Abstract:

Bayesian Variable Selection for identifying subgroups in cost-effectiveness analysis

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In cost-effectiveness analysis of medical treatments, the optimal treatment can vary across the patient population subgroups and hence to accurately define the subgroups is a crucial step in the analysis.
Decision makers require the estimates for patient subgroups and, recently, several authors have proposed a patient subgroup definition based on the interactions between the treatment effect and a baseline covariate in a regression model context. We argue that a Bayesian variable selection procedure should be developed for identifying subgroups. This new approach provides results with wider applicability and more understandable. A simulation study assuming different distributions for effectiveness and cost and different sample sizes is developed for comparing both methodologies. The Bayesian variable selection procedure is also validated with a real data set.