

Abstract

Cancer is one of deadliest disease in the world. In 2012, there were 32,6 million people diagnosed positive for cancer and 8,2 million of death caused of cancer. There are many ways that we can do to detect cancer since early stage, one of it is using *Artificial Neural Network (ANN) – Backpropagation* methods with *Genetics Algorithm (GA)*. ANN is used as classifier methods for predicting cancer and GA is used as dimension reduction method for DNA microarray features which has wide dimension. In this research ANN methods will be compared with ANN-GA hybrid. The result from ANN-GA methods has proven more effective than ANN because it can give 93.08% accuration and reduce dimension up to 51% with faster running time up to 42.2%.

Key words : *Artificial Neural Network (ANN), ANN-GA hybrid, DNA Microarray, Genetics Algorithm (GA)*