

American College of Radiology
ACR Appropriateness Criteria®

Ingested or Aspirated Foreign Body-Child

Variant 1: Child. Suspect ingested or aspirated foreign body. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Radiography abdomen and pelvis	Usually appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	9	9	0	0	0	2	0	0	4	1	8
		References		Study Quality											
		43 (10549750)		4											
		38 (26475838)		4											
		37 (22593662)		4											
		21 (33745769)		4											
		12 (25611037)		4											
Radiography chest	Usually appropriate	Limited	☢ <0.1 mSv	☢ <0.03 mSv [ped]	9	9	0	0	0	1	0	0	4	0	10
		References		Study Quality											
		54 (24074659)		4											
		53 (37201356)		3											
		49 (12596126)		4											
		50 (19092566)		4											
		52 (25592250)		4											
		51 (25384489)		4											
		21 (33745769)		4											
		17 (26495798)		4											
		47 (32896338)		4											

			45 (30188872)		4													
			46 (27576682)		4													
			48 (22841172)		2													
			44 (32032915)		4													
			43 (10549750)		4													
			15 (27876259)		4													
Radiography neck	Usually appropriate	Limited	☼☼ 0.1-1mSv	☼☼ 0.03-0.3 mSv [ped]	8	8	0	0	0	1	0	2	3	2	7			
		References			Study Quality													
		17 (26495798)			4													
Radiography neck chest abdomen and pelvis	Usually appropriate	Limited		☼☼☼ 0.3-3 mSv [ped]	8	8	0	0	0	0	0	1	4	3	7			
		References			Study Quality													
		17 (26495798)			4													
		47 (32896338)			4													
		45 (30188872)			4													
		46 (27576682)			4													
		44 (32032915)			4													
		43 (10549750)			4													
		37 (22593662)			4													
		21 (33745769)			4													
		12 (25611037)			4													
		38 (26475838)			4													
CT chest without IV contrast	May be appropriate	Strong	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	1	0	3	5	4	3	0	0			
		References			Study Quality													
		36 (32515607)			3													
		35 (23896013)			3													
		34 (24290578)			4													
		32 (18936020)			4													

33 (19036175)	1
31 (21409389)	4
22 (-3197700)	4
30 (14680912)	4
27 (17033800)	3
23 (36621123)	Good
29 (37473440)	Good
28 (21129123)	2
25 (23884842)	4
26 (-3199260)	4
21 (33745769)	4
4 (34661860)	4
18 (29106868)	3
19 (29728167)	3
16 (25683940)	3

Fluoroscopy single contrast esophagram	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	4	4	0	1	1	8	6	0	0	0	0
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References	Study Quality
42 (30642867)	4
41 (24951194)	4
37 (22593662)	4
38 (26475838)	4
39 (25309769)	4
40 (15100114)	4
21 (33745769)	4
4 (34661860)	4
11 (21948341)	4
36 (32515607)	3

Fluoroscopy upper GI series	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	3	3	5	1	4	2	2	0	1	0	0
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References	Study Quality
42 (30642867)	4
41 (24951194)	4
37 (22593662)	4
38 (26475838)	4
39 (25309769)	4
40 (15100114)	4
21 (33745769)	4
4 (34661860)	4
11 (21948341)	4
10 (38623937)	4
12 (25611037)	4
14 (18407800)	4
36 (32515607)	3

Radiography abdomen	Usually not appropriate	Expert Consensus	☢☢☢ 0.1-1mSv	☢☢☢ 0.03-0.3 mSv [ped]	3	3	3	4	3	2	2	1	1	0	0
US abdomen	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	5	4	7	0	0	0	0	0	0

References	Study Quality
59 (36714638)	3

Radiography chest decubitus view	Usually not appropriate	Limited		☢ <0.03 mSv [ped]	2	2	4	5	4	1	2	0	0	0	0
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References	Study Quality
58 (12648322)	4
57 (8578349)	4
55 (17413429)	4
48 (22841172)	2
56 (8035283)	4

CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 1-10 mSv	☢☢☢☢☢ 3-10 mSv [ped]	1	1	8	2	2	2	1	0	0	0	0
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References	Study Quality
38 (26475838)	4
37 (22593662)	4
21 (33745769)	4
11 (21948341)	4
12 (25611037)	4
14 (18407800)	4
10 (38623937)	4
36 (32515607)	3
39 (25309769)	4
40 (15100114)	4
42 (30642867)	4
41 (24951194)	4

CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 1-10 mSv	☼☼☼☼☼ 3-10 mSv [ped]	2	2	7	1	3	2	0	1	0	1	0
CT chest abdomen pelvis with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 3-10 mSv [ped]	2	2	7	6	3	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]	2	2	7	1	4	1	1	0	1	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	8	1	3	2	0	0	1	0	0
CT chest with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 1-10 mSv	☼☼☼☼☼ 3-10 mSv [ped]	1	1	9	3	4	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	8	1	3	1	1	0	1	0	0
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 3-10 mSv [ped]	1	1	8	1	1	2	1	1	0	1	0

Variant 3: Child. Suspect aspirated foreign body. Initial radiographs negative. Next imaging study.

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	Usually appropriate	Strong	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	8	8	0	0	1	0	1	0	4	2	7

References	Study Quality
31 (21409389)	4
30 (14680912)	4
27 (17033800)	3
29 (37473440)	Good
28 (21129123)	2
26 (-3199260)	4
22 (-3197700)	4
4 (34661860)	4
18 (29106868)	3
19 (29728167)	3
23 (36621123)	Good
16 (25683940)	3

Radiography chest decubitus view	Usually not appropriate	Limited		 <0.03 mSv [ped]	3	3	0	4	6	5	1	0	0	0	0
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References	Study Quality
58 (12648322)	4
57 (8578349)	4
55 (17413429)	4
48 (22841172)	2
56 (8035283)	4

CT chest with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	6	7	2	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	8	1	3	1	1	0	0	1	0
Fluoroscopy single contrast esophagram	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	1	1	8	1	3	1	1	0	1	0	0
Fluoroscopy upper GI series	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	1	1	9	0	3	1	1	0	1	0	0

Appendix Key

A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

Appropriateness Category: The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

SOE: Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References:** The citation number and PMID for the reference(s) associated with the recommendation.
- **Study Quality:** The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

RRL: Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

Rating: The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Median: The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Final tabulations: A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at www.acr.org/ac.