

Abstract Body

Mammographic breast density (MBD) is related to both breast cancer risk and the masking of breast cancer in screening mammography and is defined by the extent of fibroglandular tissue visualised on mammography images. Extent of MBD has been found to vary between nationalities as well as between women living in countries other than where they were born and women in different age groups. This study has been designed to investigate the MBD of Japanese women living in Australia. Although dense breasts have a strong association with an increase in breast cancer risk, this study focuses on the evaluation of breast density as a masking factor for the detection of breast cancer since this influences the efficacy of early detection of breast cancer. A retrospective review of de-identified screening mammography images taken at BreastScreen NSW was carried out and the breast density of both Australian women and Japanese women living in Australia qualitatively evaluated using MBD reporting scores. Right and left Cranio-Caudal (CC) and Medio-Lateral Oblique (MLO) views were visually categorised according to the American College of Radiology BI-RADS® Atlas 5th edition breast composition categories: (a) The breasts are almost entirely fatty, (b) There are scattered areas of fibroglandular density, (c) The breasts are heterogeneously dense, or (d) The breasts are extremely dense. This method was designed to evaluate differences in breast density between the two groups as well as the breast density of Japanese women living in Australia by age. The outcomes provide new knowledge that has implications for the current breast screening program in Australia related to ethnicity and effective breast cancer screening practices. As well the outcomes will inform future research directions.