	☢☢☢☢ 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	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	○ ○ mSv	○ ○ 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	○ ○ mSv	○ ○ 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



Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT chest abdomen pelvis with IV contrast	May be appropriate (Disagreement)	Expert Opinion	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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 be appropriate (Disagreement)	Expert Opinion	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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 be appropriate (Disagreement)	Expert Opinion	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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	Usually not appropriate	Limited	○ ○ mSv	○ ○ 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	Usually not appropriate	Expert Consensus	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	2	2	5	1	0	0	3	0	1	0	0
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	10	0	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	1	0	0	0	0	0	0	0

CTA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼☼ 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	☼☼☼☼ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0



Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							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											
		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 not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 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	☼☼☼☼☼ 30-100 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest without 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 without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	9	0	0	0	0	0	0	1	0
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 3-10 mSv [ped]	1	1	7	1	0	0	2	0	0	0	0

		References		Study Quality											
		26 (29947976)		3											
CT chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	8	0	0	1	1	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0



Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT chest abdomen pelvis with IV contrast	May be appropriate	Limited	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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 be appropriate	Limited	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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	Usually not appropriate	Limited	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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	Usually not appropriate	Limited	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 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	Usually not appropriate	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	Usually not appropriate	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	Usually not appropriate	Expert Consensus	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗⊗ 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	☼☼☼☼☼ 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	☼☼☼☼ 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	☼☼☼ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 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	○ 0 mSv	○ 0 mSv [ped]	1	1	10	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
US abdomen	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	8	0	1	0	1	0	0	0
Radiography chest	Usually not appropriate	Expert Consensus	☼ <0.1 mSv	☼ <0.03 mSv [ped]	1	1	7	1	0	2	0	0	0	1
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
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
MRA chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	7	1	1	0	1	1	0	0
MRI chest abdomen pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	0	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	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
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
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
MRI abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	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](http://www.acr.org/ac).