

Survival Analysis of HIV Patients at Balung Regional Hospital

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ABSTRACT

The high mortality rate among people living with Human Immunodeficiency Virus (HIV) remains a major challenge in healthcare, emphasizing the need for survival analysis to estimate patients' probability of survival over time. Balung Regional Hospital is one of the healthcare facilities providing Care, Support, and Treatment (CST) services for HIV patients in Jember Regency. Based on the HIV/AIDS Information System (SIHA) data from 2010 to 2025, 1,109 HIV patients were recorded, including 192 deaths. This study aimed to analyze differences in the survival of HIV patients based on age, sex, clinical stage, antiretroviral (ARV) therapy, tuberculosis (TB) status, and risk population. This quantitative study employed a retrospective cohort design. A total of 246 HIV patients' medical records were selected using proportional random sampling. Data were analyzed using the Kaplan–Meier method and the Log-Rank test. The results showed significant differences in survival based on age ($p = 0.007$), clinical stage ($p = 0.004$), ARV therapy ($p < 0.001$), TB status ($p < 0.001$), and risk population ($p < 0.001$). No significant difference was found based on sex ($p = 0.489$). Higher survival was observed among patients aged <40 years, those with advanced clinical stage, those receiving ARV therapy, those without TB, and those belonging to the at-risk population. The hospital is encouraged to strengthen routine monitoring of HIV patients, while future studies should include additional variables to provide a more comprehensive understanding of factors affecting survival.

Keywords: *HIV, survival, Kaplan-Meier, Log Rank, ARV.*