

Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Boyd NF, Guo H, Martin LJ, et al. Mammographic density and the risk and detection of breast cancer. *N Engl J Med* 2007;356:227-36.

Supplementary Table 1. Risk of breast cancer according to percent

mammographic density, study, and method of detection: matched analysis^a,

radiologists' classification.

Cancers	Study	No. of pairs^b	Beta	SE	OR^c	95% CI	P-value^d
All	NBSS ^e	330	0.3464	0.0817	4.00	(2.1, 7.6)	<.0001
	OBSP ^f	385	0.3493	0.0890	4.04	(2.0, 8.1)	<.0001
	SMPBC ^g	397	0.3177	0.0832	3.56	(1.9, 6.8)	0.0001
	Combined	1112	0.3366	0.0476	3.84	(2.6, 5.6)	<.0001

Supplementary Table 1 - Continued

Screen	NBSS	219	0.2339	0.0964	2.55	(1.2, 5.4)	0.02
Detected							
	OBSP	250	0.3243	0.1144	3.66	(1.5, 9.0)	0.005
	SMPBC	248	0.2231	0.1052	2.44	(1.1, 5.6)	0.03
	Combined	717	0.2504	0.0590	2.72	(1.7, 4.3)	<.0001

Non-Screen	NBSS	57	0.6636	0.2587	14.22	(1.9, 108.1)	0.01
Detected	OBSP	67	0.8045	0.2798	24.98	(2.8, 224.0)	0.004
<12 months ^h	+SMPBC						
	Combined	124	0.7075	0.1715	16.95	(4.4, 65.0)	<.0001

Supplementary Table 1 - Continued

Non-Screen	NBSS	47	0.6348	0.3167	12.67	(1.1, 151.7)	0.05
Detected	OBSP	115	0.3662	0.1701	4.33	(1.1, 16.4)	0.03
≥12 months ⁱ	SMPBC	100	0.3939	0.1828	4.83	(1.2, 20.3)	0.03
	Combined	262	0.4238	0.1055	5.45	(2.4, 12.5)	<.0001

^a Adjusted for BMI, age at menarche, parity, number of live births, age at first birth, menopausal status, age at menopause, hormone replacement therapy (ever/never), and breast cancer in first degree relatives (0,1,2+). ^b 7 pairs from NBSS, 1 pair from OBSP and 1 pair from SMPBC are excluded from the screen or non-screen group analysis because of missing information on detection or the last mammogram date. ^c The odds ratio is the gradient in risk over 5 categories of mammographic density, comparing the highest(≥75%) with the lowest category(<10%). ^d P-value: test for $\beta=0$. ^e The Canadian National Breast Screening Study. ^f The Ontario Breast Screening Program. ^g

The Screening Mammography Program of British Columbia. ^h Cancers detected within 12 months of the last screening date. ⁱ Cancers detected 12 months or more after the last screening date.

Supplementary Table 2. Risk of breast cancer according to percent mammographic density, study, and method of detection: matched analysis^a, computer assisted measure.

Cancers	Study	No. of pairs ^b	Beta	SE	OR ^c	95% CI	P-value ^d
All	NBSS ^e	330	0.4187	0.0997	5.34	(2.4, 11.7)	<.0001
	OBSP ^f	386	0.3538	0.0944	4.12	(2.0, 8.6)	0.0002
	SMPBC ^g	398	0.3699	0.0918	4.39	(2.1, 9.0)	<.0001

Combined	1114	0.3704	0.0540	4.40	(2.9, 6.7)	<.0001
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Supplementary Table 2 - Continued

Screen	NBSS	219	0.3223	0.1173	3.63	(1.4, 9.1)	0.006
Detected							
	OBSP	251	0.3147	0.1230	3.52	(1.3, 9.2)	0.01
	SMPBC	248	0.2457	0.1141	2.67	(1.1, 6.5)	0.03
	Combined	718	0.2753	0.0669	3.01	(1.8, 5.1)	<.0001

Non-Screen	NBSS	57	1.2404	0.4251	142.82	(5.1, 4001.3)	0.004
Detected							
<12	OBSP	67	0.9947	0.3143	53.45	(4.5, 628.2)	0.002
months ^h	+SMPBC						
	Combined	124	0.9713	0.2236	48.68	(8.4, 281.0)	<.0001

Supplementary Table 2 - Continued

Non-Screen	NBSS	47	0.4049	0.3032	5.05	(0.5, 54.4)	0.18
Detected							
≥12 months ⁱ	OBSP	115	0.3325	0.1703	3.78	(1.0, 14.4)	0.05
	SMPBC	101	0.6232	0.2158	12.10	(2.2, 65.7)	0.004
	Combined	263	0.4560	0.1140	6.20	(2.5, 15.1)	<.0001

^a Adjusted for BMI, age at menarche, parity, number of live births, age at first birth,

menopausal status, age at menopause, hormone replacement therapy (ever/never), and

breast cancer in first degree relatives (0,1,2+). ^b 7 pairs from NBSS, 1 pair from OBSP

and 1 pair from SMPBC are excluded from the screen or non-screen group analysis

because of missing information on detection or the last mammogram date. ^c The odds

ratio is the gradient in risk over 5 categories of mammographic density, comparing the

highest(≥75%) with the lowest category(<10%). ^d P-value: test for $\beta=0$. ^e The

Canadian National Breast Screening Study. ^f The Ontario Breast Screening Program. ^g

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12 months of the last screening date. ⁱ Cancers detected 12 months or more after the last

screening date.