

EARLY BREAST CANCER DETECTION USING STATISTICAL PARAMETERS

H. C. NAGARAJ¹, PRASANNA PAGA² & KAMAL LAMICHHANE³

¹Principal, Nitte Meenakshi Institute of Technology, Bangalore, Karnataka, India

²Associate Professor, Department of ECE, Nitte Meenakshi Institute of Technology, Bangalore, Karnataka, India

³B.E. Student, Department of ECE, Nitte Meenakshi Institute of Technology, Bangalore, Karnataka, India

ABSTRACT

Breast cancer is the second most common cancer overall and the leading cause of cancer deaths in women. Studies proven that an early diagnosis of breast cancer can increase five year survival rate from 60% to 80+%. Mammography is, at present, the only viable method for detecting most of tumors early enough for effective treatment. The secret of setting up the accurate diagnosis is to detect and understand the most subtle signs of breast lesions. Analysis of different features of mammograms can provide clues about the presence of early signs of tumors. In this work we present an automated procedure for detection using image processing techniques. Many image processing methods were developed over the past two decades to help radiologists in diagnosing breast cancer. In this paper a new algorithm is introduced for Mammograms Region of Interest (ROI) identification using statistical properties of mammograms. The proposed algorithm has been verified using 100 mammograms from the MIAS databases and other sources. Simulation results show that the proposed algorithm achieved 70% true result.

KEYWORDS: Mass Detection, Breast Mammogram, Statistical Measures, Averaged Datum Moments