

## **The success of a study is largely influenced by the quality of the statistical analysis.**

When carrying out medical-statistical studies we are better qualified than statisticians and programmers, because we are able to comprehend medical questions. By means of, for example, regrouping and/or sub-grouping or slight modifications of the analyses (e.g. sub-analyses with risk groups, differentiating between old and young patients, gender-specific analyses, etc.), non-significant and uninteresting data can suddenly turn into valid, highly-significant results. Hereby, comprehensive medical and statistical knowledge must complement each other.

Upon completion of the results they are passed on to you and are additionally discussed in-depth with you. Upon request, we also outline the data and interpret it writing.

Here are several examples of the most frequent statistical analyses:

- Descriptive statistic (determination of mean value, standard deviation, median and quartile)
- Means comparisons in independent and paired samples (e.g. t-test, univariate ANOVA, t-test for paired samples, general linear model with repeated measurements)
- Non-parametric tests for independent and paired samples (e.g. U-Test by Mann and Whitney, H-test by Kruskal and Wallis, Wilcoxon test, Friedman test, McNemar test)
- Cross-classified tables with Chi square test, resp. Fisher test including calculation of standardized residuals
- Correlation analyses with determination of correlation coefficient according to Pearson, resp. Spearman-Rho
- Survival analysis with Kaplan-Meier-curves and calculation of Log Rank
- Multivariate analyses (e.g. multiple linear regression, binary logistic regression, coxregression)
- Factor analysis
- Calculation of sample size and power analyses
- Calculation of method error, e.g. according to Dahlberg
- Model calculations

Every statistical analysis requires a chart. Here, we put great emphasis on clarity and create charts according to your colour choices.



