Statistical Inference for Heteroscedastic Survival Models

吳宏達
中興大學統計學研究所

Abstract

For right-censored two-sample transformation model with heterogeneity effect, it can be estimated through a generalized least square approach resembling the spirit of minimum chi-square inference. For censored regression, a heteroscedastic linear transformation model leads to a class of hazards regressions accounting for heterogeneity effect. Statistical inferences are made based on a set of martingale estimating equation processes, which comprises two parts: one dealing with the mean risk function and the other dealing with the heteroscedasticity. Statistical issues concerning estimation, model validation, and local hypothesis testing are reviewed. Clinical data, including a two-sample gastric cancer data and a set of lung cancer data from Taiwan, are analyzed and discussed.