Abstract

Breast cancer is one of the major causes of death among women. Small clusters of micro calcifications appearing as collection of white spots on mammograms show an early warning of breast cancer. Early detection performed on X-ray mammography is the key to improve breast cancer diagnosis. In order to increase radiologist’s diagnostic performance, several computer-aided diagnosis (CAD) schemes have been developed to improve the detection of primary identification of this disease. In this paper, an attempt is made to develop an adaptive k-means clustering algorithm for breast image segmentation for the detection of micro calcifications and also a computer based decision system for early detection of breast cancer. The method was tested over several images of image databases taken from BSR APPOLO for cancer research and diagnosis, India. The algorithm works faster so that any radiologist can take a clear decision about the appearance of micro calcifications by visual inspection of digital
An Adaptive K-means Clustering Algorithm for Breast Image Segmentation

mammograms and detection accuracy has also improved as compared to some existing works.

Reference

### Index Terms

- Computer Science
- Pattern Recognition

### Key words

- K-mean
- breast image
- segmentation
- detection
- CAD