

# Tilmelding af Foredrag

## Foredragets titel

The diagnostic accuracy of asymmetric hearing loss as a screening criterion prior to MRI: A descriptive study of patients with Vestibular Schwannoma

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## Uddannelsesniveau

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## Introduktion

In many patients with asymmetrical sensorineural hearing loss (ASHL), MRI is performed to diagnose vestibular schwannoma (VS). The extent of asymmetry differs in VS presentation, this leading to many MRI with negative findings for VS. Several screening protocols exist with different definitions of ASHL. The objective in this study was to evaluate these protocols, to select patients to MRI at a higher risk for VS.

## Materiale/metode

Our study population consisted of 807 patients diagnosed with VS, identified through diagnosis recorded at the Danish National Patient Register. Audiometric data was collected from the Hearing examinations in Southern Denmark (HESD) database. Ten screening protocols, evaluating ASHL, were applied to the patient's audiogram closest to the time of VS diagnosis (baseline audiogram). For each protocol, we calculated the sensitivity for VS.

## Resultater

69 % of the baseline audiograms were obtained within 0-179 days of the time of VS diagnose. AMCLASS protocol (ASHL  $\geq$  10 dB at  $\geq$  2 frequencies or ASHL  $\geq$  15 dB at any single frequencies) provided the highest sensitivity (95 %). Schlauch and Levine protocol (average ASHL  $\geq$  20 dB at frequencies 1-8 kHz) provided the lowest sensitivity (59 %).

## Diskussion

This study has determined sensitivity of different ASHL screening protocols varying from 59 to 95 %. A recurrent challenge is to find the best compromise between sensitivity and specificity, considering the cost of many MRIs with negative findings. To further evaluate the specificity for each protocol, we intend to apply the screening protocols on audiograms obtained from non-VS patients.

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