

		15 (33807178)		2														
FDG-PET/CT skull base to mid-high	Usually appropriate	Limited	⊛⊛⊛⊛ 10-30 mSv	⊛⊛⊛⊛ 3-10 mSv [ped]	7	7	0	0	0	0	2	0	7	6	1			
		References	Study Quality															
		20 (16368753)			4													
		19 (24990404)			4													
		18 (36686301)			2													
		10 (30299884)			4													
		11 (-3198150)			4													
FDG-PET/MRI skull base to mid-high	Usually appropriate	Expert Consensus	⊛⊛⊛ 1-10 mSv	⊛⊛⊛⊛ 3-10 mSv [ped]	7	7	0	0	0	1	3	3	7	2	0			
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	3	3	2	2	5	4	1	1	0	0	0			
CT chest without IV contrast	Usually not appropriate	Limited	⊛⊛⊛ 1-10 mSv	⊛⊛⊛⊛ 3-10 mSv [ped]	2	2	7	2	3	2	1	0	1	0	0			
		References	Study Quality															
		11 (-3198150)			4													
Radiography chest	Usually not appropriate	Limited	⊛ <0.1 mSv	⊛ <0.03 mSv [ped]	2	2	8	3	3	0	2	0	1	0	0			
		References	Study Quality															
		10 (30299884)			4													
		11 (-3198150)			4													
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	⊛⊛⊛ 1-10 mSv	⊛⊛⊛⊛ 3-10 mSv [ped]	1	1	10	2	3	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	12	0	3	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	4	2	0	0	0	0	0	0
DOTATATE PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv		1	1	10	2	2	0	1	1	1	0	0
MIBG scan whole body with SPECT or SPECT/CT area of interest	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	Varies	1	1	11	3	1	1	1	0	0	0	0
DOTATATE PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv		1	1	11	2	1	0	1	1	1	0	0
MIBG scan whole body	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	1	1	11	2	2	0	2	0	0	0	0

Variant 2: Adult. Known or suspected adrenocortical carcinoma. Restaging or surveillance.

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 appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	9	9	0	0	1	0	0	0	1	1	14
		References	Study Quality												
		10 (30299884)	4												
		11 (-3198150)	4												
CT chest with IV contrast	Usually appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	8	8	0	0	2	0	1	0	5	1	8
		References	Study Quality												
		10 (30299884)	4												
		11 (-3198150)	4												
MRI abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	1	0	0	3	3	3	7
		References	Study Quality												

			11 (-3198150)		4												
DOTATATE PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv		1	1	11	1	1	1	1	2	0	0	0		
MIBG scan whole body with SPECT or SPECT/CT area of interest	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	Varies	1	1	11	2	2	1	1	0	0	0	0		
DOTATATE PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv		1	1	11	1	1	1	1	2	0	0	0		
MIBG scan whole body	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	1	1	12	1	2	1	1	0	0	0	0		

Variant 3: Adult. Known or suspected pheochromocytoma. Initial staging.

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 appropriate	Limited	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	9	9	0	0	1	0	1	0	5	1	9		
		References	Study Quality														
		11 (-3198150)	4														
CT chest with IV contrast	Usually appropriate	Limited	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	8	8	0	1	1	0	1	0	5	3	6		
		References	Study Quality														
		11 (-3198150)	4														
MRI abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	1	0	0	2	2	6	6		
		References	Study Quality														
		11 (-3198150)	4														
DOTATATE PET/CT skull base to mid-thigh	Usually appropriate	Limited	⊗⊗⊗ 1-10 mSv		7	7	1	0	0	0	1	0	8	2	3		

			References		Study Quality													
			9 (31254038)		4													
			23 (26637204)		2													
MIBG scan whole body with SPECT or SPECT/CT area of interest	Usually appropriate	Limited	☼☼☼ 1-10 mSv	Varies	7	7	0	0	0	0	2	0	12	1	1			
			References		Study Quality													
			9 (31254038)		4													
DOTATATE PET/MRI skull base to mid-thigh	Usually appropriate	Expert Consensus	☼☼☼ 1-10 mSv		7	7	0	0	0	1	6	1	6	2	0			
FDG-PET/CT skull base to mid-thigh	May be appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	0	0	2	7	2	4	1	0			
			References		Study Quality													
			9 (31254038)		4													
FDG-PET/MRI skull base to mid-thigh	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	0	1	3	5	3	3	1	0			
			References		Study Quality													
			24 (35143455)		4													
MIBG scan whole body	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	1	0	2	6	5	1	1	0			
			References		Study Quality													
			9 (31254038)		4													
CT chest without IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	5	1	2	1	4	1	1	0	0			
			References		Study Quality													
			11 (-3198150)		4													
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	3	3	5	1	5	3	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	5	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	☹☹☹☹ 10-30 mSv	☹☹☹☹☹ 10-30 mSv [ped]	1	1	11	0	3	0	2	0	0	0	0
		References	Study Quality												
		11 (-3198150)	4												
CT chest without and with IV contrast	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	1	1	9	3	3	0	0	0	0	0	0
Radiography chest	Usually not appropriate	Limited	☹ <0.1 mSv	☹ <0.03 mSv [ped]	1	1	10	1	3	0	2	0	0	1	0
		References	Study Quality												
		11 (-3198150)	4												

Variant 4: Adult. Known or suspected pheochromocytoma. Restaging or surveillance.

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 appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	9	9	0	0	1	0	0	0	3	3	10
		References	Study Quality												
		11 (-3198150)	4												
CT chest with IV contrast	Usually appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	8	8	0	0	2	0	1	0	4	3	7
		References	Study Quality												
		11 (-3198150)	4												
MRI abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	1	0	0	2	2	4	8

		References	Study Quality												
		11 (-3198150)	4												
DOTATATE PET/CT skull base to mid-thigh	Usually appropriate	Limited	☹☹☹ 1-10 mSv		7	7	0	0	0	0	3	1	7	4	1
		References	Study Quality												
		9 (31254038)	4												
DOTATATE PET/MRI skull base to mid-thigh	Usually appropriate	Expert Consensus	☹☹☹ 1-10 mSv		7	7	0	0	0	0	4	1	7	3	1
FDG-PET/CT skull base to mid-thigh	May be appropriate	Limited	☹☹☹☹ 10-30 mSv	☹☹☹☹ 3-10 mSv [ped]	5	5	0	0	1	0	8	3	2	2	0
		References	Study Quality												
		11 (-3198150)	4												
		25 (24899991)	3												
FDG-PET/MRI skull base to mid-thigh	May be appropriate (Disagreement)	Expert Opinion	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	5	5	0	0	2	1	6	3	3	1	0
MIBG scan whole body with SPECT or SPECT/CT area of interest	May be appropriate (Disagreement)	Expert Opinion	☹☹☹ 1-10 mSv	Varies	5	5	0	1	1	1	7	1	4	1	0
		References	Study Quality												
		9 (31254038)	4												
MIBG scan whole body	May be appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	5	5	0	0	0	4	7	2	2	1	0
CT chest without IV contrast	Usually not appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	3	3	4	2	2	1	5	0	1	0	0
		References	Study Quality												
		11 (-3198150)	4												
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	3	3	4	2	4	4	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	3	3	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	11	0	3	0	2	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	2	3	0	0	0	0	0	0
Radiography chest	Usually not appropriate	Limited	☼ <0.1 mSv	☼ <0.03 mSv [ped]	1	1	13	2	0	0	0	0	0	0	0

References	Study Quality
11 (-3198150)	4

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.