

**Cure rate and survival time of COVID-19 patients by family support  
accompaniment: a semiparametric mixture cure model**

**ABSTRACT**

Background. Since the first outbreak of COVID-19, most hospitals restricted patients' family support accompaniment during medical treatment of infectious transmission. On the other hand, accompaniment has also been recognized as an essential part of the treatment. Therefore, this study aims to determine the effect of family presence accompanying COVID-19 patients during hospitalization on the recovery rate and survival time. Objective: this study was conducted in a private hospital designated as a referral hospital for COVID-19 cases in Surabaya, East Java province, Indonesia. Materials and Methods. There were 541 COVID-19 patients included in the study, consisting of 251 women and 290 men. The requirements set as a sample are patients treated between January 1st 2021 and March 31st 2021. This study used a survival analysis study design. The data used is secondary data and uses total sampling. Results. The result of this study is that patients who get support from their families can survive longer than patients who do not get family support. Among the 251 female samples, only 34 were accompanied by their families, with 29.411% fatalities recorded. Among 290 male patients, 25.71% fatalities were recorded in 35 accompanying family presence. Furthermore, female patients have a probability of better outcomes than males ( $P < 0.001$ ). Conclusions. Based on these results, family presence has the benefit of improving outcomes and recovery. So, the authorities are expected to reconsider the restrictions on family presence by maintaining proper safety protocols of isolation and quarantine.