

# Potential Bias in Facial Nerve Outcome Reporting After Vestibular Schwannoma Surgery: A Systematic Review



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## Background

- Facial nerve function is a key outcome after vestibular schwannoma (VS) resection<sup>1,2</sup>
- The House-Brackman (HB) scale, a clinician-rated assessment, is the most widely used tool for reporting postoperative facial nerve outcomes<sup>3,4</sup>
- Limitations inherent to self-scoring facial nerve outcomes by the surgical team introduce a significant risk of bias in reported outcomes

## Objective

The primary aim of this study was to review published literature and characterize how facial nerve outcomes are graded and reported.

## Methods

### Database:

- PubMed

### Inclusion Criteria

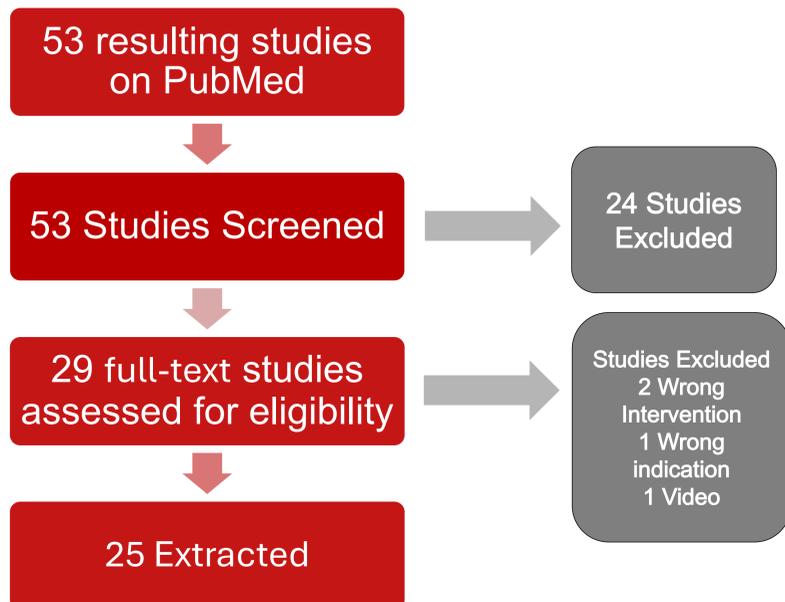
- Published between 2016-2025
- Adult patients who underwent vestibular schwannoma resection
- Reporting of postoperative facial nerve function using a grading scale

### Exclusion Criteria

- Studies without primary data, non-English studies, or studies with no full-text availability
- Non-surgical vestibular schwannoma treatments

### Outcomes

- Primary: facial nerve grading scales
- Secondary: grader and author background



## References

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3. de Ru JA, Braunius WW, van Bentham PP, Busschers WB, Hordijk GJ. Grading facial nerve function: why a new grading system, the MoReSS, should be proposed. *Otol Neurotol.* 2006;27(7):1030-1036. doi:10.1097/01.mao.0000227896.34915.4f
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5. ERAS 2026 Participating Specialties & Programs. Accessed February 6, 2026. [https://systems.aamc.org/eras/erasstats/par/display.cfm?NAV\\_ROW=PAR&SPEC\\_CD=280](https://systems.aamc.org/eras/erasstats/par/display.cfm?NAV_ROW=PAR&SPEC_CD=280)

## Results

Table 1: Search Results

Years	2016-2025
Studies	25
Case Reports	4
Retrospective	15
Prospective	6 (0 RCT)

Table 2: Facial Outcomes Grading

Grader Not Specified	19
Surgical Team Grading	3
Independent Grader	3

## Conclusions

- **Three studies had facial nerve outcomes graded by an independent grader** (i.e., not a part of the surgical team)
- **Twenty-two studies were graded by a member of the surgical team (N = 3) or an unspecified grader (N = 19).**
- **1 of 25 studies included a co-author with a special designation in facial plastic surgery.**
- **92.9%** American academic otolaryngology departments (i.e., those with AAMC residency programs) **have facial plastic and reconstructive surgeons providing facial reanimation treatments**

Table 3: Facial Plastic Surgery Specialist Academic OHNS Departments

	Number	Percentage (%)
Facial Reanimation	118	92.9
No Facial Reanimation	5	3.9
No Facial Plastic Surgeon	4	3.1

## Discussion

- While difficult to quantify, the historic norm of postoperative facial nerve outcomes grading by the surgical team presents a modifiable source of potential bias for an important surgical outcome
- The near-universal presence of Facial Plastic and Reconstructive Surgeons within academic otolaryngology departments creates a possible collaborative and multidisciplinary solution
- With recent advances in computing, surgical teams should also consider using machine learning and artificial intelligence to obtain more objective measures of facial nerve function.

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