1116-VP-714 **Ivan Rodriguez*** (`rodriguez108@outlook.com`), 207 W 28TH ST, Tucson, AZ 85713-2847, and **Claressa L. Ullmayer**. *Survival Analysis Dimension Reduction Techniques: A Comparison of Select Methods.*

Although formal studies may obtain copious data, most can be collinear/'redundant' in terms of explaining pertinent outcomes. Thus, dataset dimensionality reduction becomes imperative for easily expressing this relationship. Principal Component Analysis (PCA) and Partial Least Squares (PLS) are established methods used to obtain 'components'—eigenvalues of the given data's variance-covariance matrix—such that the covariance and correlation is maximized between linear combinations of predictor and response variables. PCA employs orthogonal transformations on covariates to reduce dataset dimensionality by producing new uncorrelated variables. PLS projects both predictor and response variables into a new space to model their covariance structure. Additionally, three Johnson-Lindenstrauss Euclidean-space embeddings were investigated. These techniques' performance was explored via 5,000 simulated datasets in R. The semi-parametric Accelerated Failure Time model was used to obtain predicted survivor curves; then, bias and mean-squared error between true and estimated survivor curves was obtained to find all methods' error distributions. The results herein indicate that PCA outperforms PLS, random matrices are comparable, and random matrices outdo both PCA and PLS. (Received September 10, 2015)