American College of Radiology
ACR Appropriateness Criteria®

Noncerebral Vasculitis

Variant 1: Suspected large-vessel vasculitis (LVV). Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA chest abdomen pelvis with IV contrast	Usually appropriate	Strong	☢☢☢☢☢ 30-100 mSv	☢☢☢☢☢ 10-30 mSv [ped]	9	9	0	0	0	0	0	0	2	7	11

References	Study Quality
27 (24925329)	4
35 (27472684)	2
26 (29600479)	3
29 (29313811)	Good
36 (28736805)	4
37 (28911987)	3
28 (25399944)	4
31 (23873881)	2
39 (27931962)	4
32 (24643395)	3
38 (29362158)	3
25 (25654393)	2
33 (29637252)	4
34 (29927635)	3
30 (29880442)	3
24 (25405825)	4
40 (29531788)	4

MRA chest abdomen pelvis without and with IV contrast	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	2	0	1	1	3	7	6

References	Study Quality
76 (26720837)	2
29 (29313811)	Good
73 (28322426)	2
22 (29358285)	4
53 (29666047)	1
75 (28757178)	4
74 (25665823)	3
54 (26553537)	4

FDG-PET/CT whole body	Usually appropriate	Strong	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	8	8	1	0	0	0	0	1	7	5	5

References	Study Quality
35 (27472684)	2
55 (27367985)	3
42 (26376404)	2
59 (25671403)	3
48 (25254211)	2
58 (24875577)	2
44 (24008434)	4
70 (28916549)	1
36 (28736805)	4
37 (28911987)	3
63 (28180963)	2
47 (29131857)	3
45 (27068039)	4
22 (29358285)	4
60 (28856429)	4
46 (29145713)	1
61 (29465347)	3

MRA chest abdomen pelvis with IV contrast	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	2	0	3	8	7

References	Study Quality
43 (25695092)	2
51 (27925577)	1
15 (30066157)	3
72 (29671039)	1
38 (29362158)	3
71 (24665112)	1
66 (29903537)	3
53 (29666047)	1
33 (29637252)	4
62 (29799393)	2
49 (25860208)	4
34 (29927635)	3
64 (28109928)	1
57 (26250689)	2
56 (29427822)	4
13 (30887249)	4
14 (30848549)	2
50 (30120746)	4
52 (-3185009)	4
54 (26553537)	4
65 (32145885)	4
67 (31081519)	1
68 (31649025)	2
69 (30976984)	3
76 (26720837)	2
29 (29313811)	Good
73 (28322426)	2
22 (29358285)	4

53 (29666047)	1
75 (28757178)	4
74 (25665823)	3
54 (26553537)	4

CT chest abdomen pelvis with IV contrast	Usually appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	7	7	0	0	1	0	1	1	11	4	1

References	Study Quality
32 (24643395)	3
34 (29927635)	3

CT chest abdomen pelvis without and with IV contrast	Usually appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	7	7	0	0	1	0	4	4	5	4	1

References	Study Quality
32 (24643395)	3
34 (29927635)	3

CTA coronary arteries with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	6	6	0	0	0	2	7	8	2	0	0

References	Study Quality
41 (24009351)	3

MRA chest abdomen pelvis without IV contrast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	6	6	0	0	1	2	4	9	3	0	0

References	Study Quality
76 (26720837)	2
29 (29313811)	Good
73 (28322426)	2
22 (29358285)	4
53 (29666047)	1
75 (28757178)	4
74 (25665823)	3
54 (26553537)	4

MRI chest abdomen pelvis without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	2	0	6	3	5	3	0

References	Study Quality
76 (26720837)	2

MRA neck without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	1	2	1	11	2	0	2	0

References	Study Quality
68 (31649025)	2

US duplex Doppler upper extremity	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	5	5	1	0	0	1	8	8	1	0	0

References	Study Quality
83 (26764900)	4
85 (25659455)	2
78 (29982780)	4
23 (28460064)	4
77 (28503707)	2
81 (26016760)	1
84 (27059104)	1
2 (29982778)	4
79 (30526899)	4
40 (29531788)	4
80 (24106211)	3
82 (29862043)	4

MRA neck with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	1	0	1	1	6	1	5	4	0

References	Study Quality
68 (31649025)	2

MRA neck without IV contrast	May be appropriate	Moderate	O 0 mSv	O 0 mSv [ped]	4	4	1	0	3	8	5	1	0	1	0

References	Study Quality

		68 (31649025)		2												
Arteriography chest abdomen pelvis	May be appropriate	Limited	Varies	Varies	4	4	4	1	2	3	7	0	1	1	0	
		References		Study Quality												
		22 (29358285)		4												
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	3	3	8	2	6	1	2	1	0	0	0	
		References		Study Quality												
		32 (24643395)		3												
		34 (29927635)		3												
US duplex Doppler lower extremity	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	2	0	8	3	5	0	1	0	0	
		References		Study Quality												
		77 (28503707)		2												
US duplex Doppler iliofemoral arteries	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	7	1	4	5	2	0	0	0	0	
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	1	0	10	0	5	3	0	0	0	
		References		Study Quality												
		76 (26720837)		2												
MRA coronary arteries without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	9	7	1	1	0	1	0	0	0	
MRI heart function and morphology without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	6	6	6	1	0	0	0	0	0	
US duplex Doppler aorta abdomen	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	3	8	1	0	0	0	0	0	
		References		Study Quality												
		77 (28503707)		2												

US duplex Doppler chest abdomen pelvis	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	8	4	0	0	0	0	0	0
	References			Study Quality											
	78 (29982780)			4											
MRA coronary arteries without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	11	4	2	0	1	1	1	0	0
MRI heart function and morphology without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	12	2	4	0	1	0	1	0	0

Variant 2: Suspected medium-vessel vasculitis (MVV). Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA chest abdomen pelvis with IV contrast	Usually appropriate	Limited	☢☢☢☢☢ 30-100 mSv	☢☢☢☢☢ 10-30 mSv [ped]	8	8	1	0	0	1	2	2	2	7	5
	References			Study Quality											
	89 (24824975)			4											
	88 (26692417)			4											
Arteriography chest abdomen pelvis	Usually appropriate	Limited	Varies	Varies	7	7	1	0	0	1	0	3	8	5	1
	References			Study Quality											
	86 (30698353)			4											
	87 (25241888)			4											
CTA coronary arteries with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	6	6	0	0	2	0	4	4	7	2	0
	References			Study Quality											
	7 (27056781)			4											
	90 (27443748)			4											

CT chest abdomen pelvis with IV contrast	May be appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	6	6	0	0	0	1	6	10	1	0	1
	References		Study Quality												
	88 (26692417)		4												
MRA chest abdomen pelvis with IV contrast	May be appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	6	6	0	0	1	0	8	5	2	3	0
CT chest abdomen pelvis without and with IV contrast	May be appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	5	5	1	0	0	0	9	8	0	0	1
	References		Study Quality												
	88 (26692417)		4												
MRA chest abdomen pelvis without IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	1	0	8	1	5	1	2	1	0
MRA chest abdomen pelvis without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	0	1	6	7	1	1	3	0
MRI heart function and morphology without and with IV contrast	May be appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	4	4	4	5	0	3	5	2	0	0	0
MRI chest abdomen pelvis without and with IV contrast	May be appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	4	4	4	5	0	2	6	1	0	1	0
CT chest abdomen pelvis without IV contrast	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	3	3	6	3	5	4	0	1	0	1	0
	References		Study Quality												
	88 (26692417)		4												
MRA coronary arteries without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	5	5	1	0	1	0	0	0
MRA neck without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	9	10	0	0	0	0	0	0	0

MRA neck without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	7	5	0	0	0	0	0	0
MRI heart function and morphology without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	3	0	2	5	1	0	0	0
FDG-PET/CT whole body	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	7	7	5	0	0	0	0	0	0

References	Study Quality
91 (29035930)	4

US duplex Doppler aorta abdomen	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	9	8	2	0	0	0	0	0	0
US duplex Doppler lower extremity	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	10	1	0	0	0	0	0	0
US duplex Doppler upper extremity	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	9	2	0	0	0	0	0	0
US duplex Doppler iliofemoral arteries	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	10	1	0	0	0	0	0	0
MRI chest abdomen pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	9	2	4	2	1	2	0	0	0
MRA neck with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	7	5	0	0	0	0	0	0
US duplex Doppler chest abdomen pelvis	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	9	1	1	0	0	0	0	0
MRA coronary arteries without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	11	7	1	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.**