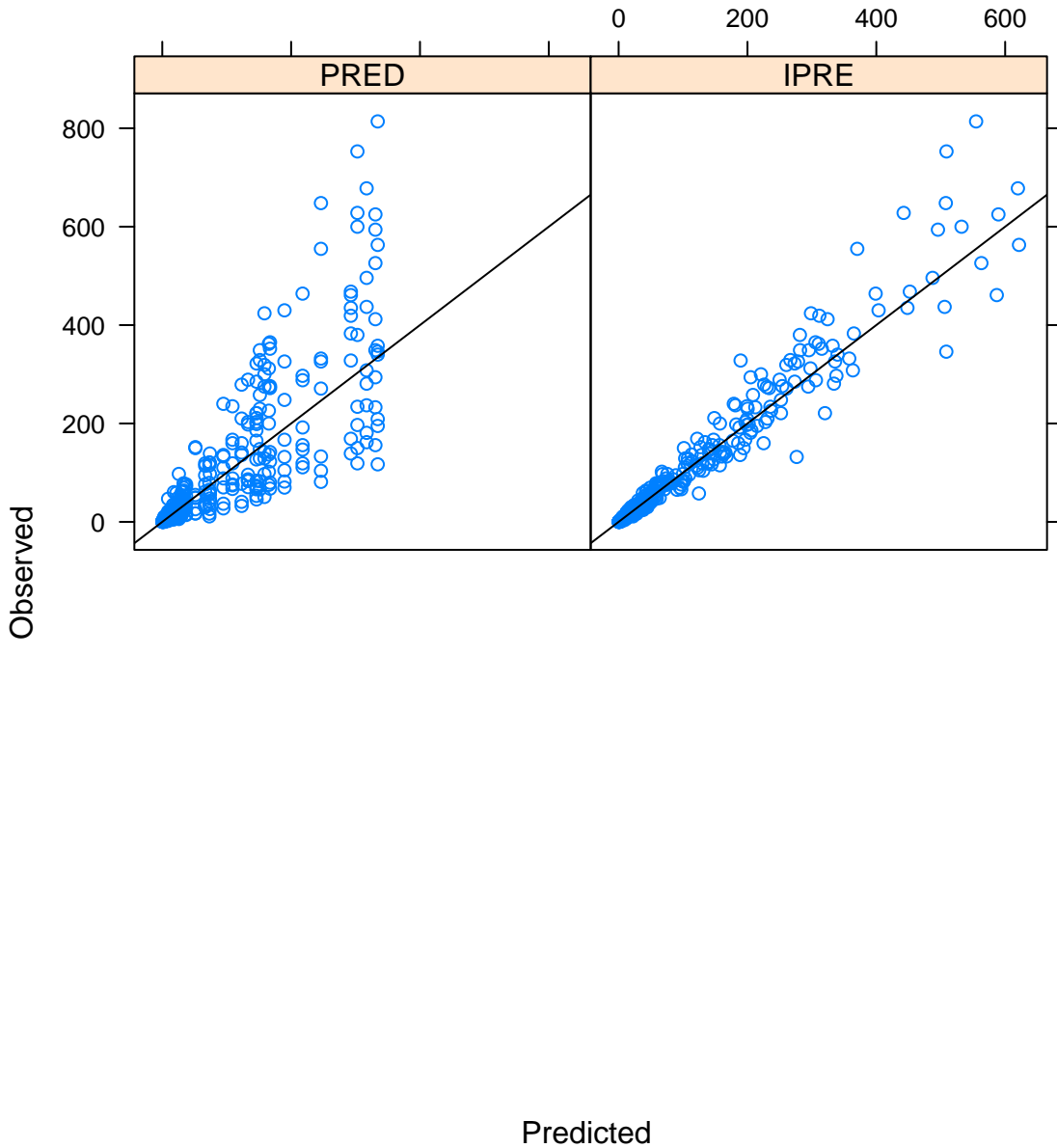
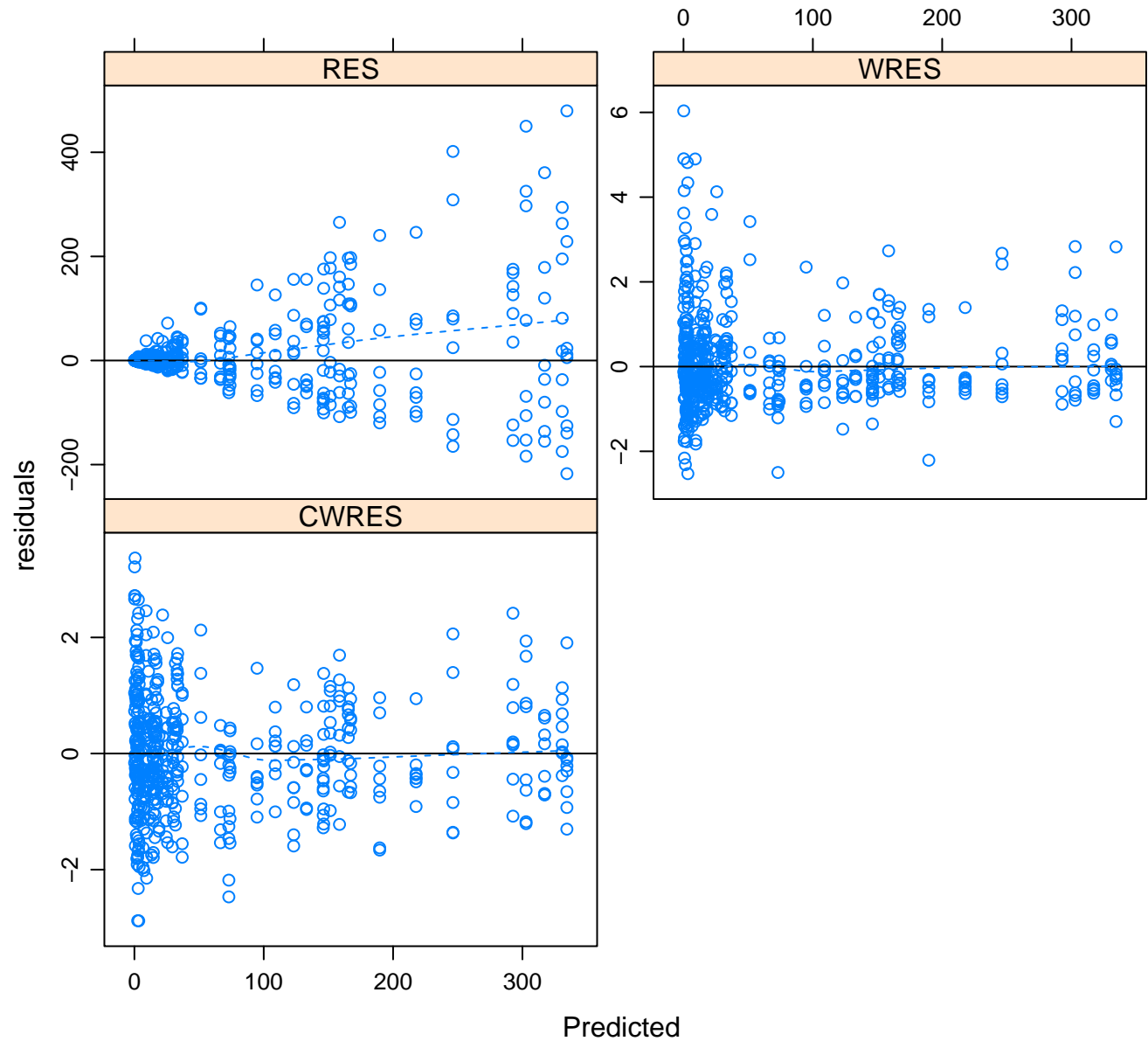


**Model 1003**  
**Observed vs. Predicted for all data**



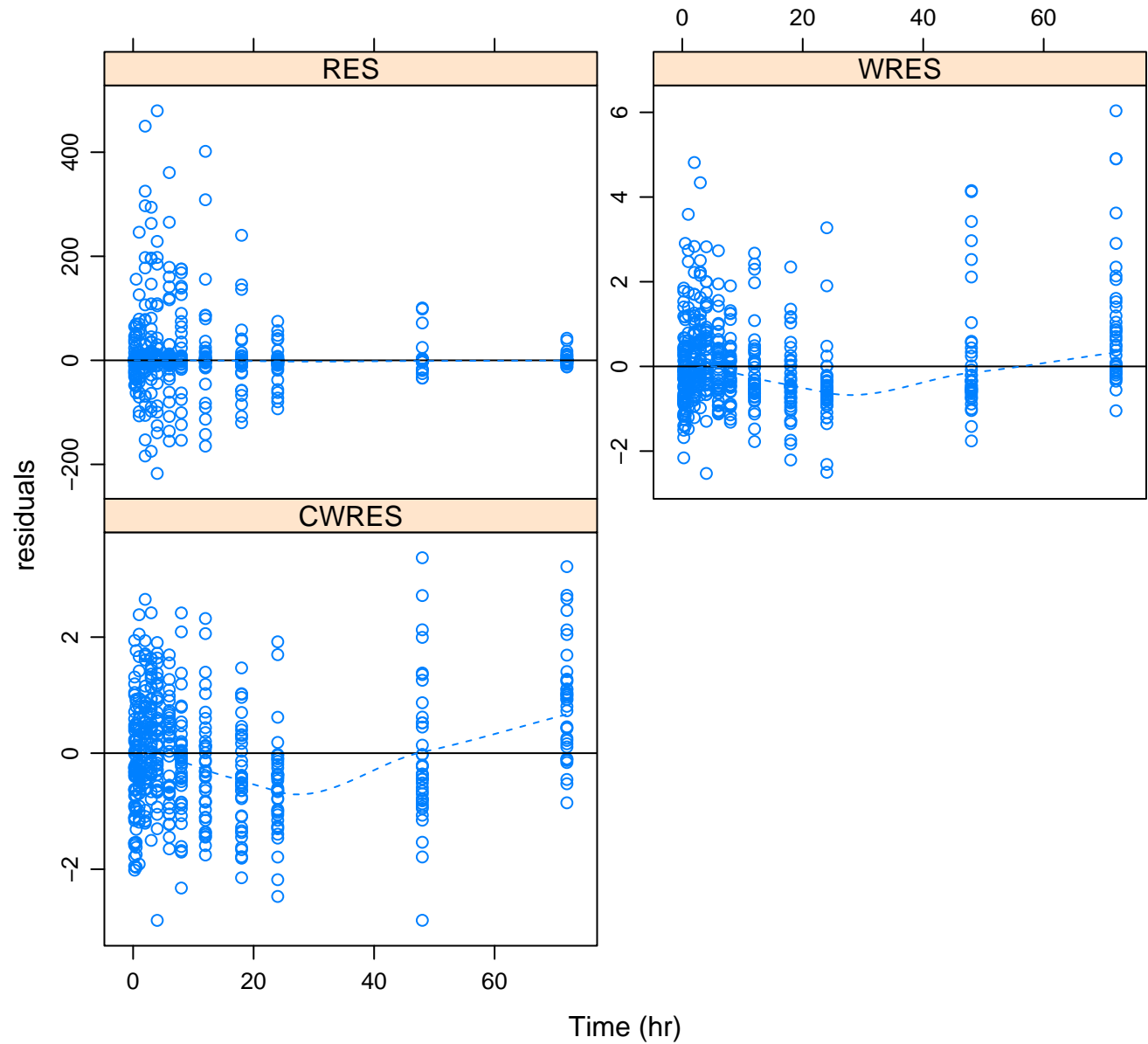
# Model 1003

## Residuals vs. Predicted for all data



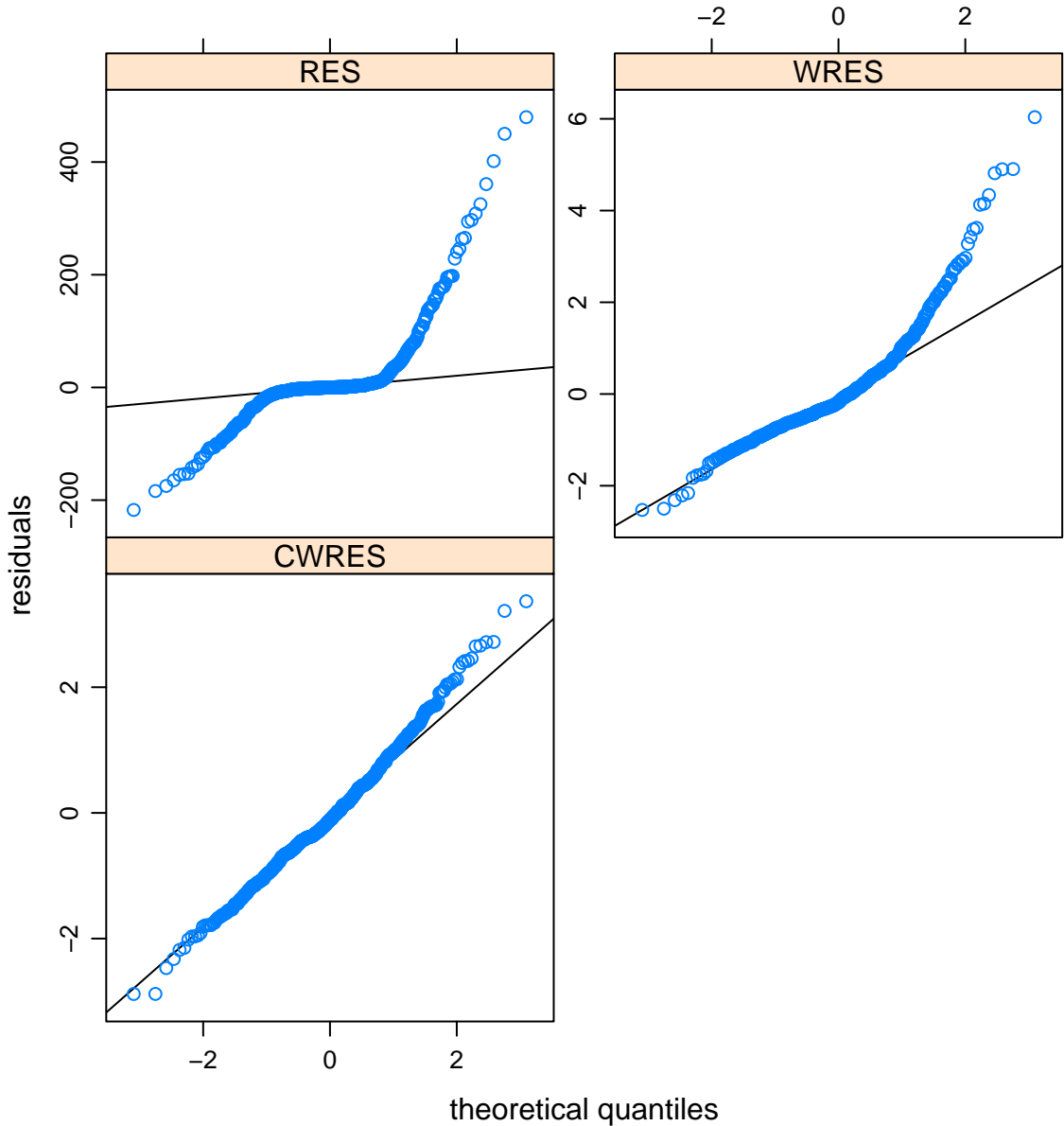
# Model 1003

## Residuals vs. Time for all data



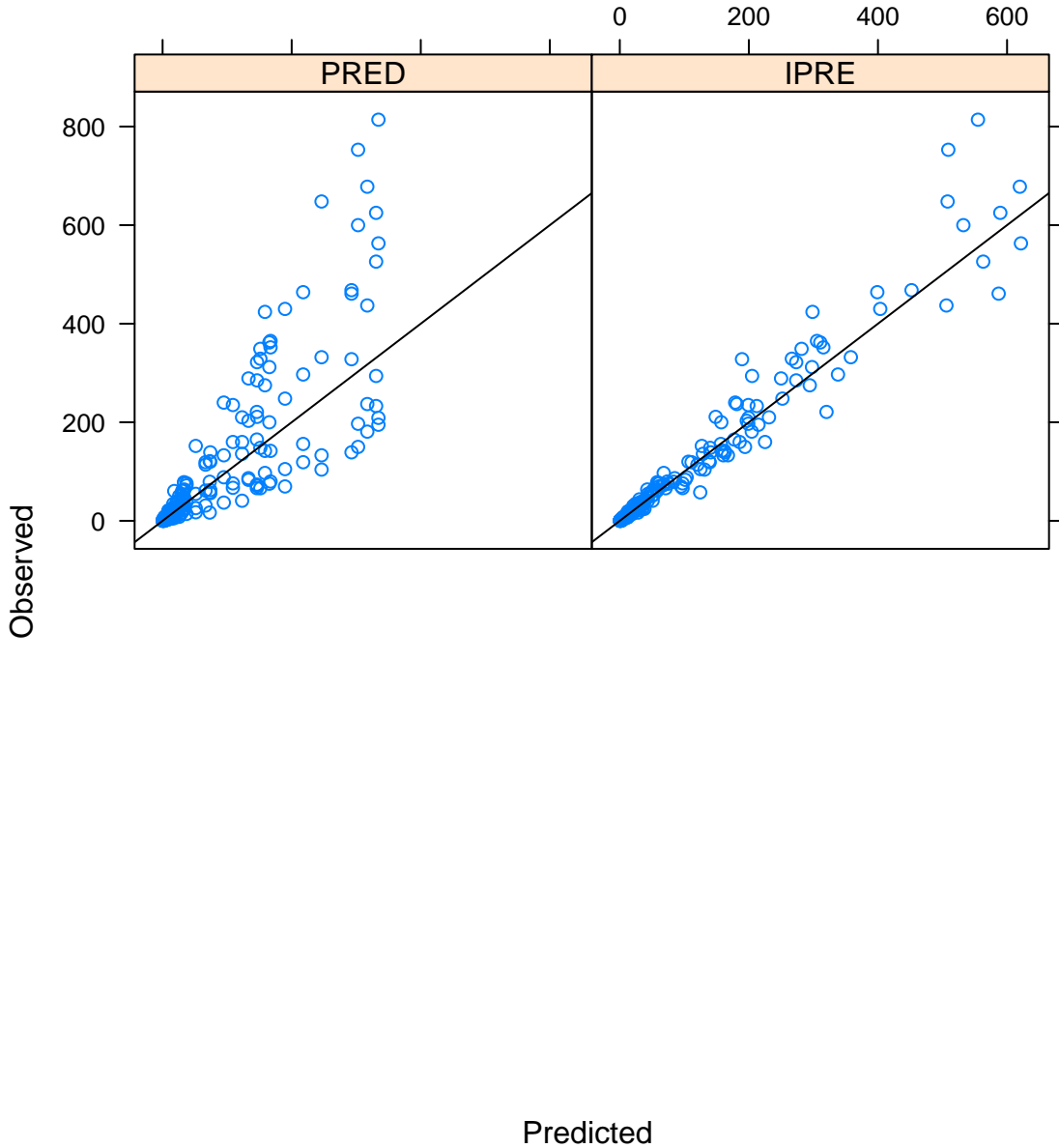
# Model 1003

## Normal Q-Q Plot Residuals for all data



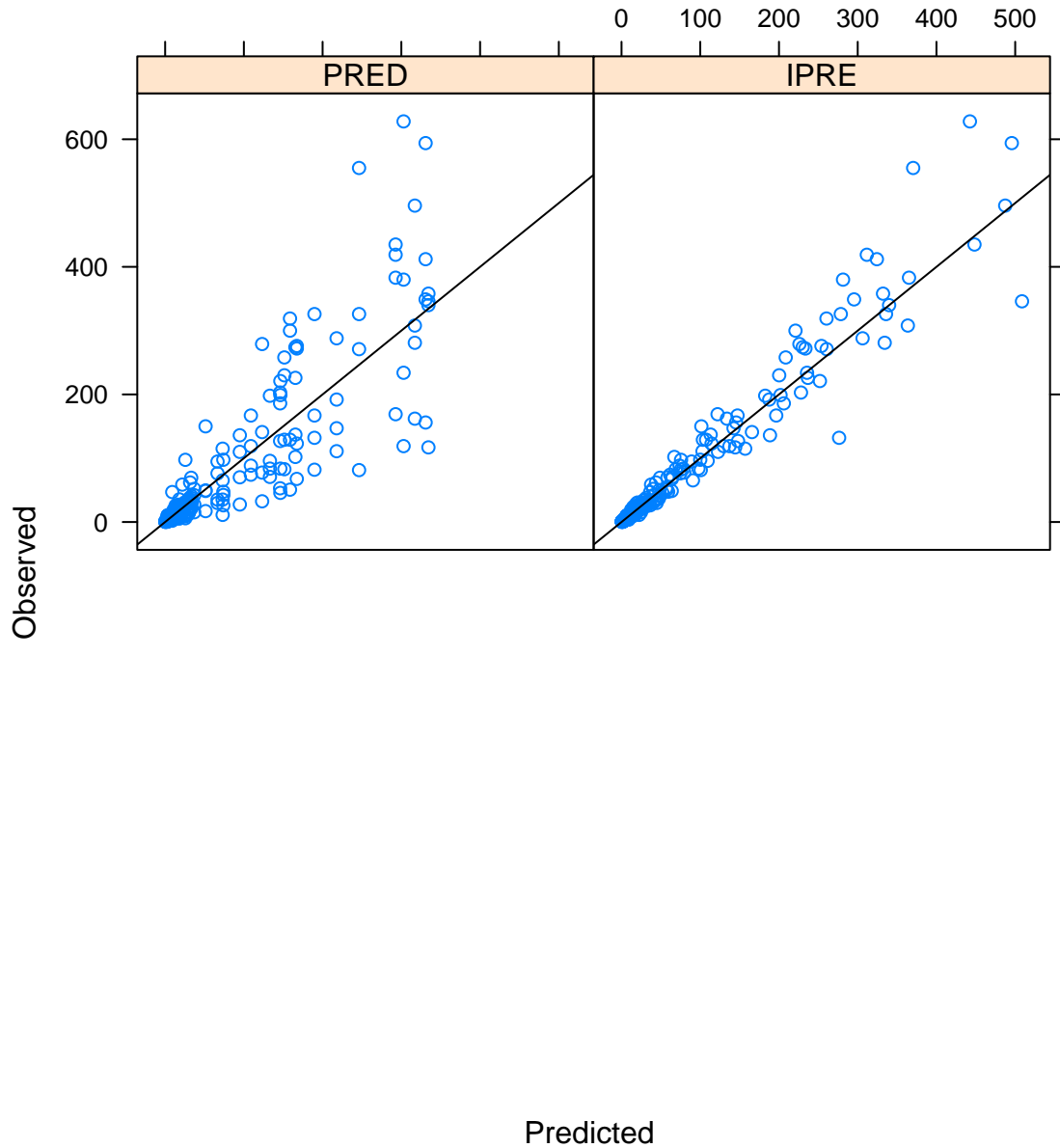
# Model 1003

## Observed vs. Predicted for female data



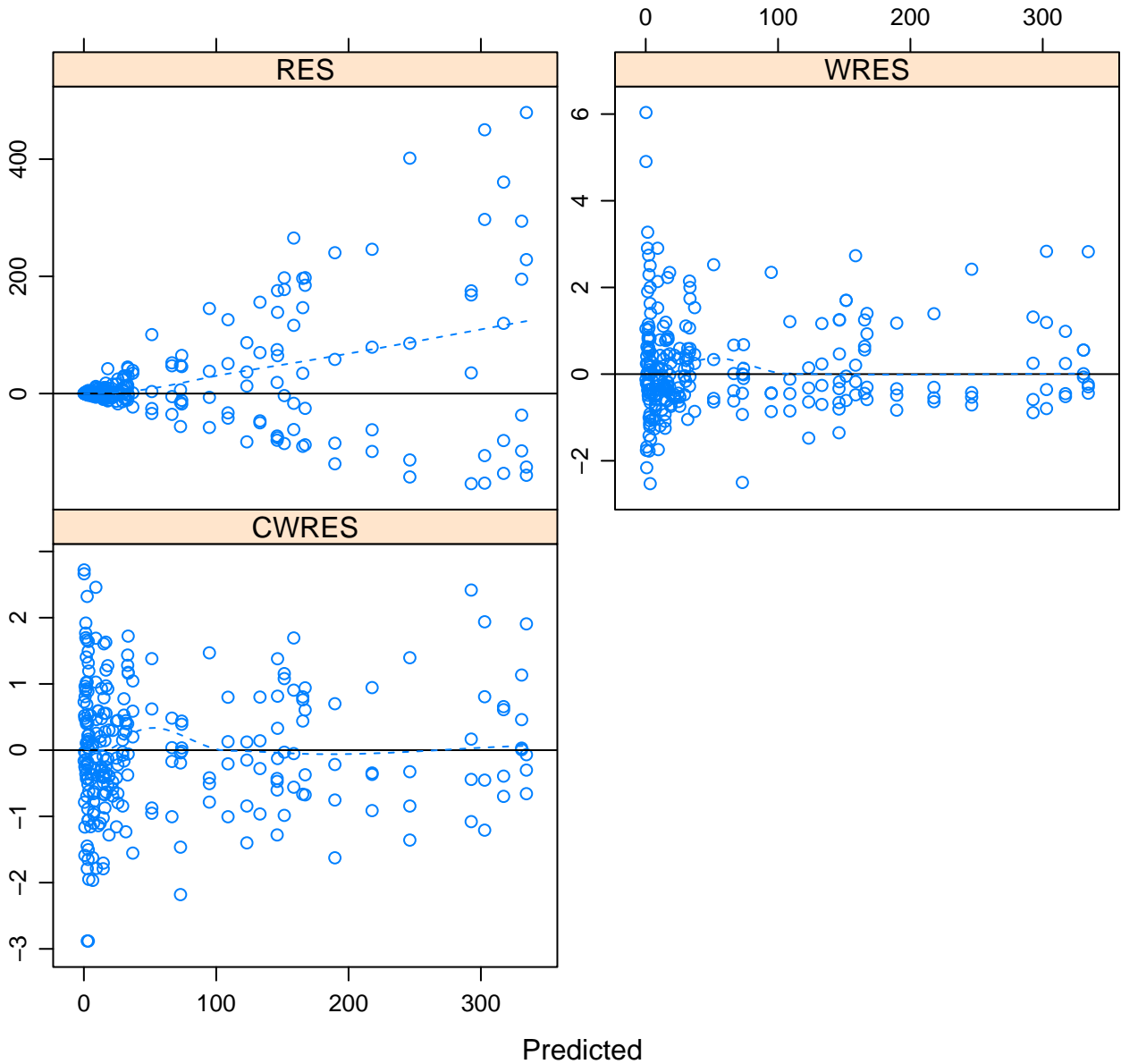
# Model 1003

## Observed vs. Predicted for male data

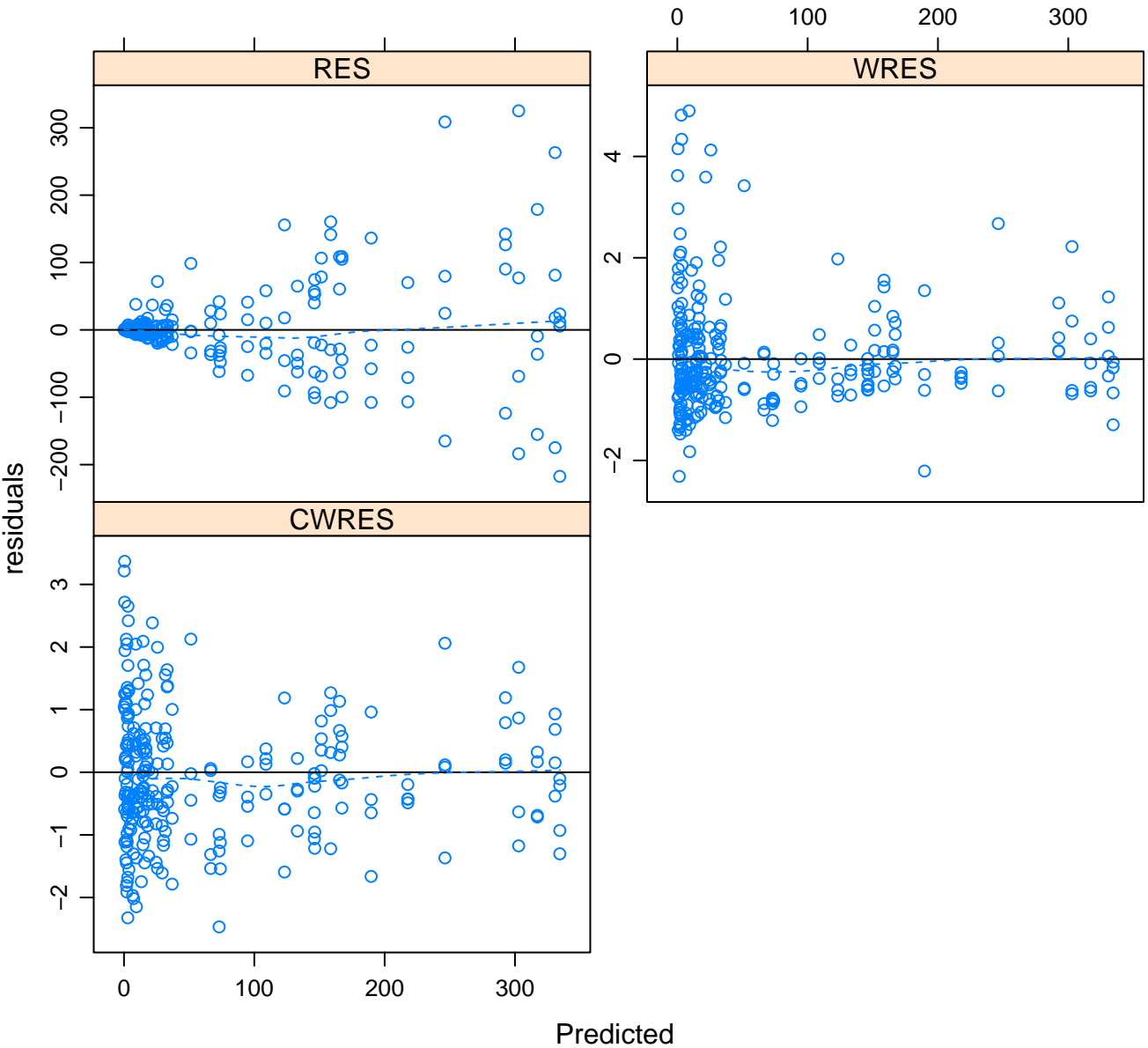


# Model 1003

## Residuals vs. Predicted for female data



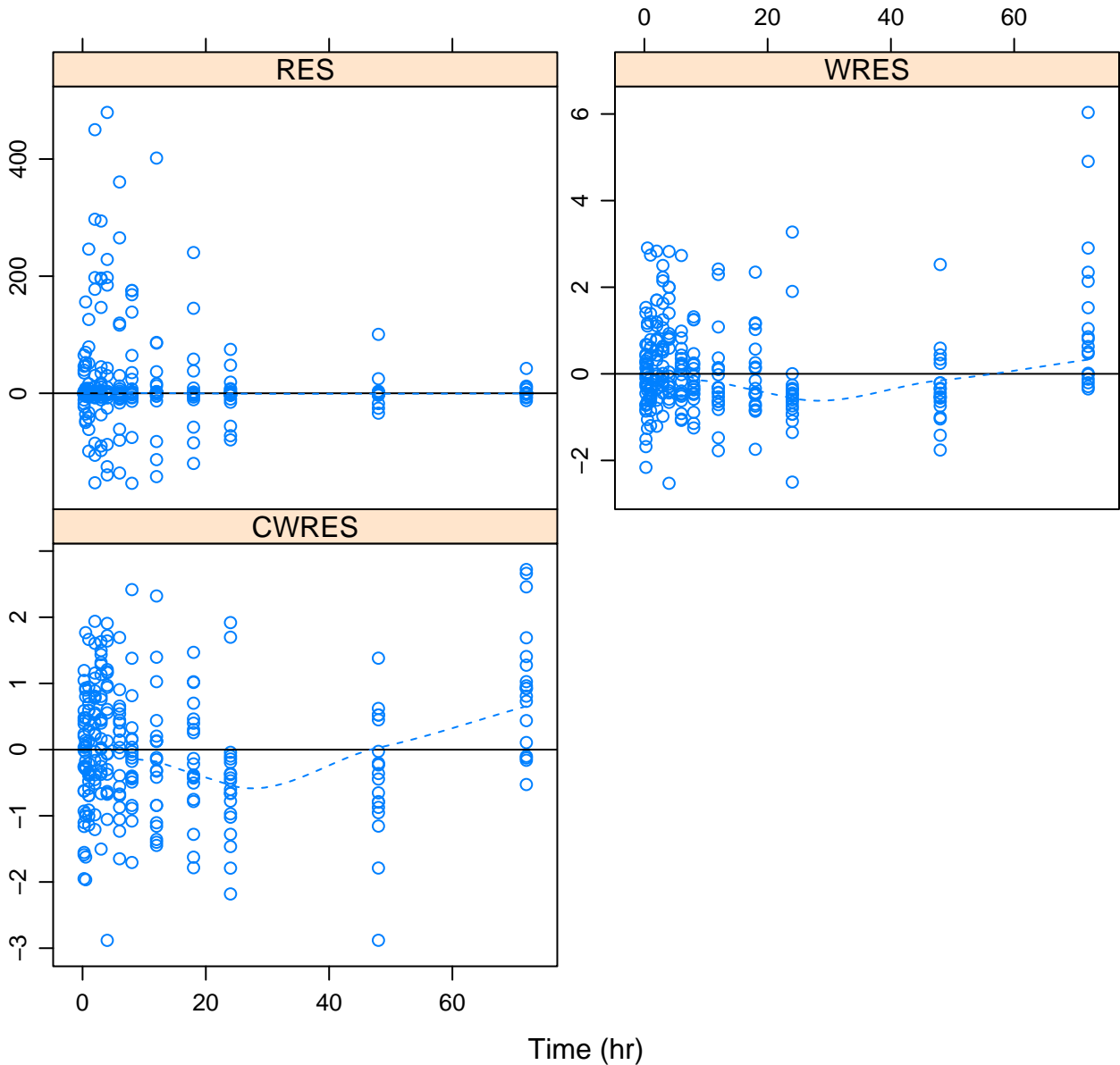
**Model 1003**  
**Residuals vs. Predicted for male data**





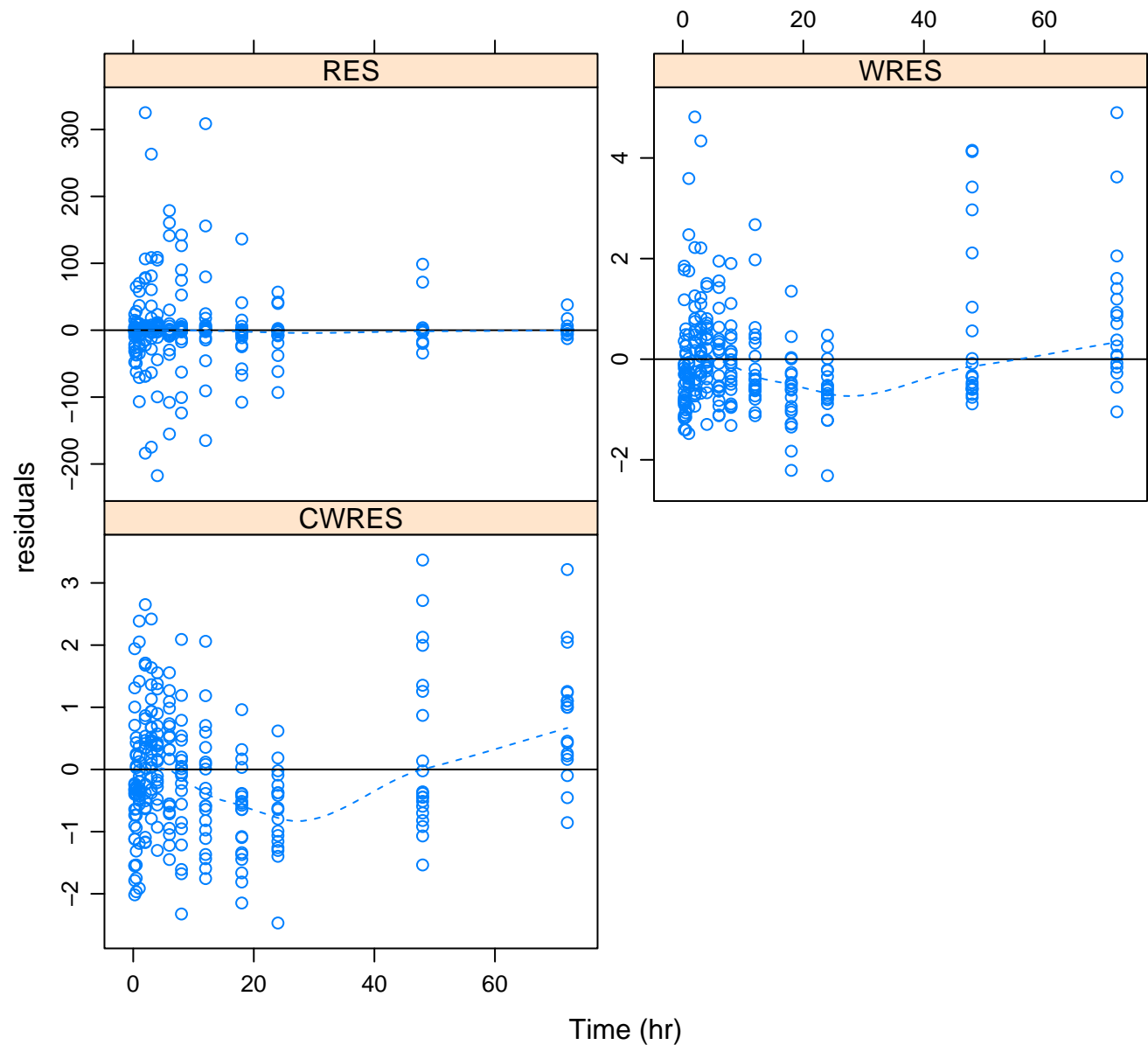
# Model 1003

## Residuals vs. Time for female data



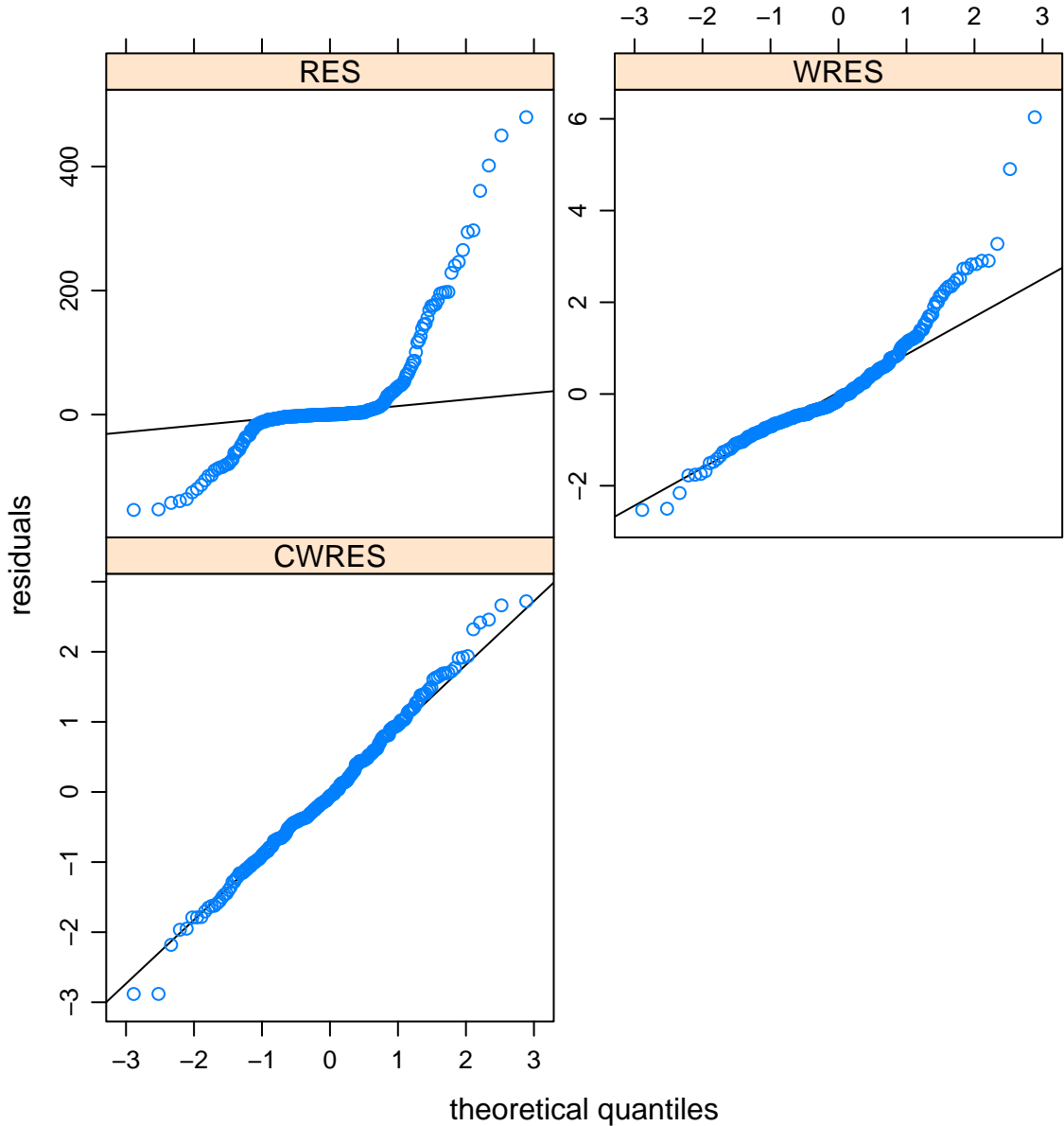
# Model 1003

## Residuals vs. Time for male data



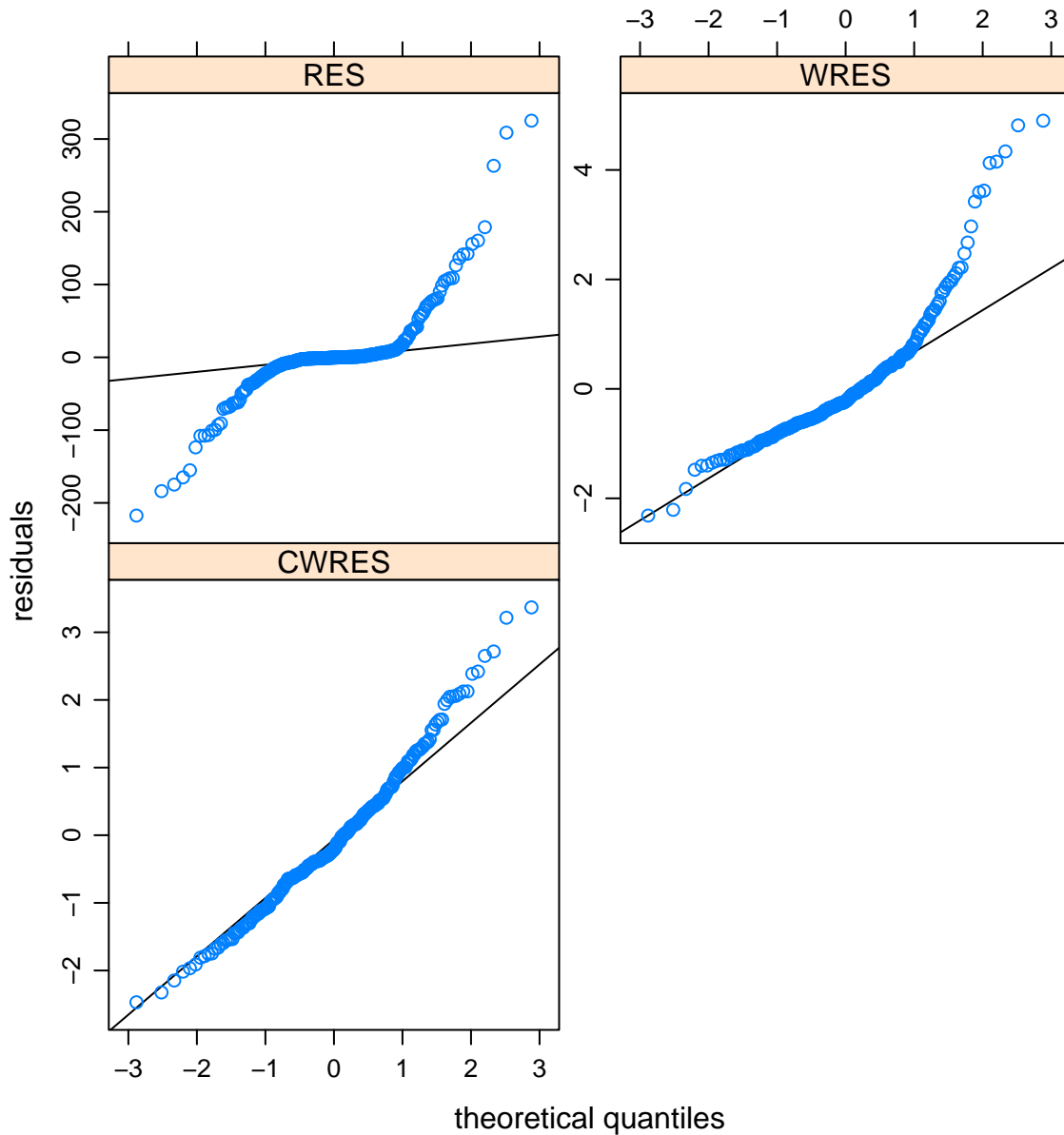
# Model 1003

## Normal Q-Q Plot Residuals for female data

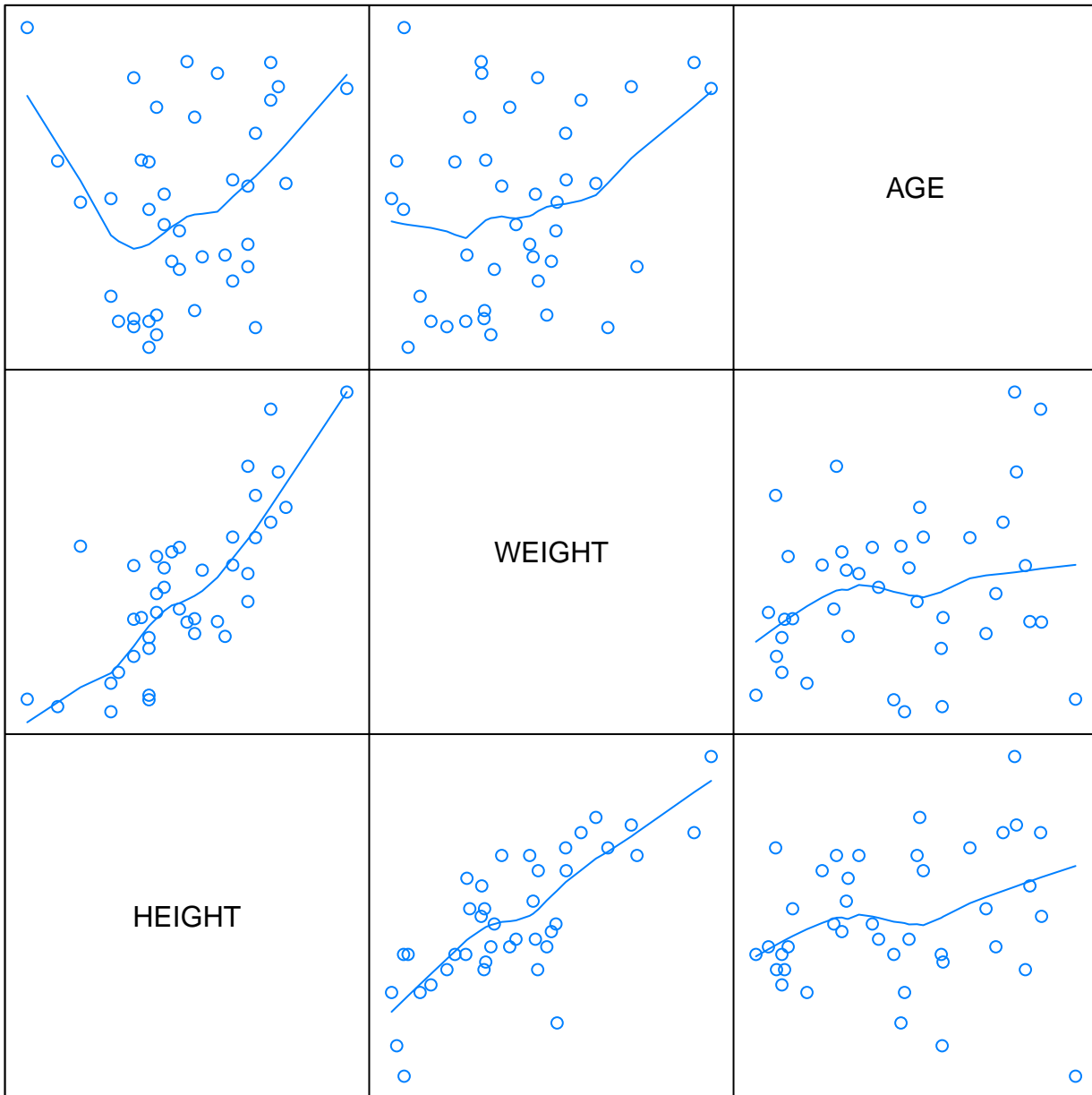


# Model 1003

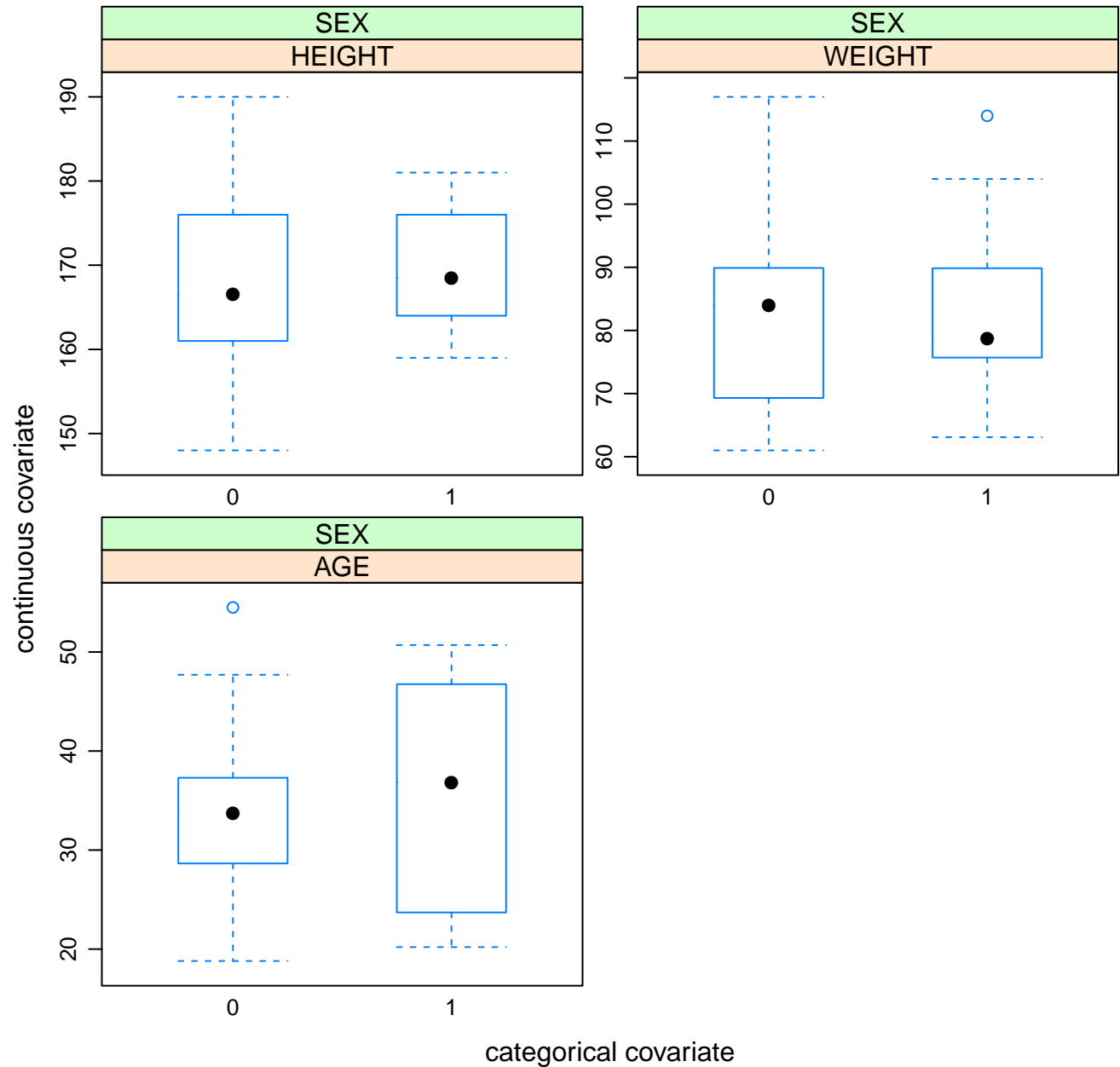
## Normal Q-Q Plot Residuals for male data



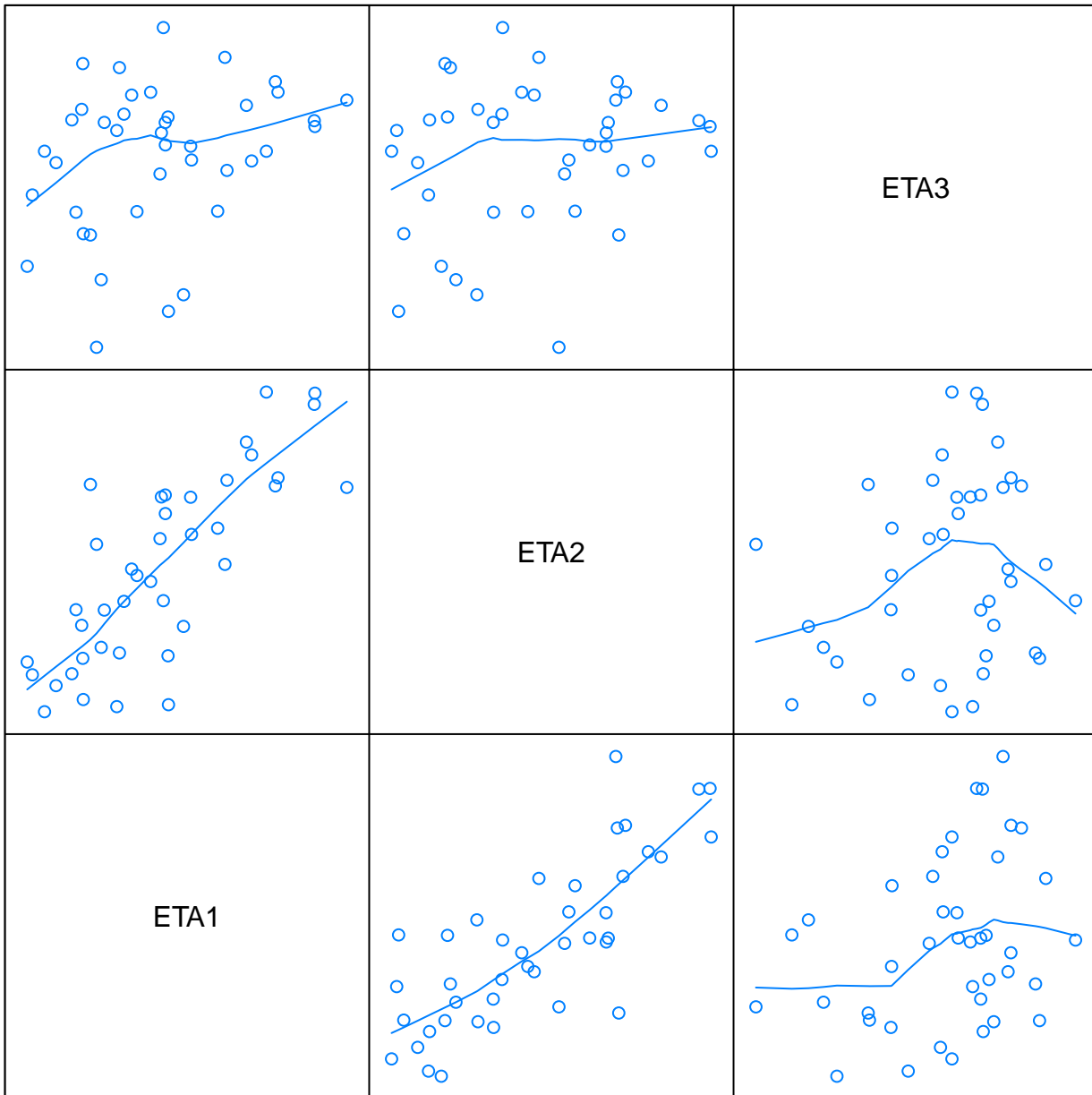
# Covariate Scatterplots



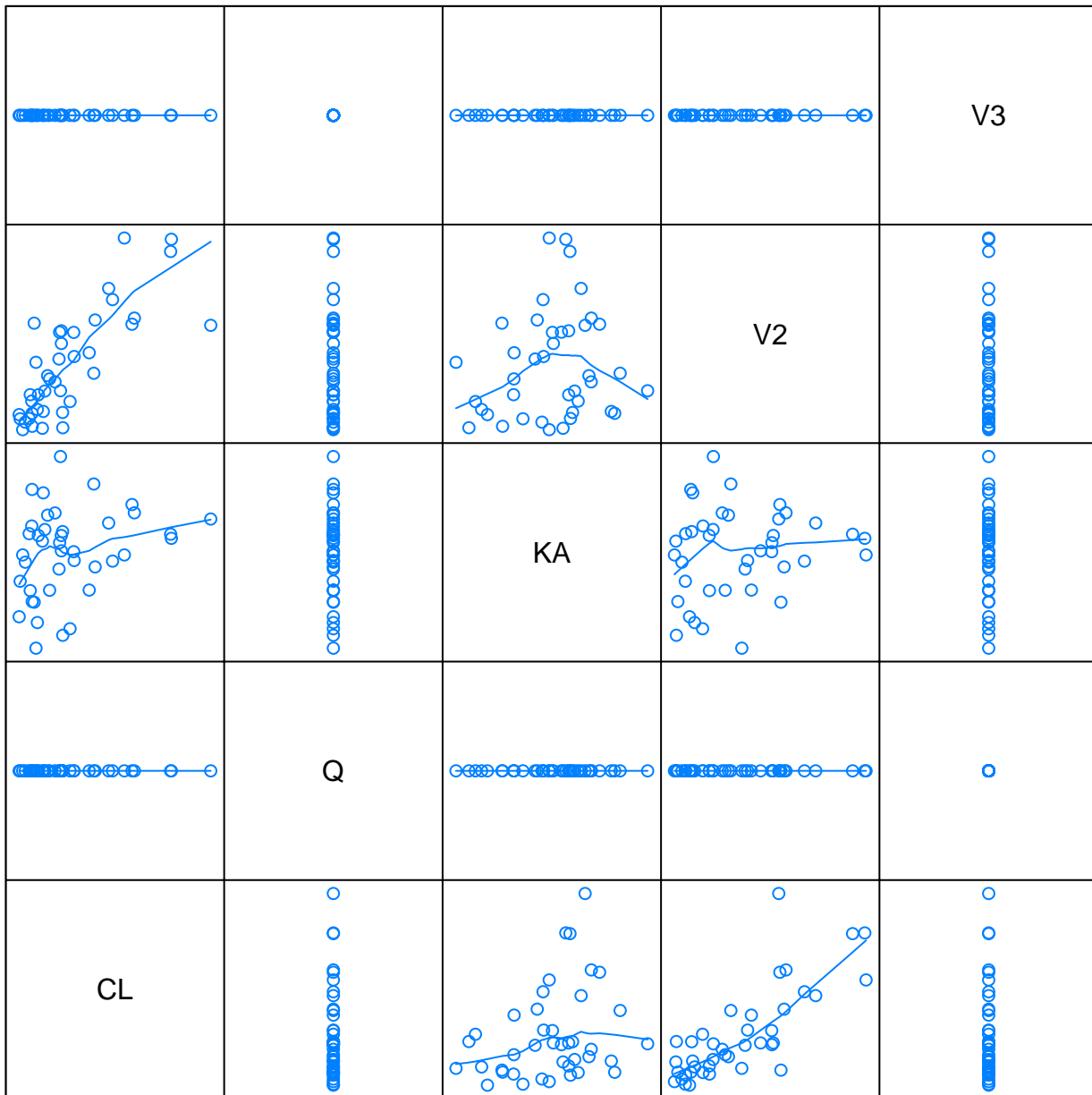
# Continuous Covariates vs. Categorical Covariates



# ETA Scatterplots

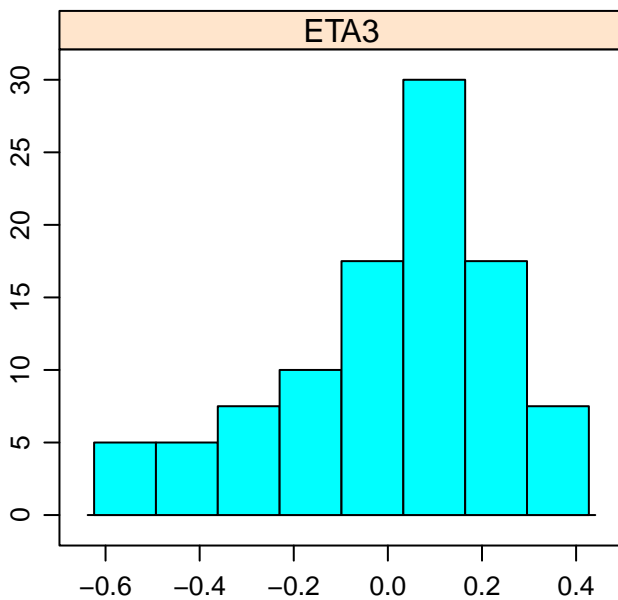
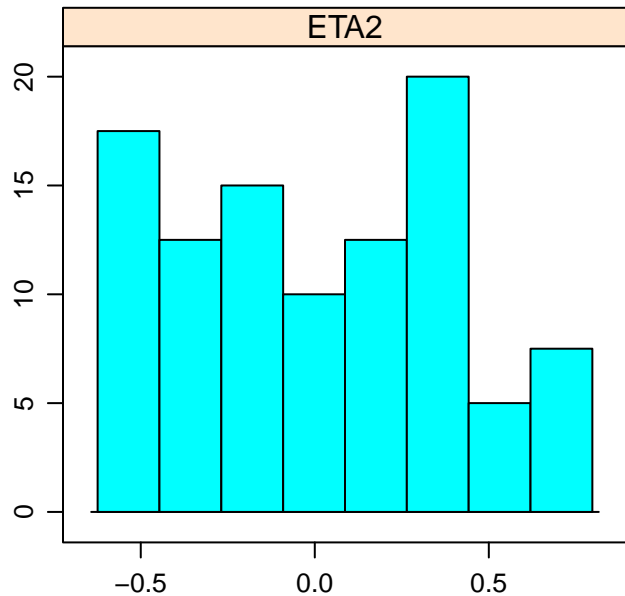
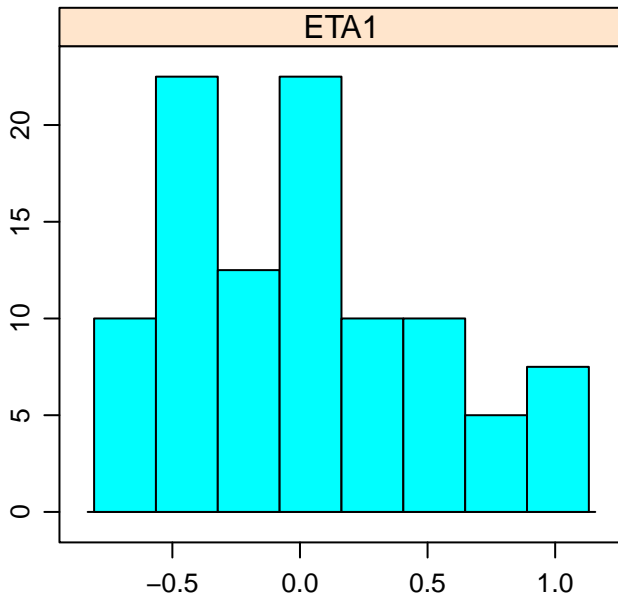


# Parameter Scatterplots



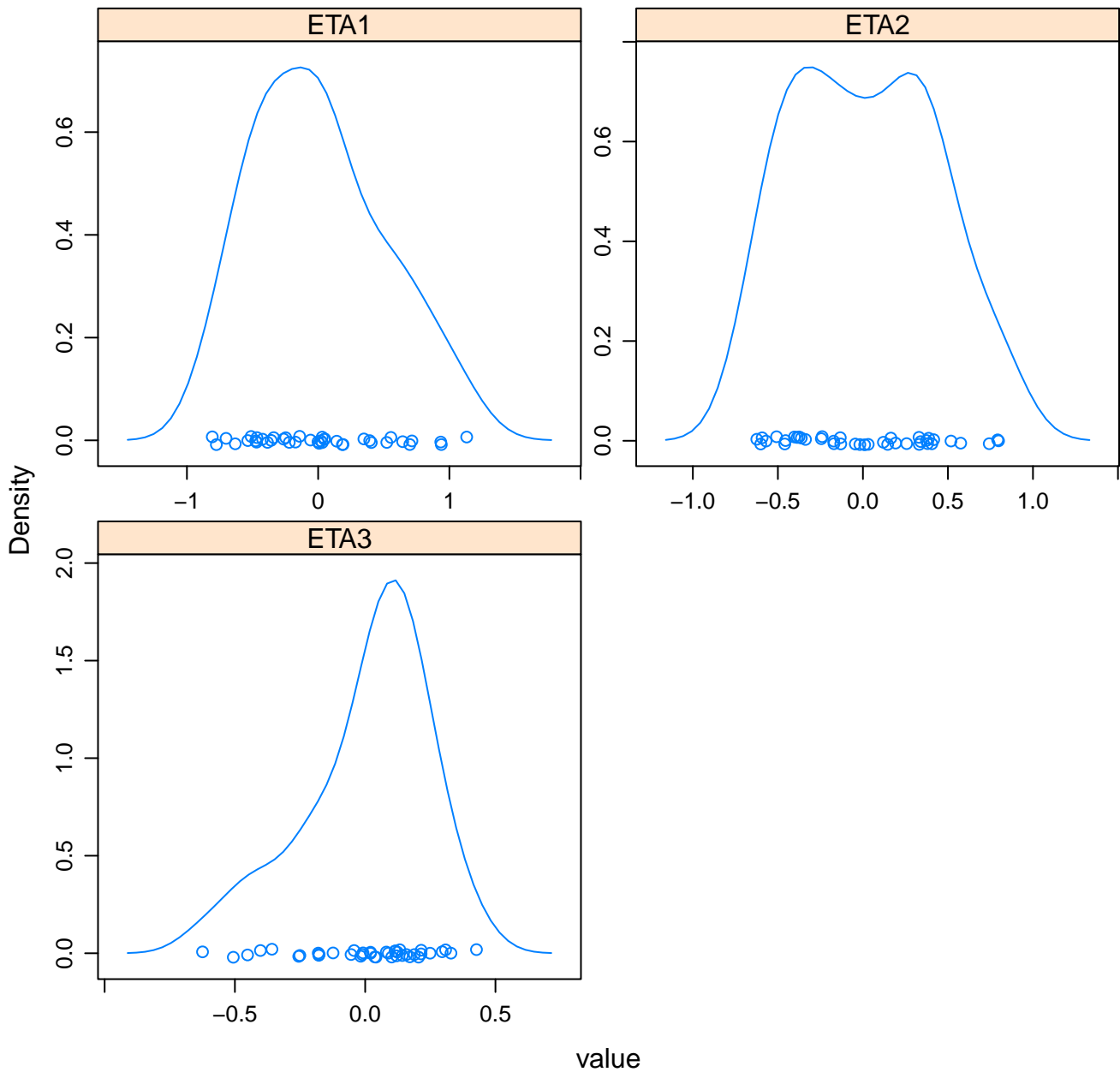


# Histograms of Etas

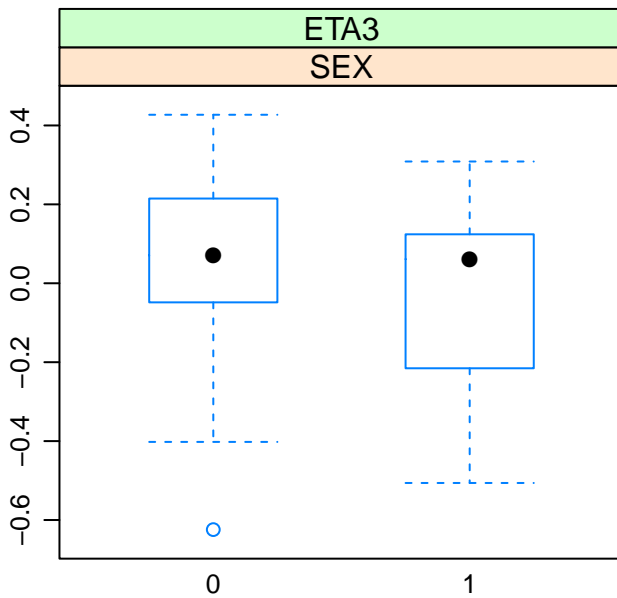
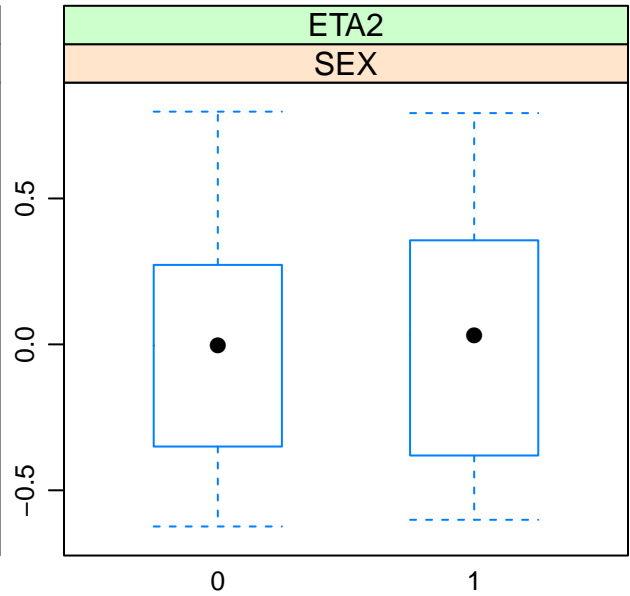
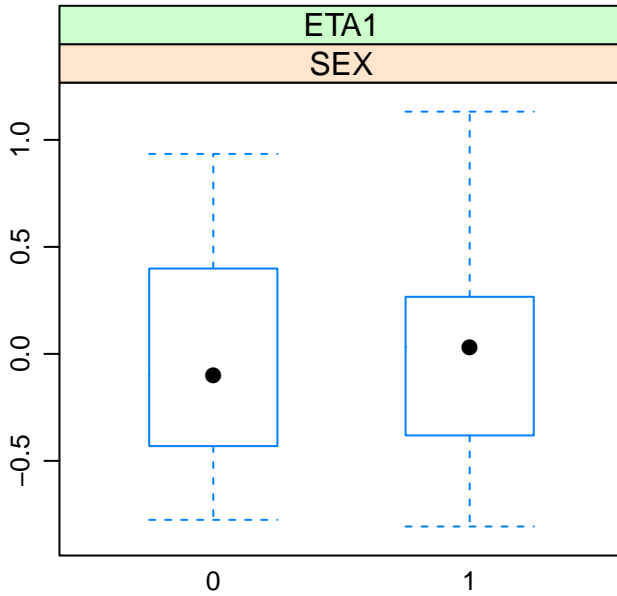


value

# Density of Etas

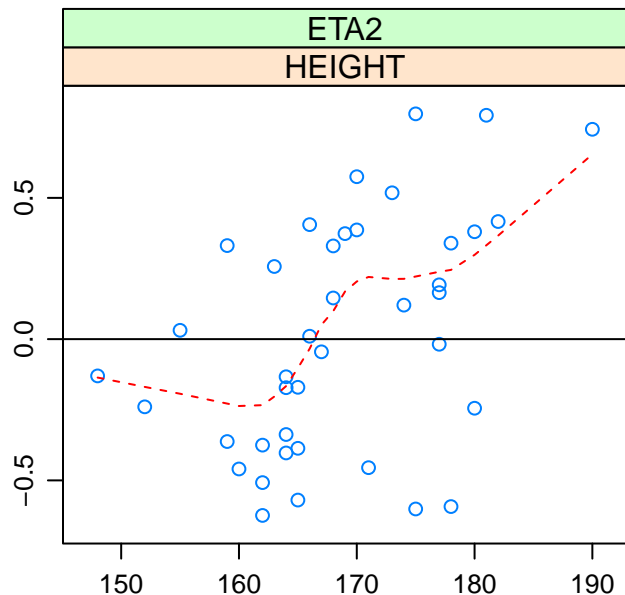
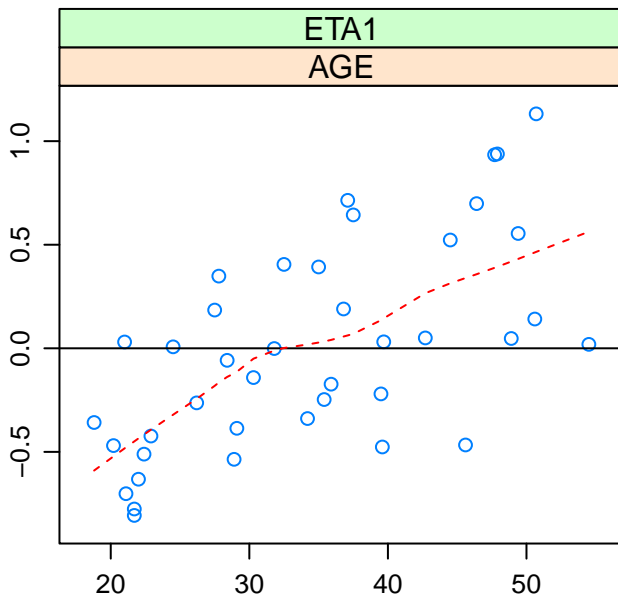
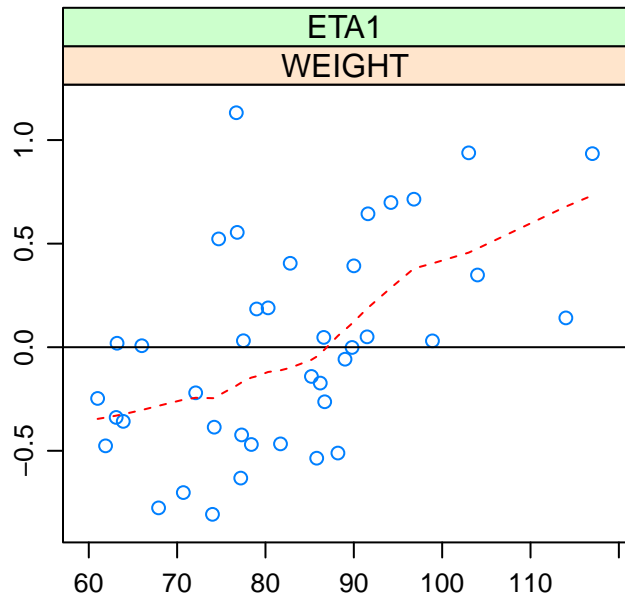
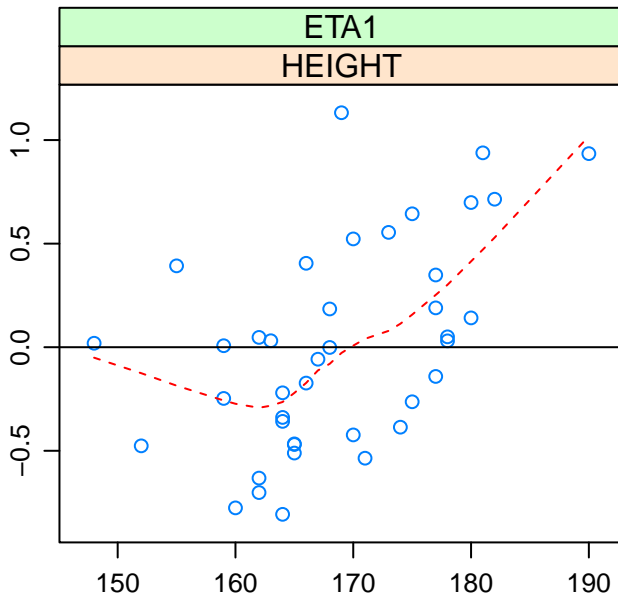


# Boxplots of Etas by Categorical Covariate



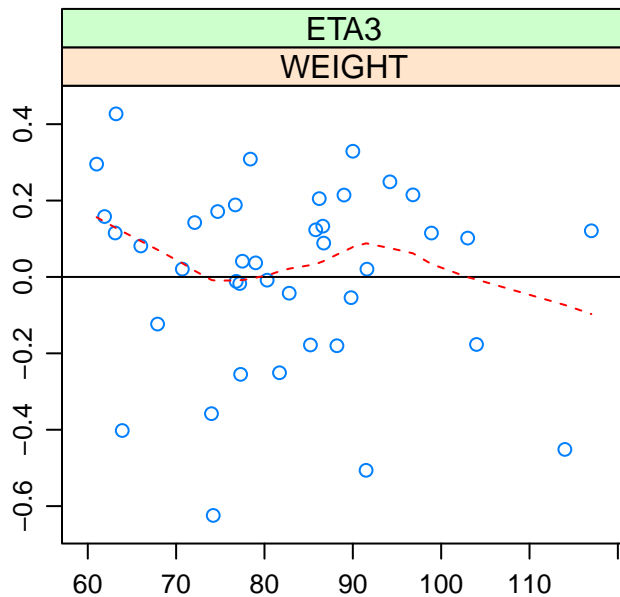
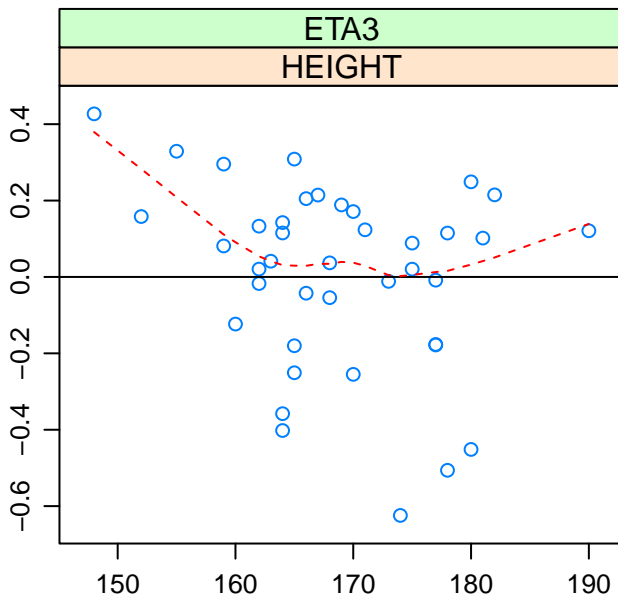
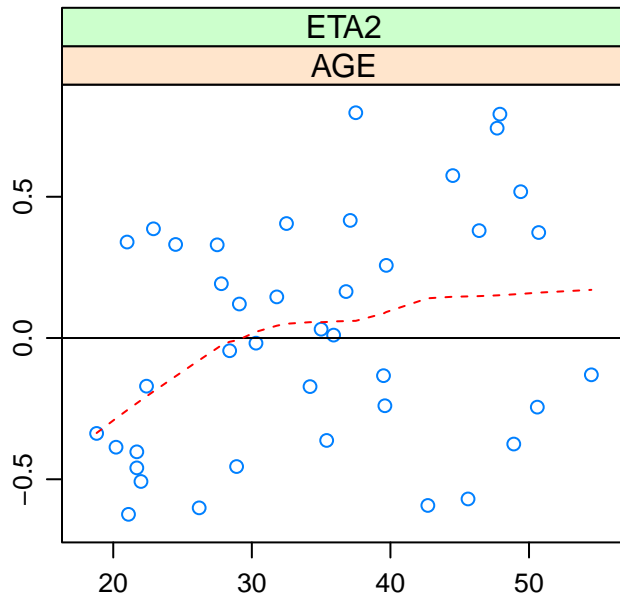
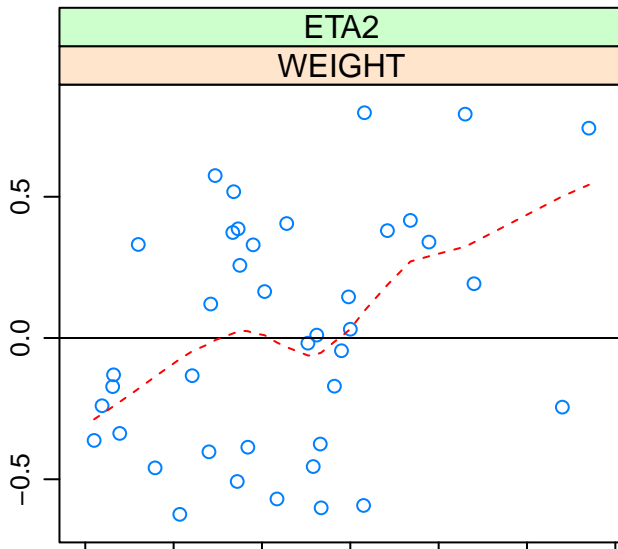
categorical covariate level

# Etas vs. Continuous Covariates



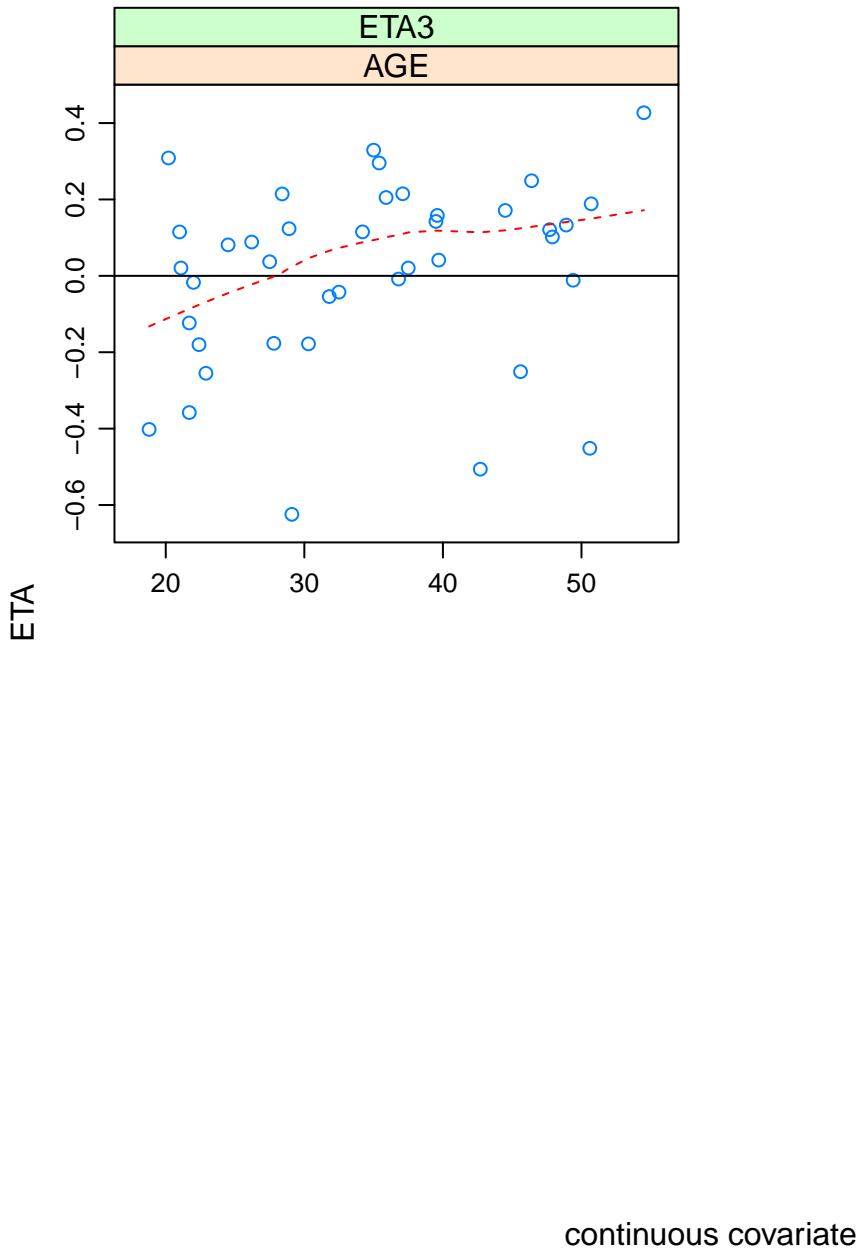
continuous covariate

# Etas vs. Continuous Covariates

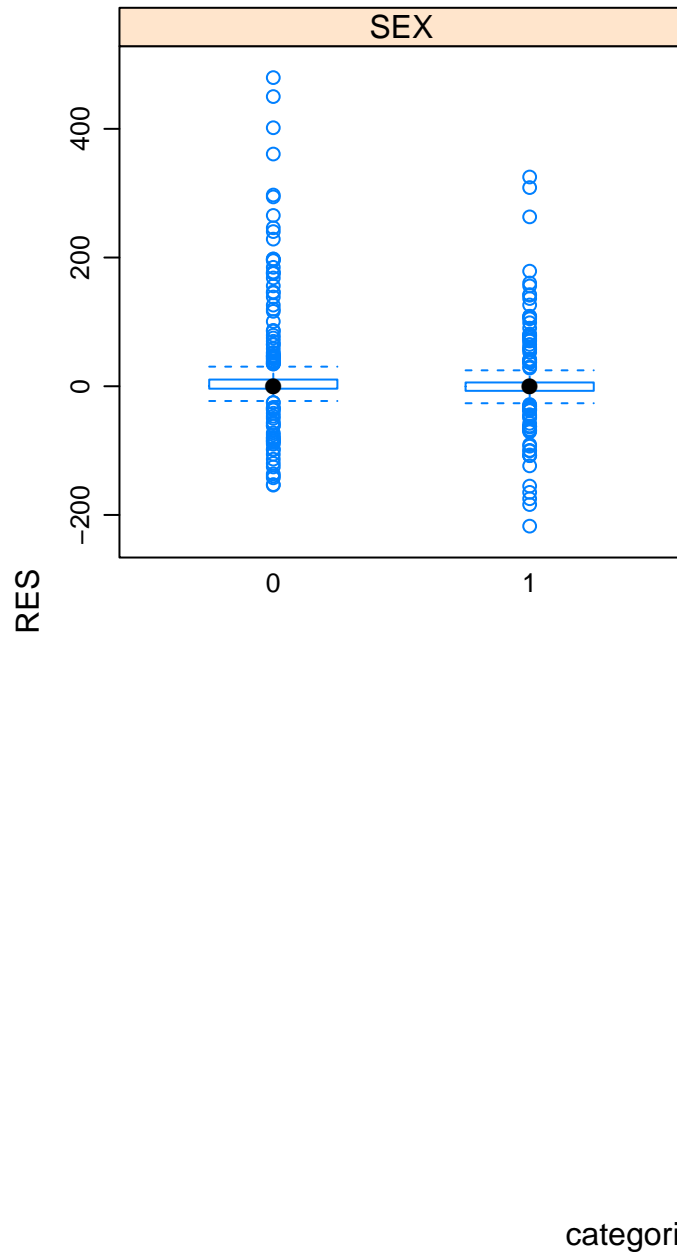


continuous covariate

# Etas vs. Continuous Covariates

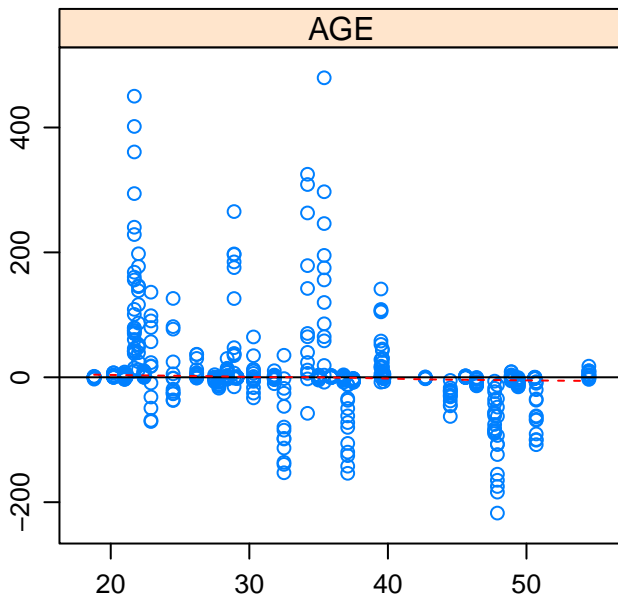
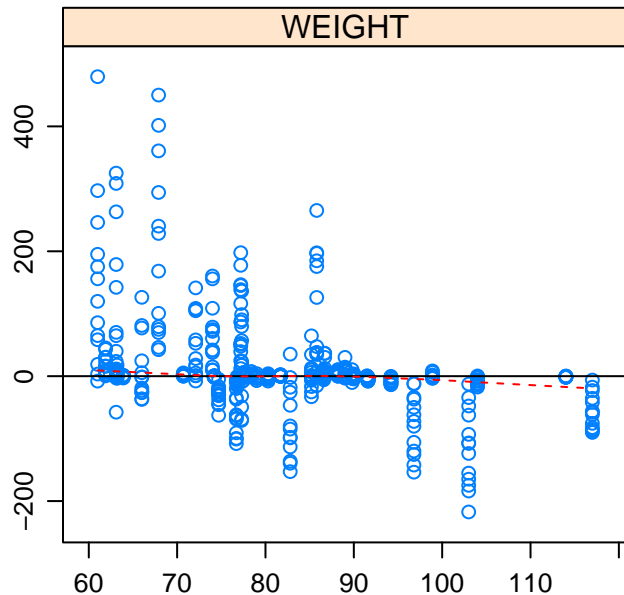
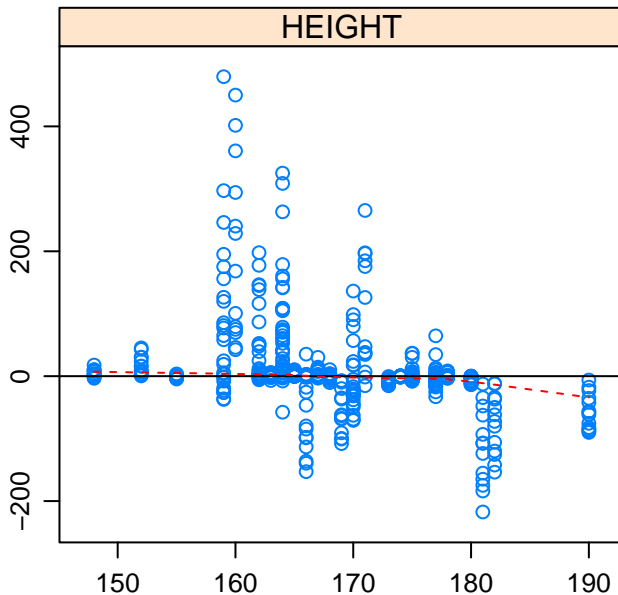


# RES vs. Categorical Covariates



# RES vs. Continuous Covariates

RES

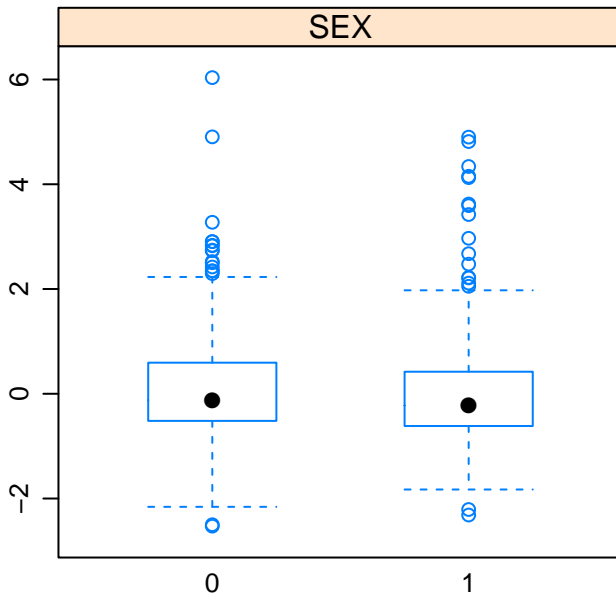


continuous covariate



# WRES vs. Categorical Covariates

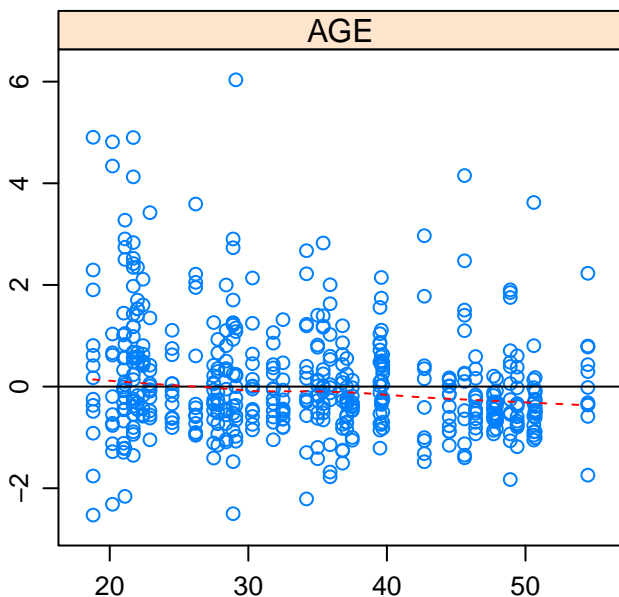
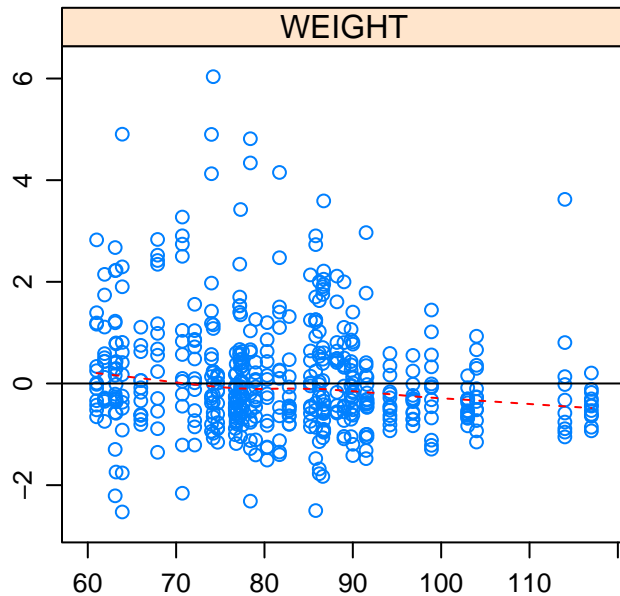
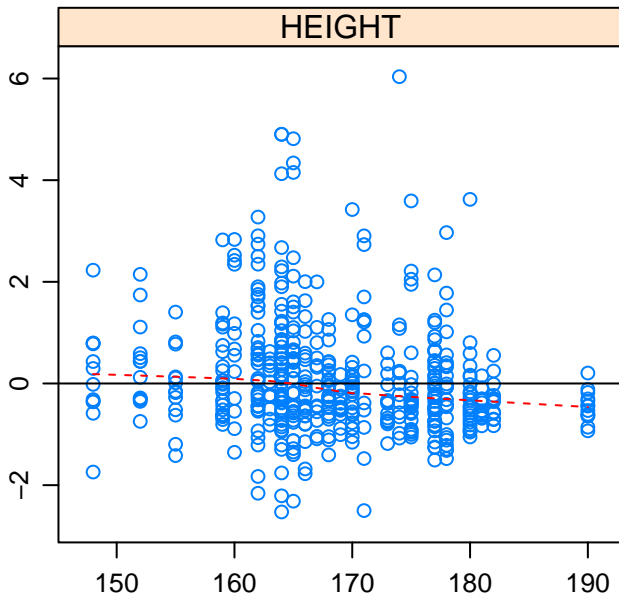
WRES



categorical Covariate

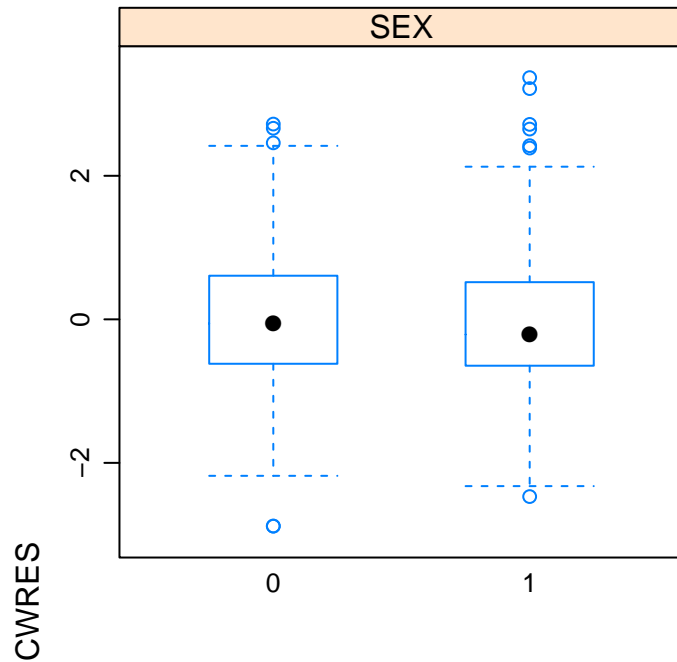
# WRES vs. Continuous Covariates

WRES



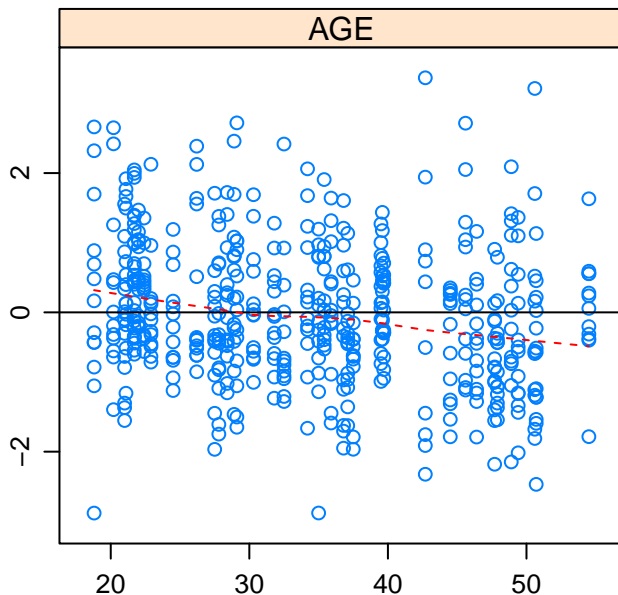
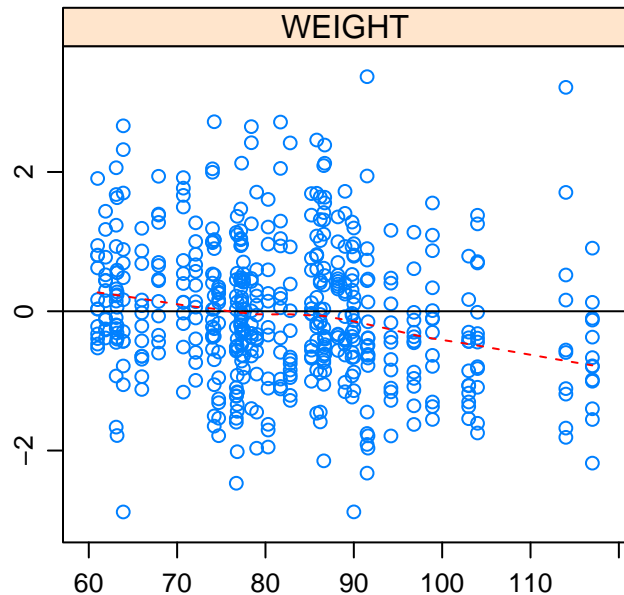
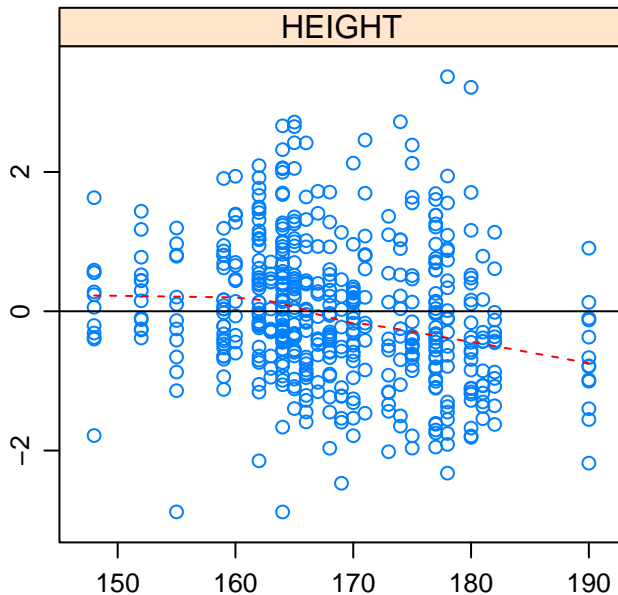
continuous covariate

# CWRES vs. Categorical Covariates



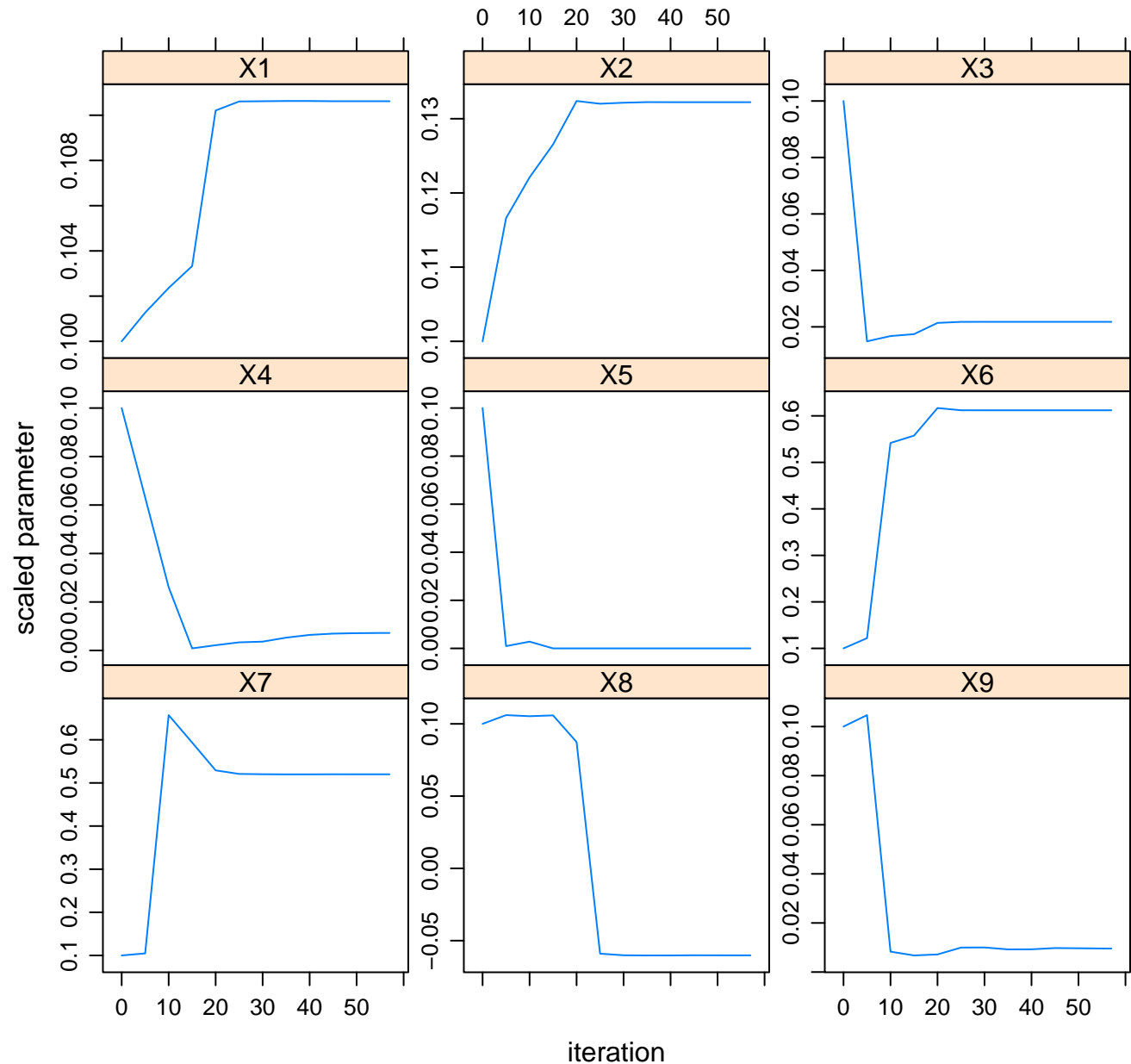
categorical Covariate

# CWRES vs. Continuous Covariates



continuous covariate

# Model 1003 parameter search



# Model 1003 gradient search

0 10 20 30 40 50

