Summary of Some Statistical Methods to Test Hypotheses

Scale of measurement	Type of experiment				
	Two treatment groups consisting of different individuals	Three or more treatment groups consisting of different individuals	Before and after a single treatment in the same individuals	Multiple treatments in the same individuals	Association between two variables
Interval (and drawn from normally distributed populations*)	Unpaired t test	Analysis of variance	Paired t test	Repeated-measures analysis of variance	Linear regression, Pearson product-moment correlation
Nominal	Chi-square	Chi-square	McNemar's test	Cochrane Q[†]	Relative risk or odds ratio
Ordinal[†]	Mann-Whitney	Kruskal-Wallis	Wilcoxon	Friedman statistic	Spearman rank correlation
Survival time	Log-rank test or Gehan's test				

*If the assumption of normally distributed populations is not met, rank the observations and use the methods for data measured on an ordinal scale.

[†]Or interval data that are not necessarily normally distributed.