

ABSTRACT

A MODEL DETERMINATION OF MAMMA DISORDERS BASED ON PHYSICAL MAMMOGRAPHY FILM

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Breast cancer is a public health problem in the world. To solve this problem, scientists have developed a variety of methods of early detection of breast cancer. All this time to determine the histopathological type of breast cancer there had been developed a biopsy method using a fine needle. The physical parameters obtained from x-ray mammography have great potential to detect breast cancer. The physical parameters used in this reseach were *entropy, contrast, angular second moment, inverse difference moment, correlation, mean, deviation, entropy of H_{diff} , angular second moment of H_{diff} and mean H_{diff}* . The samples used in this study were 498, where 394 were used for the database and 104 for the trials. The method used in this research was the second order histogram method. The analysis used was logistic regression. The results showed that significant physical quantities in determining normal-abnormal were *Entropy, Contrast, inverse difference moment, Mean, Deviation, entropy of H_{diff} , angular second moment of H_{diff} and mean H_{diff}* , with a sensitivity of 97.11%, while the insignificant ones were *angular second moment and correlation*. To determine the types of histopathological grade the significant physical quantities were *angular second moment, inverse difference moment, Mean, Deviation, entropy of H_{diff} , angular second moment of H_{diff} and mean H_{diff}* , with a sensitivity of 95.45 %. The insignificant physical quantities were *entropy, contrast and correlation*. To determine the types of *ILC and IDC* the significant quantities were *Deviation, entropy of H_{diff} , angular second moment of H_{diff} and mean H_{diff}* , with a sensitivity of 95.65 %, while the insignificant ones were *entropy, contrast, angular second moment, inverse difference moment, correlation, mean*. The conclusion, not all of the physical quantities influenced the determination of breast abnormalities.

Keywords: *mammographic, breast cancer, histopatology, infiltrating ductal carcinoma, infiltrating lobuler carcinoma. Model, RSUD Dr. Soetomo Surabaya.*