

**Abstract Form**

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**Title of abstract:** Breast density and breast cancer screening in Indigenous women in the Northern Territory

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**Background:** Mammographic density (MD) is an independent risk factor for breast cancer with high MD reported to increase risk four to sixfold and to result in lower mammographic sensitivity. Indigenous Australians have lower breast cancer rates but higher mortality rates and lower attendance to breast screening compared with other women. With evidence of ethnic variations in MD globally, studies investigating MD in Indigenous women may provide insight into optimising breast cancer diagnosis and care for an underserved population.

**Aims:** To investigate the MD of Indigenous women in the Northern Territory (NT) and their BreastScreen attendance.

**Methods:** Indigenous status, age, remoteness, HRT use, personal and family history of breast cancer, current breast lump, and language spoken at home from n=857 Indigenous and n=3236 non-Indigenous women were analysed for associations with MD and screening attendance. Receiver Operating Characteristic (ROC) analyses were used to determine cut-off points for age and numbers of visits to screening. Univariate and multivariate logistic regression were employed to determine odds ratios and  $P \leq 0.05$  were considered significant.

**Results:** MD was lower for Indigenous women even at younger ages. For non-Indigenous women, high MD was associated with younger age (OR 2.4, 95% CI 2.1-2.8), family history of breast cancer (OR 1.4, 95% CI 1.2-1.6), English as the main language (OR 1.4, 95% CI 1.2-1.6), and remoteness (OR 1.2, 95% CI

1.1-1.4). For Indigenous women, younger age was the only determinant of high MD (OR 2.7, 95% CI 2.0–3.5). Indigenous women had fewer visits to screening particularly those who were younger (OR 12.3, 95%CI 8.1–18.8), had no family history of breast cancer (OR 2.1, 95%CI 1.3–3.3), and spoke a language other than English (OR 1.9, 95%CI 1.3 –2.9). Remoteness was associated with fewer visits for non-Indigenous women only (OR 1.3, 95% CI 1.1–1.5).

**Implications:** Breast cancer detection is more effective in low MD cases which indicates that Indigenous Australians would benefit from engaging with BreastScreen. Health communication strategies to encourage and retain Indigenous participation in BreastScreen must include culturally appropriate language and age-targeted approaches.