

Effect of BI-RADS Assessment in Improving CAD of Masses (2010)

Título: Effect of BI-RADS Assessment in Improving CAD of Masses Autores: Antonio García-Manso, Carlos J. García-Orellana, Ramón Gallardo-Caballero, Horacio González-Velasco and Miguel Macías-Macías
Revista: Lecture Notes in Computer Science Vol./Pag.: 6136, 614-621 DOI:
10.1007/978-3-642-13666-5_83 Ed./Año: Springer Verlag, 2010 Abstract: In this work we study how the BI-RADS assessment could help to improve the performance of a CAD (Computer Aided Diagnosis) image-based system in the task of masses diagnosis. Our system is based on the use of Independent Component Analysis (ICA) as feature extractor from mammographic images, and Neural Networks as a final classifier. For our tests, the "Digital Database for Screening Mammography" (DDSM) has been used, particularly the subset BCRP MASS1. The best results were obtained when we used the image data (with feature extraction by means of ICA) together with the BI-RADS assessment provided by DDSM database. Keywords: CAD, breast cancer, mammogram, independent component analysis, neural networks.