

## **Dependence model selection for semi-competing risks data**

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### **Abstract**

In this talk, we consider the model selection problem of the dependency between the terminal event and the non-terminal event under semi-competing risks data. When the relationship between the two events is unspecified, the inference on the non-terminal event is not identifiable. We can not make inference on the non-terminal event without extra assumptions. Thus, an association model for semi-competing risks data is necessary, and it is important to select an appropriate dependence model for a data set. We construct the likelihood function for semi-competing risks data to select an appropriate dependence model. From simulation studies, it shows the performance of the proposed approach is well. Finally, we apply our method to a bone marrow transplant data set.

Keyword: Copula model, Likelihood function, Model selection, Semi-competing risks data