



FDG-PET/CT whole body	May be appropriate		⊕⊕⊕⊕ 10-30 mSv		4	n/a	0	0	0	0	0	0	0	0	0
Radiography chest	Usually not appropriate		⊕ <0.1 mSv	⊕ <0.03 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
CT chest without and with IV contrast	Usually not appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0
CT chest with IV contrast	Usually not appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

**Variant 3: Higher-risk patient (high grade). Evaluation for metastatic disease to the lung from musculoskeletal primary. Baseline examination at time of diagnosis.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Radiography chest	Usually not appropriate		⊕ <0.1 mSv	⊕ <0.03 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0
FDG-PET/CT whole body	Usually appropriate		⊕⊕⊕⊕ 10-30 mSv		7	n/a	0	0	0	0	0	0	0	0	0
CT chest without IV contrast	Usually appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	9	n/a	0	0	0	0	0	0	0	0	0
CT chest without and with IV contrast	Usually not appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0
CT chest with IV contrast	Usually not appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

**Variant 4: Higher-risk patient (high grade). Evaluation for metastatic disease to the lung from musculoskeletal primary. Follow-up examination 3–6 months after treatment or surgery.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
Radiography chest	Usually not appropriate		⊕ <0.1 mSv	⊕ <0.03 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0	0
FDG-PET/CT whole body	May be appropriate		⊕⊕⊕⊕ 10-30 mSv		5	n/a	0	0	0	0	0	0	0	0	0	0
CT chest without IV contrast	Usually appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	9	n/a	0	0	0	0	0	0	0	0	0	0
CT chest without and with IV contrast	Usually not appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0	0
CT chest with IV contrast	Usually not appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0	0

**Variant 5: Evaluation for osseous metastatic disease from musculoskeletal primary. Asymptomatic. Baseline and follow-up examination.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
FDG-PET/CT whole body	Usually not appropriate		⊕⊕⊕⊕ 10-30 mSv		2	n/a	0	0	0	0	0	0	0	0	0	0
Bone scan whole body	Usually not appropriate		⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0	0
MRI whole body without IV contrast	Usually not appropriate		○ 0 mSv	○ 0 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0	0
MRI whole body without and with IV contrast	Usually not appropriate		○ 0 mSv	○ 0 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0	0

**Variant 6: Evaluation for osseous metastatic disease from musculoskeletal primary. Symptomatic. Baseline and follow-up examination.**



US area of interest	Usually not appropriate		O 0 mSv	O 0 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0
Radiography area of interest	Usually appropriate		Varies	Varies	9	n/a	0	0	0	0	0	0	0	0	0

**Variant 8: Osseous tumor, with significant hardware present. Local recurrence.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT area of interest with IV contrast	May be appropriate		Varies	Varies	5	n/a	0	0	0	0	0	0	0	0	0
CT area of interest without and with IV contrast	Usually not appropriate		Varies	Varies	2	n/a	0	0	0	0	0	0	0	0	0
CT area of interest without IV contrast	May be appropriate		Varies	Varies	5	n/a	0	0	0	0	0	0	0	0	0
FDG-PET/CT whole body	May be appropriate		☢☢☢☢ 10-30 mSv		5	n/a	0	0	0	0	0	0	0	0	0
MRI area of interest without and with IV contrast	Usually appropriate		O 0 mSv	O 0 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
MRI area of interest without IV contrast	Usually appropriate		O 0 mSv	O 0 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
US area of interest	Usually not appropriate		O 0 mSv	O 0 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0
Radiography area of interest	Usually appropriate		Varies	Varies	9	n/a	0	0	0	0	0	0	0	0	0

**Variant 9: Soft-tissue tumors. Local recurrence surveillance. Follow-up examination 3–6 months after treatment or surgery.**



## **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).