Introduction
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Descriptive Analysis
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Inferential Analysis
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Discussion
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Conclusion
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Predicting the Risk of Recurrent MI
SIBS Hackathon Presentation

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Outline

Background

- Bullet 1

- Bullet 2

- Bullet 3

Research Question

Question 1

What can we look at either during admission or the hospital stay in patients post-heart attack (myocardial infarction) to predict the risk of having a relapse?

Question 2

Which risk prediction model is best at predicting a recurrent heart attack?

Outline

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Response Variable Correlation
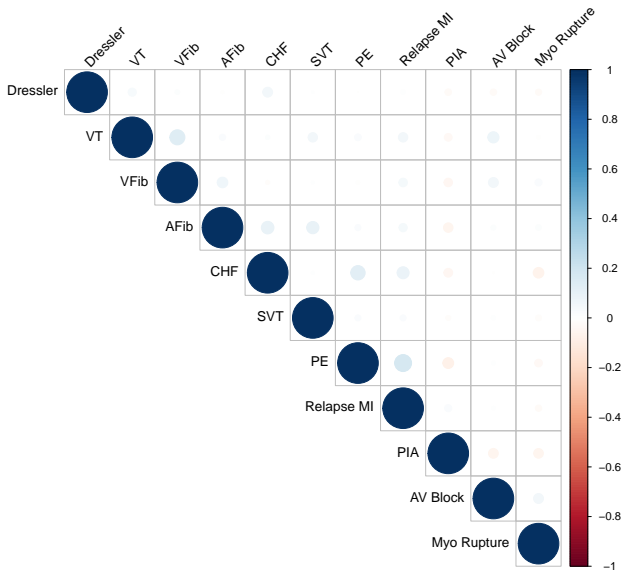
Outline

Model Building

Logistic regression is the basis

- Response variable (recurrent MI) is binary
- Multiple predictors
  - > 100 covariates to begin
  - Several removed from consideration due to missingness

Model Building

Two methods to select significant predictors:

1. Backwards Elimination using AIC (stepAIC)

2. Elastic Net Penalized Regression (glmnet)

Methods will pick predictors and build model

Model

$$REC\_IM = \beta_0 + \beta_1 x_1$$

\end{subsection}

Outline

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5 **Conclusion**

Questions??