American College of Radiology  
ACR Appropriateness Criteria®

Hearing Loss and/or Vertigo

Variant 1: Acquired conductive hearing loss in absence of clinically evident mass in the middle ear. Initial imaging.

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### Variants

#### Variant 2: Acquired conductive hearing loss secondary to cholesteatoma or neoplasm with suspected intracranial or inner ear extension. Surgical planning.

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### MRV head with IV contrast

- **Procedure:** MRV head with IV contrast
- **Appropriateness Category:** Usually not appropriate
- **Expert Consensus:** O 0 mSv
- **Adults RRL:** O 0 mSv
- **Peds RRL:** O 0 mSv
- **Rating:** 2, 2
- **Median:** 1, 7, 3, 2, 0, 0, 2, 0, 0

### CT head without and with IV contrast

- **Procedure:** CT head without and with IV contrast
- **Appropriateness Category:** Usually not appropriate
- **Expert Consensus:** ☢☢☢ 1-10 mSv
- **Ped RRL:** ☢☢☢☢ 3-10 mSv
- **Median:** 1, 1, 8, 3, 1, 0, 1, 2, 0, 0

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**Variant 3:** Acquired sensorineural hearing loss. Initial imaging.

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Variant 5: Congenital hearing loss or total deafness or cochlear implant candidate. Surgical planning.
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### Variant 6: Episodic vertigo with or without associated hearing loss or aural fullness (peripheral vertigo). Initial imaging.

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**Notes:**
- CT head with IV contrast: Usually not appropriate. Expert Consensus: ☢☢☢ 1-10 mSv ☢☢☢ 0.3-3 mSv [ped].
- CT head without IV contrast: Usually not appropriate. Expert Consensus: ☢☢☢ 1-10 mSv.
- CT head without and with IV contrast: Usually not appropriate. Expert Consensus: ☢☢☢ 1-10 mSv ☢☢☢ 3-10 mSv [ped].
- MRA head without IV contrast: Usually not appropriate. Expert Consensus: O 0 mSv.
- MRA head without and with IV contrast: Usually not appropriate. Expert Consensus: O 0 mSv ☢☢☢ 0 mSv [ped].
- MRV head without IV contrast: Usually not appropriate. Expert Consensus: O 0 mSv.
- MRV head with IV contrast: Usually not appropriate. Expert Consensus: O 0 mSv.
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- 3 (24314796)
- 4 (18646412)
- 5 (27430449)
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Variant 7: Persistent vertigo with or without neurological symptoms (central vertigo). Initial imaging.

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- 56 (27495834)
- 40 (22940762)
- 54 (25956665)
- 56 (27495834)
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).