

Abstract

Breast cancer is a disease that often causes death in women. The appearance of a lump in the breast is a sign to look out for, but it does not always indicate cancer. It required an act of initial detection to detect the degree of malignancy of a cancer. One function of tumor markers is skrening and initial detection [5].

Tumor markers used are Wisconsin Breast Cancer Database. The system has five input variables, namely Cell Size, Cell Shape, Bare Nuclei, Bland Chromatin and epithelial-Size, and has a variable output of the Class Type of Cancer. The method of the system is Fuzzy Inference System with Mamdani inference model in the initial detection of breast cancer risk. The system is expected to help medical experts in the initial detection of breast cancer risk automatically.

As the resul of the experiment, the highest accuracy is 97%.

Keywords: breast cancer, tumor markers, fuzzy systems, FIS, Mamdani inference