Hybrid model for recurrent event data

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Abstract

In the last four decades, there has been an increasing interest in developing survival models appropriate for multiple event data and, in particular, for recurrent event data. Some of the most known models for the last situation are PWP (Prentice, Williams and Peterson) [5], AG (Andersen and Gill) [1], WLW (Wei, Lin and Weissfeld) [6] and LWA (Lee, Wei and Amato) [4], all of them extensions of the Cox model [3]. These models can handle with situations where exists potentially correlated lifetimes of the same subject (due to the occurrence of more than one event for each subject) which is common in this type of data.

In this work we will present a new model, which we will call hybrid model, with the purpose of minimizing one of the limitations of PWP model: the violation of the missing completely at random (MCAR) condition [2].

Keywords

Correlated observations, Cox model, recurrent events, survival analysis.

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