

Proportional odds frailty model and stochastic comparisons

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Abstract In this paper, we present some distributional properties of the survival and frailty distribution involved in the proportional odds (PO) frailty model. Stochastic orderings are studied for this proportional odds frailty model. It is showed that negative dependence arises in the PO frailty model as opposed to the proportional hazard frailty model.

Keywords Likelihood ratio ordering · Failure rate ordering · Stochastic ordering · $T P_2(RR_2)$ functions · Frailty distributions