Buckley–James method for analyzing censored data, with an application to a cardiovascular disease and an HIV/AIDS study

James Cui
Monash University, Melbourne, Australia
james.cui@med.monash.edu.au

Abstract. The Buckley–James method and the Cox proportional hazards model were proposed in the 1970s. Both methods can be used to analyze survival-type data, although the former focuses on calculation of the expected value of the survival time and the latter on the relative risk of explanatory variables on the failure event. In cardiovascular disease epidemiological studies, it is essential to correct the effect of taking antihypertensive medicine, which means we need to calculate the expected blood pressure for people who take the medicine. I developed a Stata program to calculate the Buckley–James estimate. I will describe how to use this program to calculate the expected value of a censored outcome and illustrate the method through an example from a cardiovascular disease and an HIV/AIDS study.

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