

Table 1: Which test to use?

Groups		Variable		
N. samples	Independent (unpaired) Y/N	Nominal or categorical	Ordered categorical or continuous and non normal	Continuous and normally distributed
One sample	N/A	Sign test (binom.test) χ^2 test (chisq.test)	Sign test (binom.test) Kolmogorov-Smirnov test (ks.test)	t-test (t.test)
Two sample	Yes	χ^2 test(2xK) (chisq.test) Fishers exact test (fisher.test)	Mann Whitney rank sum test (wilcox.test) Median test (chisq.test)	Unpaired t-test (t.test)
	No	McNemars test (McNemar.test)	Wilcoxon signed rank test (Wilcox.test) Sign test (binom.test)	Paired t-test (t.test)
Multiple Samples ((k>2)	Yes	χ^2 (r x k) (chisq.test)	Kruskal-Wallis (kruskal.test) Median test (chisq.test)	Analysis of variance (ANOVA) (Aov)
	Yes (ordered)	Cochran Q-test (not covered in course)	Friedman test (friedman.test)	Jonckheere-Terpstra (trend) test (jonckheere.test) Repeated measures ANOVA (aov)