

## Supplementary Online Content

Houssami N, Abraham LA, Miglioretti DL, et al. Accuracy and outcomes of screening mammography in women with a personal history of early-stage breast cancer. *JAMA*. 2011;305(8):790-799.

eFigure. Assembling Matched Screens in PHBC and Non-PHBC Women

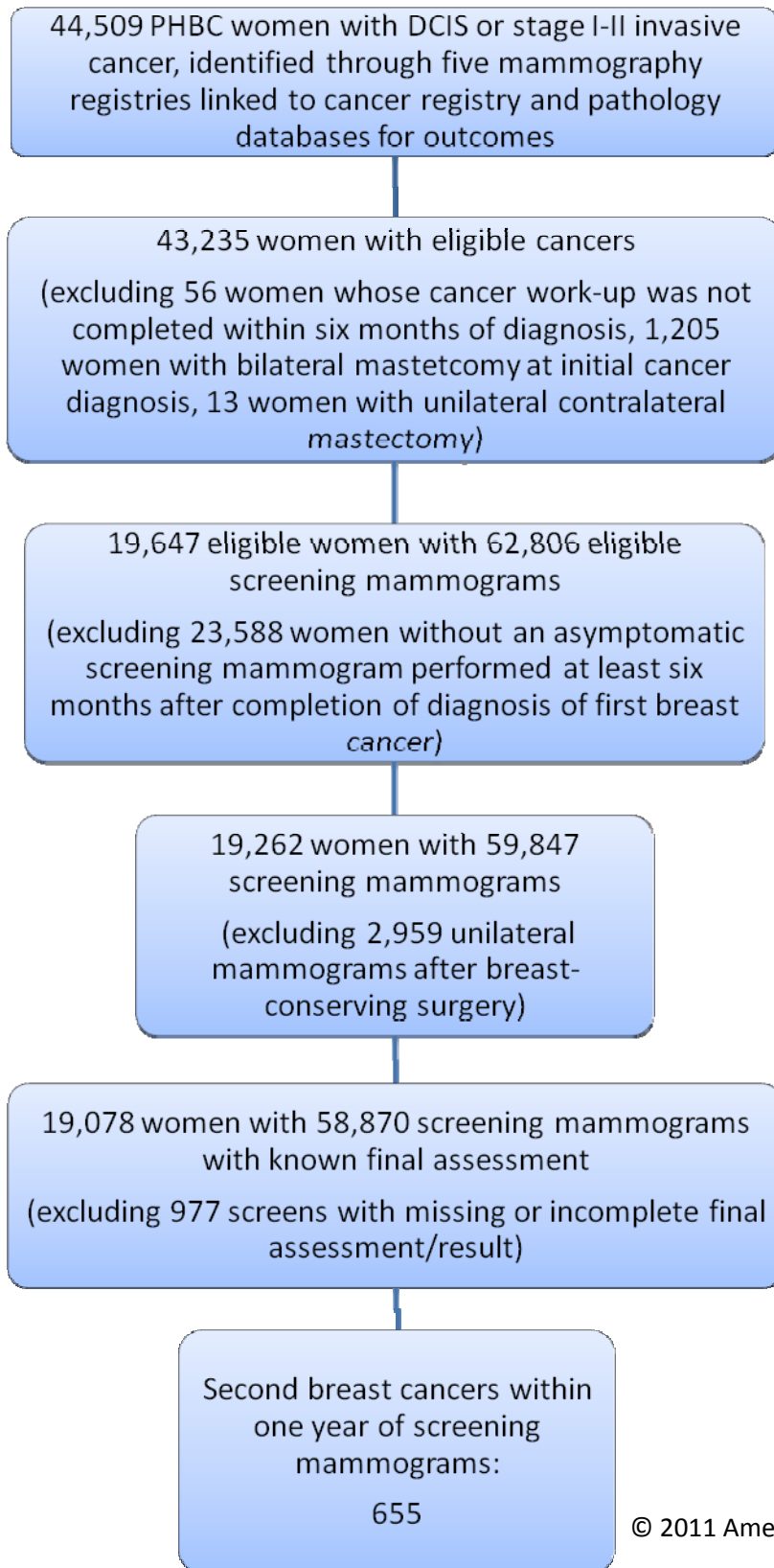
eTable 1. Screening Mammography Accuracy and Cancer Rates in Women With a Personal History of Breast Cancer (N = 58,830 screens)

eTable 2. Stage of Breast Cancers in Women With a Personal History of Breast Cancer (PHBC) and Matched Non-PHBC Women

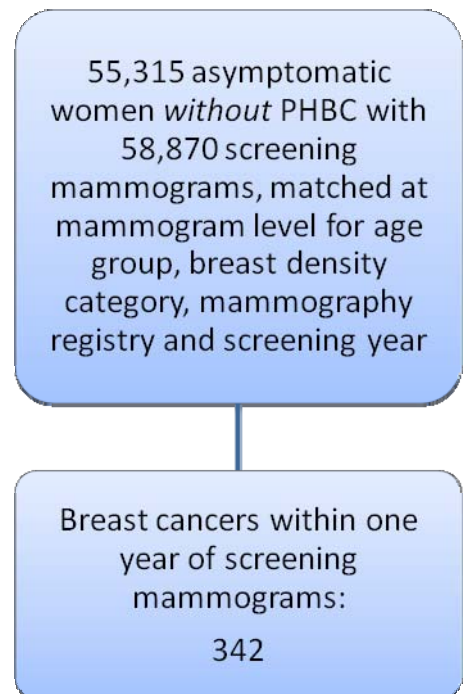
This supplementary material has been provided by the authors to give readers additional information about their work.

**e-Figure 1. Assembling Matched Screens in PHBC and Non-PHBC Women**

**Cohort of Women With PHBC**



**Screening mammogram- matched group *without* PHBC**



**eTable 1. Screening Mammography Accuracy and Cancer Rates in Women With a Personal History of Breast Cancer (N = 58,830 Screens)**

	<b>Sensitivity %</b>	<b>Specificity %</b>	<b>AIR<sup>a</sup> %</b>	<b>PPV2<sup>b</sup> %</b>	<b>Cancer Rates<sup>c</sup></b>	<b>Cancer detection rates<sup>d</sup></b>	<b>Interval cancer rates<sup>e</sup></b>
	<b>(n/d)</b>	<b>(n/d)</b>	<b>(n/d)</b>	<b>(n/d)</b>	<b>(n/d)</b>	<b>(n/d)</b>	<b>(n/d)</b>
<b>Age at mammography, years</b>							
<50	53/104	6572/6719	200/6823	53/200	104/6823	53/6823	51/6823
50-59	96/150	14100/14367	363/14517	96/363	150/14517	96/14517	54/14517
60-69	89/124	14421/14665	333/14789	89/333	124/14789	89/14789	35/14789
70+	164/237	22147/22464	481/22701	164/481	237/22701	164/22701	73/22701
<b>BI-RADS breast density</b> (excludes 12,956 screens missing data)							
1- Almost entirely fatty	11/15	3396/3430	45/3445	11/45	15/3445	11/3445	4/3445
2- Scattered fibroglandular tissue	145/209	21586/21931	490/22140	145/490	209/22140	145/22140	64/22140
3- Heterogeneously dense	126/206	17372/17666	420/17872	126/420	206/17872	126/17872	80/17872
4- Extremely dense	21/38	2325/2379	75/2417	21/75	38/2417	21/2417	17/2417
<b>Time since last mammogram</b>							

	Sensitivity %	Specificity %	AIR <sup>a</sup> %	PPV2 <sup>b</sup> %	Cancer Rates <sup>c</sup>	Cancer detection rates <sup>d</sup>	Interval cancer rates <sup>e</sup>
	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)
(excludes 1,061 screens missing data)							
9-14 months	308/483	46632/47361	1037/47844	308/1037	483/47844	308/47844	175/47844
15-23 months	55/78	7125/7274	204/7352	55/204	78/7352	55/7352	23/7352
24+ months	27/40	2474/2533	86/2573	27/86	40/2573	27/2573	13/2573
<b>Time since first breast cancer diagnosis</b>							
<1 year	32/50	4223/4355	164/4405	32/164	50/4405	32/4405	18/4405
1-2 years	77/129	13692/13995	380/14124	77/380	129/14124	77/14124	52/14124
3-4 years	80/135	13727/13946	299/14081	80/299	135/14081	80/14081	55/14081
5-6 years	89/118	10388/10541	242/10659	89/242	118/10659	89/10659	29/10659
7-9 years	72/113	9446/9565	191/9678	72/191	113/9678	72/9678	41/9678
≥10 years	52/70	5764/5813	101/5883	52/101	70/5883	52/5883	18/5883
<b>Type of first breast cancer</b>							

	Sensitivity %	Specificity %	AIR <sup>a</sup> %	PPV2 <sup>b</sup> %	Cancer Rates <sup>c</sup>	Cancer detection rates <sup>d</sup>	Interval cancer rates <sup>e</sup>
	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)
Ductal carcinoma <i>in situ</i> (DCIS)	140/192	11709/11943	374/12135	140/374	192/12135	140/12135	52/12135
Invasive cancer	262/423	45531/46272	1003/46695	262/1003	423/46695	262/46695	161/46695
<b>Primary surgery</b> (excludes 1,149 screens missing data)							
Breast conserving without radiation	84/132	7219/7371	236/7503	84/236	132/7503	84/7503	48/7503
Breast conserving with radiation	217/335	29060/29651	808/29986	217/808	335/29986	217/29986	118/29986
Mastectomy	76/117	19875/20075	276/20192	76/276	117/20192	76/20192	41/20192
<b>Radiation therapy</b> (excludes 1,136 screens missing data)							
None	140/217	20343/20626	423/20843	140/423	217/20843	140/20843	77/20843
Any	238/369	35815/36482	905/36851	238/905	369/36851	238/36851	131/36851
<b>Adjuvant systemic therapy</b> (excludes 3,501 screens missing data)							

	Sensitivity %	Specificity %	AIR <sup>a</sup> %	PPV2 <sup>b</sup> %	Cancer Rates <sup>c</sup>	Cancer detection rates <sup>d</sup>	Interval cancer rates <sup>e</sup>
	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)	(n/d)
None	247/348	27157/27640	730/27988	247/730	348/27988	247/27988	101/27988
Any (chemotherapy and/or endocrine)	118/218	26691/27123	550/27341	118/550	218/27341	118/27341	100/27341
<b>Self-reported history of breast implant, reduction, or reconstruction</b> (excludes 14,387 screens missing data)							
No	277/420	40324/40940	893/41360	277/893	420/41360	277/41360	143/41360
Yes	10/20	3026/3063	47/3083	10/47	20/3083	10/3083	10/3083

<sup>a</sup> AIR, abnormal interpretation rate (percentage with positive mammograms based on final imaging assessment)

<sup>b</sup> PPV2, positive predictive value (percentage of positive mammograms on final imaging assessment associated with a cancer diagnosis)

<sup>c</sup> Cancer rates per 1000 screening mammograms (all screen-detected and interval cancers identified in subjects)

<sup>d</sup> Cancer detection rates per 1000 screening mammograms (based on true positive mammograms)

<sup>e</sup> Interval cancer rates per 1000 screening mammograms (based on false negative mammograms)

**eTable 2. Stage of Breast Cancers in Women With a Personal History of Breast Cancer (PHBC) and Matched Non-PHBC Women**

	Second breast cancers within one year of screening (women with PHBC)			Breast cancers within one year of screening (women without PHBC)		
	All cancers	Screen-detected	Interval cancers	All cancers	Screen- detected	Interval cancers
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Total	615 <sup>a</sup>	402	213	341 <sup>a</sup>	261	80
<b>Stage of cancers occurring within one year of screening</b>						
Ductal carcinoma <i>in situ</i>	150 (24.4)	118 (29.4)	32 (15.0)	57 (16.7)	46 (17.6)	11 (13.8)
Invasive cancer	465 (75.6)	284 (70.6)	181 (85.0)	284 (83.3)	215 (82.4)	69 (86.2)
Stage I <sup>b</sup>	273 (70.0)	185 (77.1)	88 (58.7)	171 (64.3)	141 (70.9)	30 (44.8)
Stage IIA <sup>b</sup>	50 (12.8)	27 (11.3)	23 (15.3)	59 (22.2)	36 (18.1)	23 (34.3)
Stage IIB <sup>b</sup>	21 (5.4)	9 (3.8)	12 (8.0)	17 (6.4)	13 (6.5)	4 (6.0)
Stage III <sup>b</sup>	40 (10.3)	17 (7.1)	23 (15.3)	15 (5.6)	7 (3.5)	8 (11.9)

	Second breast cancers within one year of screening (women with PHBC)			Breast cancers within one year of screening (women without PHBC)		
Stage IV <sup>b</sup>	6 (1.5)	2 (0.8)	4 (2.7)	4 (1.5)	2 (1.0)	2 (3.0)
Stage missing	75	44	31	18	16	2
<b>Node status (for invasive cancer; contralateral cancers only in PHBC women)<sup>c</sup></b>						
Negative	220 (84.3)	143 (89.9)	77 (75.5)	211 (76.2)	162 (77.9)	49 (71.0)
Positive	41 (15.7)	16 (10.1)	25 (24.5)	66 (23.8)	46 (22.1)	20 (29.0)
<i>Missing</i>	9	5	4	7	7	0

<sup>a</sup> Total number of cancers occurring within one year of screening mammograms, after excluding 40 screens associated with ipsilateral cancer on mastectomy side and 40 matched screens in non-PHBC women

<sup>b</sup> Percents for stage of invasive cancers were computed based on all invasive cancers not missing stage data

<sup>c</sup> For 270 PHBC screens associated with invasive cancers that were contralateral, and 284 non-PHBC screens associated with invasive cancer, during follow-up