

1145-VT-1869 **Melissa Innerst***, melissa_innerst1@baylor.edu, and **Jack Tubbs**, jack_tubbs@baylor.edu. *A Comparison of ROC Regression Techniques.*

In the medical field, ROC curves have long been a widely accepted measure of accuracy in diagnostic tests. In recent years, researchers have been interested in the effect that having a covariate or repeated measures data can have on the accuracy of these tests. The ROC regression methods that we considered are the binormal method, the beta regression method, and the Lehmann method. The binormal method and beta regression method are both based on the generalized linear model framework. The Lehmann method is based on the Cox proportional hazards regression model framework, and is still relatively new. One of our goals was to introduce this method, highlight situations in which it performs well, and warn of situations in which it performs poorly. We applied these methods to Texas childhood obesity data and compared the observed data to the CDC's body mass index charts. (Received September 24, 2018)