# ACR Appropriateness Criteria

## Cervical Neck Pain or Cervical Radiculopathy

### Variant 1: New or increasing nontraumatic cervical or neck pain. No “red flags.” Initial imaging.

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- Usually not appropriate
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- Study Quality: 2

### Facet injection/medial branch block cervical spine
- Usually not appropriate
- Expert Consensus: ☢☢ 0.1-1mSv
- Study Quality: 2

### MRA neck without IV contrast
- Usually not appropriate
- Expert Consensus: O 0 mSv [ped]
- Study Quality: 4

### MRA neck with IV contrast
- Usually not appropriate
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### MRI cervical spine with IV contrast
- Usually not appropriate
- Strong: O 0 mSv
- Study Quality: 9

### Bone scan whole body with SPECT or SPECT/CT neck
- Usually not appropriate
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### Variant 3: Prior cervical spine surgery. New or increasing nontraumatic cervical or neck pain or radiculopathy. Initial imaging.
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57 (2119123)
56 (2966418)
55 (11371319)
52 (23479714)
51 (23318108)
50 (23118135)
48 (18469691)
49 (16889148)
53 (26430596)
58 (11037993)
59 (9171175)
Variant 4:  Suspicion for infection with new or increasing nontraumatic cervical or neck pain or radiculopathy. Initial imaging.

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**Variant 5:** Known malignancy. New or increasing nontraumatic cervical or neck pain or radiculopathy. Initial imaging.

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**Expert Opinion**

CT cervical spine with IV contrast: May be appropriate (Disagreement)

CT cervical spine without IV contrast: May be appropriate (Disagreement)

MRI cervical spine with IV contrast: May be appropriate (Disagreement)

Bone scan whole body with SPECT or SPECT/CT neck: May be appropriate

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| CTA neck with IV contrast                      | Usually not appropriate | Expert Consensus | 1-10 mSv, 0.3-3 mSv [ped] | 1 | 1 | 10 | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 0 |
| CT myelography cervical spine                 | Usually not appropriate | Expert Consensus | 10-30 mSv, 0.3-3 mSv [ped] | 1 | 1 | 12 | 1 | 1 | 1 | 3 | 0 | 0 | 0 | 0 |
| CT cervical spine without and with IV contrast | Usually not appropriate | Limited | 1-10 mSv, 3-10 mSv [ped] | 1 | 1 | 10 | 2 | 5 | 0 | 1 | 0 | 1 | 0 | 0 |

| Discography cervical spine                    | Usually not appropriate | Expert Consensus | 0.1-1 mSv | 1 | 1 | 14 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Facet injection/medial branch block cervical spine | Usually not appropriate | Expert Consensus | 0.1-1 mSv | 1 | 1 | 16 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiographic myelography cervical spine       | Usually not appropriate | Limited | 1-10 mSv | 1 | 1 | 11 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 0 |

<p>| MRA neck without IV contrast                  | Usually not appropriate | Expert Consensus | O 0 mSv, O 0 mSv [ped] | 1 | 1 | 11 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 |</p>
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Variants:

**Variant 6:** Cervicogenic headache and new or increasing nontraumatic cervical or neck pain. No neurologic deficit. Initial imaging.

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- 90 (27634981)
- 91 (28872551)
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**Variant 7: Chronic cervical or neck pain. Initial imaging.**

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Variant 8:  Chronic cervical or neck pain. No neurologic findings. Radiographs show degenerative changes. Next imaging study.

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- 112 (19333104)
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</tr>
<tr>
<td>Facet injection/medial branch block cervical spine</td>
<td>Usually not appropriate</td>
<td>Expert</td>
<td>☢☢ 0.1-1mSv</td>
<td>1</td>
</tr>
<tr>
<td>MRA neck without IV contrast</td>
<td>Usually not appropriate</td>
<td>Expert</td>
<td>O 0 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>MRA neck with IV contrast</td>
<td>Usually not appropriate</td>
<td>Expert</td>
<td>O 0 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>MRI cervical spine with IV contrast</td>
<td>Usually not appropriate</td>
<td>Limited</td>
<td>O 0 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>References</td>
<td>Study Quality</td>
<td></td>
<td></td>
<td>122 (1636514)</td>
</tr>
<tr>
<td>Bone scan whole body with SPECT or SPECT/CT neck</td>
<td>Usually not appropriate</td>
<td>Expert</td>
<td>☢☢☢ 1-10 mSv [ped]</td>
<td>1</td>
</tr>
</tbody>
</table>
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).