Abstract

The most common cancer of women is breast cancer which is the leading cause of cancer-related death among women aged 15 to 54. The risk of cancer increases after the age of 40's. Thus earlier detection of breast cancer increases the probability of survival of the patient. For its detection mammography is done, but many of the masses remain either undetected or falsely detected due to poor contrast and noise present in mammographic images. Thus for earlier detection of cancerous masses many enhancement techniques are applied. In this paper various set of performance metrics that measure the quality of the image enhancement of mammographic images in a CAD framework that automatically finds masses using machine learning techniques. These performance metrics quantitatively measures the best suited image enhancement on a per mammogram basis, which improves the quality of ensuing image segmentation much better than using the same enhancement method for all mammograms.

- Petrick, Nicholas A.; Chan, Heang-Ping; Sahiner, Berkinan; Wei, Datong, "An adaptive density-weighted contrast enhancement filter for mammographic breast mass detection," IEEE Transactions on Medical Imaging, Volume: 15, Page(s): 59 – 67, 1996.

Index Terms

Computer Science
Artificial Intelligence

Keywords
MLO CC ASNR PSNR ROI DSM CEM CI CD TBCs TBC