

## **ABSTRACT**

*Decision making is crucial process especially for an organization like hospital. Medical world has complex and semi-structure problem that can caused fatal error if it is handled inappropriate. Therefor a Decision Support System is needed and hope that it can help decision maker to make the decision. Add data mining method into DSS, especially for being used in healthcare, can support DSS in solving complex question or problems (semi-structured problems) in medical world, which can not be solved with DSS only. Then with data mining, that is decision tree method Classification and Regression Tree (CART), binary tree that can handle variables or many features, good precision, easy to understood and fast computation, hope that it can solve medical problems quickly and precisely. Usability testing that is done to system's classification result showed that CART can support some criteria of the DSS.*

**Keywords:** *Decision Support System (DSS), decision tree, Classification and Regression Tree (CART), medical, medicine, healthcare, usability*