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Positive findings and breast cancer: prediction through the mammographic x - ray examination among a selected population, Sri Lanka

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Mammography x-ray examination is a gold standard method for detection of breast cancer. This cross sectional study describes the risk factors to positive finding of breast cancer and their association among Sri Lankan women who underwent mammography examination. Data were collected for six months at a selected private hospital in Sri Lanka in 2015. A structured questionnaire was distributed among the patients prior to mammography x-ray examination. It included demographic information of patients and signs and symptoms, surgery related risk factors, and other related factors were considered as associated risk factors for breast cancer. All mammographic images were interpreted and reported by a well experienced radiologist at a particular hospital.

Mammographic examinations were performed on 213 consecutive women, and among them 120 women were diagnosed as positive for breast cancer. 41 (34.16%) women came for screening and 79 (65.83%) for diagnostic mammograms. Among the positive diagnosis of women, 65 (54%) had pain and 62 (51.6%) had palpable mass in one or both breasts. Changes of shape in breast was observed in 27 (22.5%), 46 (38.4%) had none or low breast feed, 81 (72.5%) use contraceptive pills, 67 (55.8%) have family history of breast cancer and 71 (59.16%) were in menopause period. A binomial logistic regression was performed to see the factors which can be predicted towards the positive finding. The Hosmer-Lemeshow test showed that the model fitted the well: ($p=0.544$). None or lack of breast feeding, usage of contraceptive pills and family history showed a statistical significance: ($p<0.05$) on prediction of positive finding. However, the pattern of menses was not a statistically significant ($p > 0.05$) predictor. The study concluded that pain and palpable mass or lumps are good indicators. It is evident that mammogram being positive is 7.18 times higher in those with family history of breast cancer than those without a family history. Furthermore, family history of breast cancer, usage of contraceptive pills and none or lack of breast feeding were identified as higher risk factors in predicting the positive finding to breast cancer. However, biopsy procedures should be performed to confirm the positive findings.