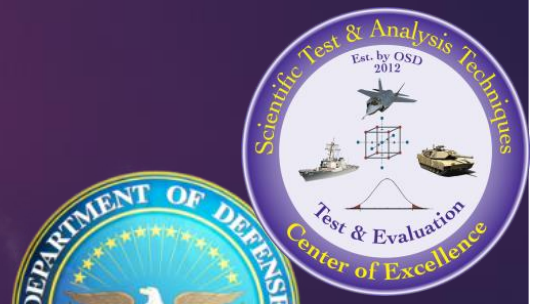
Interactive Inferential Statistics Flowchart

Version 1.0

Last Updated: 8 January 2019

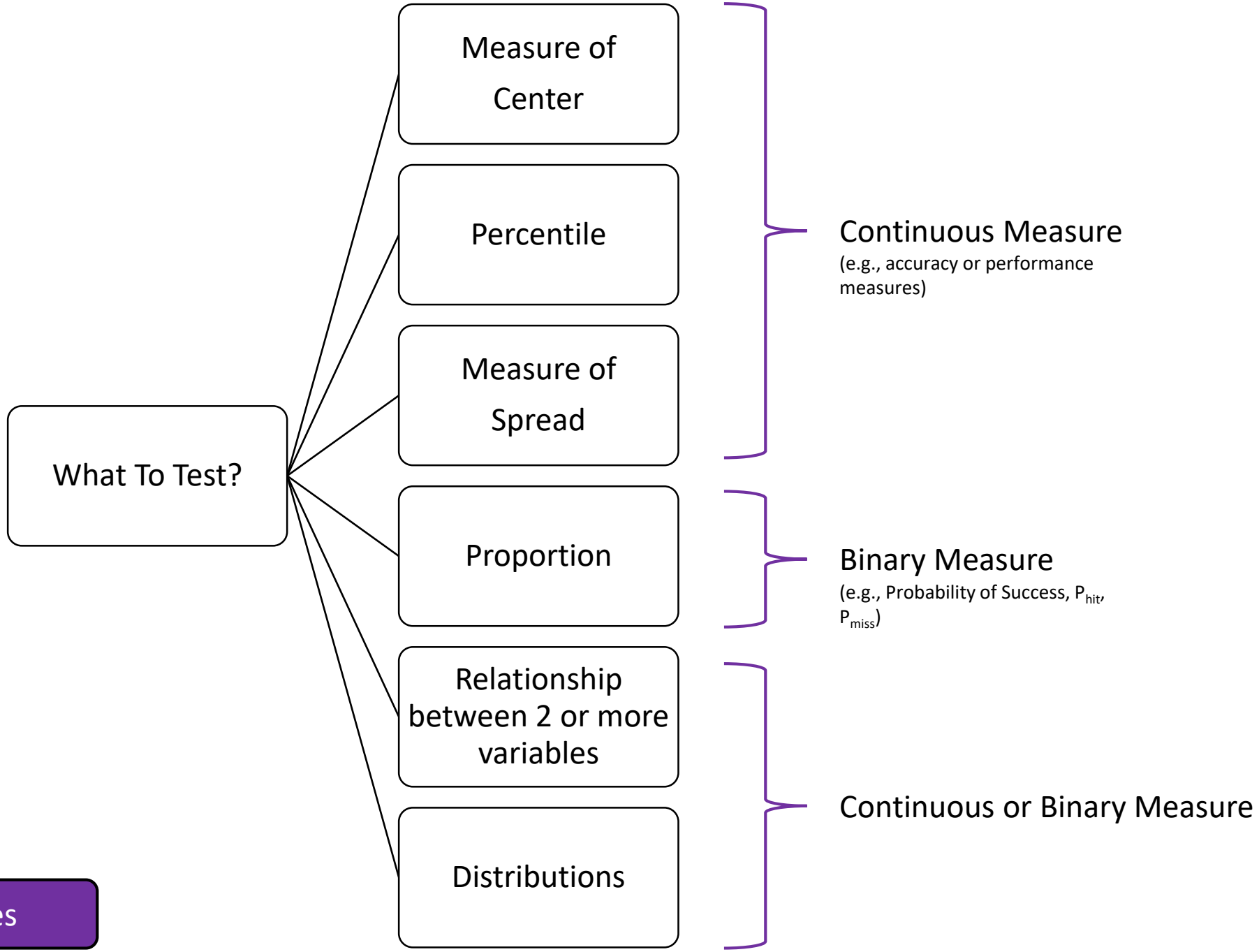


STAT COE: *Scientia Prudentia et Valor*

Directions

- View this in “Presentation Mode” in MS PowerPoint
- Click the “Begin” button below to start
- Click the desired measure of interest (e.g., Measure of Center)
- Follow the flowchart to arrive at the recommended inferential statistical method
- Use the button to return to the previous slide
- Use the button to return to the starting page
- Questions? Contact the STAT COE at COE@afit.edu

Begin

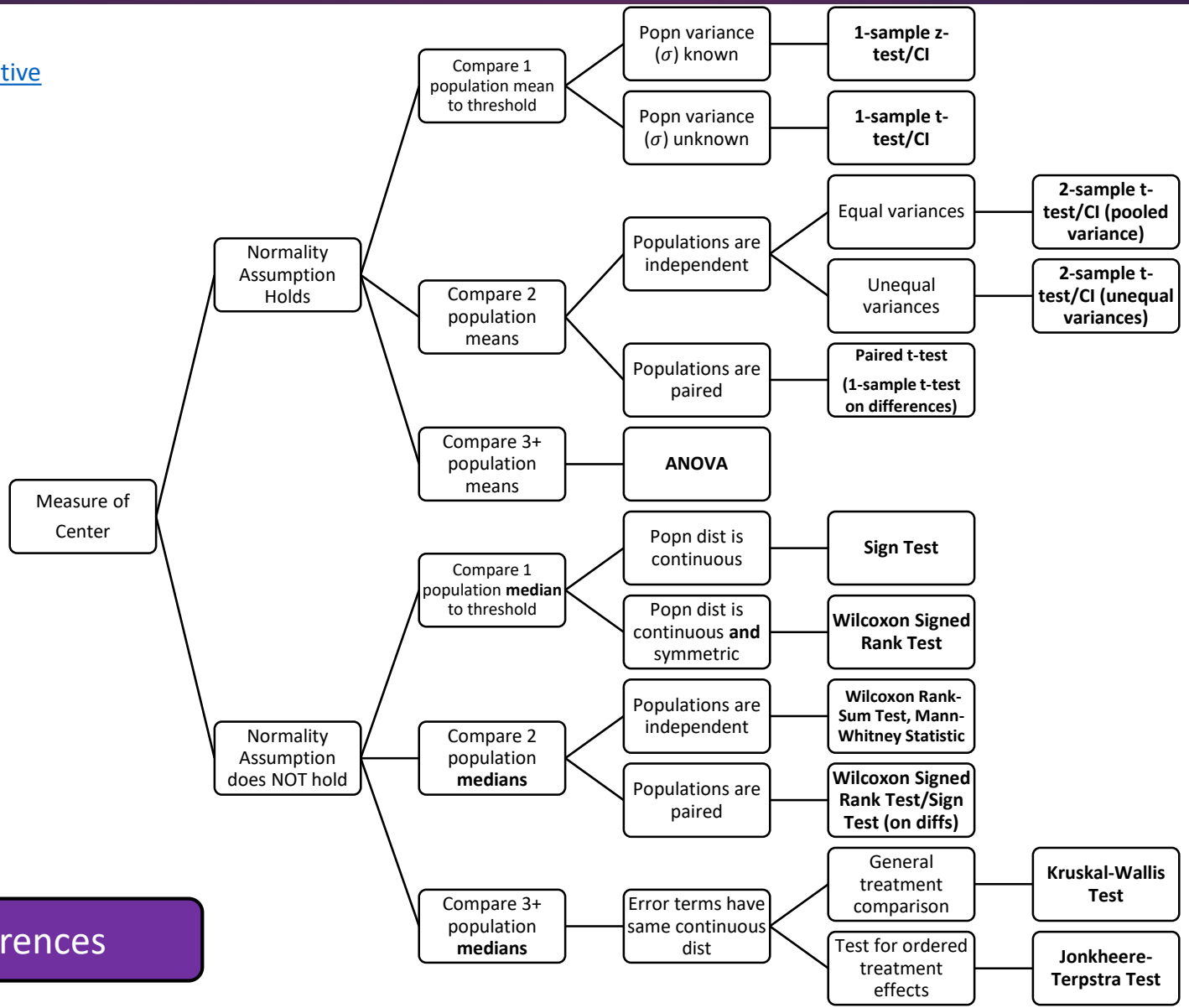

What To Test?
Measure of Center
Percentile
Measure of Spread
Proportion
Relationship between 2 or more variables
Distributions
Continuous Measure
(e.g., accuracy or performance measures)
Binary Measure
(e.g., Probability of Success, P_{hit}, P_{miss})
Continuous or Binary Measure

References

Measure of Center

STAT COE Best Practices:

[Statistics Reference Series Part 1: Descriptive Statistics]
[Interpreting Confidence Intervals]
[Statistical Hypothesis Testing]
[Understanding Analysis of Variance]



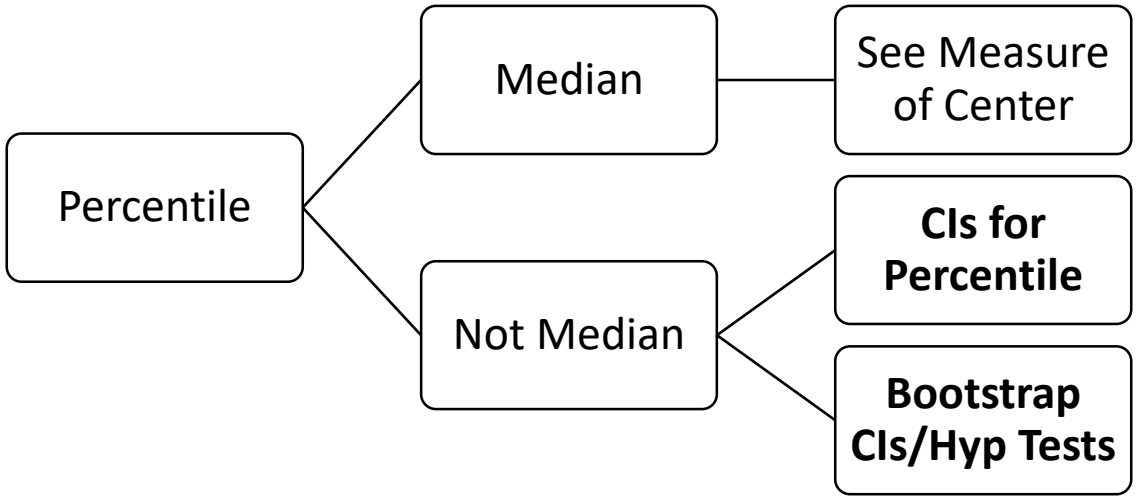
References

Exit

Percentile

STAT COE Best Practices:

[Confidence Intervals for the Median and Other Percentiles]



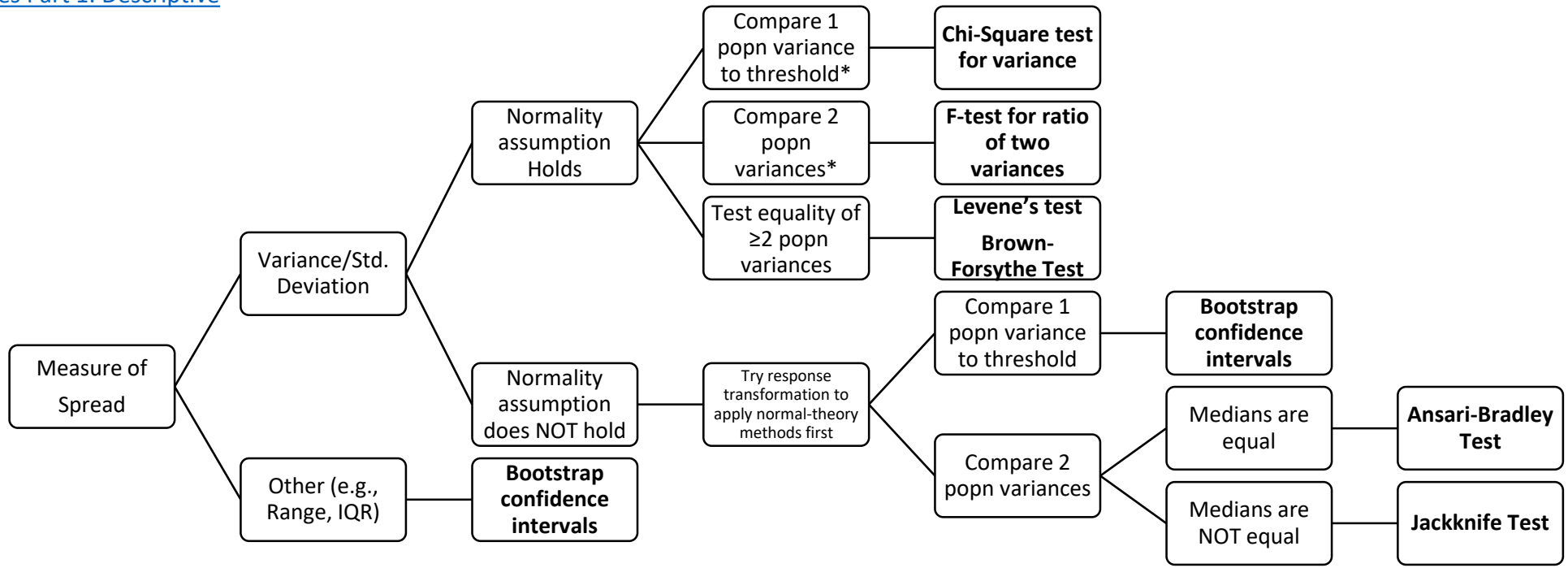
References

Exit

Measure of Spread

STAT COE Best Practices:

[Statistics Reference Series Part 1: Descriptive Statistics]



References

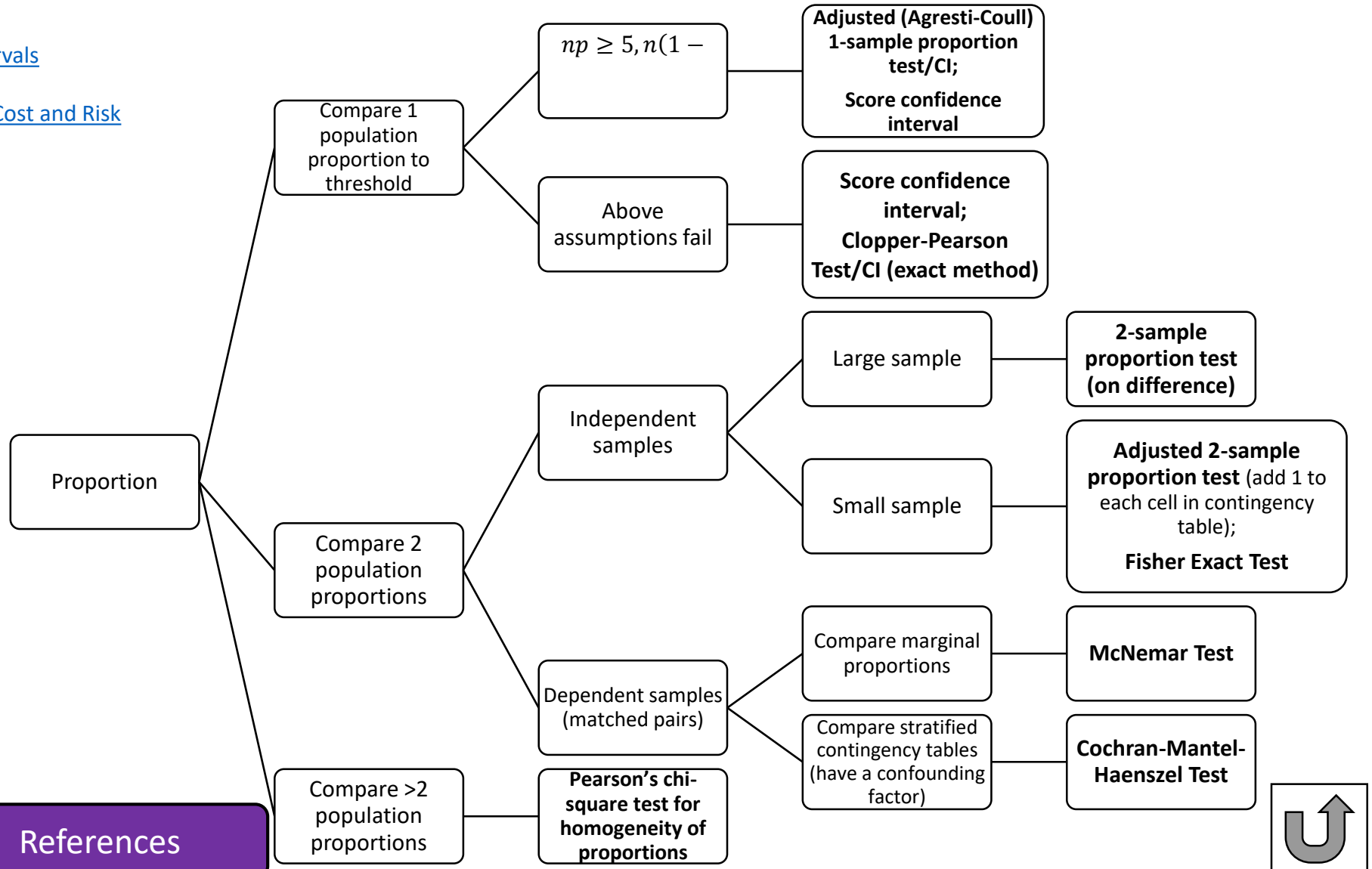
*For CIs of the standard deviation (σ), simply take the square root of the confidence bounds for variance (σ^2)

Exit

Proportion

STAT COE Best Practices:

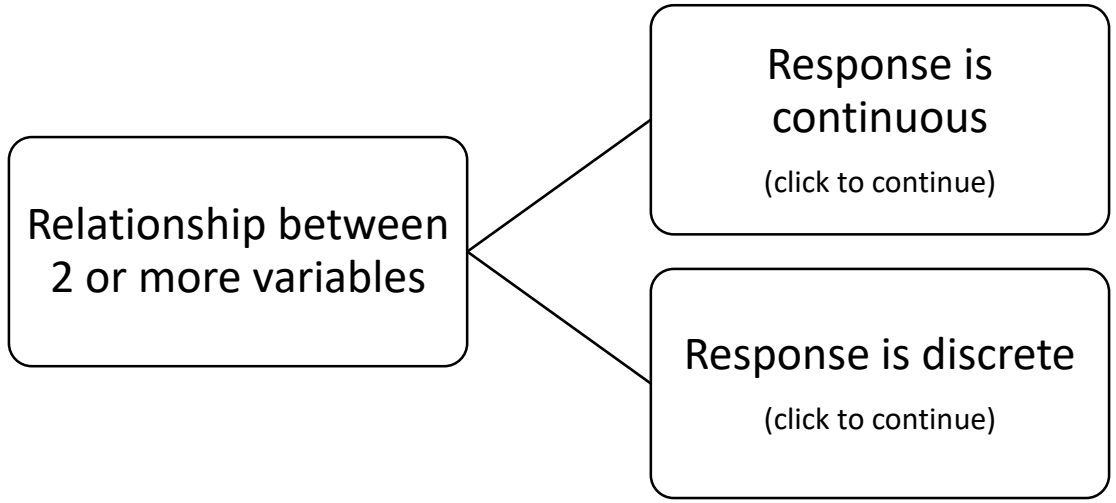
[Interpreting Confidence Intervals]
[Statistical Hypothesis Testing]
[Using OC Curves to Balance Cost and Risk]



References

Exit

Relationship between 2 or more variables



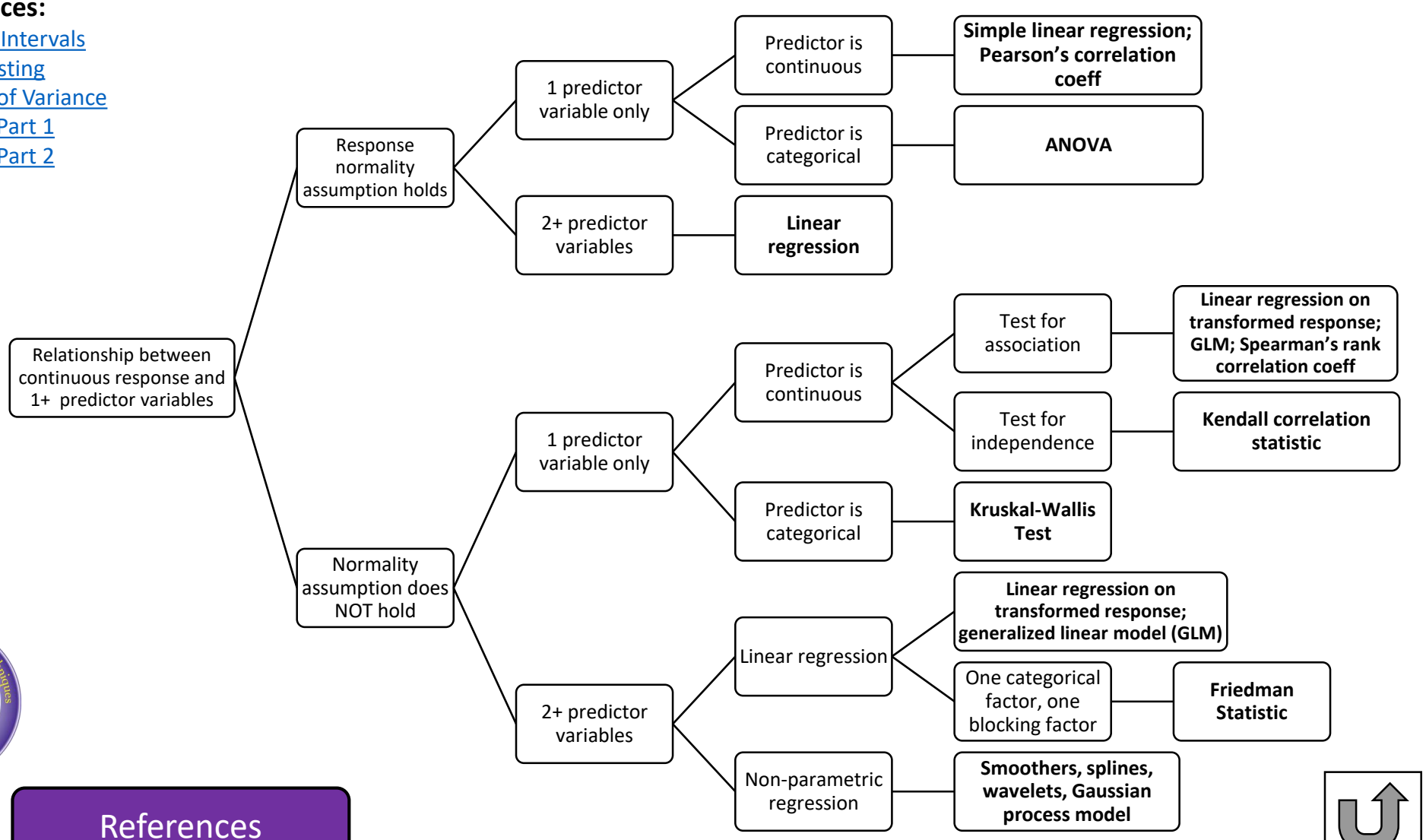
References

Exit

Relationship between 2 or more variables (Continuous Response)

STAT COE Best Practices:

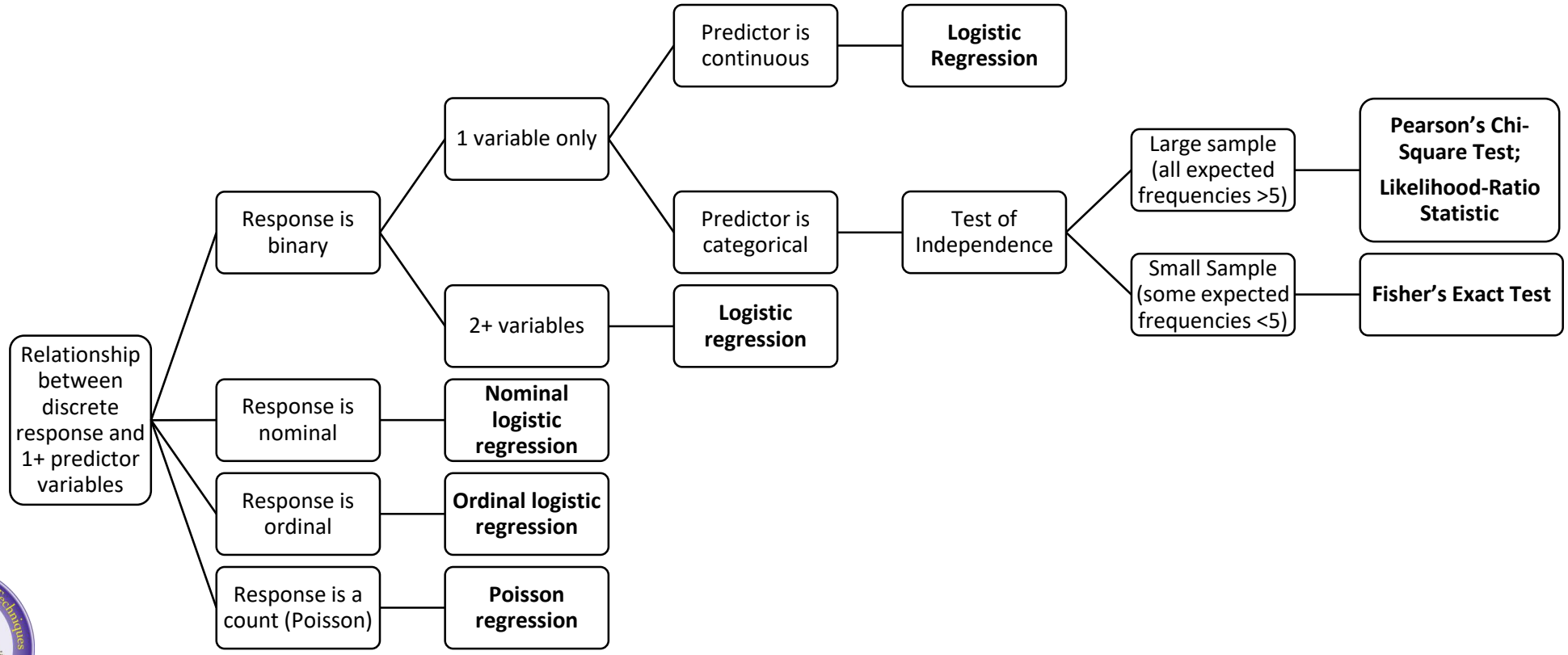
[Interpreting Confidence Intervals]
[Statistical Hypothesis Testing]
[Understanding Analysis of Variance]
[Model Building Process Part 1]
[Model Building Process Part 2]
[Using Regression Trees]



References

Exit

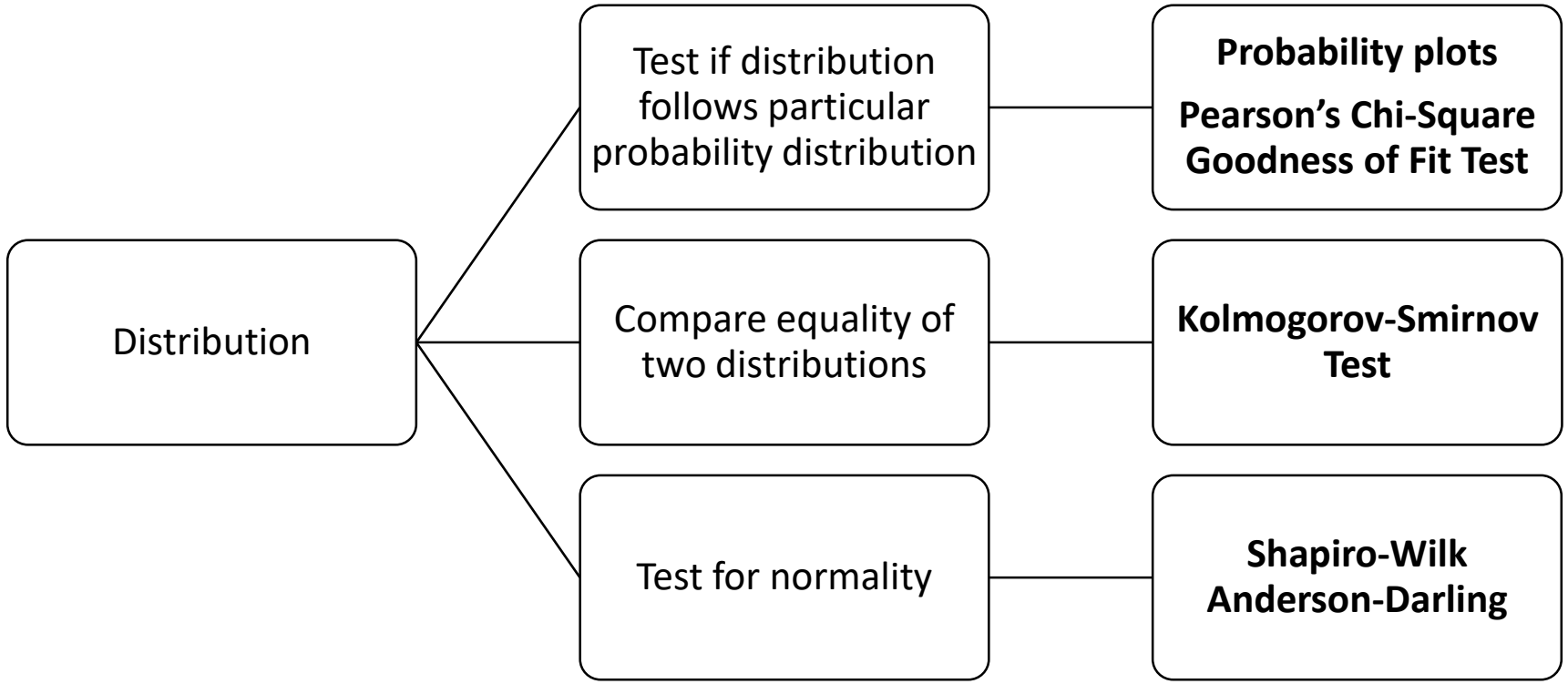
Relationship between 2 or more variables (Discrete Response)



References

Exit

Distributions

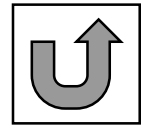


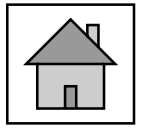
References

Exit

References

- Agresti, Alan and Brent A. Coull. “Approximate is Better than ‘Exact’ for Interval Estimation of Binomial Proportions.” The American Statistician, vol. 52, no. 2, 1998, pp. 119-126.
- Hines, W., Montgomery, D.C., Goldman, D.M., and Borror, C.M. *Probability and Statistics in Engineering*. John Wiley & Sons, Inc., 2008.
- Agresti, Alan. *Categorical Data Analysis*. 3rd Ed. John Wiley & Sons, Inc., 2013.
- Hollander, M., Wolfe, D.A., Chicken, E. *Nonparametric Statistical Methods.* 3rd Ed. John Wiley & Sons, Inc., 2014.





Exit