American College of Radiology
ACR Appropriateness Criteria®

Gestational Trophoblastic Disease

Variant 1: Suspected or initial diagnosis of gestational trophoblastic disease (GTD).

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US pelvis transvaginal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	1	1	2	1	11

References	Study Quality
22 (17201012)	3
23 (27696434)	2
9 (19369669)	4
21 (16273594)	3
28 (24907943)	4
29 (23848045)	4
30 (26060553)	4
31 (24379071)	4

US duplex Doppler pelvis	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	0	1	6	5	2

References	Study Quality
34 (26735221)	4
33 (19200936)	4
35 (28591340)	4

US pelvis transabdominal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	1	0	4	3	3	2	3

References	Study Quality

		32 (23416812)		3												
Radiography chest	May be appropriate	Limited	☢ <0.1 mSv	☢ <0.03 mSv [ped]	5	5	0	1	0	1	7	3	1	1	0
		References		Study Quality												
		19 (16816073)		4												
		36 (28287945)		4												
		20 (-3131525)		4												
		37 (23999759)		4												
CT abdomen and pelvis with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	2	11	1	0	0	0	0	0	0
		References		Study Quality												
		43 (26896825)		4												
		37 (23999759)		4												
CT abdomen and pelvis without IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	8	4	0	1	2	1	0	0	0
		References		Study Quality												
		43 (26896825)		4												
		37 (23999759)		4												
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	2	2	3	11	0	0	0	0	0	0	0
		References		Study Quality												
		43 (26896825)		4												
		37 (23999759)		4												
CT chest with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	1	8	5	0	0	0	0	0	0
		References		Study Quality												
		19 (16816073)		4												
		36 (28287945)		4												

20 (-3131525)	4
38 (26270122)	4
39 (3016626)	3
40 (19480243)	3
41 (19019416)	4
42 (17765466)	3
37 (23999759)	4

CT chest without IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	4	5	1	1	3	2	0	0	0

References	Study Quality
19 (16816073)	4
36 (28287945)	4
20 (-3131525)	4
38 (26270122)	4
39 (3016626)	3
40 (19480243)	3
41 (19019416)	4
42 (17765466)	3
37 (23999759)	4

CT chest without and with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	2	10	2	0	0	0	0	0	0

References	Study Quality
19 (16816073)	4
36 (28287945)	4
20 (-3131525)	4
38 (26270122)	4
39 (3016626)	3
40 (19480243)	3
41 (19019416)	4
42 (17765466)	3

		37 (23999759)		4												
CT head with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	2	2	4	10	0	0	0	0	0	0	0	
		References		Study Quality												
		43 (26896825)		4												
		37 (23999759)		4												
CT head without IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	2	2	6	5	1	1	2	0	1	0	0	
		References		Study Quality												
		43 (26896825)		4												
		37 (23999759)		4												
CT head without and with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	6	4	2	1	3	0	0	0	0	
		References		Study Quality												
		43 (26896825)		4												
		37 (23999759)		4												
MRI pelvis without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	2	10	2	0	0	0	0	0	0	
		References		Study Quality												
		44 (25126425)		4												
		45 (22085657)		4												
		46 (28189211)		3												
MRI pelvis without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	1	10	3	0	0	0	0	0	0	
		References		Study Quality												
		44 (25126425)		4												
		45 (22085657)		4												
		46 (28189211)		3												

FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	8	6	0	0	2	0	0	0	0

References	Study Quality
47 (26868372)	4

MRI head without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	10	4	1	0	0	0	0	1	0

References	Study Quality
43 (26896825)	4
37 (23999759)	4

MRI head without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	9	4	0	0	2	0	0	1	0

References	Study Quality
43 (26896825)	4
37 (23999759)	4

Variant 2: Staging and risk assessment: suspected or established diagnosis of gestational trophoblastic neoplasia (GTN).

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US pelvis transvaginal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	1	0	0	1	2	3	9

References	Study Quality
44 (25126425)	4
15 (23159816)	4
37 (23999759)	4
45 (22085657)	4
51 (22696814)	4
52 (21738043)	4
53 (25396428)	3
54 (9808132)	4

		55 (22807194)		4												
US duplex Doppler pelvis	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	0	1	4	7	2
		References		Study Quality												
		34 (26735221)		4												
		56 (22374461)		3												
		57 (22262502)		3												
		58 (23759086)		3												
		59 (26257463)		2												
US pelvis transabdominal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	1	0	5	7	1
		References		Study Quality												
		32 (23416812)		3												
Radiography chest	Usually appropriate	Limited	☢ <0.1 mSv	☢ <0.03 mSv [ped]	8	8	0	0	1	1	1	1	3	4	5
		References		Study Quality												
		6 (26092638)		4												
		7 (25341573)		4												
		36 (28287945)		4												
		20 (-3131525)		4												
		38 (26270122)		4												
		39 (3016626)		3												
		60 (22730711)		4												
CT abdomen and pelvis with IV contrast	Usually appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	7	7	0	0	1	0	6	1	5	1	2
		References		Study Quality												
		6 (26092638)		4												
		36 (28287945)		4												
CT chest with IV contrast	Usually appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	7	7	0	0	0	1	5	1	6	1	2

References	Study Quality
7 (25341573)	4
19 (16816073)	4
36 (28287945)	4
20 (-3131525)	4
38 (26270122)	4
39 (3016626)	3
40 (19480243)	3
41 (19019416)	4
42 (17765466)	3
37 (23999759)	4
60 (22730711)	4

MRI pelvis without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	3	0	7	4	0

References	Study Quality
44 (25126425)	4
14 (26775357)	4
15 (23159816)	4
17 (27424358)	2
46 (28189211)	3
52 (21738043)	4
61 (16546459)	4
65 (27001388)	4

MRI head without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	0	4	6	2	2	0

References	Study Quality
6 (26092638)	4
12 (25118474)	4
16 (23803756)	4
61 (16546459)	4
62 (20795342)	4

CT chest without IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	0	1	8	1	2	2	0

References	Study Quality
7 (25341573)	4
19 (16816073)	4
36 (28287945)	4
20 (-3131525)	4
38 (26270122)	4
39 (3016626)	3
40 (19480243)	3
41 (19019416)	4
42 (17765466)	3
37 (23999759)	4
60 (22730711)	4

CT head with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	5	5	0	0	1	2	10	2	1	0	0

References	Study Quality
6 (26092638)	4
12 (25118474)	4
16 (23803756)	4
43 (26896825)	4
37 (23999759)	4
61 (16546459)	4
62 (20795342)	4

MRI pelvis without IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	0	2	1	6	3	1	1	0

References	Study Quality
44 (25126425)	4
14 (26775357)	4
15 (23159816)	4

References	Study Quality
17 (27424358)	2
46 (28189211)	3
52 (21738043)	4
61 (16546459)	4
65 (27001388)	4

FDG-PET/CT skull base to mid-thigh	May be appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	1	1	9	0	3	0	0

References	Study Quality
67 (17218850)	4
47 (26868372)	4
66 (16220307)	3
68 (23314259)	3
69 (16356798)	4

CT abdomen and pelvis without IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	3	3	3	4	2	3	2	0	0	0	0

References	Study Quality
6 (26092638)	4
36 (28287945)	4

MRI head without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	0	5	3	0	5	0	1	0	0

References	Study Quality
6 (26092638)	4
12 (25118474)	4
16 (23803756)	4
61 (16546459)	4
62 (20795342)	4

CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	2	2	3	5	4	0	2	0	0	0	0

References	Study Quality

		6 (26092638)		4												
		36 (28287945)		4												
CT chest without and with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	1	8	4	0	1	0	0	0	0	
		References		Study Quality												
		7 (25341573)		4												
		19 (16816073)		4												
		20 (-3131525)		4												
		38 (26270122)		4												
		39 (3016626)		3												
		40 (19480243)		3												
		41 (19019416)		4												
		42 (17765466)		3												
		37 (23999759)		4												
		60 (22730711)		4												
CT head without IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	2	2	1	7	1	1	4	0	0	0	0	
		References		Study Quality												
		6 (26092638)		4												
		12 (25118474)		4												
		16 (23803756)		4												
		43 (26896825)		4												
		37 (23999759)		4												
		61 (16546459)		4												
		62 (20795342)		4												
CT head without and with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	1	8	0	0	4	1	0	0	0	
		References		Study Quality												
		6 (26092638)		4												
		12 (25118474)		4												

16 (23803756)	4
43 (26896825)	4
37 (23999759)	4
61 (16546459)	4
62 (20795342)	4

Variant 3: Surveillance of GTN, including refractory, relapsed, or quiescent GTN.

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]	8	8	0	0	1	0	4	1	2	6	2
References				Study Quality											
16 (23803756)				4											
18 (20495216)				4											
US duplex Doppler pelvis	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	1	0	0	3	8	2
References				Study Quality											
57 (22262502)				3											
61 (16546459)				4											
US pelvis transvaginal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	1	0	1	10	2
References				Study Quality											
2 (22244665)				4											
13 (20739008)				4											
61 (16546459)				4											
CT chest with IV contrast	Usually appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	7	7	0	0	1	0	3	2	3	5	2
References				Study Quality											
16 (23803756)				4											

		18 (20495216)		4												
		71 (16404359)		3												
MRI head without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	0	0	10	3	1	
		References		Study Quality												
		12 (25118474)		4												
		61 (16546459)		4												
US pelvis transabdominal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	1	4	3	4	2	
		References		Study Quality												
		32 (23416812)		3												
MRI pelvis without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	0	3	6	3	1	1	
		References		Study Quality												
		44 (25126425)		4												
		16 (23803756)		4												
		17 (27424358)		2												
		45 (22085657)		4												
		61 (16546459)		4												
		24 (19552948)		4												
CT abdomen and pelvis without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	5	5	2	6	1	1	2	0	1	1	0	
		References		Study Quality												
		16 (23803756)		4												
		18 (20495216)		4												
CT chest without IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	0	0	9	1	3	1	0	
		References		Study Quality												
		16 (23803756)		4												

		18 (20495216)		4												
		71 (16404359)		3												
CT head with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	5	5	0	0	0	0	8	3	2	1	0	
		References		Study Quality												
		6 (26092638)		4												
CT head without and with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	1	1	3	2	6	2	1	0	0	
		References		Study Quality												
		6 (26092638)		4												
MRI head without IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	5	2	0	3	2	2	0	0	
		References		Study Quality												
		12 (25118474)		4												
		61 (16546459)		4												
MRI pelvis without IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	1	0	1	0	8	2	1	1	0	
		References		Study Quality												
		44 (25126425)		4												
		16 (23803756)		4												
		17 (27424358)		2												
		45 (22085657)		4												
		61 (16546459)		4												
		24 (19552948)		4												
FDG-PET/CT skull base to mid-thigh	May be appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	1	1	7	4	1	0	0	
		References		Study Quality												
		67 (17218850)		4												
		10 (20673583)		4												

	66 (16220307)	3														
	69 (16356798)	4														
	72 (17165434)	4														
CT abdomen and pelvis without IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	3	3	2	5	1	0	4	1	0	1	0	
	References	Study Quality														
	16 (23803756)	4														
	18 (20495216)	4														
CT head without IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	3	3	2	5	1	0	6	0	0	0	0	
	References	Study Quality														
	6 (26092638)	4														
Radiography chest	Usually not appropriate	Expert Consensus	☢ <0.1 mSv	☢ <0.03 mSv [ped]	3	3	1	5	4	1	2	0	0	1	0	
CT chest without and with IV contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	2	6	2	1	1	1	0	1	0	
	References	Study Quality														
	16 (23803756)	4														
	18 (20495216)	4														
	71 (16404359)	3														

Variant 4: Assessment of complications: GTD and GTN.

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]	7	7	0	0	0	0	4	1	5	3	3
	References	Study Quality													
	16 (23803756)	4													

CT chest with IV contrast	Usually appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	7	7	0	0	1	0	5	2	3	3	2

References	Study Quality
44 (25126425)	4
45 (22085657)	4

US pelvis transvaginal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	4	1	4	3	4

References	Study Quality
44 (25126425)	4
61 (16546459)	4

CT head without IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	6	6	0	0	0	1	6	6	0	1	0

References	Study Quality
16 (23803756)	4

MRI head without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	1	7	4	3	1	0

References	Study Quality
16 (23803756)	4

US duplex Doppler pelvis	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	1	0	5	3	1	3	3

References	Study Quality
44 (25126425)	4

CT abdomen and pelvis without IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	0	1	7	4	1	1	0

References	Study Quality
16 (23803756)	4

CT abdomen and pelvis without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	5	5	1	0	1	2	3	5	1	1	0

		References		Study Quality												
		16 (23803756)		4												
CT chest without IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	0	0	10	2	1	1	0	
		References		Study Quality												
		44 (25126425)		4												
		45 (22085657)		4												
CT chest without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	2	1	2	5	1	2	1	0	
		References		Study Quality												
		44 (25126425)		4												
		45 (22085657)		4												
CT head with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	5	5	0	0	2	0	7	3	4	0	0	
		References		Study Quality												
		16 (23803756)		4												
CT head without and with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	0	0	11	2	0	1	0	
		References		Study Quality												
		16 (23803756)		4												
MRI head without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	0	11	2	0	1	0	
		References		Study Quality												
		16 (23803756)		4												
MRI pelvis without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	1	1	7	4	0	1	0	
		References		Study Quality												
		75 (29052024)		4												

MRI pelvis without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	2	8	4	2	0	0
	References		Study Quality												
	75 (29052024)		4												
US pelvis transabdominal	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	1	7	4	1	1	0
	References		Study Quality												
	32 (23416812)		3												
	37 (23999759)		4												
Radiography chest	May be appropriate	Limited	☢ <0.1 mSv	☢ <0.03 mSv [ped]	5	5	0	0	1	2	7	3	0	1	0
	References		Study Quality												
	44 (25126425)		4												
	45 (22085657)		4												
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	5	5	2	0	2	1	0	0	1

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.**