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Media Release

INCREASED BREAST CANCER DETECTION RATES QUANTIFIED FOR FIVE RISK FACTORS

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THE age-specific impact of risk factors on breast cancer detection at regular screens and between screens could inform discussions of risk-stratified screening, according to research published today by the *Medical Journal of Australia*.

"The aim of risk-stratified screening is to potentially improve the benefit and possibly reduce the harms of screening by reducing the interval between screens, or by using more sensitive imaging procedures for people at higher risk while reducing screening intensity for those at lower risk," wrote the authors, led by Dr Naomi Noguchi from the School of Public Health at the University of Sydney.

Noguchi and colleagues analysed data from all BreastScreen WA mammography screening episodes for women aged 40 years or more during 1 July 2007 – 30 June 2017, to estimate rates of screen-detected and interval breast cancers, stratified by risk factor.

"Our aim was to provide real-world evidence for informing discussion of the potential role of risk-stratified breast cancer screening in the BreastScreen program," they wrote.

A total of 323 082 women were screened in 1 026 137 screening episodes (mean age, 58.5 years. The overall cancer detection rate at screens (CDR) was 68 cancers per 10 000 screens, and the overall inter-screen interval cancer rate (ICR: those cancers detected between regular screens) was 9.7 cancers per 10 000 women-years.

Noguchi and colleagues "found that the influence of risk factors on screening CDR and ICR varied by age group" by looking at risk factors that are routinely collected by the BreastScreen program. For example, family history of breast cancer had larger effect on CDR than ICR, and the effect of family history on CDR was larger in older age groups. Having family history elevated ICR only in women in 40s but not in older age groups.

The authors concluded that:

"Our findings could inform discussions of the role for risk-stratified screening in Australia and overseas, and may assist planning of research for generating evidence on its clinical and cost-effectiveness."

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