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## Breast density in Chinese women: Using percentage and area measures from a quantitative technique

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Breast density (BD) is an independent risk factor for breast cancer but its characteristics are poorly understood in China. This study aims to identify associated factors with BD in Chinese women by using a quantitative method. 84 cancer and 987 cancer-free women were recruited from Fudan University Shanghai Cancer Centre. BD was measured by an automatic algorithm autodensity and expressed in both percentage density (PD) and dense area (DA) format. Pearson tests were performed to exam relationships between density and continuous variables and t-tests were conducted to compare differences of mean density values for categorical variables. Multivariate models were built using variables being statistically significant from the Pearson and t-tests. For cancer-free women, weight and BMI were negatively associated ( $r=-0.237$ ,  $r=-0.272$ ) with PD whereas positively associated ( $r=-0.495$ ,  $r=-0.520$ ) with DA; age was associated with PD ( $r=-0.202$ ) and DA ( $r=-0.086$ ) but did not add any prediction within multivariate models. Lower PD was found within women with secondary education background or below compared to women with tertiary education. For cancer-women, PD showed similar relationships with that of cancer-free women whilst breast area was the only factor that was associated with DA ( $r=0.739$ ). This is the first time that BD was measured by a quantitative method for Chinese women and important associations were identified for both PA and DA. The findings are very valuable to policy makers being responsible for introducing effective models of breast cancer prevention and diagnosis.

### Biography

Tong Li is a PhD candidate at Faculty of Health Sciences, The University of Sydney. Her PhD project is studying breast density and cancer presentations for women in China. This project will be the first study to determine the optimum image technology for policy makers in China who are considering the implementation and implications of a national population-based breast cancer screening program. She published a literature review regarding breast cancer in China last year in Breast Cancer Research and Treatment with an impact factor of 4.

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