

Imaging Findings	Cause
Contrast enhancement of the labyrinth or vestibular nerves	Vestibular neuritis
None or nonspecific scattered FLAIR/T2 hyperintensities.	Migrainous vertigo
Absence of bone overlying the superior semicircular canal	Semicircular canal dehiscence
Opacified mastoid air cells; fluid in the middle ear.	Otitis media
See MacDonald criteria for diagnosis.	Multiple sclerosis
TIA: none. Stroke: MRI (+) DWI acutely, followed by (+) T2, FLAIR and then (much later) (+) T1	Vertebrobasilar distribution ischemia
Controversial; asymmetry of vestibular aqueduct.	Meniere disease
Mass at the cerebellopontine angle or, more rarely, within the internal auditory canal. With longstanding tumors, there may be erosion/widening of the canal.	Vestibular schwannoma
Intra-axial or extra-axial brainstem mass.	Brainstem tumor
Abnormal contrast enhancement of the meninges, with or without nodularity.	Meningitis

## **COMBINED CHECKLIST/REPORT TEMPLATE FOR MRI DONE FOR CN VIII SYMPTOMS**

MRI BRAIN UNENHANCED [<AND CONTRAST ENHANCED>]

INDICATION: []

COMPARISON: [Check priors to see if following a known lesion.]

TECHNIQUE: []

INTERPRETATION:

Brain and CSF spaces: [Scattered lesions of the brain showing decreased SI on T1WI and increased SI on T2WI (multiple myeloma, migraine headaches with vertigo, vasculopathy). Focus of restricted diffusion in the brainstem with or without accompanying signal abnormality on other sequences (brainstem infarct). Extra-axial posterior fossa mass along the porous acousticus (vestibular schwannoma).]

Pituitary gland and pineal: []

Vasculature: [Flow limiting lesion (as a cause of vertebrobasilar TIA or stroke). Aneurysm or vertebrobasilar dolichoectasia (with compression on the brainstem or CN VII/VIII complex).]

Paranasal sinuses: []

Nasal cavity and nasopharynx: []

Otomastoid findings: [Contrast enhancing lesion along the course of the CN VII/VIII complex (vestibular schwannoma). Abnormal contrast enhancement of the labyrinth or vestibular nerves (labrynthitis).] [Opacification of the mastoid air cells (mastoiditis). Abnormal appearance of the cochlea (Mondini or other congenital deformity).]

Bones and joints: []

Orbits: []

IMPRESSION: []

## **COMBINED CHECKLIST/REPORT TEMPLATE FOR CT OF THE TEMPORAL BONES DONE FOR CONDUCTIVE HEARING LOSS**

CT TEMPORAL BONE WITHOUT IV CONTRAST

CLINICAL INFORMATION: []

COMPARISON STUDIES: [Check priors to see if following a known lesion.]

TECHNIQUE: []

INTERPRETATION:

External auditory canals: [Soft tissue density (cerumen or inflammation) or other material (foreign body).]

Ossicles/middle ear: [Abnormal ossicles (congenital deformity or absence)+] [Mass or destruction (cholesteatoma, glomus tumor). Fluid density filling the middle ear or bone destruction (middle ear effusion, otitis media).]

Cochlea: [Abnormal number of turns or dilated vestibule (congenital deformity).]

Semicircular canals: [Destruction (otitis media, cholesteatoma).]

Internal auditory canal: [Mass or expansion (acoustic schwannoma, other tumors).]

Mastoid air cells: [Opacity (mastoiditis/otitis media). Mass (cholesteatoma, squamous cell carcinoma, glomus tumor).]

Other structures: [Skin thickening or inflammation (infection extending into external auditory canal).]

IMPRESSION: []