

# A STUDY ON SAMPLE SIZE – MODELING

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# AGENDA

- 1 MOTIVATIONS
- 2 MODELING
- 3 PRELIMINARY RESULTS

# WHAT ARE WE TRYING TO MODEL?

## Removal of symptoms

- Pain



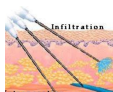
- Redness



- Swelling



- Infiltration



# WHAT COVARIATES DO WE HAVE?

- Diagnosis
- Age
- Gender
- Race
- Length of stay (LOS)
- Unit
- ...

# WHAT TOOLS DO WE USE FOR NOW?

- Logistic Regression
- Generalized Linear Mixed Effect Model

# WHAT IS THE GOAL?

Short answer: Find the relationship between the sample size and the power

# SOME RESULTS

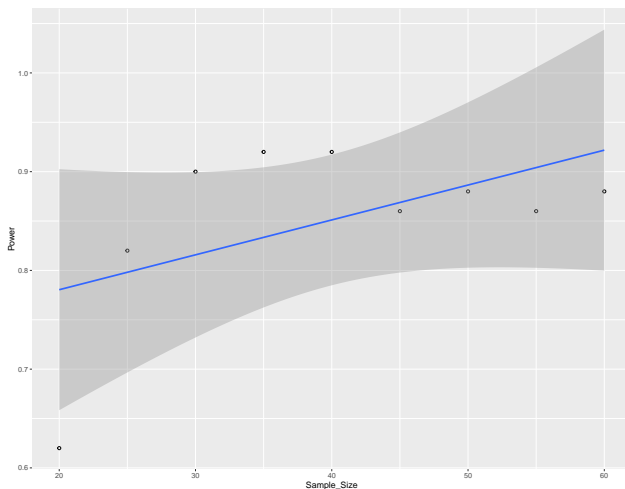


FIGURE: Logistic Regression

# SOME RESULTS

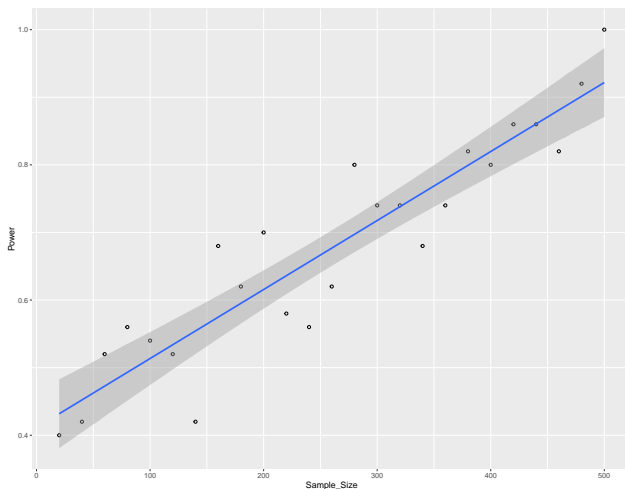


FIGURE: Generalized Linear Mixed Effect Model



# NEXT STEP?

- More Simulations?
- Theoretic results?
- Toolbox?
- ...