

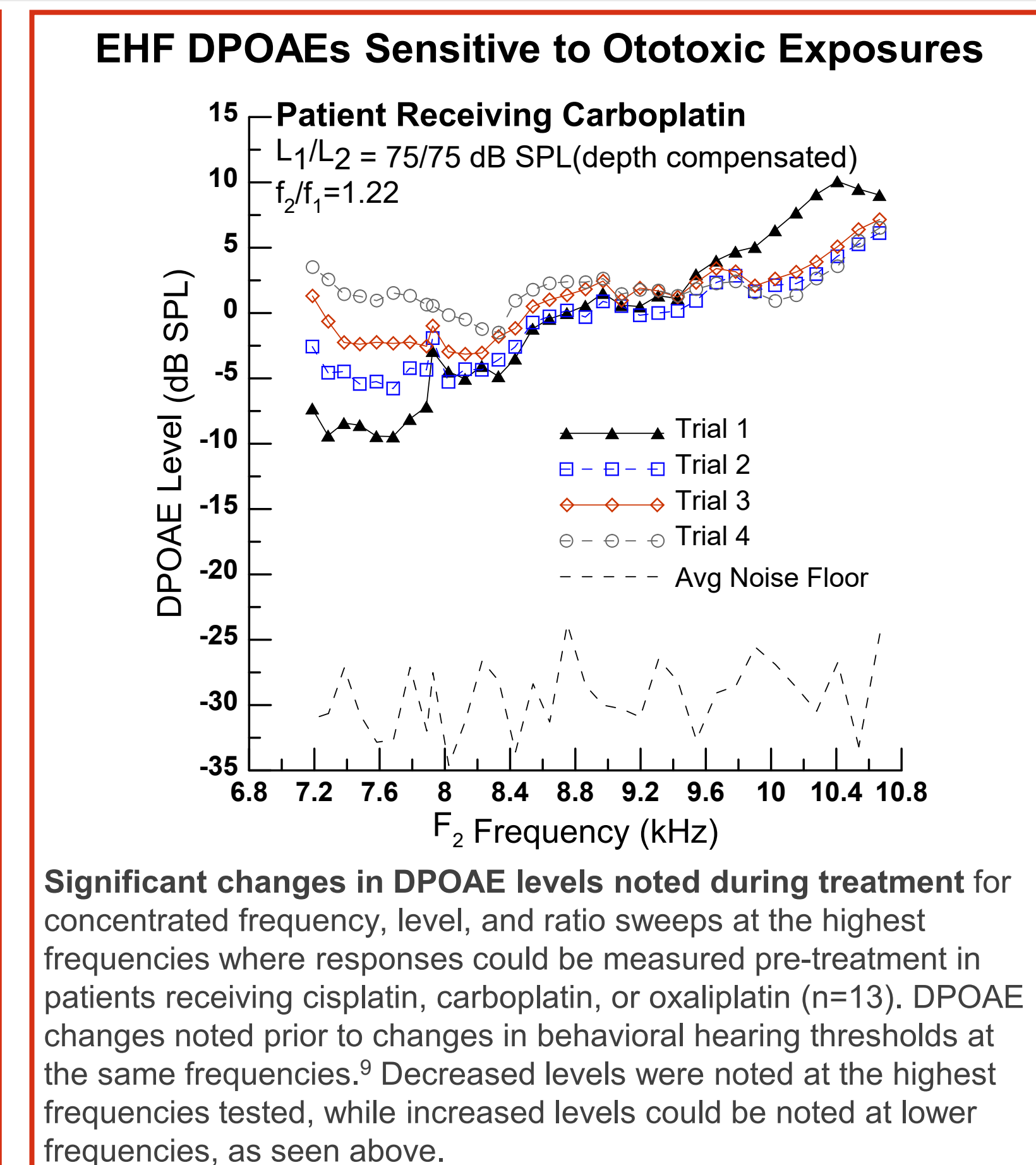
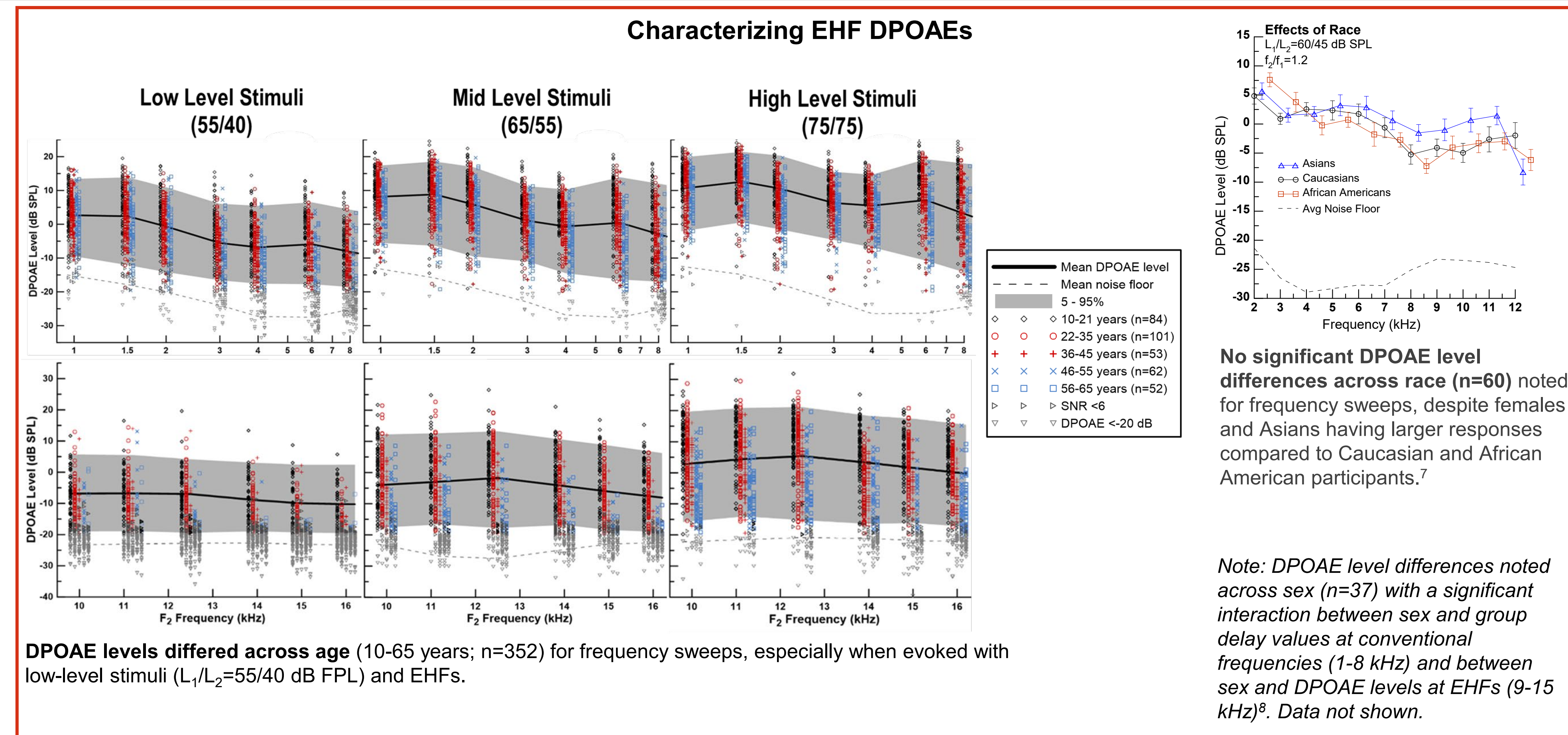
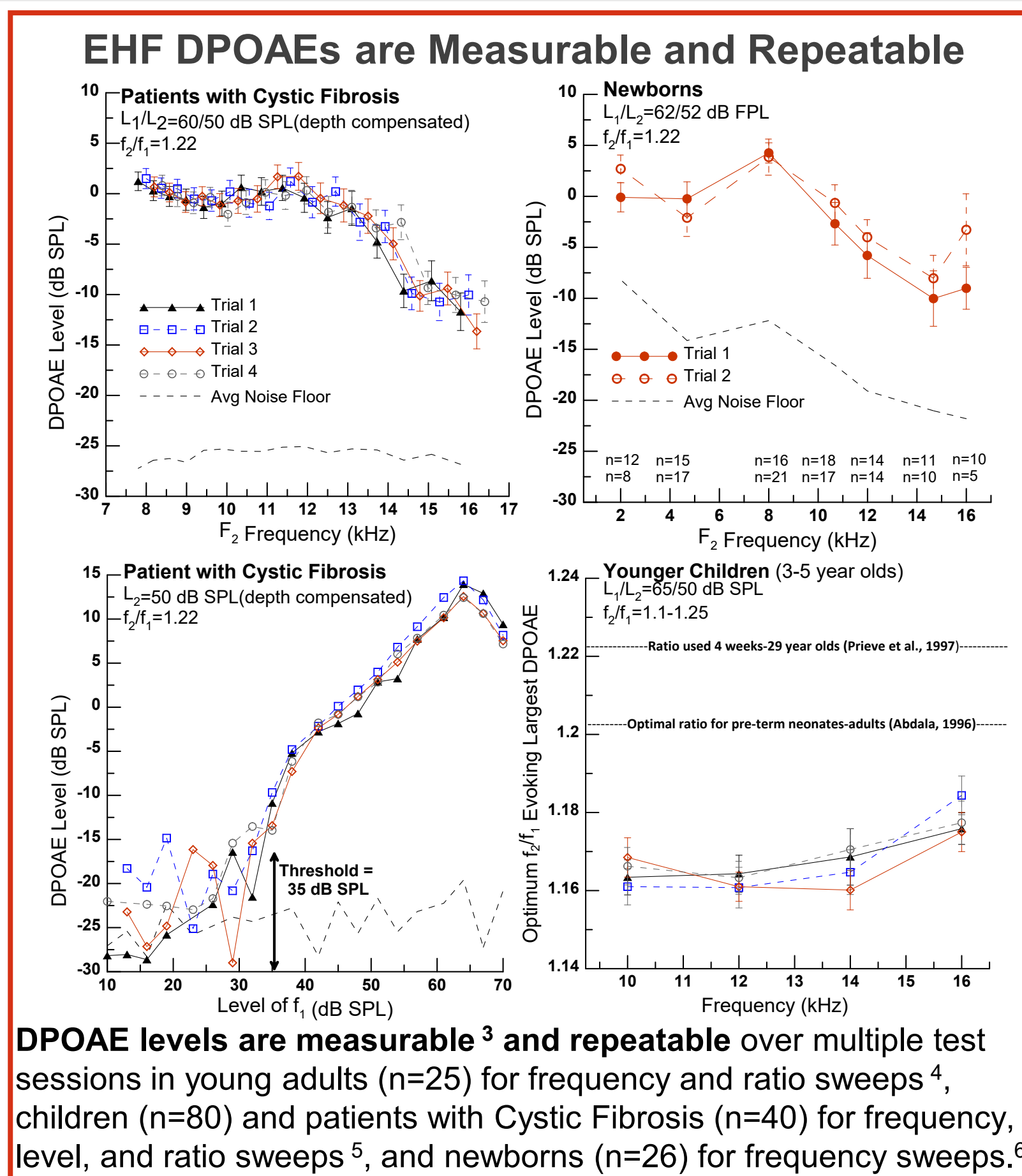
## Aims

- Extended-high frequencies (>8 kHz; EHF) are sensitive to ototoxic exposures.<sup>1</sup>
- Measurement challenges, including ear canal acoustics and limited transducer bandwidths, exist for the measurement of distortion product otoacoustic emissions (DPOAEs).<sup>2</sup>
- **Purpose: Characterize EHF DPOAEs and challenges to explore sensitivity to ototoxic exposures.**

## Methods

- Ethnically diverse participant and patient groups from newborns through 65 years.
- DPOAEs measured from 10 to 16 kHz (EHFs) with varied stimulus parameters, frequencies, levels, and ratio. Traditional or advanced (depth-compensated simulator sound pressure level or SPL, forward pressure level or FPL) in-ear calibration methods utilized.

## Results



## Interpretation/Conclusions

- Overcoming technical limitations has proven that EHF DPOAEs are measurable and repeatable across the lifespan, differ across age and can yield significant contributions to the audiological test battery, especially for those exposed to a variety of ototoxicants.
- **EHF DPOAEs are a viable and critical tool for the earliest identification of cochlear damage from ototoxic exposures.**

## References

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