

Supplemental online content for:

Factors Associated With False-Positive Recalls in Mammography Screening

Xinhe Mao, MD, MSc; Wei He, PhD; Keith Humphreys, PhD; Mikael Eriksson, PhD; Natalie Holowko, PhD;
Fredrik Strand, MD, PhD; Per Hall, MD, PhD; and Kamila Czene, PhD

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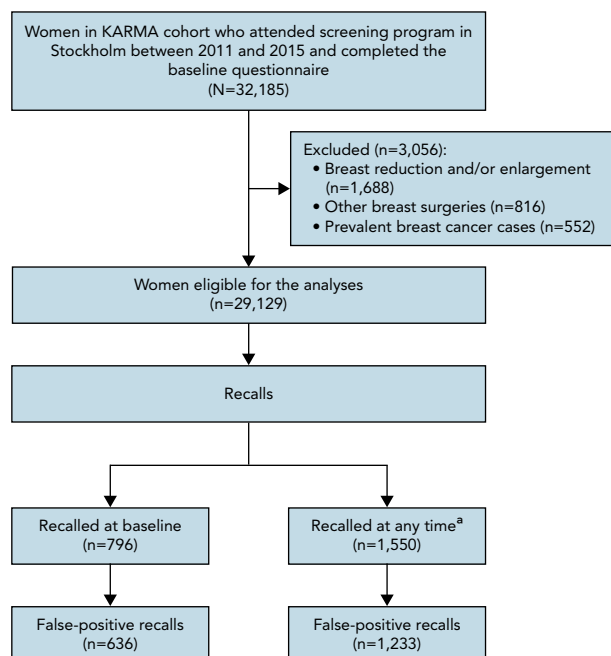
eFigure 1: Study Populations Used for Analyses

eFigure 2: Association Between Bilateral Symmetry of Mammographic Features and False-Positive Recalls

eFigure 3: Association Between Breast Cancer Risk Factors and False-Positive Recalls

eTable 1: Association Between Bilateral Symmetry of Mammographic Features and Mammography Screening Recall Rates

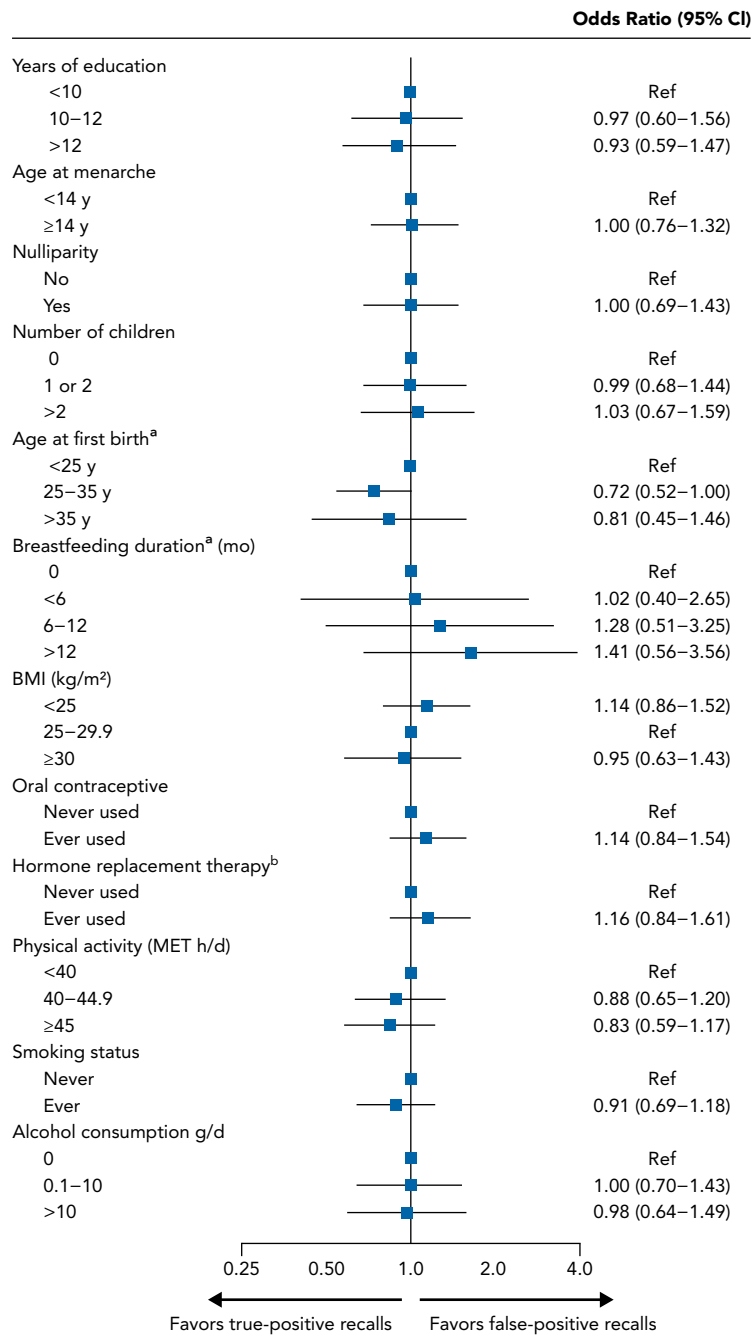
eTable 2: Association Between Bilateral Symmetry of Mammographic Features and False-Positive and True-Positive Recalls



eFigure 1. Study populations used for analyses.

Abbreviation: KARMA, Karolinska Mammography Project for Risk Prediction of Breast Cancer.

^aWomen who received their first mammography recall at or after KARMA baseline.

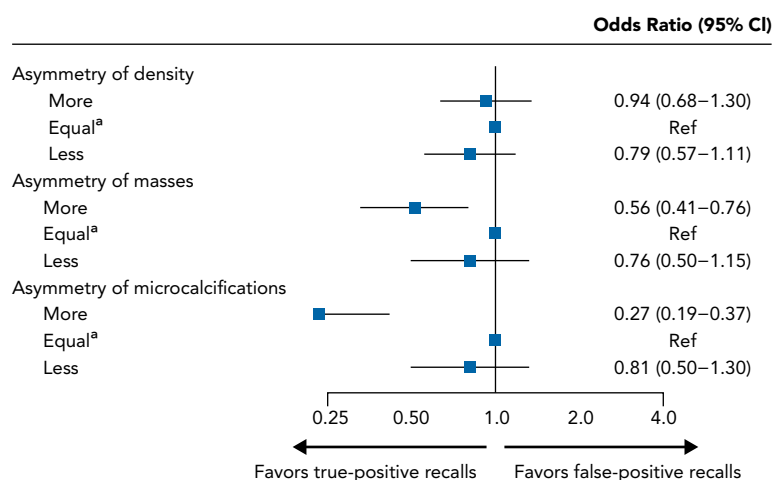


eFigure 2. Association between breast cancer risk factors and false-positive recalls (vs true-positive recalls).

Breast cancer risk factors not associated with mammography screening recalls based on Table 1 ($P \geq .1$) are included. Abbreviations: BMI, body mass index; MET, metabolic equivalents of task.

^aAmong parous women.

^bAmong postmenopausal women.



eFigure 3. Association between bilateral symmetry of mammographic features (compared with contralateral side) and false-positive recalls (compared with true-positive recalls), adjusting for age at mammogram. Asymmetry of mammographic features were defined as the recalled side dense area, number of masses, and number of microcalcification clusters minus those on the contralateral side.

^aEqual was defined as within 6 cm² of dense area, same number of masses, and same number of microcalcification clusters, respectively.

Table 1. Association Between Bilateral Symmetry of Mammographic Features^a and Mammography Screening Recall Rates

	Number of Screenings	Recalls (Crude rate per 1,000 screenings)		P Value ^b
		Yes	No	
Dense area on the recalled compared with contralateral side ^c				
More	6,377	211 (33.1)	6,166 (966.9)	.002
Equal ^d	15,412	382 (24.8)	15,030 (975.2)	
Less	6,384	184 (28.8)	6,200 (971.2)	
Masses on the recalled compared with contralateral side ^c				
More	5,841	264 (45.2)	5,577 (954.8)	<.001
Equal ^d	16,726	404 (24.2)	16,322 (975.8)	
Less	5,606	109 (19.4)	5,497 (980.6)	
Microcalcifications on the recalled compared with contralateral side ^c				
More	1,887	97 (51.4)	1,790 (948.6)	<.001
Equal ^d	24,573	625 (25.4)	23,948 (974.6)	
Less	1,713	55 (32.1)	1,658 (967.9)	

Column totals may not equal to total number of subjects due to missing values.

^aCompared with contralateral side.

^bP values from chi-square tests.

^cAsymmetries of mammographic features were defined as the recalled side dense area, number of masses, and number of microcalcification clusters minus those on the contralateral side.

^dEqual was defined as within 6 cm² of dense area, same number of masses, and same number of microcalcification clusters, respectively.

eTable 2. Association Between Bilateral Symmetry of Mammographic Features ^a and FP and TP Recalls						
	Women With FP Recalls vs Women Who Were Not Recalled			Women With TP Recalls vs Women Who Were Not Recalled		
	FP Recall n (%)	Matched No Recall n (%)	OR (95% CI) ^b	TP Recall n (%)	Matched No Recall n (%)	OR (95% CI) ^b
Total, n	1,233	6,165		317	1,585	
Dense area on the recalled compared with contralateral side ^c						
More	328 (29.4)	1,343 (24.0)	1.35 (1.16–1.57)	77 (25.9)	350 (23.6)	1.24 (0.91–1.67)
Equal ^d	519 (46.5)	2,856 (51.1)	Ref	145 (48.8)	814 (54.8)	Ref
Less	270 (24.2)	1,386 (24.8)	1.08 (0.92–1.27)	75 (25.3)	321 (21.6)	1.32 (0.97–1.80)
Masses on the recalled compared with contralateral side ^c						
More	409 (40.7)	1,323 (26.4)	1.78 (1.53–2.07)	153 (55.0)	368 (26.5)	3.43 (2.53–4.66)
Equal ^d	417 (41.5)	2,403 (47.9)	Ref	80 (28.8)	647 (46.5)	Ref
Less	178 (17.7)	1,294 (25.8)	0.80 (0.66–0.96)	45 (16.2)	375 (27.0)	0.98 (0.67–1.45)
Microcalcifications on the recalled compared with contralateral side ^c						
More	115 (11.5)	396 (7.9)	1.57 (1.26–1.96)	98 (35.3)	153 (11.0)	4.94 (3.60–6.79)
Equal ^d	800 (79.7)	4,268 (85.0)	Ref	151 (54.3)	1,112 (80.0)	Ref
Less	89 (8.9)	356 (7.1)	1.36 (1.06–1.74)	29 (10.4)	125 (9.0)	1.87 (1.20–2.92)

Asymmetric mammographic features associated with mammography screening recalls based on supplemental eTable 1 ($P < .1$).

Column totals may not equal to total number of subjects due to missing values.

Significant associations are highlighted in bold ($P < .05$).

Abbreviations: FP, false-positive; OR, odds ratios; TP, true-positive.

^aCompared with contralateral side.

^bConditional logistic regression models in age-matched strata.

^cAsymmetries of mammographic features were defined as the recalled side dense area, number of masses, and number of microcalcification clusters minus those on the contralateral side.

^dEqual was defined as within 6 cm² of dense area, same number of masses, and same number of microcalcification clusters, respectively.