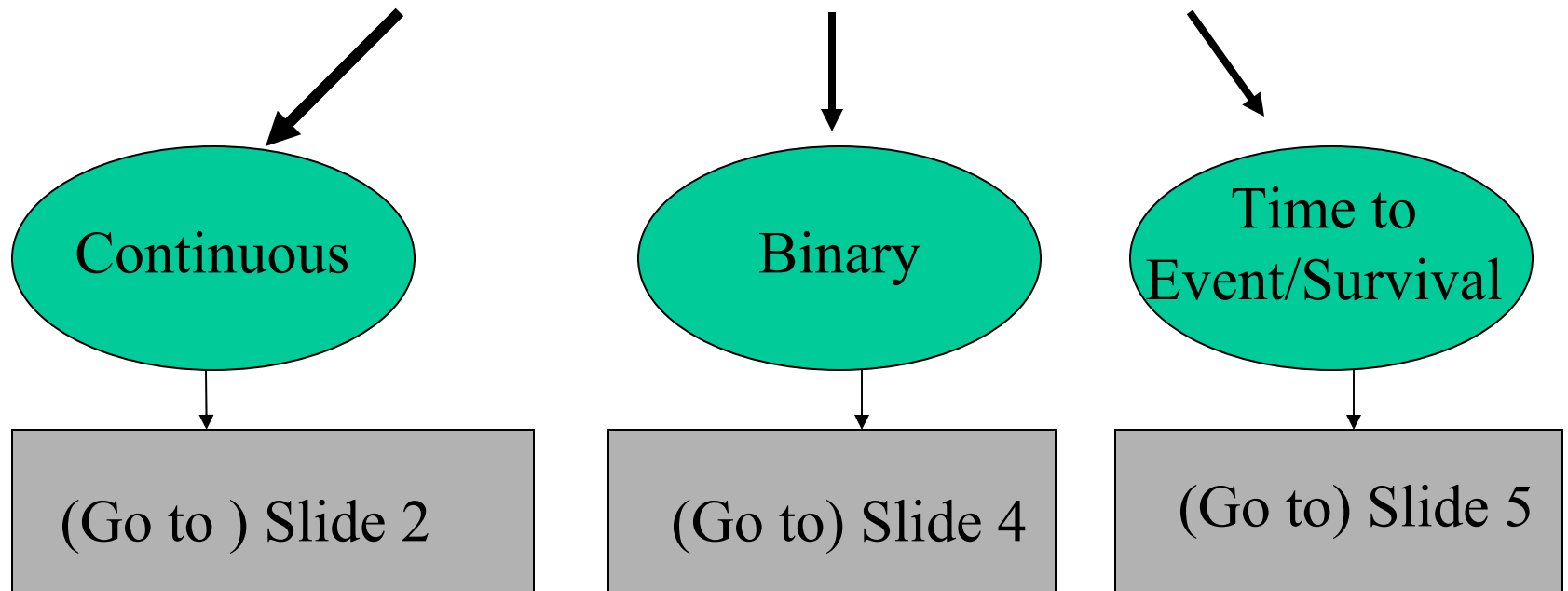


Outcome Data Type?



2-Group Comparison?

Yes

No (go to Slide 3)

Paired Data?

Yes

No

n_1 and $n_2 > 10$?

Paired t-test

2 sample t-test

Yes

Data in both groups Normally Distributed?

No

No

Mann – Whitney-Wilcoxon

-If $n > 60$, create confidence interval and compute p-value using normal distribution.

- If $n < 60$ create confidence interval and compute p-value using “t” distribution with appropriate degrees freedom

-If $n_1, n_2 > 60$, create confidence interval and compute p-value using normal distribution.

- If n_1 and/or $n_2 < 60$ create confidence interval and compute p-value using “t” distribution with appropriate degrees freedom

2- Group Comparison?



No (more than 2 Groups)

ANOVA

NOTE: the p-value will only allow you to ascertain that at least one group means is statistically significantly different than the other group means. Further work is required to determine which groups are different (two sample t-tests) and the magnitude and direction of the difference (sample mean differences, 95% confidence intervals)

2- Group Comparison?

Yes

No (more than 2 Groups)

Do your samples meet size criteria for large sample methods?

Chi-Squared Test

Yes

No

Normal Approximation, Chi-Square, Fisher's Exact

Fisher's Exact Test

Create confidence interval for difference in proportions using normal distribution.

No simple straightforward method for computing exact confidence interval on difference in proportions –consult a statistician!

2- group or more than 2 groups comparison
but only one categorical grouping variable –
ex: age groups, ethnicity, hair color etc..)?



To estimate survival curves and percentiles of
survival times, use Kaplan-Meier method

To test for statistical differences in survival curves,
use log-rank test or Breslow-Gehan test