Abstract

Developing a robust Computer Aided Diagnosis (CADx) system for mammograms analysis has been the challenging task for years. The slight difference in X-ray attenuation between normal and abnormal glandular tissues makes the mammogram diagnosis complicated. The proposed CAD system discriminates the abnormal severity of mammograms into normal-benign (non-cancerous, non-spreadable), normal-malign (cancerous) ans benign-,malign, using wavelet features combined with spectral domain. Classification is performed on 206 different mammogram images from Mias database using Kernel Discriminant Analysis (KDA). KDA affords a non-parametric statistical approach with parzen window density estimation to estimate density function from a given sample dataset. The study reveals that the optimal smoothing parameters are increasing functions of the sample size of the complementary classes, features used to classify and value of the bandwidth.

References

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Index Terms

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