Abstract

This paper describes a system that enhances the mammogram to detect the possible lesion or tumor. First the pre-processing task is performed on the mammogram. The pre-processing phase has been sub-divided into 4 parts to get the Region of interest and remove the external factors that affect the system in obtaining the possible lesion. Then the segmentation process is performed on the mammogram to get only those portions of the image which are greater than a particular predefined threshold value. After segmentation the edge detection process is performed on this segmented mammogram to display edges over masses. Morphological filtering is done to get masses highlighted with a border. Out of these masses the maximum probable mass that could be a lesion/tumor is highlighted. Finally this mass detected clear border mammogram image is superimposed over the original mammogram to enhance the mass from the mammogram.
Early Breast Cancer Tumor Detection on Mammogram Images


Index Terms

Computer Science Image Processing

Keywords

Breast cancer tumor Feature extraction Gray-scale Image processing Image enhancement
Image segmentation

Image edge detection

Image processing

Mammogram

Morphological operations

Thresholding