

## **Prediction of Survival Rate after Gastrointestinal Surgery Based on The New Japanese Association for Acute Medicine (JAAM Score) With Neural Network Classification Method**

**Authors :** Ayu Nabila Kusuma Pradana, Aprinaldi Jasa Mantau, Tomohiko Akahoshi

**Abstract :** The incidence of Disseminated intravascular coagulation (DIC) following gastrointestinal surgery has a poor prognosis. Therefore, it is important to determine the factors that can predict the prognosis of DIC. This study will investigate the factors that may influence the outcome of DIC in patients after gastrointestinal surgery. Eighty-one patients were admitted to the intensive care unit after gastrointestinal surgery in Kyushu University Hospital from 2003 to 2021. Acute DIC scores were estimated using the new Japanese Association for Acute Medicine (JAAM) score from before and after surgery from day 1, day 3, and day 7. Acute DIC scores will be compared with The Sequential Organ Failure Assessment (SOFA) score, platelet count, lactate level, and a variety of biochemical parameters. This study applied machine learning algorithms to predict the prognosis of DIC after gastrointestinal surgery. The results of this study are expected to be used as an indicator for evaluating patient prognosis so that it can increase life expectancy and reduce mortality from cases of DIC patients after gastrointestinal surgery.

**Keywords :** the survival rate, gastrointestinal surgery, JAAM score, neural network, machine learning, disseminated intravascular coagulation (DIC)

**Conference Title :** ICMLHM 2021 : International Conference on Machine Learning for Healthcare and Medicine

**Conference Location :** Tokyo, Japan

**Conference Dates :** December 02-03, 2021