

<https://doi.org/10.29289/25945394V36S11049>

1049 – Incidental findings in risk reducing mastectomy: incidence and predictors in a real-world cohort

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Purpose: Risk reducing mastectomy (RRM) is an established preventive strategy for women at high genetic and/or familial risk of breast cancer. Histopathological evaluation of RRM specimens may identify incidental findings (IFs), including occult malignancies and precursor lesions; however, their incidence and associated predictors remain insufficiently characterized. This study aimed to estimate the incidence of IFs and identify associated factors in a Brazilian cohort.

Methods: A retrospective cohort study was conducted among 154 women who underwent RRM at a tertiary public cancer center (Women's Hospital Professor José Aristodemo Pinotti CAISM/UNICAMP, University of Campinas, Brazil) between 2013 and 2025. Eligible patients carried pathogenic/likely pathogenic germline variants and/or met NCCN high-risk criteria, and had normal breast imaging within six months before surgery. Histopathological evaluation followed an institutional protocol with extensive tissue sampling. Multivariate logistic regression was used to evaluate demographic, clinical, and surgical predictors of IFs.

Results: IFs were identified in 35% (54/154) of the patients, including 10.4% malignant lesions (DCIS or invasive carcinoma) and 24.6% atypical proliferative lesions. Breast MRI was performed in 14 patients, where IFs were detected in 21.4% (3/14), compared with 36.4% (51/140) among those without MRI, with no significant association ($p=0.38$). In multivariable analysis, increasing age (OR 1.071) was an independent predictor of incidental findings (IFs). For invasive and DCIS outcomes, age remained the only significant predictor (OR 1.069). Genetic status was not significantly associated with IFs.

Conclusion: In this single-institution cohort, IFs were frequently identified in RRM specimens. Older age was the main clinical predictor, while genetic status and preoperative MRI were not significantly associated with IFs. These findings support individualized risk stratification and comprehensive pathological assessment when counseling patients undergoing RRM, particularly in resource-limited settings.

Ethics: Research Ethics Committee Approval (CAAE 54179621.1.0000.5404).

Keywords: mastectomy; breast neoplasms; incidental findings; risk assessment.