

TIME DEPENDENT COVARIATES COX PROPORTIONAL HAZARD PADA ANALISIS SURVIVAL
PENDERITA RETINOBLASTOMA DI RSUD DR.SOETOMO SURABAYA

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ABSTRACT

**Time Dependent Covariates Cox Proportional Hazards in Survival
Analysis Retinoblastoma Patients at Dr. Soetomo Hospital Surabaya**

The aim of this study is to analyze the effect of assumption of hazard function. Recently evaluation of the proportional hazard (PH) assumption is important. In survival analysis that uses a Cox PH model, there are three approaches to assess the PH assumption for one or more variables in the model using; a graphical approach, the Goodness of fit approach and an extended Cox model with time-dependent covariates. In this study, an extended Cox model with time-dependent covariates is used to analyze PH assumption in retinoblastoma patients. PH assumption is important to get variable that is fit to the model. The model without PH assumption, there is one variable fit to model, but after using PH assumption there are three variables fit to model. So, if the PH assumption is used from the beginning to built Cox model, there are three variables; time-dependent diagnosed-age, metastase and time-independent diagnosed-age, but if without PH assumption involved, only one variable include, metastase. PH assumption using time-dependent covariates become the choice to get variable fit to model.

Key words: time-dependent covariates, Cox proportional hazards, proportional hazard assumption, survival analysis, retinoblastoma