

# Statistical Analysis

The Statistical databases are from the clinical tests but also from Hospitals, clinics and private offices worldwide.

The data will be analyzed using the statistical methods (section, above). Statistics will be computed with STATISTICA™ software (version 7.0). The impedance and clinical data will be transferred from their respective Microsoft Excel databases into the STATISTICA program database. The first step will be to run the STATISTICA version of the Shapiro-Wilk W test to examine whether the impedance data has a normal (Gaussian) distribution. Skewed (non-Gaussian) data will be analyzed with nonparametric methods and data with a normal (Gaussian) will be analyzed with parametric methods (see Table, below).

Table: Choice of Statistical Tests

Objective	Type of Data		
	Normal (Gaussian) distribution	Non-Gaussian distribution	Categorical (binomial)
Compare 2 unpaired groups	Unpaired <i>t</i> test	Mean Plot: Whisker: Mean	Fisher's Exact test (chi-square test for large sample sizes)
Compare 2 paired groups	Paired <i>t</i> test	Wilcoxon test	McNemar's test
Compare $\geq 3$ unmatched groups	One-way ANOVA	Box & whisker plot by group	Chi-square test
Compare $\geq 3$ matched groups	Repeated-measures ANOVA	Friedman test	Cochrane Q test
Quantify association between 2 variables	Pearson correlation	Categorized histograms by group	Contingency coefficients