

**Official Title:** Comprehensive Wide Bandwidth Test Battery of Auditory Function  
in Veterans

**NCT Number:** 02019888

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## **Statistical Analysis Plan**

Analyses of variance (ANOVA) will be conducted to examine differences in outcomes measures across the three subject groups with normal hearing (NH), sensorineural hearing loss (SNHL), and middle ear disorders (ME). Bonferroni corrections will be applied for multiple comparisons. T-tests will be used to examine effects of method (clinical vs. experimental wideband) within each subject group.

For the Primary Outcome measure of Middle Ear Test, separate ANOVAs will be used to examine differences across groups within each method. In the first ANOVA, the independent variable will be subject group, and the dependent variable will be clinical tympanometric peak static acoustic admittance at 226 Hz. In the second ANOVA, the independent variable will be subject group, and the dependent variable will be wideband absorbance at ambient pressure averaged across half-octaves from 250 to 8000 Hz.

For the Secondary Outcome measure of Middle Ear Muscle Reflex Test, separate t-tests will be used to examine the difference in middle ear muscle reflex threshold between the clinical and wideband experimental methods within each subject group.

For the Secondary Outcome measure of Wideband Otoacoustic Emission Test, an ANOVA will be used to examine the differences across subject groups in transient evoked otoacoustic emission (TEOAE) signal-to-noise ratio (SNR) (averaged across half-octave bands from 1000 to 8000 Hz).