

Presenting Results of Regression Models to Clinicians

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Regression models can flexibly summarize relationships of multiple variables to clinical outcomes. With increased flexibility, such as incorporation of nonlinear effects or interactions, comes greater difficulty of interpreting model coefficients. In this talk I will discuss graphical and semi-graphical methods for describing a fitted regression model, using the binary logistic model as an example. The methods demonstrated include typesetting the model equation, summarizing the effects of predictors with odds ratio charts, displaying the shape of the effect of a predictor, drawing nomograms, and using trees to approximate the model. These methods will be demonstrated using a re-analysis of a model to predict the probability that patient will have bacterial meningitis (Spanos et al., JAMA 1989).