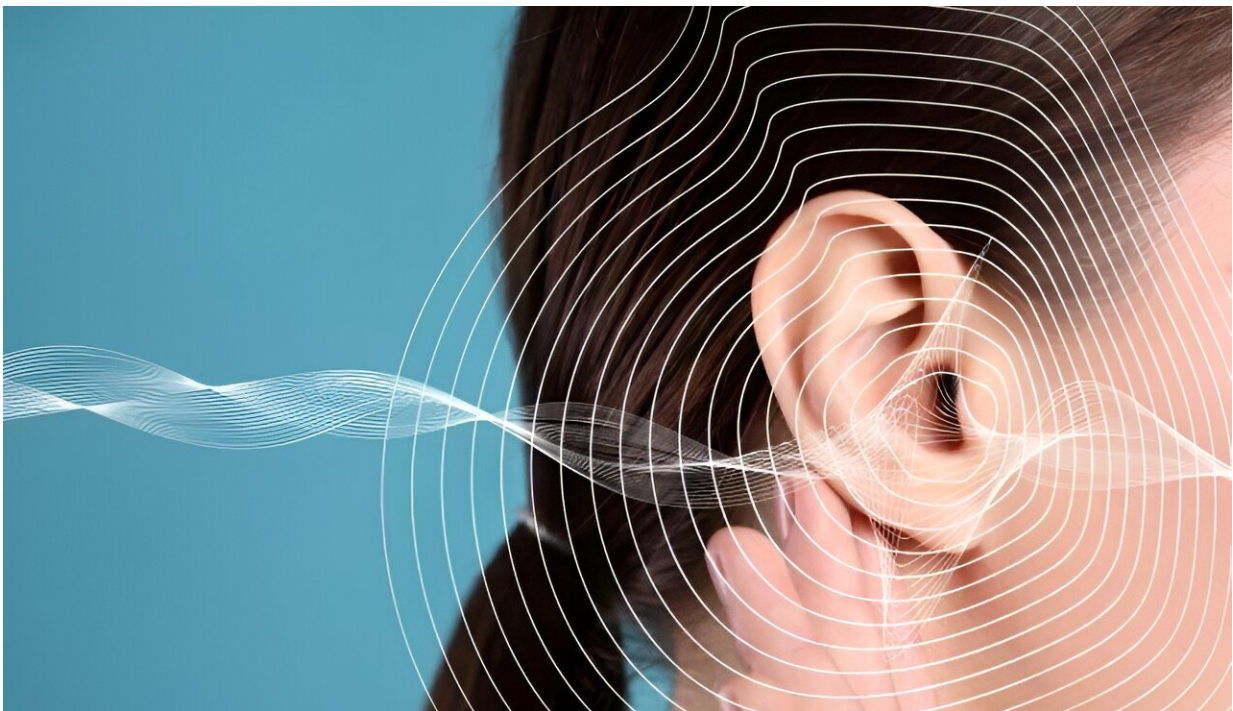


# Radiomics nomograms predict cochlear, vestibular endolymphatic hydrops in meniere disease

April 5 2024, by Elana Gotkine

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Novel radiomics nomograms successfully predict cochlear and vestibular

endolymphatic hydrops (EH) in patients with Meniere disease, according to a [study](#) published online March 8 in *European Radiology*.

Wei Chen, from Fudan University in Shanghai, and colleagues enrolled 156 patients (312 affected ears) with bilateral definite Meniere disease who underwent delayed enhancement [magnetic resonance](#) imaging scans. The ears were divided into a training and internal validation set (218 and 94, respectively).

A radiomics nomogram was constructed from features extracted from the T2-sampling perfection with application-optimized contrasts using different flip-angle evolutions (SPACE) images; a radiomics score was then calculated.

Construction of the cochlear radiomics nomogram included five features, and seven features were included in the vestibular radiomics [nomogram](#).

The researchers found that in both the training and validation cohorts, the radiomics nomograms exhibited robust performance for differentiating between EH-positive and EH-negative statuses, with the area under the receiver operating characteristic curve values being 0.703 and 0.728, respectively, for [cochlear](#) and vestibular radiomic nomograms in the training set and 0.718 and 0.701, respectively, in the validation set.

"The models showed a solid and superior performance and may play an important supporting role in EH prediction in situations where conventional EH imaging cannot be done properly," the authors write.

**More information:** Wei Chen et al, A novel radiomics nomogram based on T2-sampling perfection with application-optimized contrasts

using different flip-angle evolutions (SPACE) images for predicting cochlear and vestibular endolymphatic hydrops in Meniere's disease patients, *European Radiology* (2024). [DOI: 10.1007/s00330-024-10670-2](https://doi.org/10.1007/s00330-024-10670-2)

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