# Breast Cancer Classification

Breast Cancer is one of the most common cancer and causing a huge number of deaths in women. The high incidence and mortality of breast cancer is due to its considerably low accuracy of diagnosis. In this project we explore machine learning model that can be applied to help increasing the accuracy of diagnosis of the breast cancer. The main problem of this project is to detect breast cancer based on the set of features calculated from Fine Needle Aspiration of breast mass from a patient.

We present a diagnosis model using both traditional and deep learning machine learning model. Classic machine learning model including Logistic Regression, Decision Tree and Random Forest Algorithm etc. are tested on the Breast Cancer Wisconsin Dataset. This project demonstrates that machine learning models can be used for an automatic diagnosis for Breast Cancer.

## Methods:

We used 3 traditional models for the classification of breast cancer cases. Features selection is applied to increase the rate of accurate prediction. Additionally, deep learning model is also build for the diagnosis system. Finally, we compare the performance of the each models applied and choose the one with highest performance.