
BIN DONG, NCIC Clinical Trials Group, Queen's University

Copula Estimation for Censored Data via Empirical Likelihood: NCIC CTG MA.27 and MA.14 Endocrine Breast Cancer Trials

In multivariate survival analysis, copulas have become a popular tool for modeling the dependence in a vector of continuous time-to-event random variables subject to censoring. Many authors have investigated goodness-of-fit (gof) tests for copulas. In the presence of censoring, most of the established work is restricted to a particular class of copulas. In order to develop a gof test procedure that can be used in more general situations, I use an empirical likelihood (EL) approach to estimate copula non-parametrically. With this EL-based estimator of a copula, I can derive a gof test for assessing a specific parametric copula model for censored data.