

We propose Weibull model with heterogeneity (frailty or random effect) which is generated by correlated compound Poisson distribution with random scale for the bivariate survival data. There are some interesting situations like survival times in genetic epidemiology, dental implants of patients and twin births (both monozygotic and dizygotic) where genetic behavior (which is unknown and random) of patients follows a known frailty distribution. These are the situations which motivate to study this particular model. We propose maximum likelihood estimation procedure for the parameters in the proposed model.