Joint Event

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## Does mammographic density in women with previous breast cancer predict further breast cancer?

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**Background:** The aim of this research was to determine whether increased mammographic density in women with a previously diagnosed breast cancer is related to the risk of development or detection of a further breast cancer in either breast.

Methods: 906 women with previous breast cancer were identified from those consenting to the Predicting Risk of Cancer at Screening (PROCAS) study. Personal risk factors were self-reported, with visual assessment of mammographic density recorded by two readers on Visual Analogue Scales (VAS) and automated volumetric breast density measured using VolparaTM. Of these women, 23 had a subsequent contralateral breast cancer and 17 had subsequent ipsilateral breast cancer. A nested case control study was carried out where cases were women with a second breast cancer. Three controls per case were matched on age, HRT use, menopausal status, parity and BMI.

**Results:** Increased dense volume in the breast contralateral to that of the previous cancer was associated with subsequent development of cancer in that breast, with median fibroglandular volumes of 44.8 and 37.9 cm3 respectively (p<0.05) for cases and controls, although no significant difference between cases and controls was found for volumetric or visually assessed percent density. No association between increased mammographic density and a second ipsilateral breast cancer was found.

**Discussion:** Our results suggest that increased fibroglandular volume might be predictive of subsequent contralateral breast cancers in women with a previous diagnosis of breast cancer, but further investigation with a larger sample size is needed to confirm this result.

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**Notes:**