

**American College of Radiology
ACR Appropriateness Criteria®**

Myelopathy

Variant 1: Acute onset myelopathy. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
MRI spine area of interest without IV contrast	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	1	2	4	9

References	Study Quality
47 (21743997)	4
14 (19525791)	3
43 (19901954)	3
37 (20494809)	3
56 (9715996)	4
7 (7477839)	4
13 (3257332)	4
36 (10735767)	3
57 (9517765)	3
63 (26822746)	4
40 (26243328)	2
55 (26677112)	4
33 (25025170)	4
4 (24788128)	4
52 (29449281)	2
53 (27267643)	4
54 (27007482)	4
34 (23917647)	4

42 (24838831)	4
45 (27645347)	4
35 (27509189)	2
12 (29500319)	4
38 (28498290)	4
58 (27480991)	4
39 (26077097)	2
21 (29332032)	2
32 (27175620)	2
41 (24411833)	4
59 (28749553)	4
60 (30694379)	4
28 (29627015)	4
61 (30300457)	4
67 (29358319)	4
69 (30015803)	4
70 (26564433)	4
44 (22733920)	4
27 (25324492)	4
62 (26009002)	4
64 (25248365)	4
68 (29275977)	4
50 (16977443)	4
49 (10851403)	4

MRI spine area of interest without and with IV contrast	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	0	1	0	4	4	7
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References	Study Quality
47 (21743997)	4
14 (19525791)	3
43 (19901954)	3
37 (20494809)	3

56 (9715996)	4
7 (7477839)	4
13 (3257332)	4
36 (10735767)	3
57 (9517765)	3
63 (26822746)	4
40 (26243328)	2
55 (26677112)	4
33 (25025170)	4
4 (24788128)	4
52 (29449281)	2
53 (27267643)	4
54 (27007482)	4
34 (23917647)	4
42 (24838831)	4
45 (27645347)	4
35 (27509189)	2
12 (29500319)	4
38 (28498290)	4
58 (27480991)	4
39 (26077097)	2
21 (29332032)	2
32 (27175620)	2
41 (24411833)	4
59 (28749553)	4
60 (30694379)	4
28 (29627015)	4
61 (30300457)	4
67 (29358319)	4
69 (30015803)	4
70 (26564433)	4

44 (22733920)	4
27 (25324492)	4
62 (26009002)	4
64 (25248365)	4
68 (29275977)	4
50 (16977443)	4
49 (10851403)	4

CT myelography spine area of interest	May be appropriate	Limited	Varies	Varies	6	6	0	0	0	0	4	12	0	1	0
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References	Study Quality
14 (19525791)	3
73 (3485355)	4
13 (3257332)	4
74 (28457932)	3
72 (30614510)	4
15 (19967536)	2

CT spine area of interest without IV contrast	May be appropriate	Limited	Varies	Varies	5	5	1	0	1	0	7	7	0	0	0
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References	Study Quality
14 (19525791)	3
13 (3257332)	4
76 (26708079)	4
75 (16523124)	4
15 (19967536)	2

CT spine area of interest with IV contrast	May be appropriate	Limited	Varies	Varies	4	4	0	2	3	8	2	2	0	0	0
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References	Study Quality
14 (19525791)	3
13 (3257332)	4
76 (26708079)	4
75 (16523124)	4

33 (25025170)	4
4 (24788128)	4
52 (29449281)	2
53 (27267643)	4
54 (27007482)	4
34 (23917647)	4
42 (24838831)	4
45 (27645347)	4
35 (27509189)	2
12 (29500319)	4
38 (28498290)	4
58 (27480991)	4
39 (26077097)	2
21 (29332032)	2
32 (27175620)	2
41 (24411833)	4
59 (28749553)	4
60 (30694379)	4
28 (29627015)	4
61 (30300457)	4
67 (29358319)	4
69 (30015803)	4
70 (26564433)	4
44 (22733920)	4
27 (25324492)	4
62 (26009002)	4
64 (25248365)	4
68 (29275977)	4
50 (16977443)	4
49 (10851403)	4

CTA spine area of interest with IV contrast	Usually not appropriate	Limited	Varies	Varies	3	3	4	4	1	5	2	0	0	0	0	
		References		Study Quality												
		12 (29500319)		4												
		15 (19967536)		2												
MRA spine area of interest with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0	
		References		Study Quality												
		12 (29500319)		4												
		71 (30207937)		4												
MRA spine area of interest with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	3	4	3	5	1	3	0	0	0	0	
		References		Study Quality												
		12 (29500319)		4												
		71 (30207937)		4												
MRA spine area of interest without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	3	4	4	5	1	2	0	0	0	0	
		References		Study Quality												
		12 (29500319)		4												
		71 (30207937)		4												
MRA spine area of interest without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0	
		References		Study Quality												
		12 (29500319)		4												
		71 (30207937)		4												
MRA spine area of interest without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0	
		References		Study Quality												
		12 (29500319)		4												
		71 (30207937)		4												

42 (24838831)	4
82 (30602797)	4
83 (29502317)	4
35 (27509189)	2
89 (28831529)	4
12 (29500319)	4
38 (28498290)	4
39 (26077097)	2
21 (29332032)	2
90 (30109382)	4
11 (24756535)	4
32 (27175620)	2
41 (24411833)	4
84 (26965759)	4
91 (27814888)	2
61 (30300457)	4
69 (30015803)	4
70 (26564433)	4
44 (22733920)	4
92 (18084751)	4
93 (25091110)	4
94 (15526223)	4
95 (26235013)	3
96 (26430598)	4
97 (20212227)	4
62 (26009002)	4
86 (29490181)	4
87 (23186906)	4
85 (29773568)	4
78 (29545250)	2
79 (23348759)	4

MRI spine area of interest without IV contrast	Usually appropriate	80 (28338452)			4		0	0	0	0	0	0	3	6	7
		Strong	0 0 mSv	0 0 mSv [ped]	8	8									
		References	Study Quality												
		9 (24986469)			4										
		14 (19525791)			3										
		43 (19901954)			3										
		37 (20494809)			3										
		13 (3257332)			4										
		88 (19213818)			4										
		36 (10735767)			3										
		63 (26822746)			4										
		40 (26243328)			2										
		33 (25025170)			4										
		81 (27074180)			Good										
		34 (23917647)			4										
		42 (24838831)			4										
		82 (30602797)			4										
		83 (29502317)			4										
		35 (27509189)			2										
		89 (28831529)			4										
		12 (29500319)			4										
		38 (28498290)			4										
		39 (26077097)			2										
		21 (29332032)			2										
		90 (30109382)			4										
		11 (24756535)			4										
		32 (27175620)			2										
		41 (24411833)			4										
		84 (26965759)			4										
		91 (27814888)			2										

61 (30300457)	4
69 (30015803)	4
70 (26564433)	4
44 (22733920)	4
92 (18084751)	4
93 (25091110)	4
94 (15526223)	4
95 (26235013)	3
96 (26430598)	4
97 (20212227)	4
62 (26009002)	4
86 (29490181)	4
87 (23186906)	4
85 (29773568)	4
78 (29545250)	2
79 (23348759)	4
80 (28338452)	4

CT spine area of interest without IV contrast	May be appropriate	Limited	Varies	Varies	6	6	1	0	0	2	5	8	0	0	0
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References	Study Quality
14 (19525791)	3
13 (3257332)	4

CT myelography spine area of interest	May be appropriate	Limited	Varies	Varies	6	6	1	0	0	0	4	8	2	1	0
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References	Study Quality
73 (3485355)	4
72 (30614510)	4
98 (28247081)	4
79 (23348759)	4
80 (28338452)	4

MRI spine area of interest with IV contrast	Usually not appropriate	Strong	0 0 mSv	0 0 mSv [ped]	2	2	6	3	5	0	1	1	0	1	0
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References	Study Quality
9 (24986469)	4
14 (19525791)	3
43 (19901954)	3
37 (20494809)	3
13 (3257332)	4
88 (19213818)	4
36 (10735767)	3
63 (26822746)	4
40 (26243328)	2
33 (25025170)	4
81 (27074180)	Good
34 (23917647)	4
42 (24838831)	4
82 (30602797)	4
83 (29502317)	4
35 (27509189)	2
89 (28831529)	4
12 (29500319)	4
38 (28498290)	4
39 (26077097)	2
21 (29332032)	2
90 (30109382)	4
11 (24756535)	4
32 (27175620)	2
41 (24411833)	4
84 (26965759)	4
91 (27814888)	2
61 (30300457)	4

69 (30015803)	4
70 (26564433)	4
44 (22733920)	4
92 (18084751)	4
93 (25091110)	4
94 (15526223)	4
95 (26235013)	3
96 (26430598)	4
97 (20212227)	4
62 (26009002)	4
86 (29490181)	4
87 (23186906)	4
85 (29773568)	4
78 (29545250)	2
79 (23348759)	4
80 (28338452)	4

CTA spine area of interest with IV contrast	Usually not appropriate	Limited	Varies	Varies	2	2	8	3	3	2	0	1	0	0	0
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References	Study Quality
99 (29114089)	4
100 (28366753)	4

MRA spine area of interest without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	2	2	7	3	2	1	3	0	0	0	0
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References	Study Quality
5 (28220287)	4
89 (28831529)	4
90 (30109382)	4
91 (27814888)	2

Arteriography spine area of interest	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	9	0	2	2	3	0	0	0	0
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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.