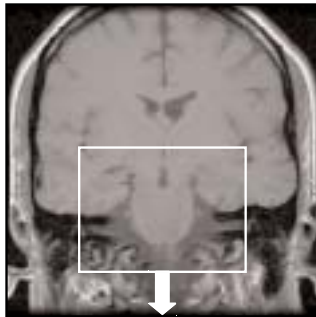


The cerebello-pontine angle

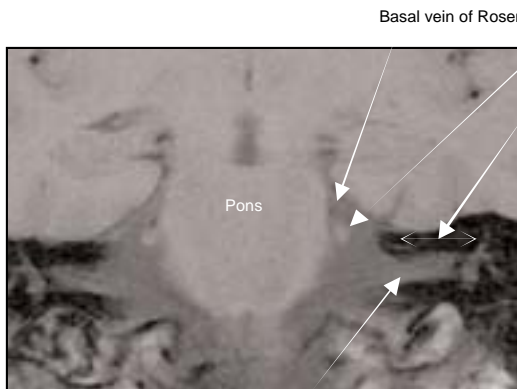
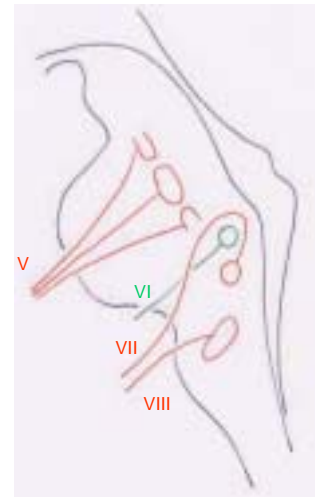
The basics. The cerebello-pontine angle is the space bound by the cerebellum, pons and temporal bone and contains the short intracranial courses of the fifth, seventh and eighth cranial nerves. By far the most common pathology in this area is the acoustic neuroma (or, more correctly, schwannoma) which classically gives rise to sensorineural deafness, ipsilateral facial palsy, ipsilateral cerebellar signs and trigeminal sensory loss.



Coronal MRI of the pons

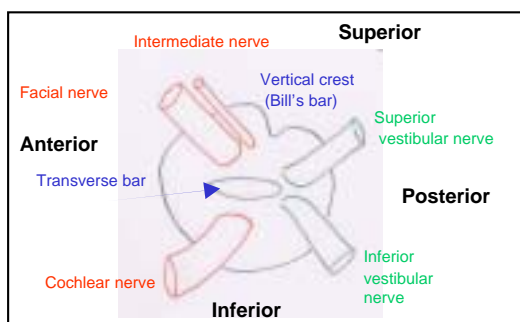
Five nerves enter the internal auditory canal:

- Facial
- Intermediate (usually enters with the facial nerve, but sometimes travels with the superior vestibular nerve)
- Cochlear
- Superior & inferior vestibular nerves

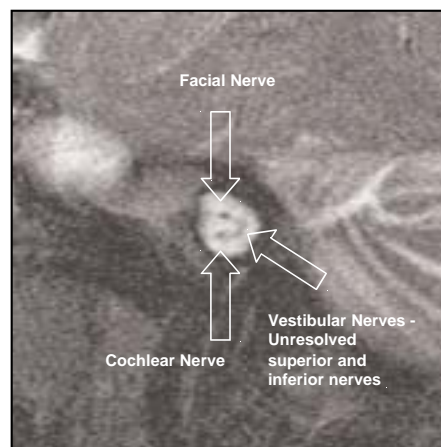


Trigeminal Nerve
Internal Auditory Canal

This image demonstrates the relationship between the nerves running in the internal auditory canal and the trigeminal nerve.

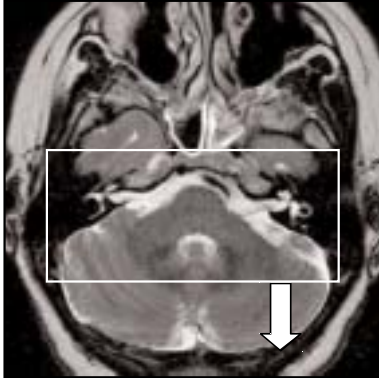


Sagittal MRI of the internal auditory meatus



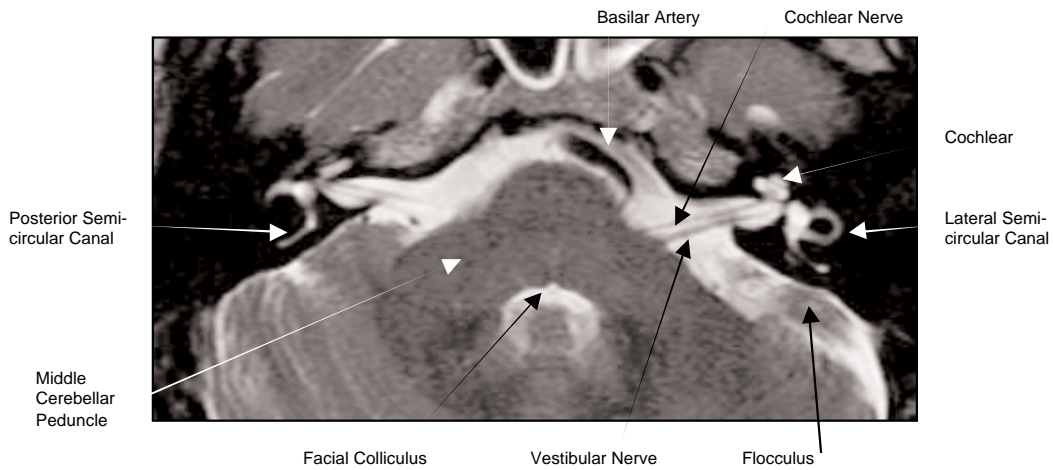
Acoustic neuromas usually (85%) arise from the inferior vestibular nerve, less often (10%) the superior vestibular nerve and never the cochlear nerve. The facial and cochlear nerves are pushed forward by a tumour of the inferior vestibular nerve.

Justin Cross and Alasdair Coles



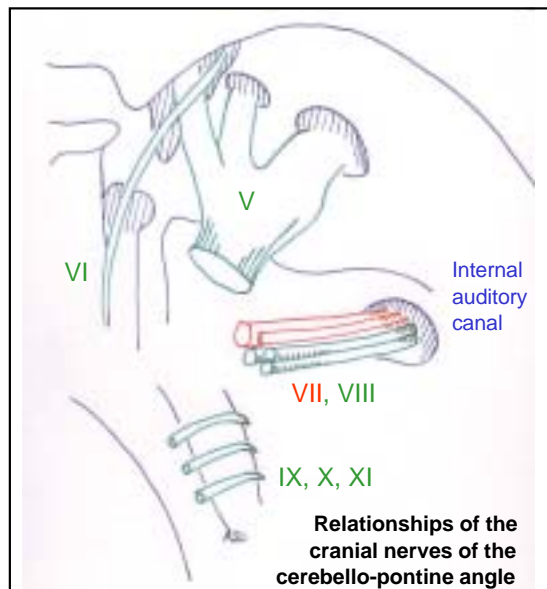
Large cerebello-pontine angle lesions may compress the pons, the ipsilateral cerebellar hemisphere, the trigeminal nerve anteriorly and superiorly, and the IX, X and XI nerves posteriorly. Although the sixth cranial nerve emerges from the anterior pons between the fifth and seventh nerves, it immediately runs upwards into the subarachnoid space around the basilar and so usually avoids compression from cerebello-pontine angle lesions.

Axial section of the pons



Cerebello-pontine angle lesions

- **75% acoustic schwannoma**
- **10% meningioma**
- **5% epidermoid**
- **Rare:**
 - Metastases
 - Paraganglioma (glomus jugulare tumours)
 - Other schwannomas (facial and trigeminal)
 - Vascular lesions



References

University of California Acoustic Neuroma team
<http://itsa.ucsf.edu/~rkj/IndexAN.html>
 Johns Hopkins Acoustic Neuroma Textbook
<http://www.med.jhu.edu/radiosurgery/braintumors/acoustic/textbook/>

