Goal

Description of one group

Comparison of one group to a hypothetical value

Comparison of two groups

Comparison of three or more groups

Measure association between two vaariables

Prediction

Unpairedgroups

Paired groups

Unmatched Groups

Matche

From another measured variable

From several meas or binomial variable

R, I

O

N

R, I

O

N

R, I

O

N

R,I

O

N

R,I

ND

NND

Chi-square or Binomial test

ND

NN D

Fisher's test (chi-square for large samples)

ND

NND

Cochrane Q

ND

NND

One-sample t test

Wilcoxon test

Unpaired t test

Mann-Whitney test

Repeated measures ANOVA

Friedman test

Simple linear regression

Multiple logistic regressions

Nonparametric regression

R, I

O

N

R,I

O

N

R,I

O

N

Contingency coefficients

Simple logistic regression

R, I

O

N

McNemar's test

ND

NND

Spearman correlation

Multiple linear regressions or Multiple nonlinear

N

NND

Proportion

N

NND

R,I

O

N

Paired t

Wilcoxon test

R, I

O

N

ND

NND

Chi-square test

Pearson correlation

Mean, SD

Median, interquartile range
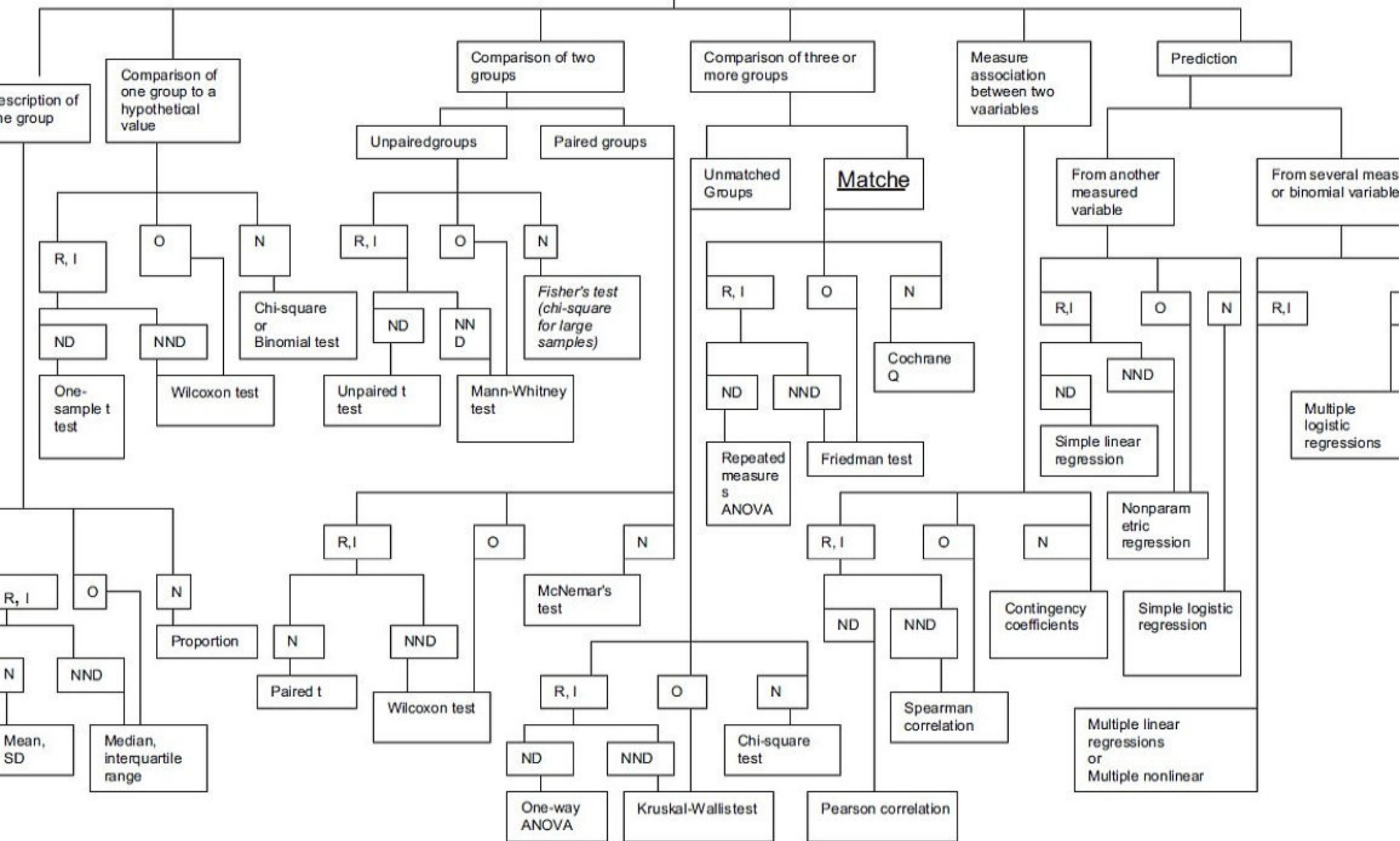
ND

NND

One-way ANOVA

Kruskal-Wallistest

R, I = Ratio and Interval data   O= Ordinal data   N = Nominal data

N = Normal distribution   NND = Non normal distribution