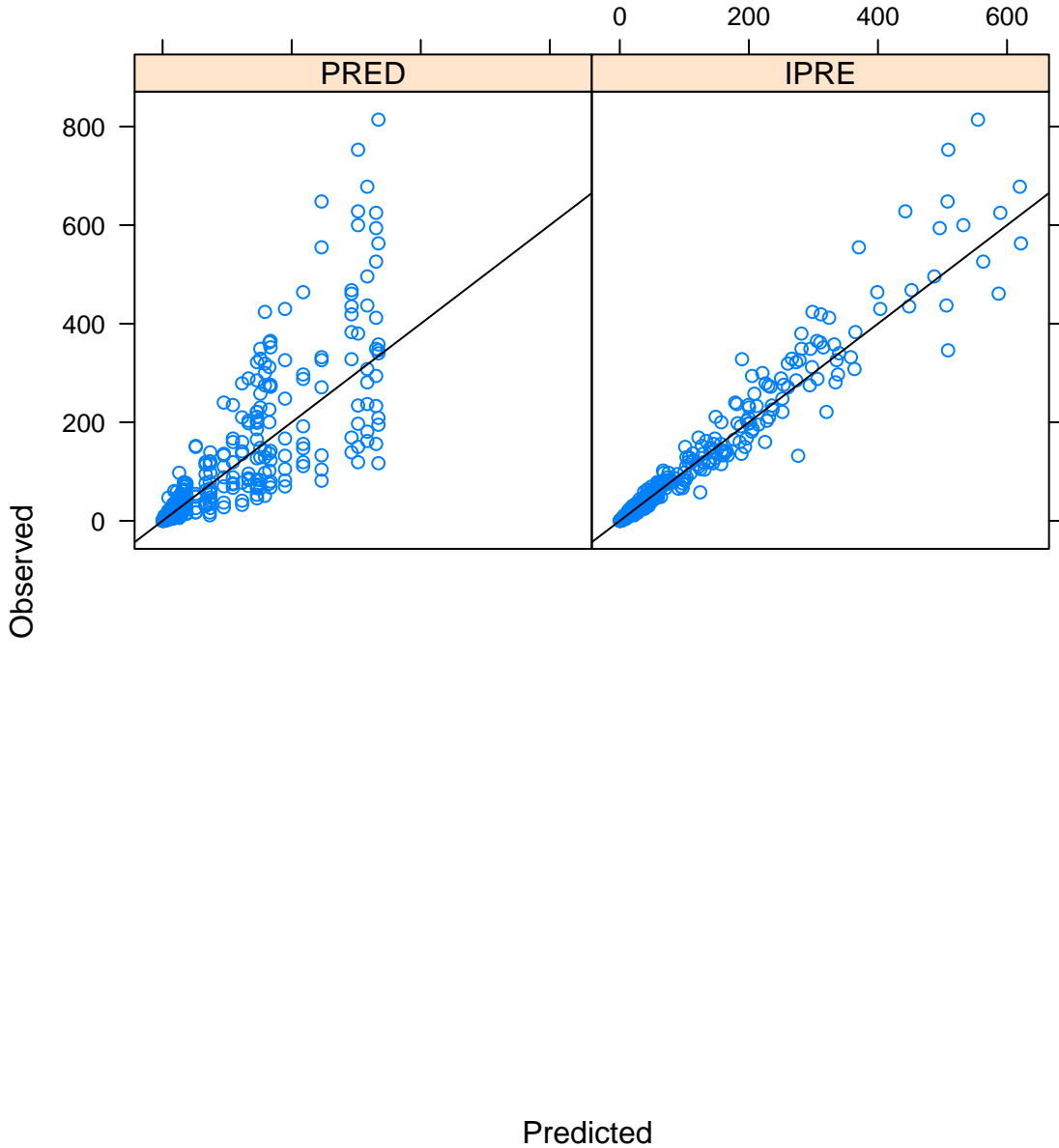


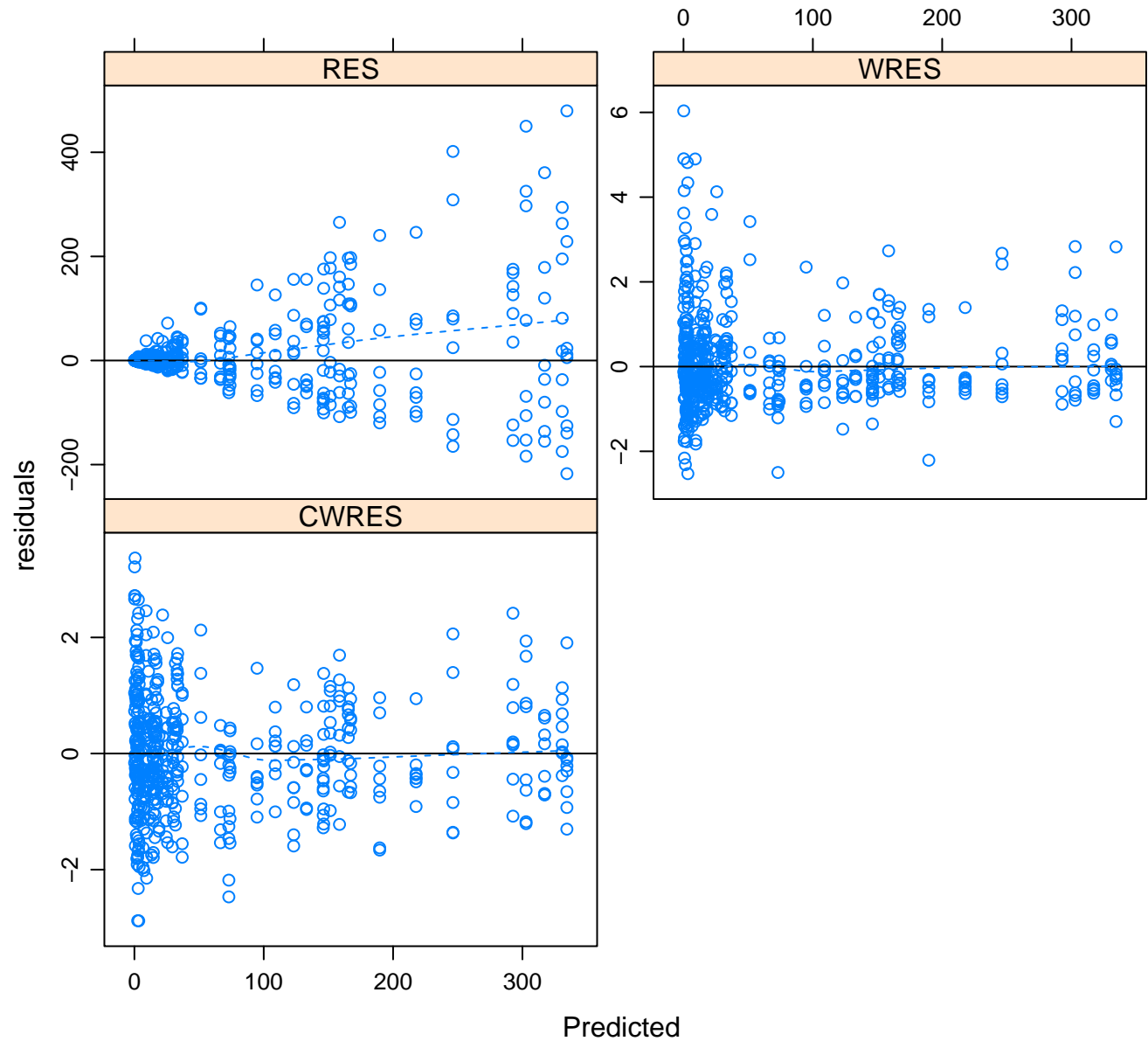
Model 1003

Observed vs. Predicted for all data



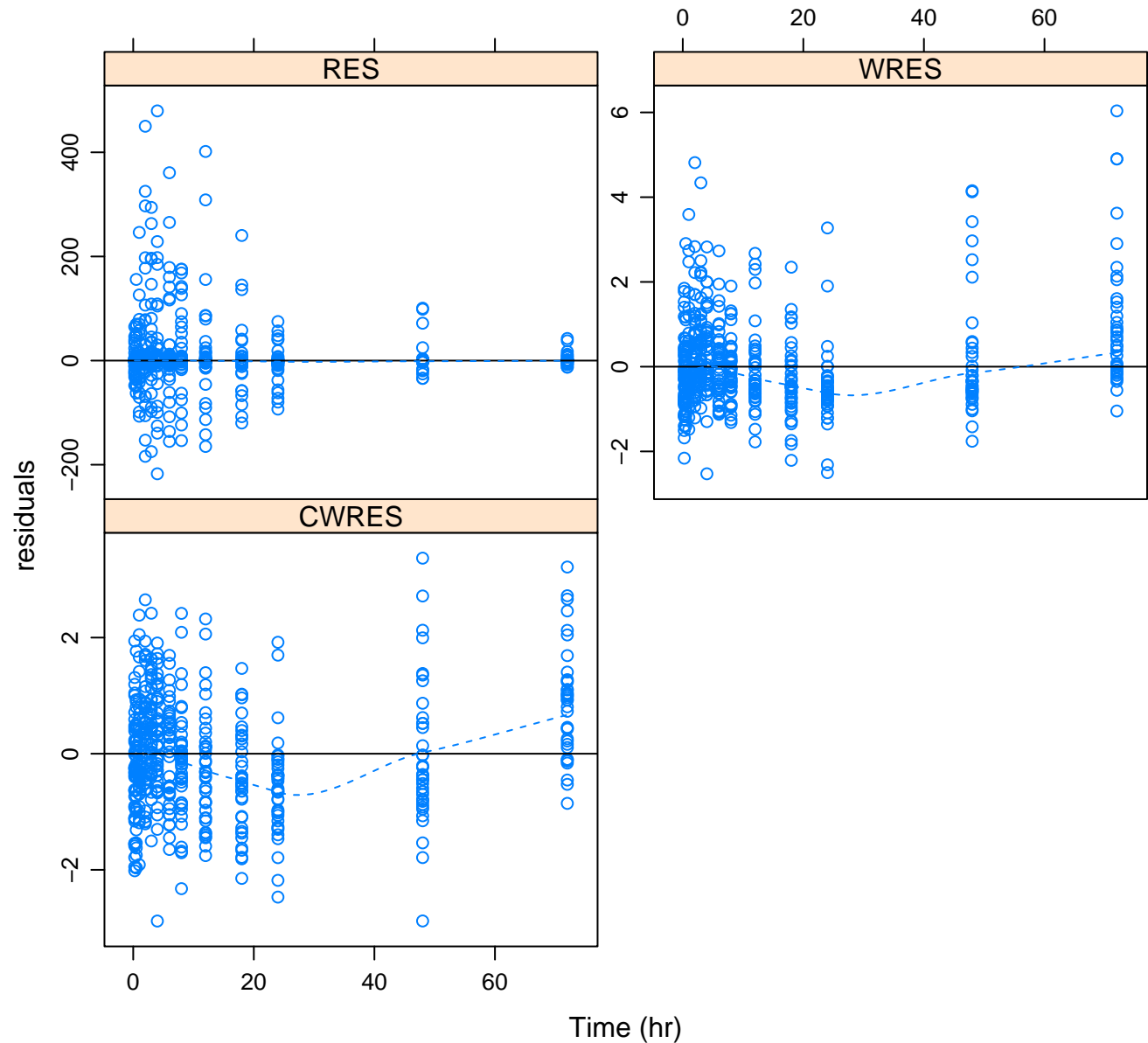
Model 1003

Residuals vs. Predicted for all data



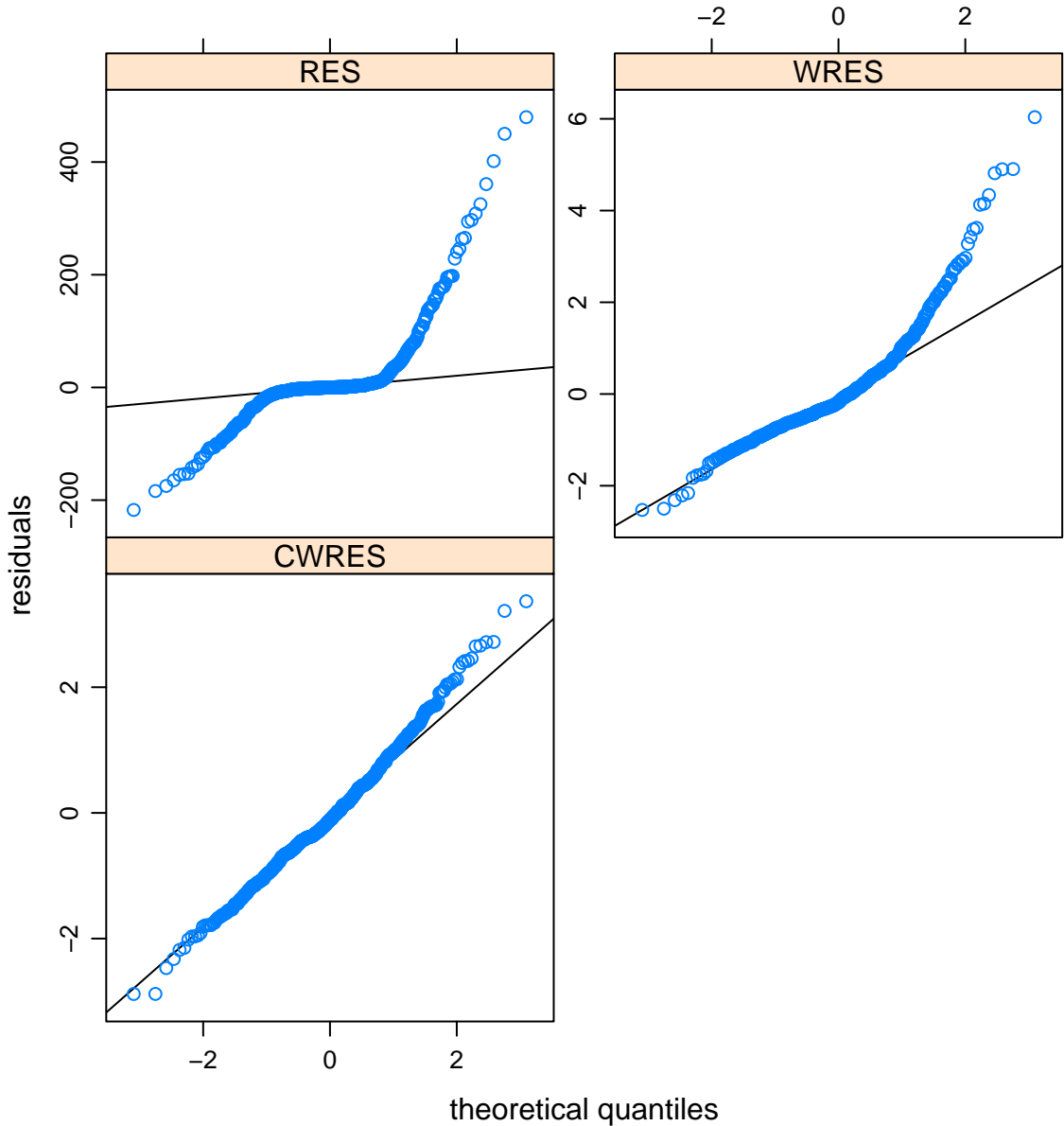
Model 1003

Residuals vs. Time for all data



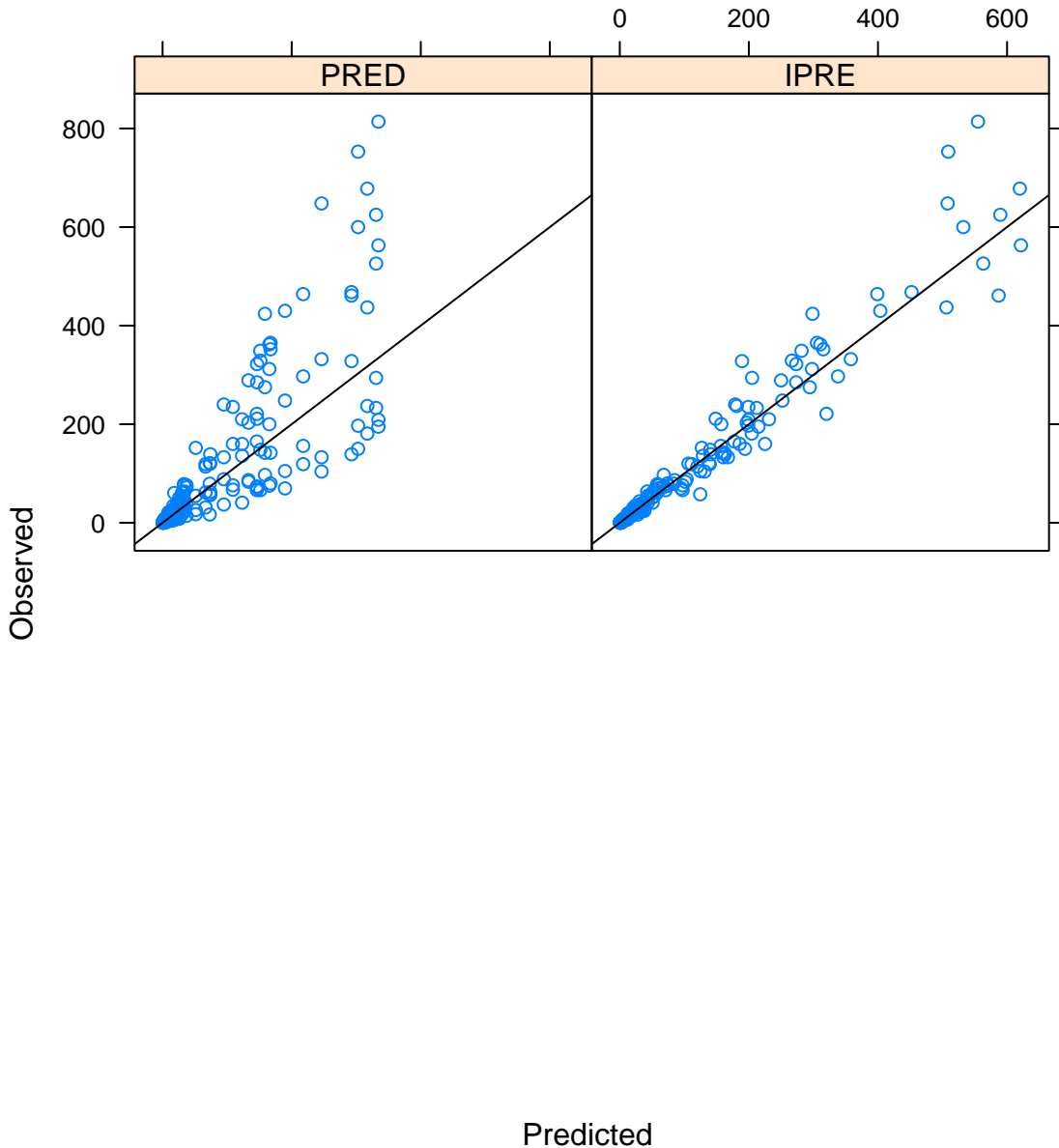
Model 1003

Normal Q-Q Plot Residuals for all data



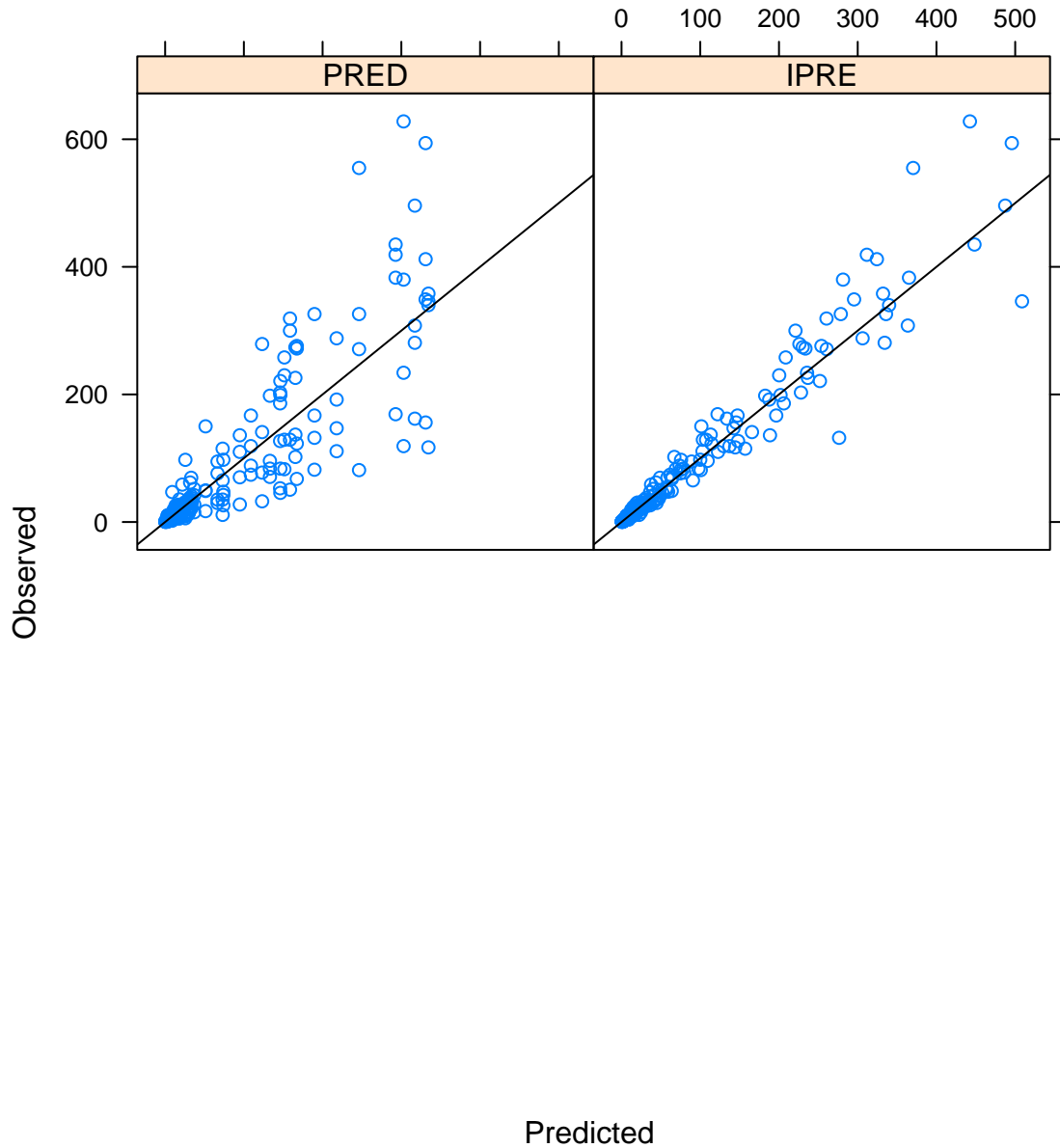
Model 1003

Observed vs. Predicted for female data



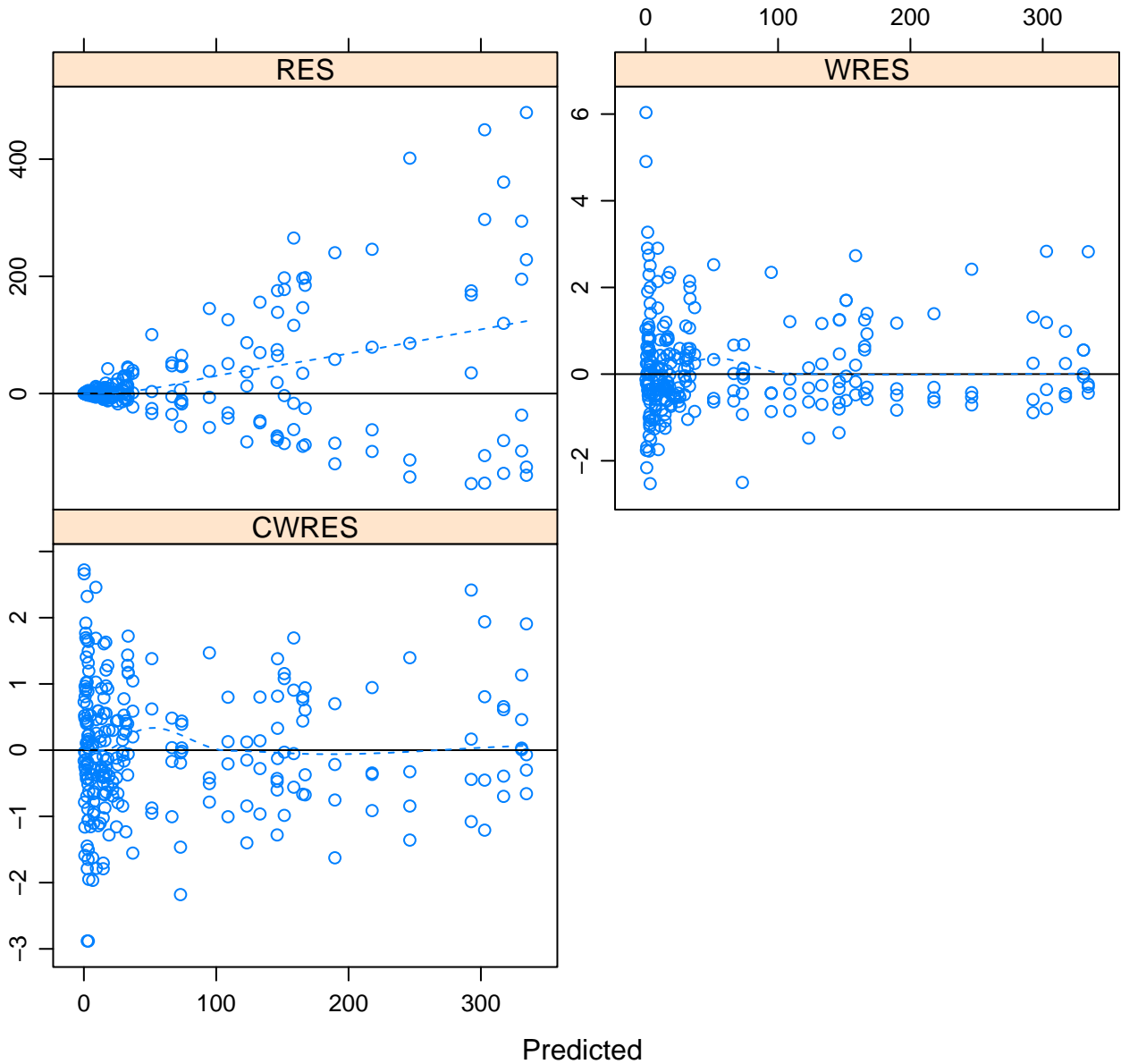
Model 1003

Observed vs. Predicted for male data

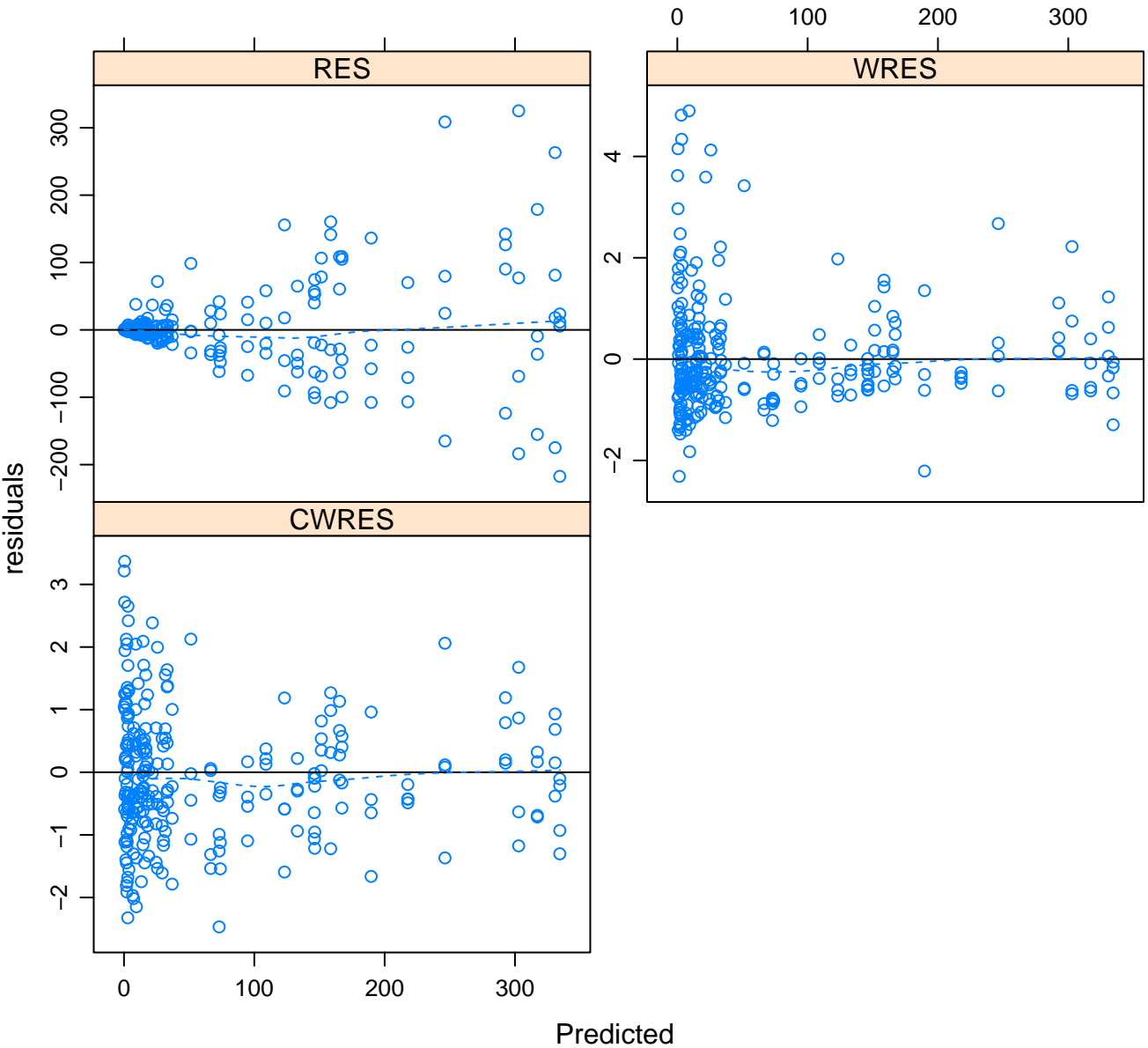


Model 1003

Residuals vs. Predicted for female data

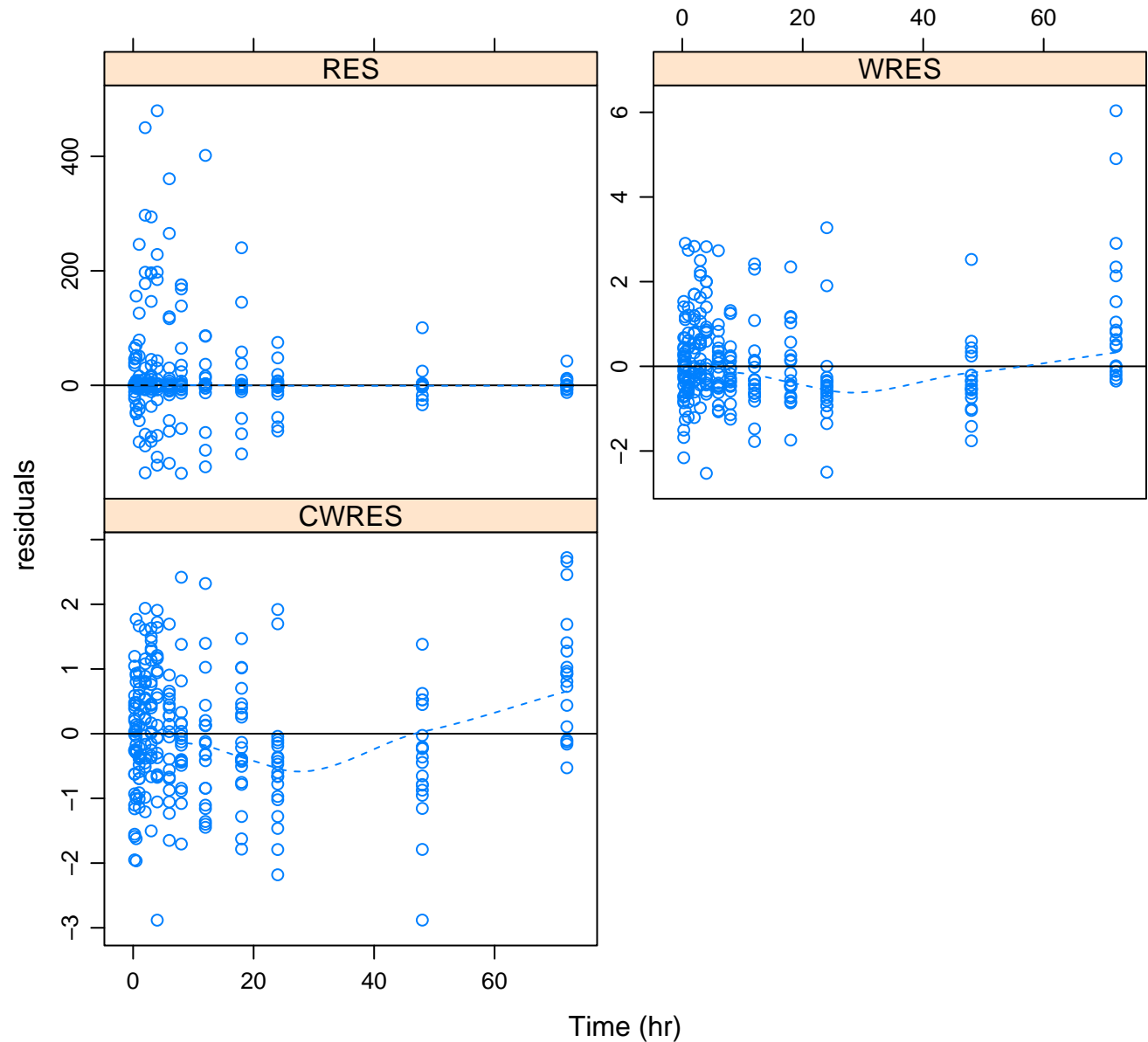


Model 1003
Residuals vs. Predicted for male data



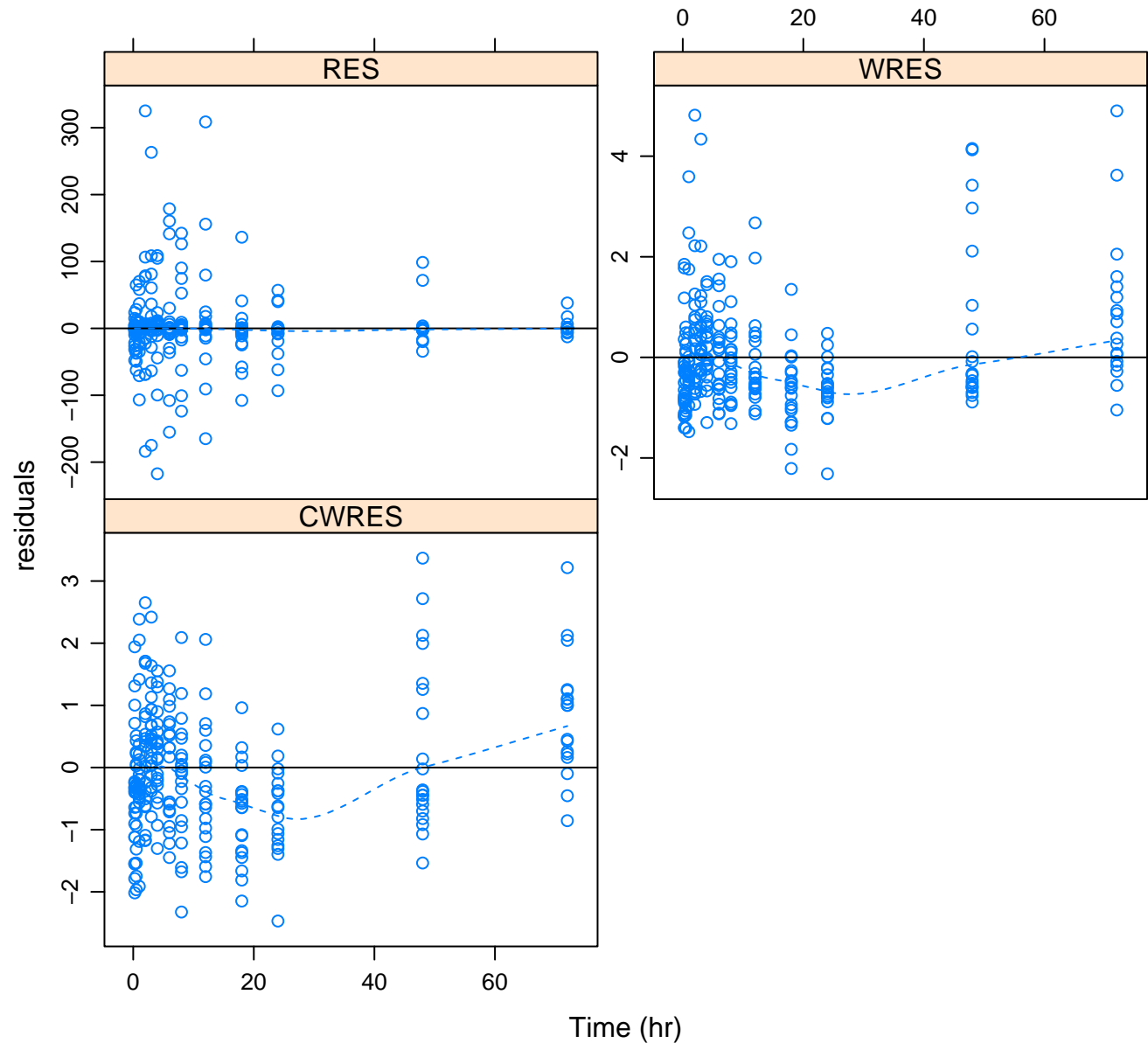
Model 1003

Residuals vs. Time for female data



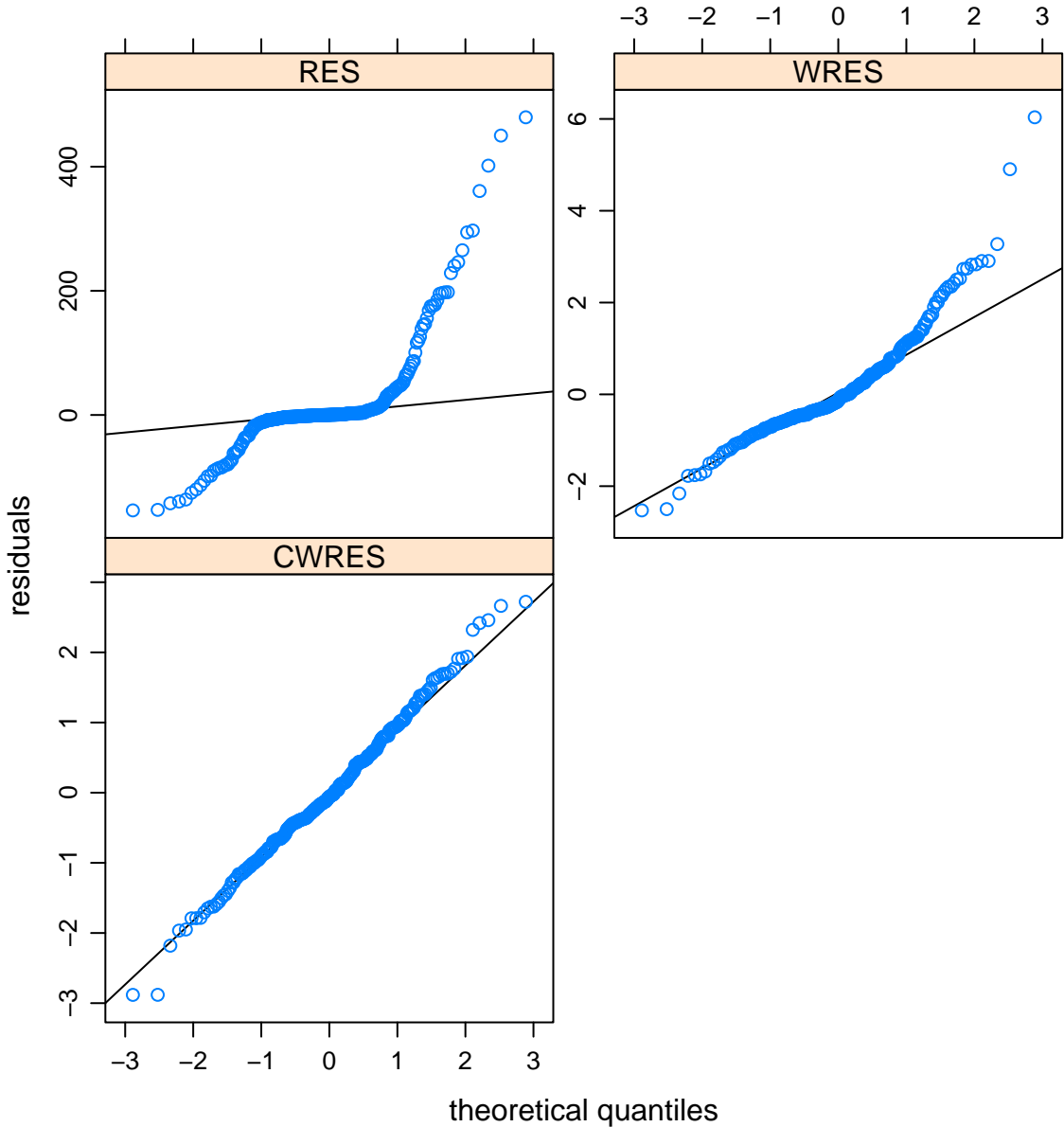
Model 1003

Residuals vs. Time for male data



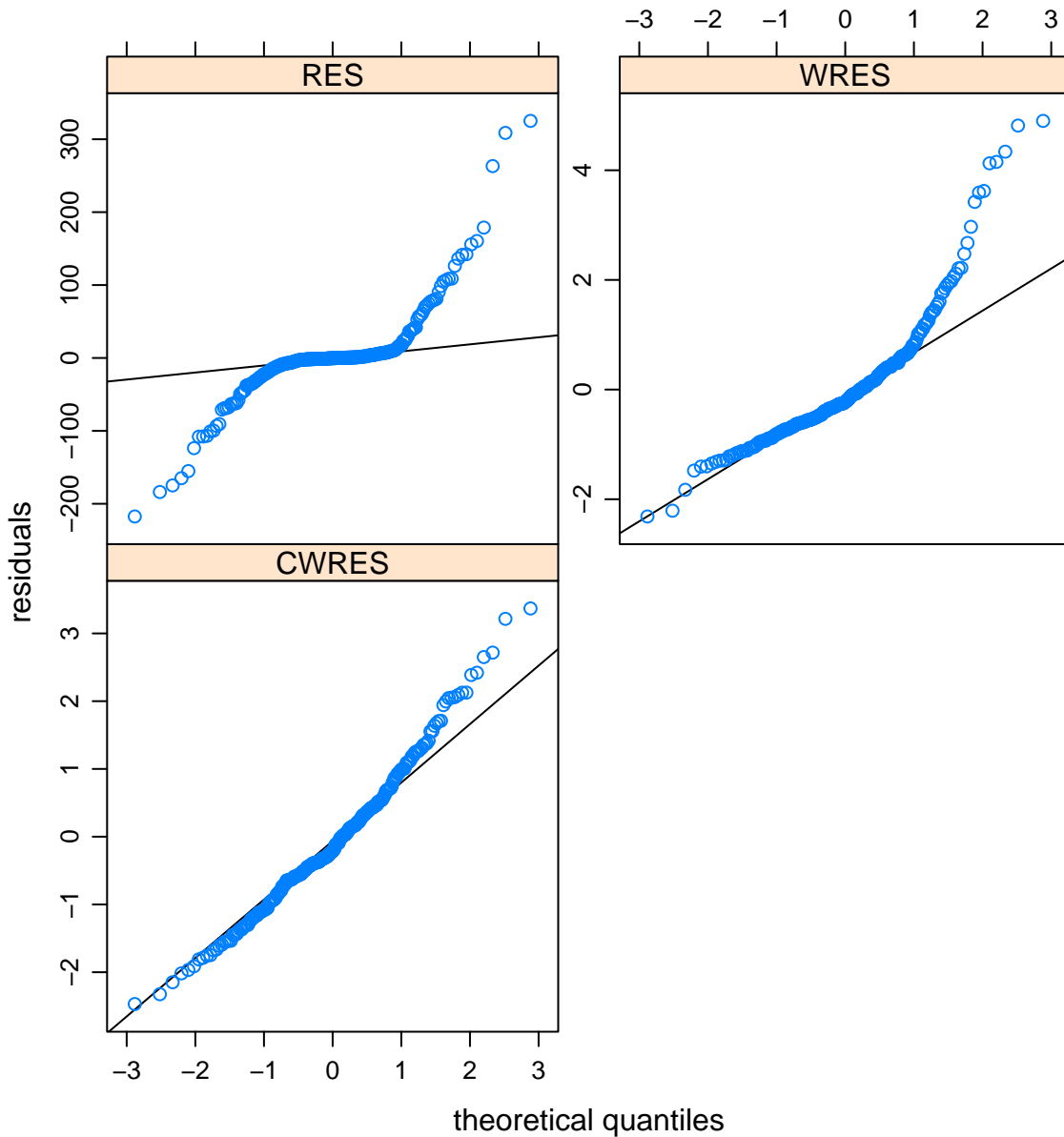
Model 1003

Normal Q-Q Plot Residuals for female data

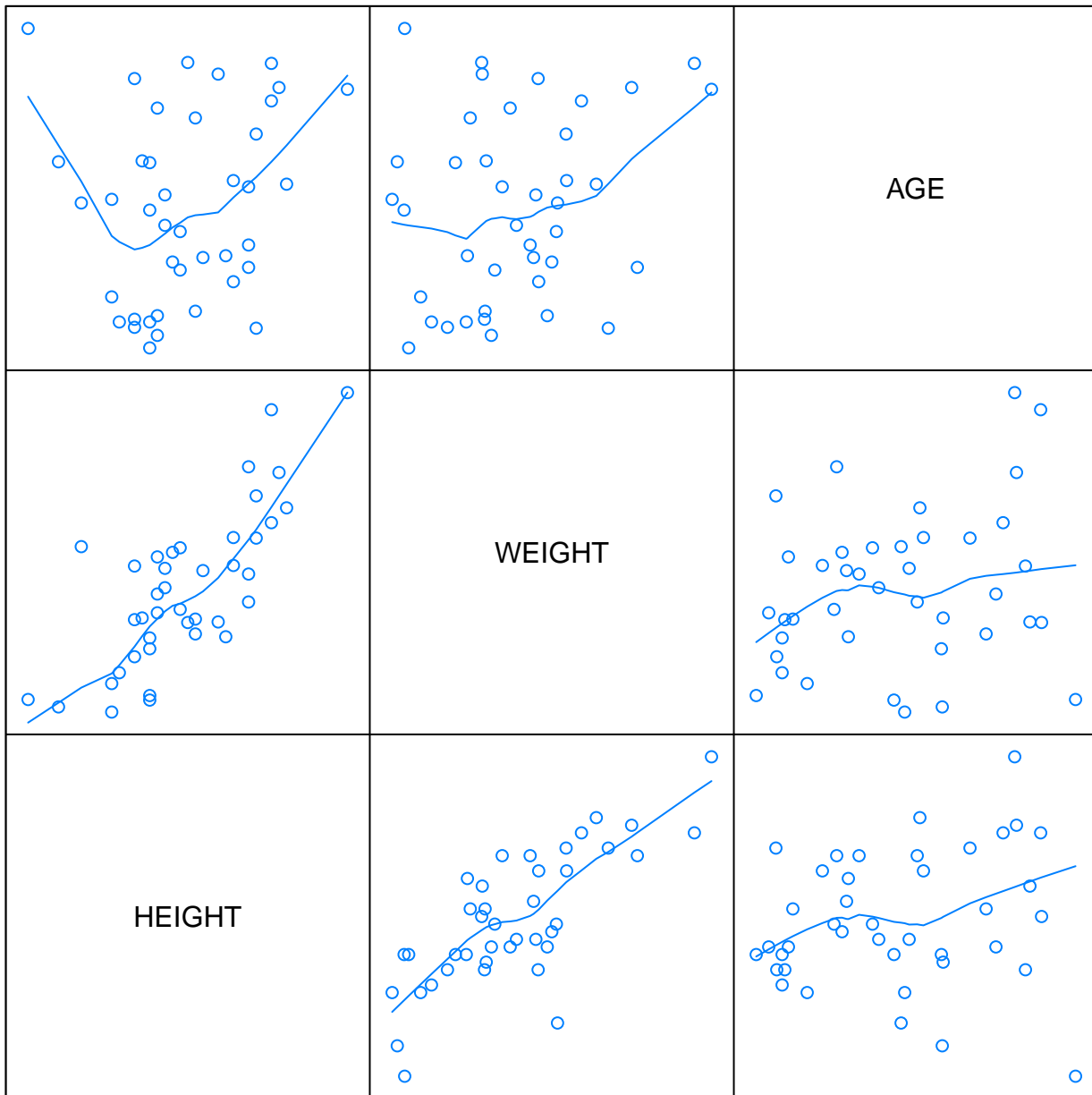


Model 1003

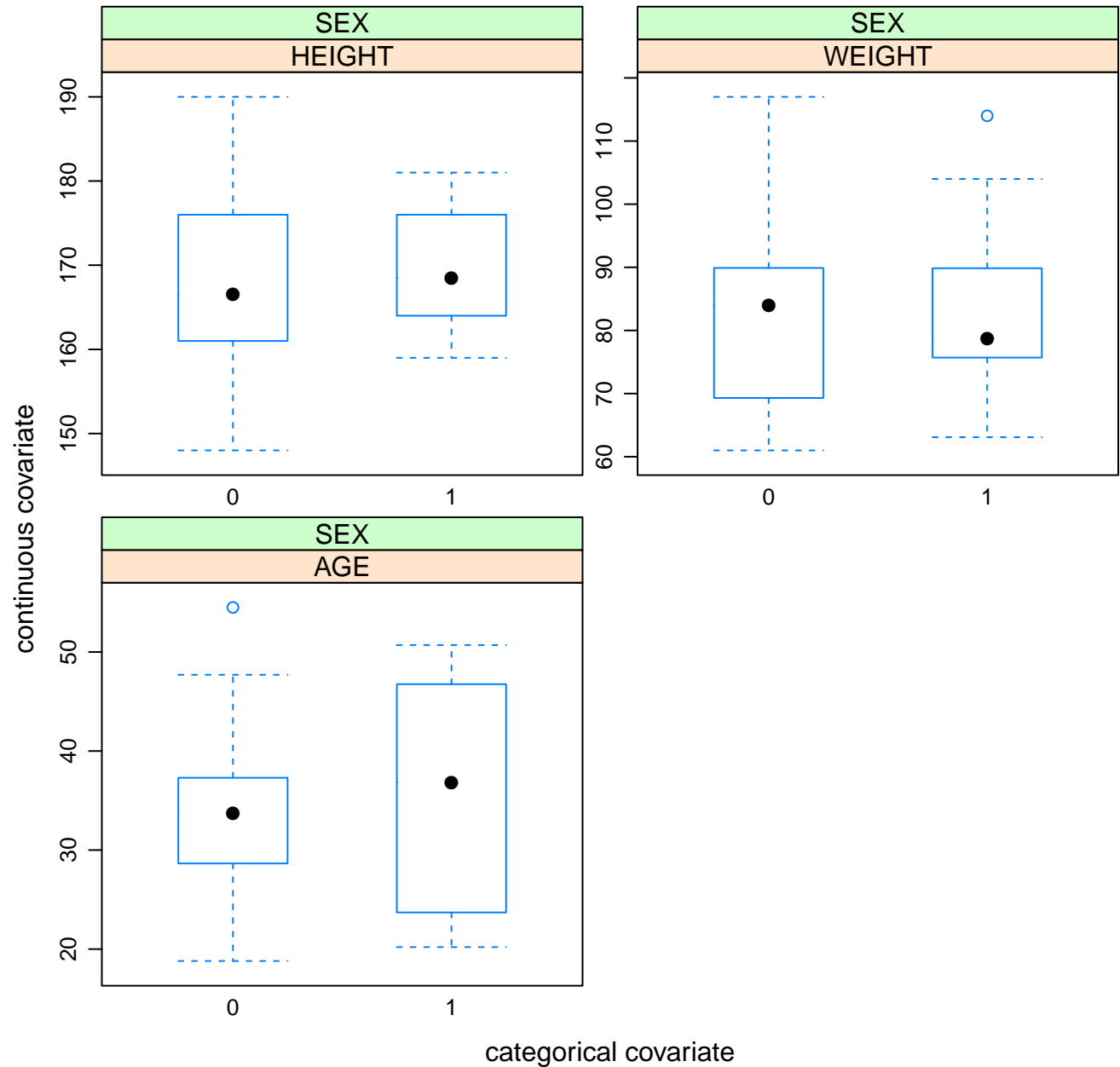
Normal Q-Q Plot Residuals for male data



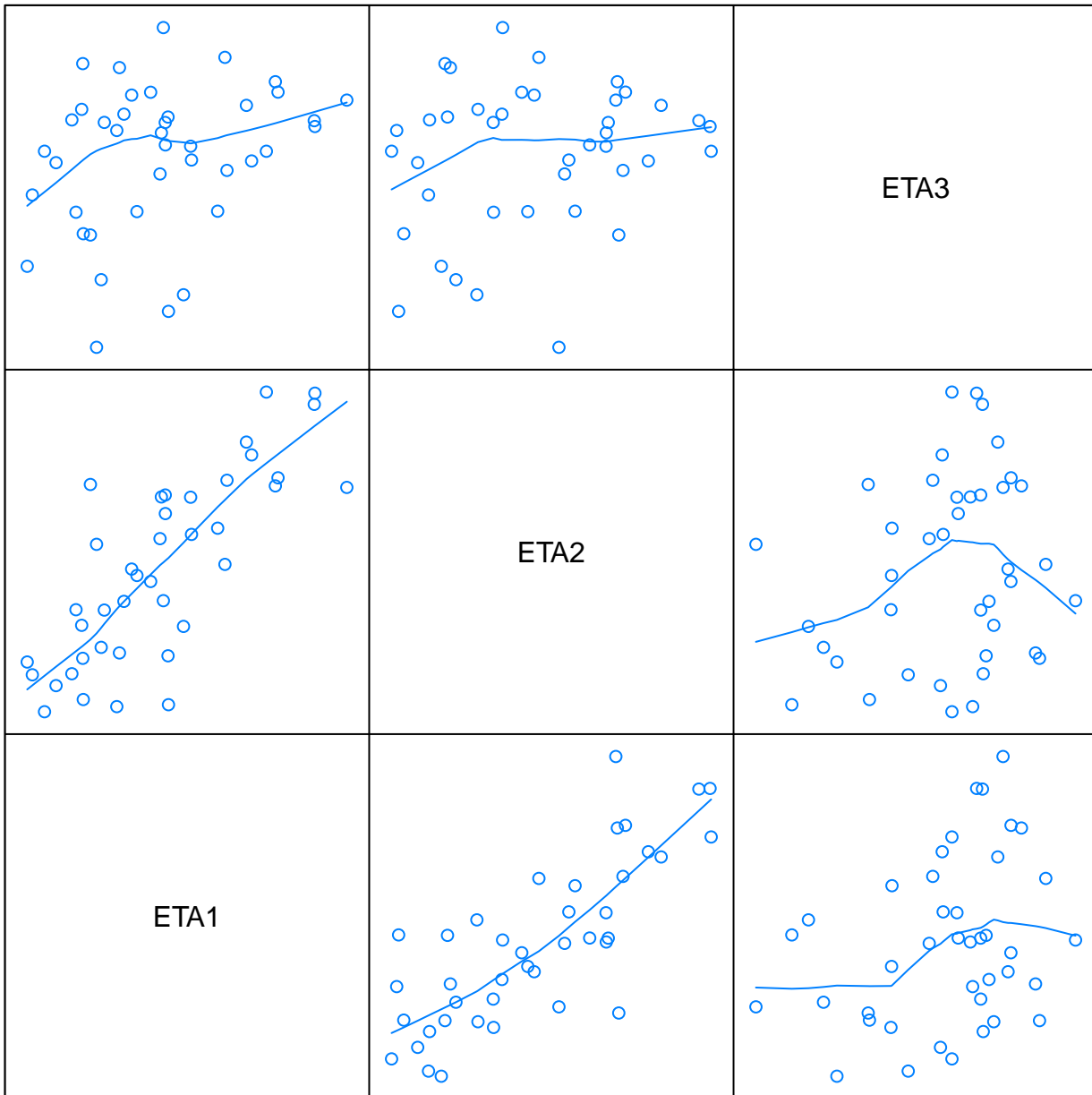
Covariate Scatterplots



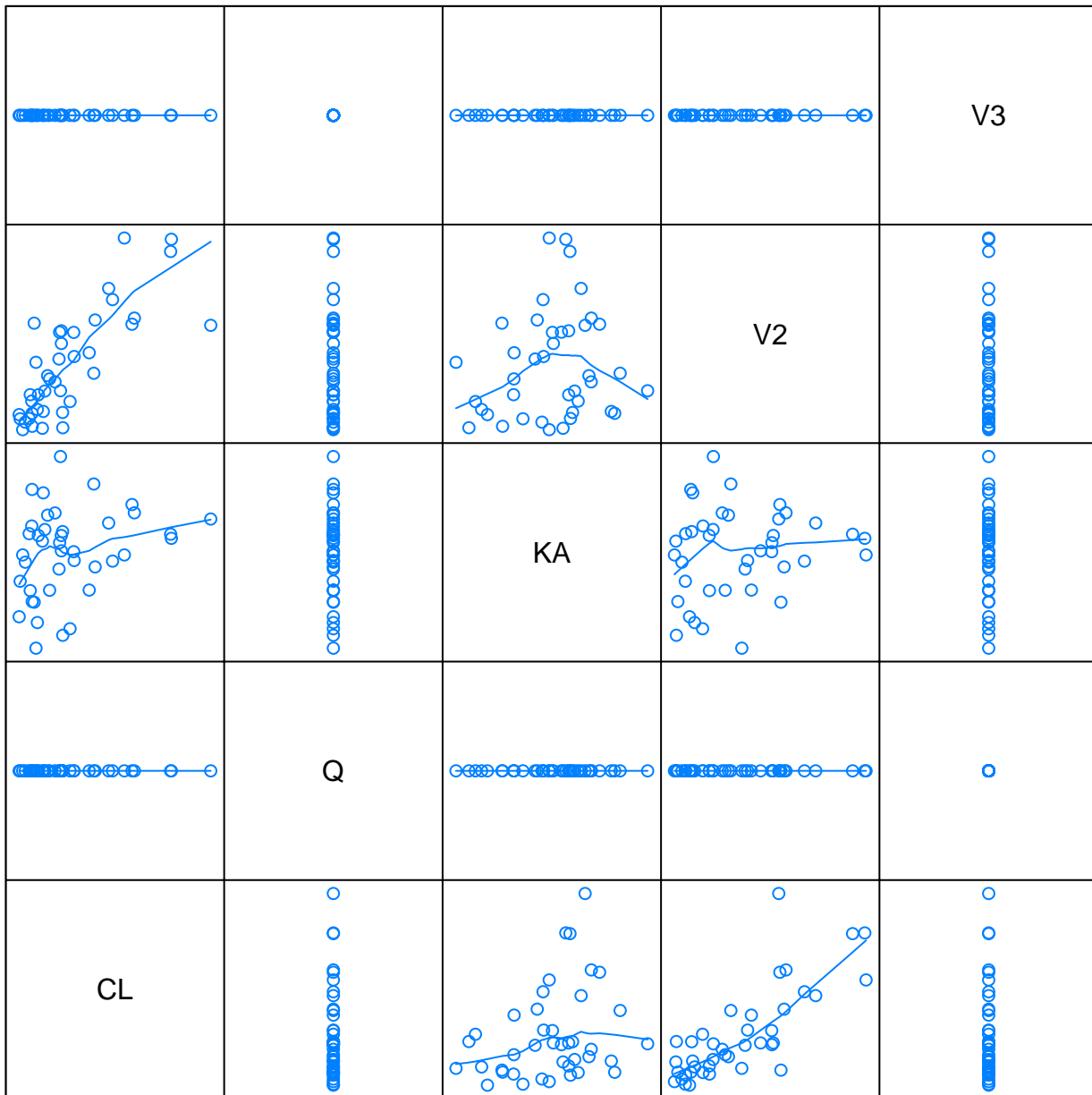
Continuous Covariates vs. Categorical Covariates



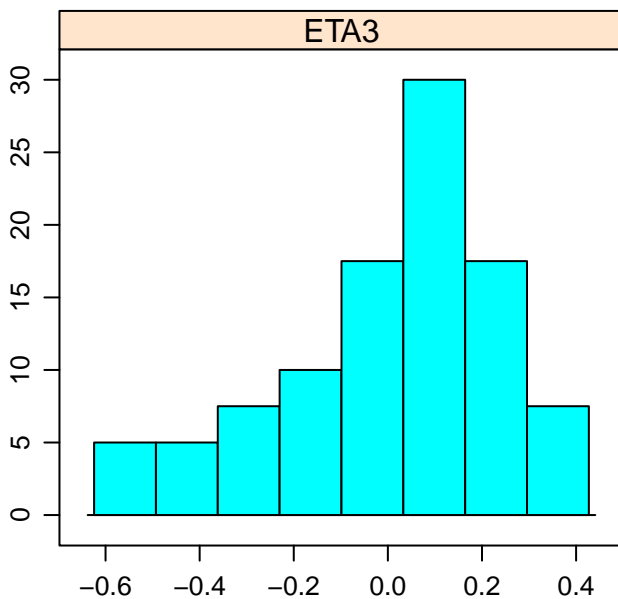
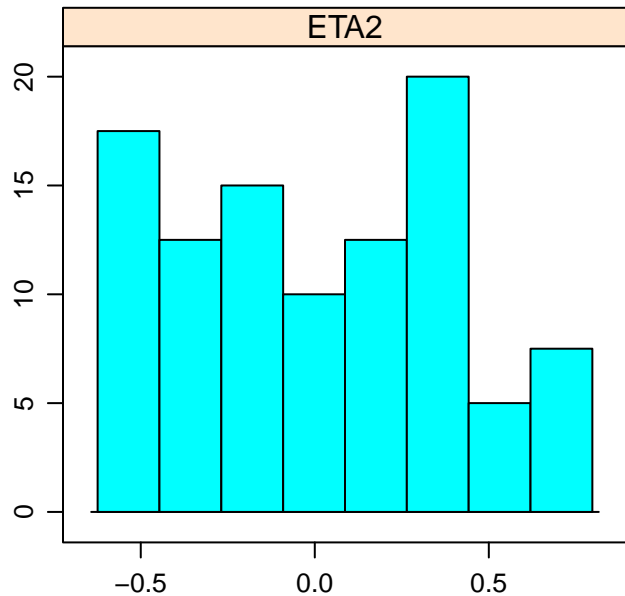
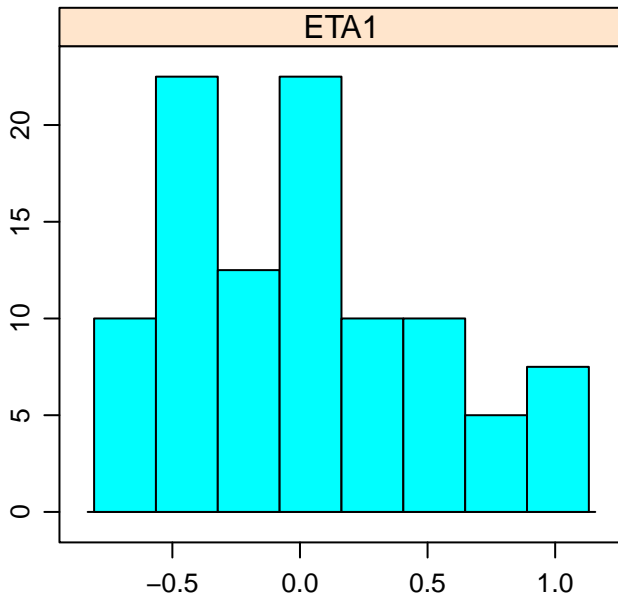
ETA Scatterplots



Parameter Scatterplots

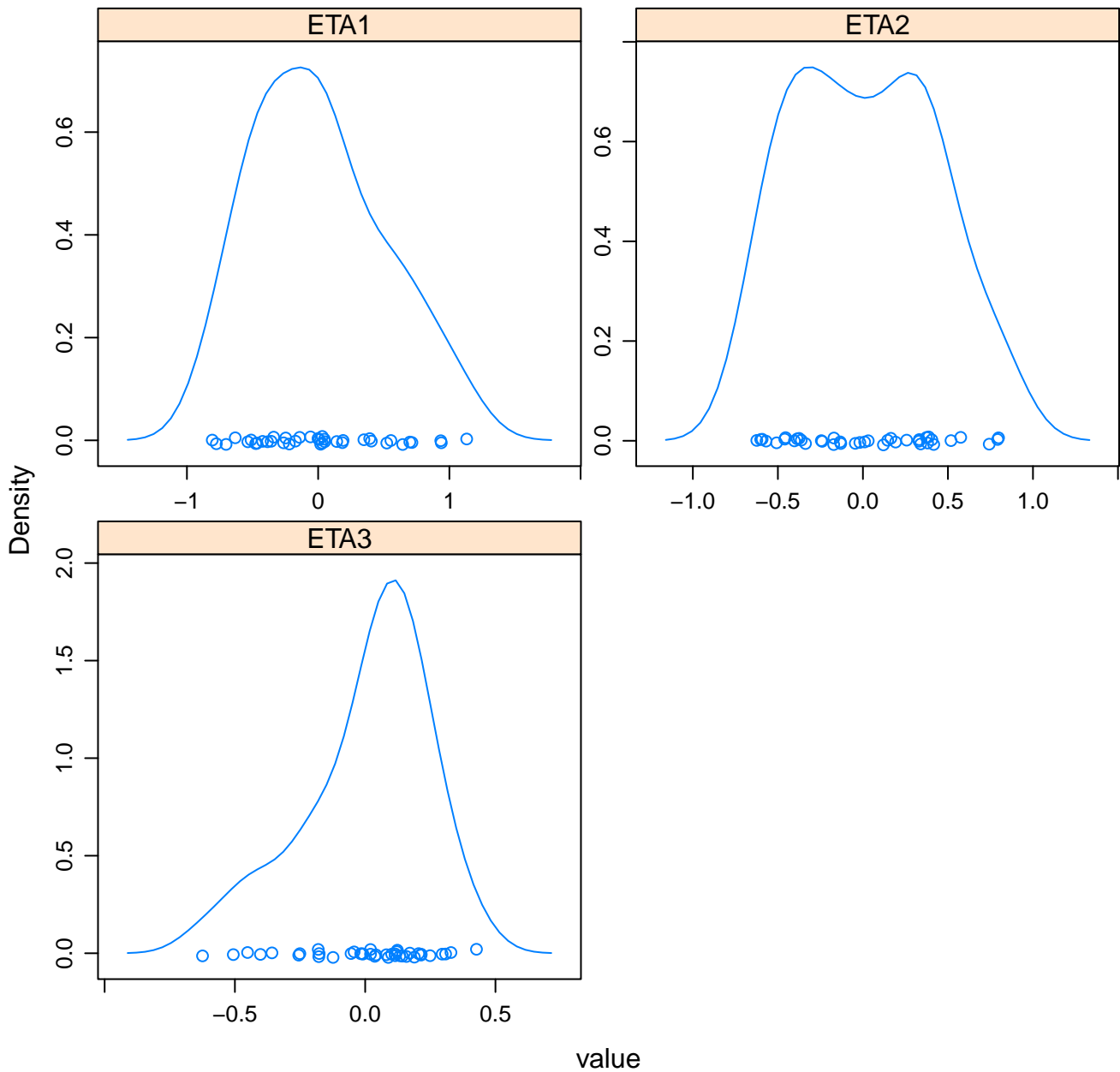


Histograms of Etas

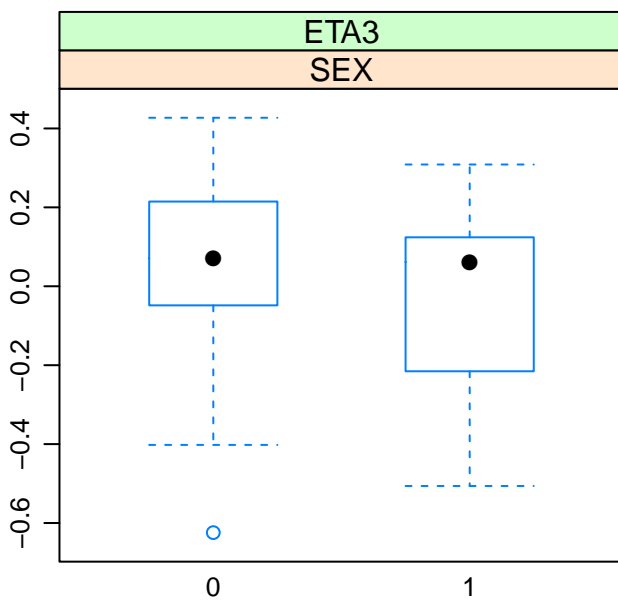
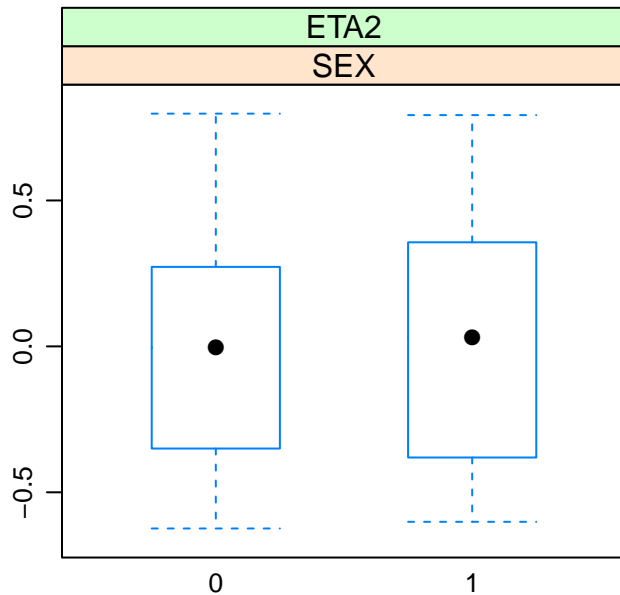
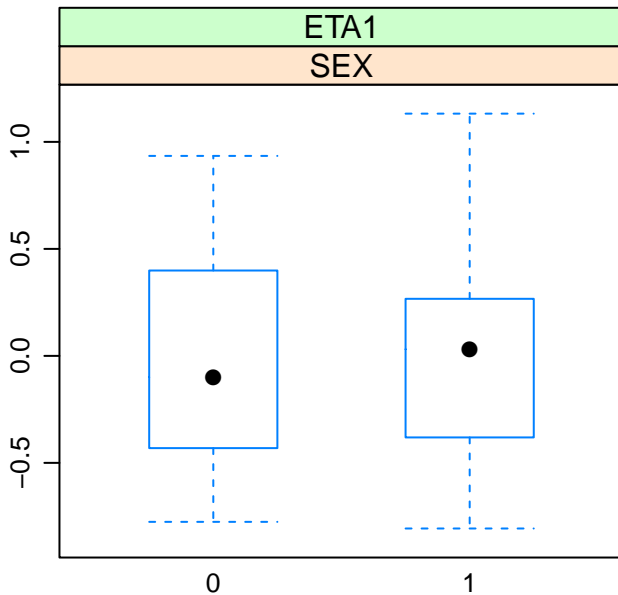


value

Density of Etas

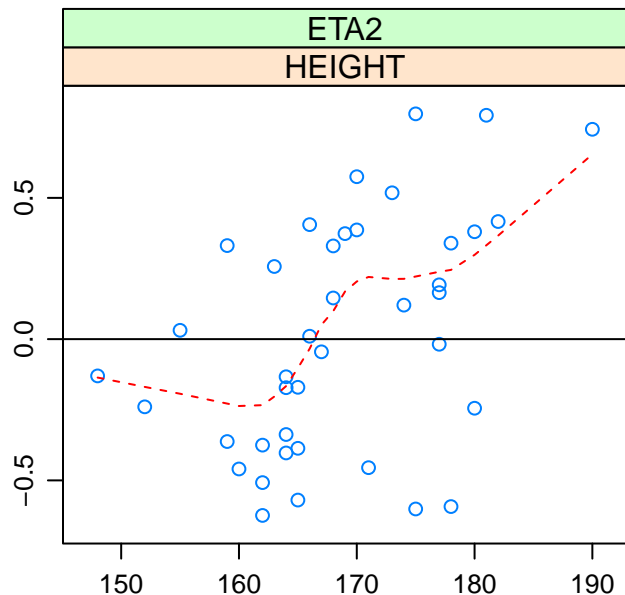
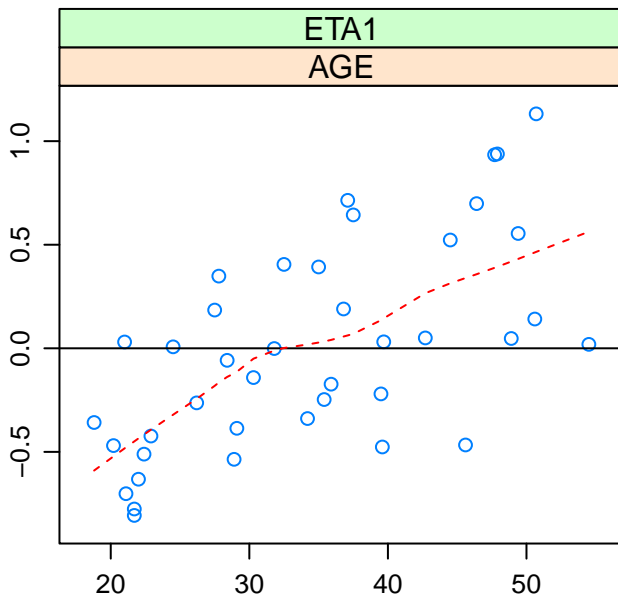
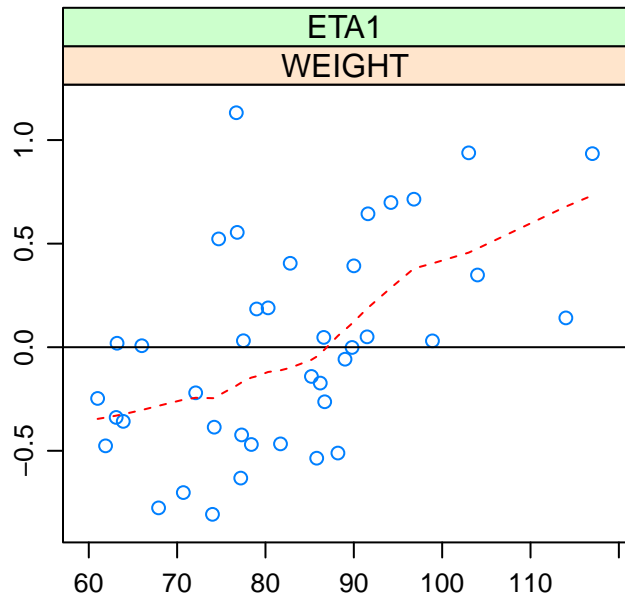
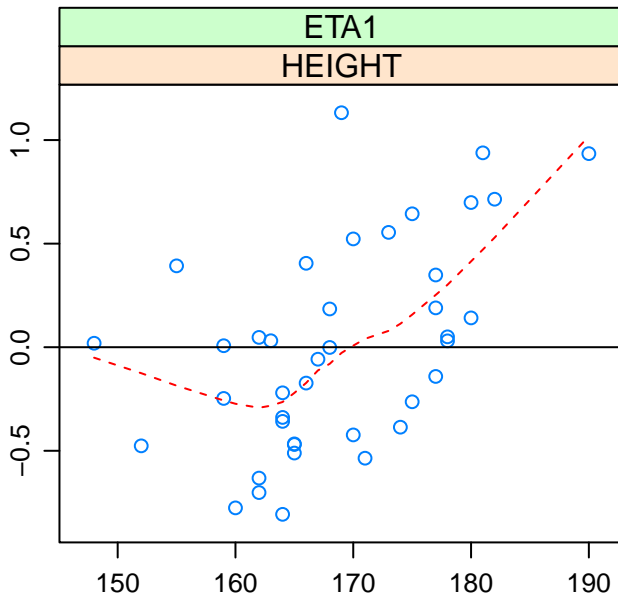


Boxplots of Etas by Categorical Covariate



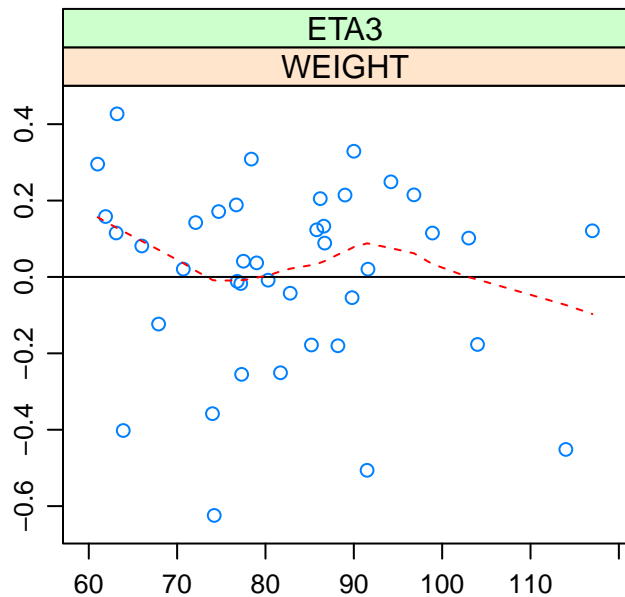
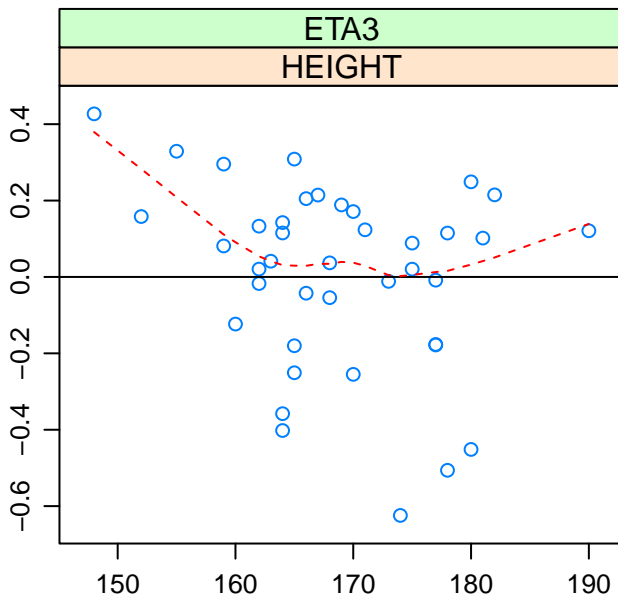
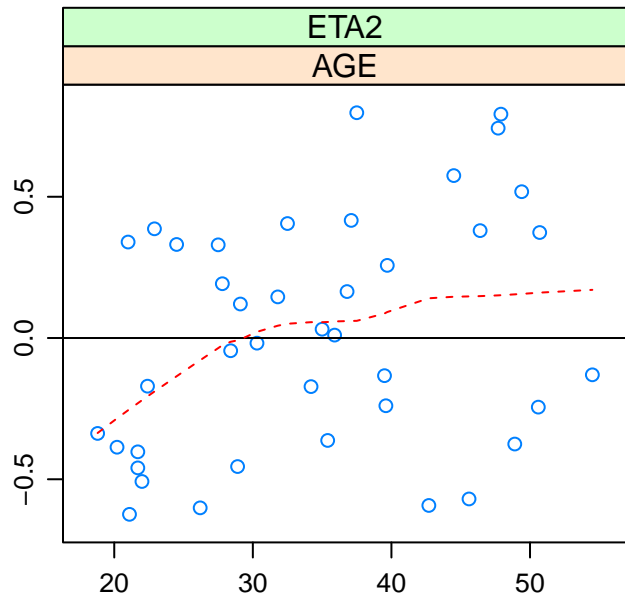
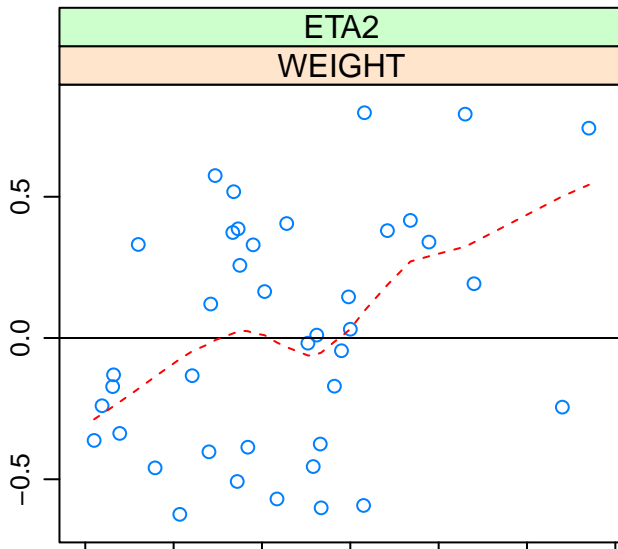
categorical covariate level

Etas vs. Continuous Covariates



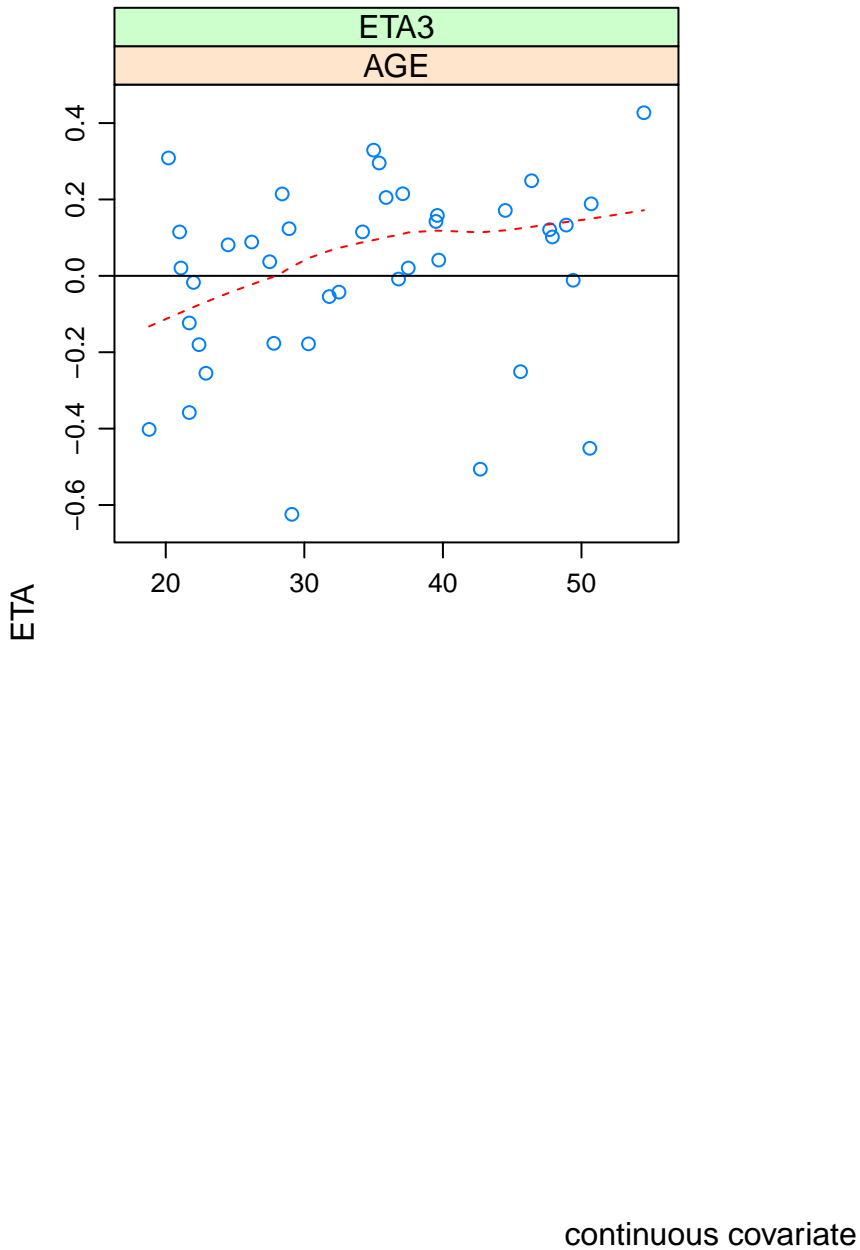
continuous covariate

Etas vs. Continuous Covariates

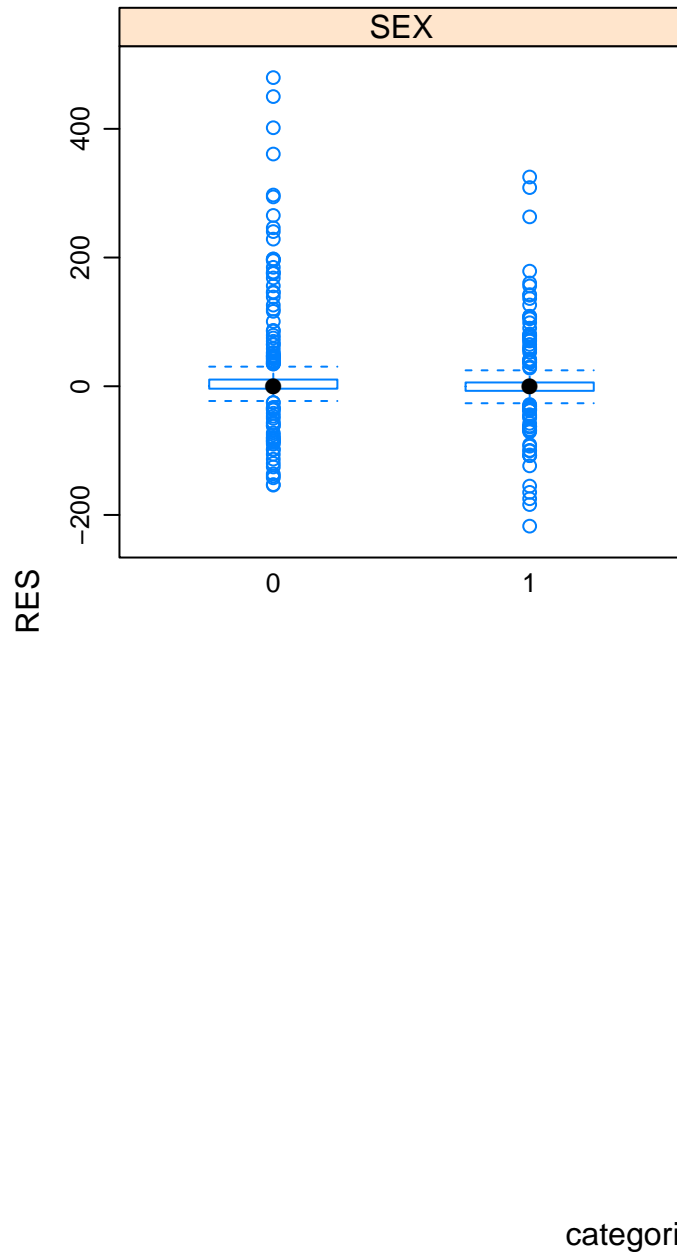


continuous covariate

Etas vs. Continuous Covariates

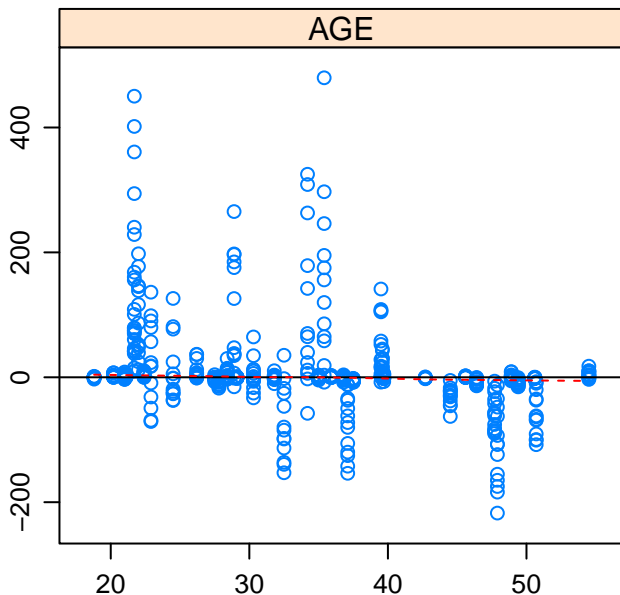
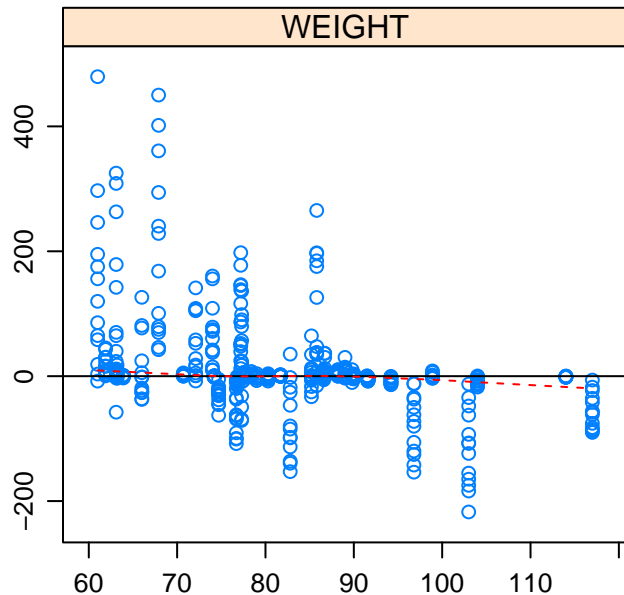
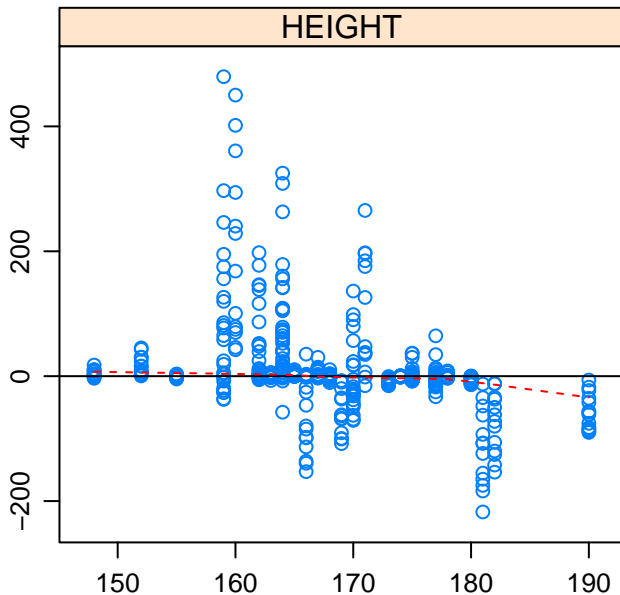


RES vs. Categorical Covariates



RES vs. Continuous Covariates

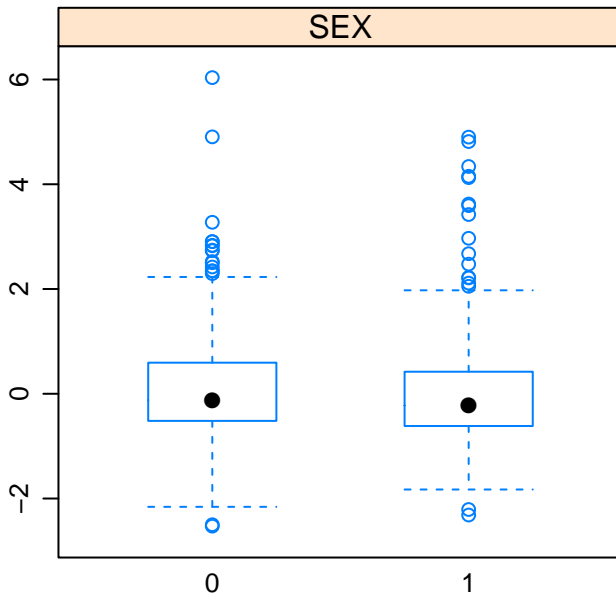
RES



continuous covariate

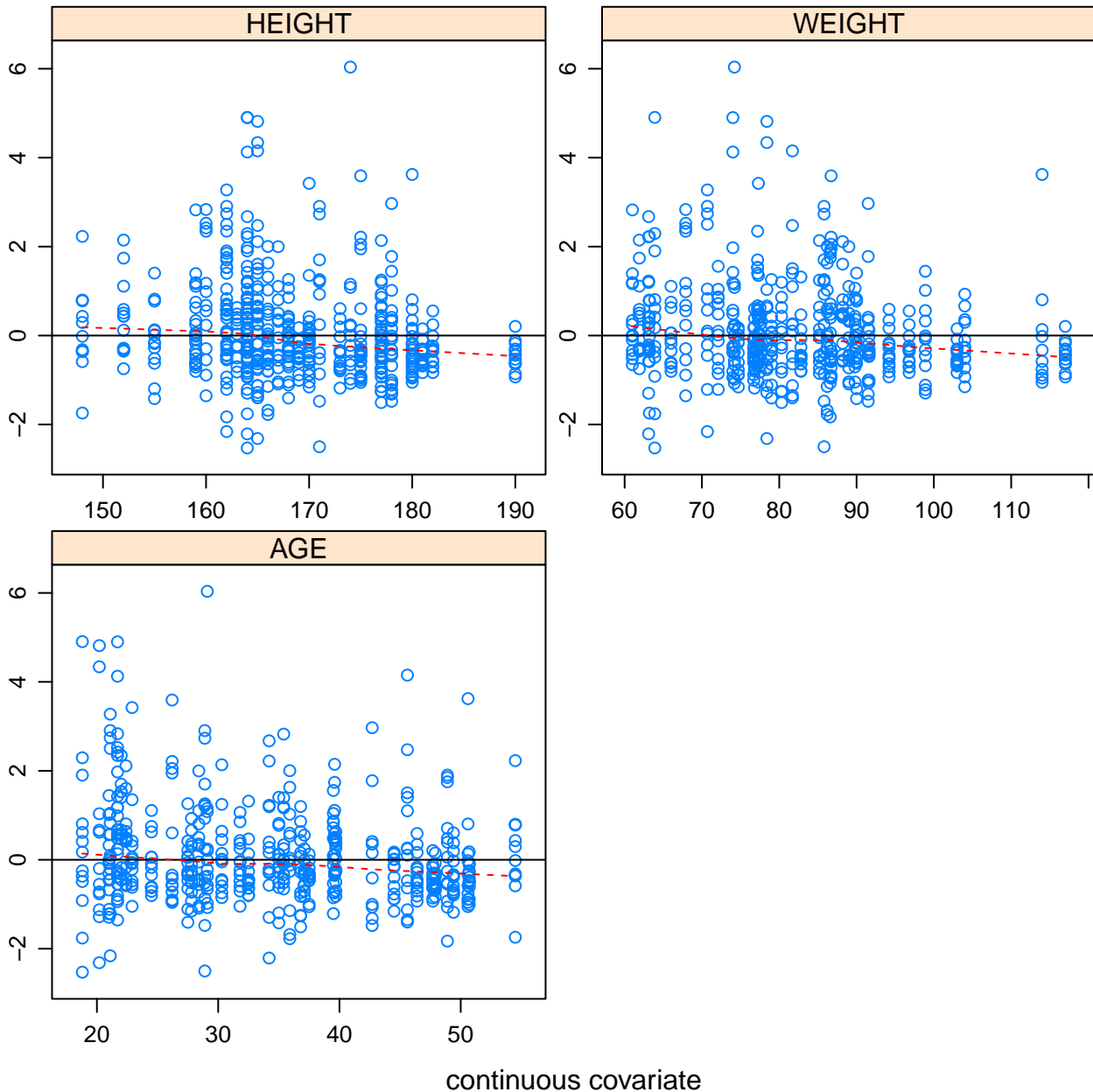
WRES vs. Categorical Covariates

WRES

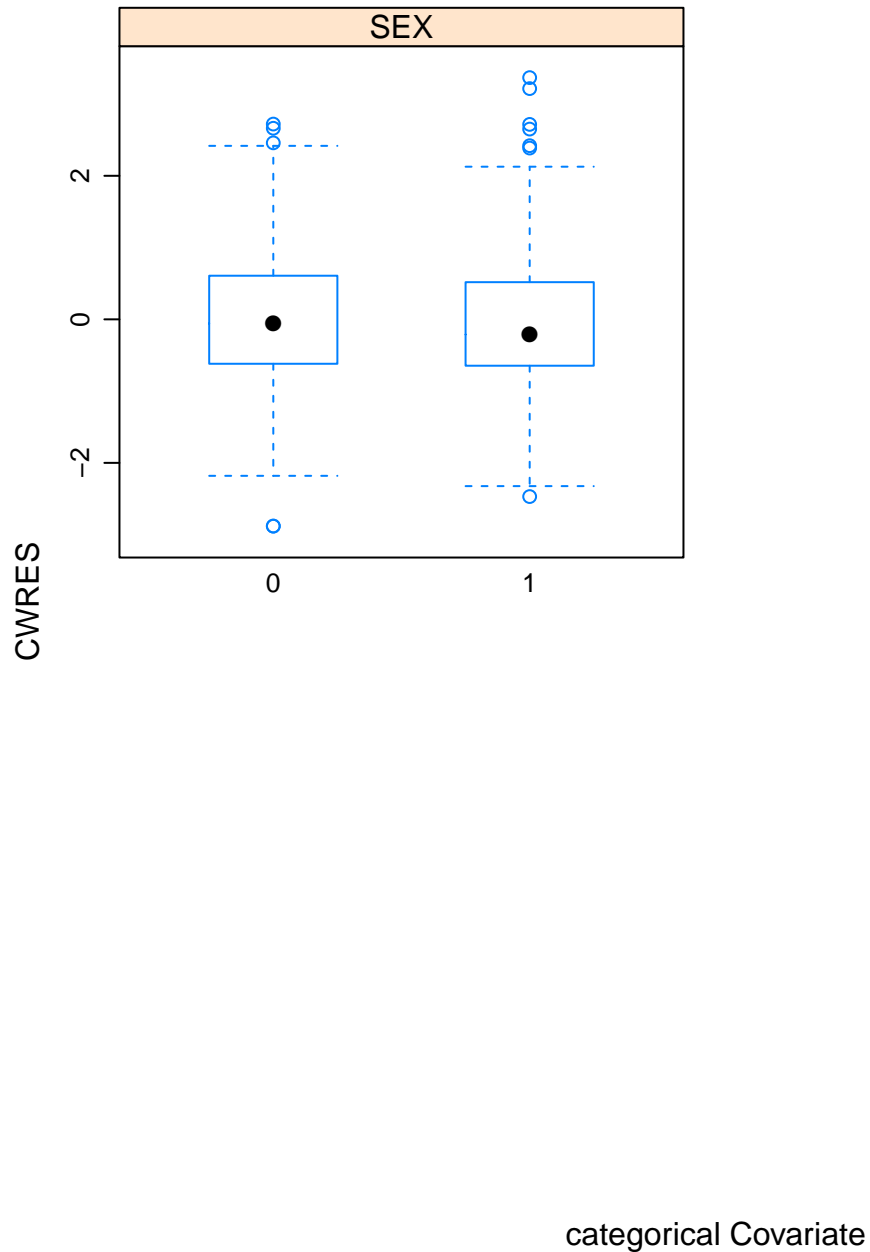


categorical Covariate

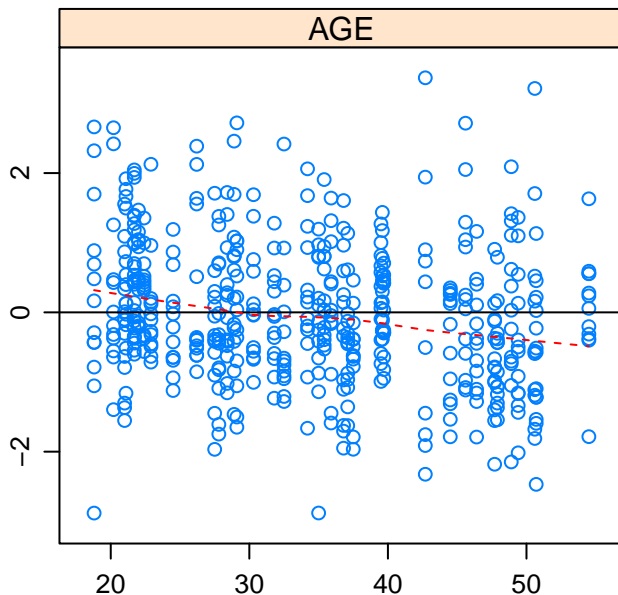
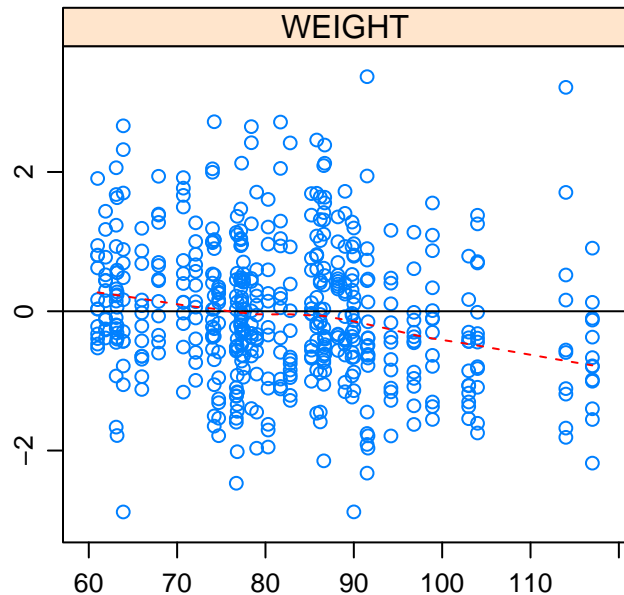
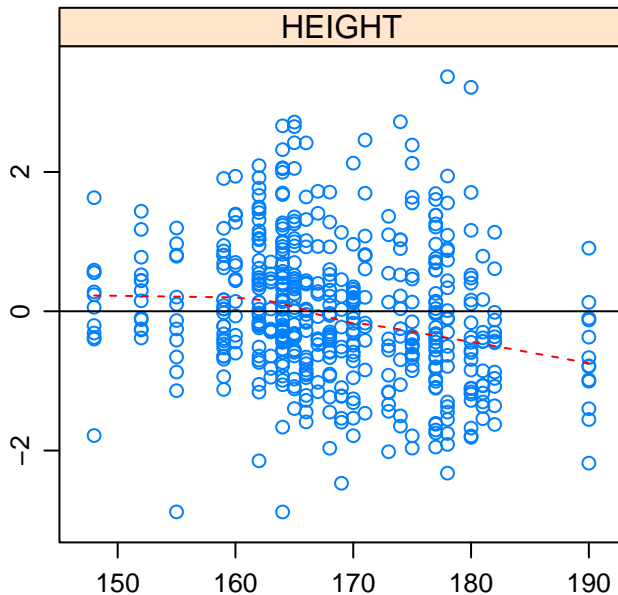
WRES vs. Continuous Covariates



CWRES vs. Categorical Covariates

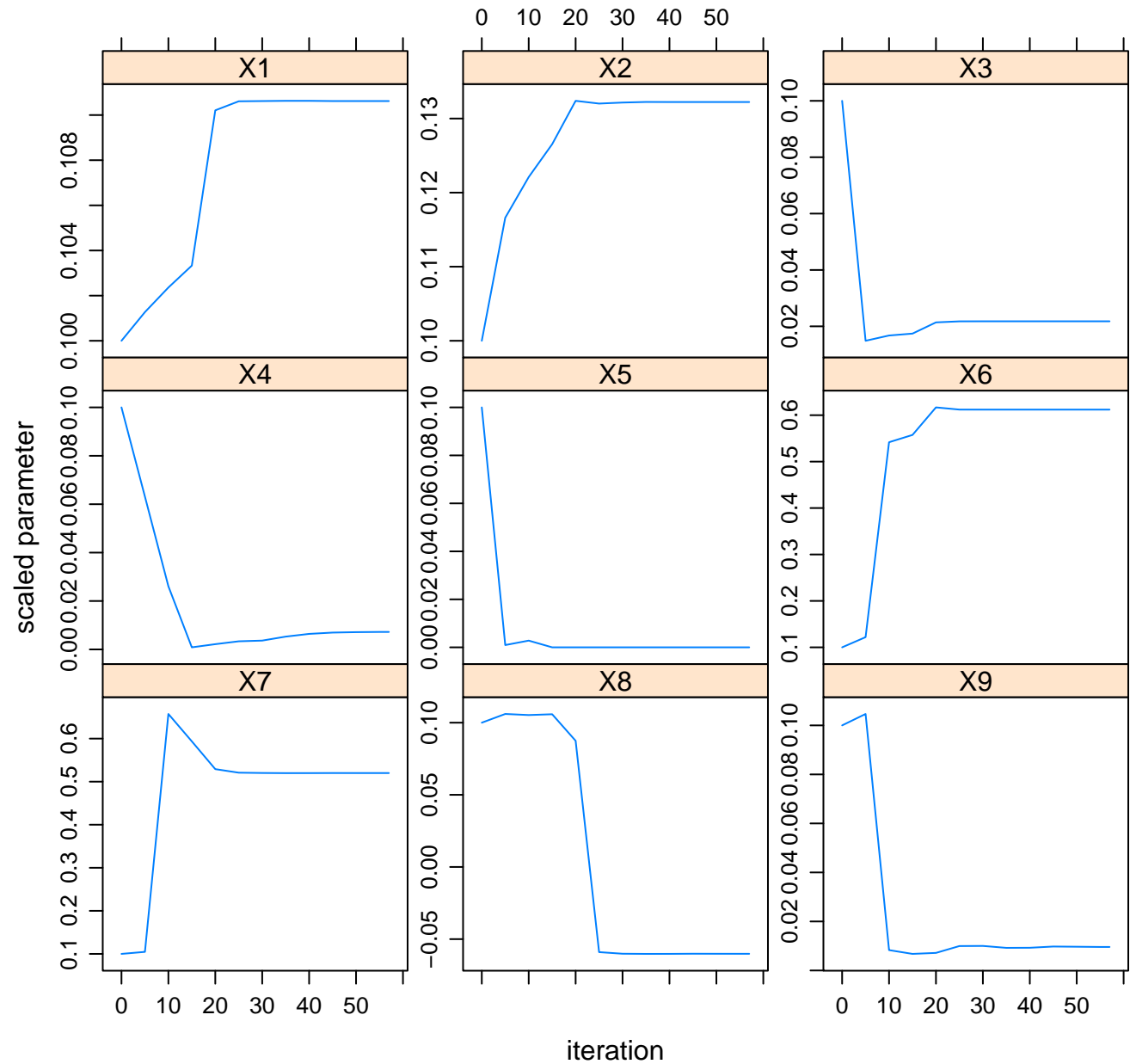


CWRES vs. Continuous Covariates



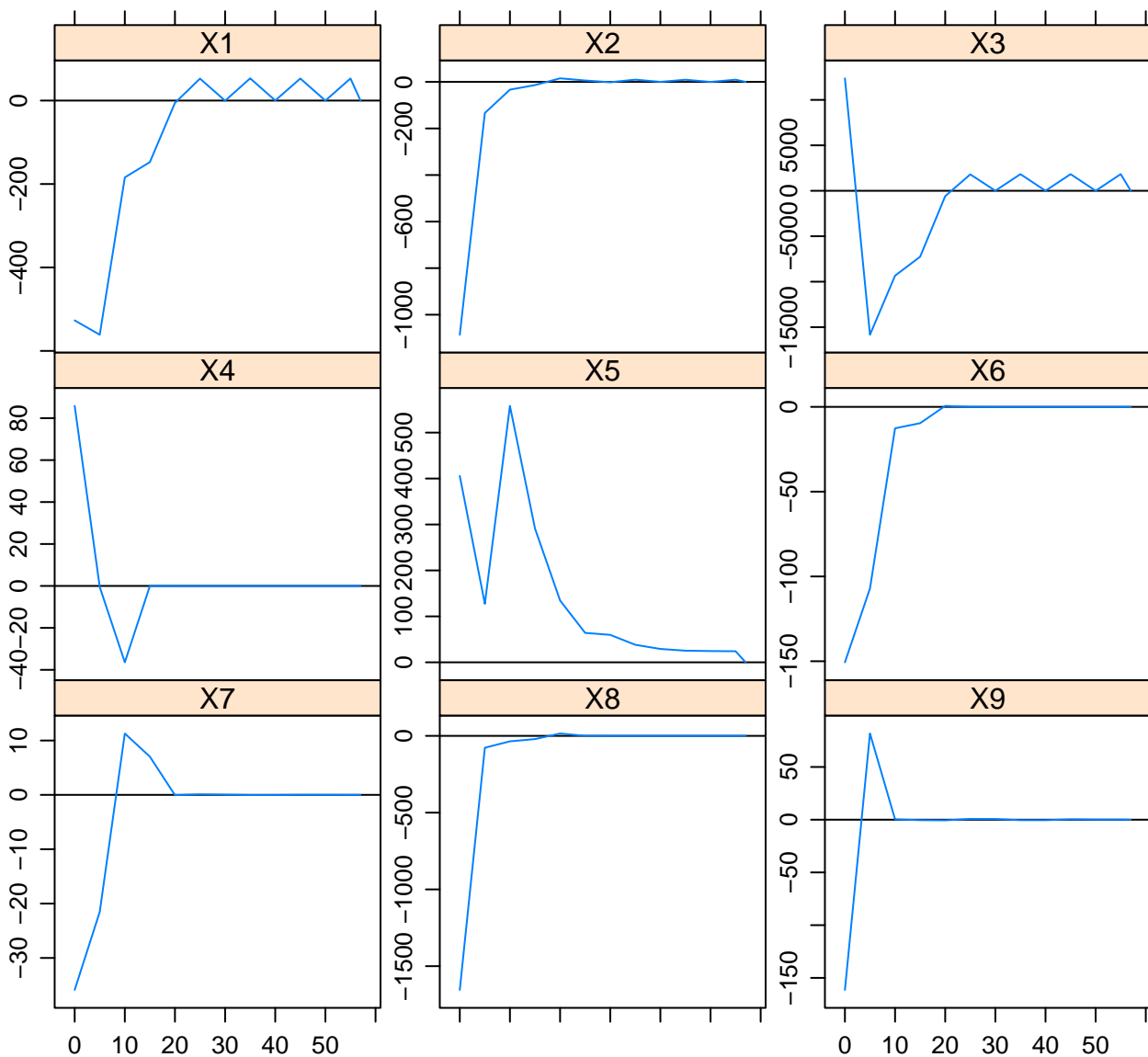
continuous covariate

Model 1003 parameter search



Model 1003 gradient search

0 10 20 30 40 50



iteration