

## BAYESIAN ESTIMATION OF INDIVIDUAL FRAILTIES OF PATIENTS WITH CHRONICH RENAL FAILURE OF LAVRAS- MG

Graziela Dutra Rocha GOUVÊA<sup>1</sup>  
Vera Lúcia Damasceno TOMAZELLA<sup>2</sup>  
João Domingos SCALON<sup>3</sup>

- **ABSTRACT:** *In some situations, we may observe that the event of interest occurs repeatedly in the same individual. In this situation, it's more reasonable to suppose the existence of a relationship between times until the occurrence of events. In order to examine the association between survival times, a class of models has been studying. These are called frailty models and consider a random effect in the Cox model. Penã and Hollander (2004) purposed a new class of models, more general and flexible, that simultaneously incorporates the effect of covariates, the impact on the unit of accumulating event occurrences, the effect of unobserved variables which, as well as the effect of performed interventions after each event occurrence. Then, the aim of this paper was to explore Bayesian methods for estimate the individuals frailties in patients from Santa Casa de Misericórdia in Lavras, MG.*
- **KEYWORDS:** *Survival analysis; chronic renal failure; frailty models; Cox model.*

---

<sup>1</sup> Universidade Federal dos Vales do Jequitinhonha e Mucuri, Instituto de Ciência e Tecnologia, CEP: 39100-000, Diamantina, MG, Brasil. E-mail: [gragouvea@gmail.com](mailto:gragouvea@gmail.com)

<sup>2</sup> Universidade Federal de São Carlos - UFSCar, Departamento de Estatística, CEP: 13052-780, São Carlos, Brasil, SP. E-mail: [vera@ufscar.br](mailto:vera@ufscar.br)

<sup>3</sup> Universidade Federal de Lavras -- UFLA, Departamento de Ciências Exatas, CEP: 37200-000, Lavras, MG, Brasil. E-mail: [scalon@dex.ufla.br](mailto:scalon@dex.ufla.br)