Computer Aided Classification of Architectural Distortion in Mammograms Using Texture Features

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Abstract : Computer aided diagnosis systems provide vital opinion to radiologists in the detection of early signs of breast cancer from mammogram images. Masses and microcalcifications, architectural distortions are the major abnormalities. In this paper, a computer aided diagnosis system has been proposed for distinguishing abnormal mammograms with architectural distortion from normal mammogram. Four types of texture features GLCM texture, GLRLM texture, fractal texture and spectral texture features for the regions of suspicion are extracted. Support Vector Machine has been used as classifier in this study. The proposed system yielded an overall sensitivity of 96.47% and accuracy of 96% for the detection of abnormalities with mammogram images collected from Digital Database for Screening Mammography (DDSM) database.

Keywords : architecture distortion, mammograms, GLCM texture features, GLRLM texture features, support vector machine classifier

Conference Title : ICMPBE 2015 : International Conference on Medical Physics and Biomedical Engineering

Conference Location : Zurich, Switzerland

Conference Dates : July 29-30, 2015