Abstract

Breast cancer is the second leading cause of death for women all over the world. Screening mammography is currently the best available radiological technique for early detection of breast cancer. However the presence of artifacts can disturb the detection of breast cancer and reduce the rate of accuracy in the computer aided detection (CAD) systems. For this reason, the pre-processing of mammogram images is very important in the process of breast cancer analysis because it reduces the number of false positive. This paper proposes various filtering techniques to solve the noise removal problems and separate the background region from the breast profile region using an automatic thresholding technique and Connected Component
Labelling. We evaluated our pre-processing method on a set of images obtained from a private hospital. Thus this preparation phase improves the image quality and accentuates the CAD results more accurate.

References

- Breast Cancer Facts and Figures 2009-2010, ACS.

**Index Terms**

Computer Science

Image Processing

**Keywords**

Mammogram

Thresholding

Connected Component Labelling

Breast Region

Extraction

Computer Aided Analysis

Otsu Method

Kittler Method

Wiener Filter