Cochleovestibular Anomalies

- 35% have anomalous cochleovestibular anatomy

<table>
<thead>
<tr>
<th>Cochleovestibular Anomalies</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>common cavity</td>
<td>8</td>
</tr>
<tr>
<td>hypoplastic cochlea</td>
<td>16</td>
</tr>
<tr>
<td>incomplete partition</td>
<td>42</td>
</tr>
<tr>
<td>vestibular aqueduct enlargement (isolated anomaly)</td>
<td>37</td>
</tr>
</tbody>
</table>

incomplete partition I
Intraoperative findings and anomalies of the middle ear encountered in this series

**Complication**
- perilymph/CSF leak
  - requiring CLCFD$^+$
- wound Infection
- non-stimulation
- facial nerve weakness

**Abnormal Middle Ear Anatomy**
- stapes abnormal only
- nerve anteriorly displaced

$^+$ continuous lumbar cerebrospinal fluid drainage
$^*$ explanted temporarily/permanently
$^\dagger$ one explanted

\[7 + 18 = 25/103 \ (24\%)\]
Gusher Majoris
Problematic Anatomy

- Anteriorly displaced CN VII
- Prominent sinus pericrani
- Hypoplastic cochlea
CHARGE – Yikes!
Cochleovestibular Anomalies

common cavity
Speech Perception Tests in Anomalous Cochleae
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- **TAC score**

- **pre**
- **post**

- Normal
- IAC
Speech Perception Tests in Anomalous Cochleae

![Graph showing TAC score comparison between Normal and IAC conditions pre and post intervention.](image)
Current Opinion

- most anomalies are implantable
- they are technically challenging
- results are generally good
- narrow or absent nerves concerning