

1125-62-2323

Steve Chung, Aaron Pinkerton, Hunter Rehm and Michelle Yu*

(myu18@g.holycross.edu). *A Bayesian Approach to Predicting the Outcome of Endovenous Laser Ablation.*

Varicose veins affect more than 40 million people in the United States. Endovenous Laser Ablation (EVLA) is a common and highly effective treatment method for varicose veins. The success of EVLA may depend on several key variables: laser power, time, length of vein, laser energy, and linear endovenous energy density (LEED), as well as combinations of these variables. In this study, we consider the Bayesian and parametric logistic regression models to predict the treatment outcome from these key variables. We use the Monte Carlo cross validation to assess the models. Our finding indicates that the Bayesian logistic regression is a better predictive model than the parametric logistic regression. (Received September 20, 2016)