

Supplementary Table 1. Cumulus and ImageJ-based density readings at ages 42 and 48 years, by case-control status.

Density measure Method, view	Cases (N=313)				Controls (N=452)			
	At age 42 years		At age 48 years		At age 42 years		At age 48years	
	N ^a	Median (IQR)	N ^a	Median (IQR)	N ^a	Median (IQR)	N ^a	Median (IQR)
Percent density								
Cumulus, left MLO	243	41.5 (28.3, 57.4)	48	33.2 (19.8, 41.4)	405	32.4 (18.9, 48.5)	160	22.9 (13.4, 40.4)
ImageJ-based, left MLO	242	43.2 (31.9, 55.4)	48	37.8 (18.4, 47.6)	405	37.4 (25.3, 48.7)	160	29.7 (19.4, 40.0)
ImageJ-based, right MLO	217	43.0 (31.4, 53.4)	48	34.0 (22.1, 45.1)	376	37.0 (24.7, 46.8)	160	27.5 (16.1, 41.5)
ImageJ-based, MLO mean	242	43.0 (31.0, 53.6)	48	35.1 (22.4, 45.2)	412	37.6 (25.5, 47.7)	162	28.1 (18.3, 41.1)
Dense area [cm²]								
Cumulus left MLO	243	48.3 (34.8, 65.9)	48	46.5 (29.5, 61.5)	405	38.3 (21.4, 57.5)	160	32.0 (19.1, 50.6)
ImageJ-based, left MLO	242	50.1 (36.4, 63.5)	48	42.8 (25.1, 56.4)	405	39.9 (29.1, 54.3)	160	34.4 (24.4, 45.2)
ImageJ-based, right MLO	217	50.0 (36.7, 61.8)	48	47.0 (33.9, 55.3)	376	41.4 (28.6, 54.0)	160	32.6 (21.0, 46.1)
ImageJ-based, MLO mean	242	50.1 (39.2, 60.9)	48	47.0 (29.2, 57.5)	412	41.2 (30.5, 52.8)	162	34.3 (24.0, 46.6)
Non dense area [cm²]								
Cumulus, left MLO	243	71.7 (45.9, 107.2)	48	100.8 (72.0, 142.8)	405	78.8 (51.6, 118.3)	160	101.4 (71.3, 139.9)
ImageJ-based, left MLO	242	71.2 (48.9, 103.2)	48	94.3 (62.1, 123.1)	405	75.7 (50.8, 114.7)	160	95.8 (63.2, 130.4)
ImageJ-based, right MLO	217	73.3 (51.4, 99.1)	48	96.2 (65.8, 133.9)	376	82.9 (57.6, 116.2)	160	102.7 (66.3, 147.6)
ImageJ-based, MLO mean	242	73.8 (52.0, 104.5)	48	98.5 (62.8, 122.1)	412	79.9 (54.3, 115.1)	162	97.5 (67.9, 141.9)
Breast area [cm²]								
Cumulus, left MLO	243	122.0 (96.4, 156.7)	48	148.5 (118.9, 185.1)	405	125.1 (93.8, 165.5)	160	135.6 (99.8, 177.6)
ImageJ-based, left MLO	242	120.9 (100.0, 156.6)	48	137.5 (116.9, 164.0)	405	122.3 (96.5, 155.4)	160	130.7 (97.6, 167.5)
ImageJ-based, right MLO	217	123.1 (101.7, 152.7)	48	143.3 (116.2, 176.6)	376	127.0 (102.8, 164.7)	160	138.1 (107.3, 180.2)
ImageJ-based, MLO mean	242	124.9 (101.6, 155.2)	48	139.2 (118.7, 168.3)	412	124.6 (100.9, 159.9)	162	134.9 (103.3, 174.7)

IQR: inter-quartile range; MLO: medio-lateral oblique view

^a Number of women with non-missing data

The average number of screening rounds for which images were available was 5 (IQR 3,7) per case and 7 (IQR 5,8) per control woman. For cases, only images from pre-diagnostic screens taken at least one year prior to diagnosis were included; for controls, all available screens up to the time of cancer diagnosis (without censoring them one year prior to the diagnosis of the corresponding matched case) were included as they were all eligible for control-only analyses.