

Supplementary Table S3. Multivariable-adjusted association between body mass index (BMI) and mammographic density (MD)^a by reclassified race and ethnicity categories, stratified by age at mammogram

BMI (kg/m ²)	All			AIAN			Asian			Black			Hispanic White			NHPI			Non-Hispanic White			
	Low MD (n)	High MD (n)	RR (95% CI)	Low MD (n)	High MD (n)	RR (95% CI)	Low MD (n)	High MD (n)	RR (95% CI)	Low MD (n)	High MD (n)	RR (95% CI)	Low MD (n)	High MD (n)	RR (95% CI)	Low MD (n)	High MD (n)	RR (95% CI)	Low MD (n)	High MD (n)	RR (95% CI)	
Full cohort^b																						
<25	27,429	47,253	(ref)	119	219	(ref)	289	1,253	(ref)	111	250	(ref)	1,115	2,471	(ref)	23	65	(ref)	25,772	42,995	(ref)	
≥25-<30	30,502	21,105	0.68 (0.68, 0.69)	179	129	0.66 (0.57, 0.77)	148	193	0.71 (0.65, 0.78)	174	155	0.69 (0.61, 0.79)	1,448	1,331	0.71 (0.68, 0.74)	47	58	0.76 (0.62, 0.93)	28,506	19,239	0.68 (0.67, 0.69)	
≥30	25,461	9,054	0.43 (0.42, 0.44)	187	56	0.36 (0.28, 0.46)	56	37	0.51 (0.40, 0.66)	228	83	0.40 (0.33, 0.48)	1,211	567	0.48 (0.44, 0.51)	101	39	0.37 (0.27, 0.49)	23,678	8,272	0.43 (0.42, 0.44)	
p-trend			<0.001			<0.001			<0.001			<0.001			<0.001			<0.001			<0.001	
p-heterogeneity ^c																						0.07
Age <45^d																						
<25	5,493	17,652	(ref)	33	87	(ref)	63	513	(ref)	27	109	(ref)	371	1,189	(ref)	*	27	(ref)	4,993	15,727	(ref)	
≥25-<30	5,250	5,811	0.69 (0.68, 0.71)	42	47	0.74 (0.59, 0.93)	27	73	0.81 (0.72, 0.92)	39	80	0.84 (0.72, 0.98)	451	575	0.73 (0.69, 0.78)	*	23	0.83 (0.63, 1.10)	4,681	5,013	0.68 (0.67, 0.70)	
≥30	4,975	2,388	0.43 (0.41, 0.44)	51	25	0.46 (0.33, 0.65)	*	*	0.53 (0.32, 0.87)	60	34	0.45 (0.34, 0.60)	378	222	0.48 (0.43, 0.53)	39	17	0.36 (0.23, 0.55)	4,438	2,082	0.42 (0.41, 0.44)	
p-trend			<0.001			0.001			<0.001			<0.001			<0.001			<0.001			<0.001	
p-heterogeneity ^c																						0.004
Age 45 to <55^b																						
<25	7,730	16,752	(ref)	42	81	(ref)	85	481	(ref)	41	91	(ref)	431	983	(ref)	*	25	(ref)	7,121	15,091	(ref)	
≥25-<30	8,623	7,613	0.70 (0.68, 0.71)	61	59	0.73 (0.58, 0.92)	59	69	0.63 (0.54, 0.74)	69	49	0.62 (0.49, 0.79)	591	566	0.71 (0.66, 0.75)	*	24	0.83 (0.60, 1.15)	7,829	6,846	0.70 (0.68, 0.71)	
≥30	8,241	3,460	0.44 (0.43, 0.45)	71	20	0.33 (0.22, 0.49)	24	17	0.48 (0.33, 0.69)	93	35	0.40 (0.30, 0.54)	515	256	0.48 (0.43, 0.53)	31	*	0.45 (0.28, 0.72)	7,507	3,116	0.44 (0.42, 0.45)	
p-trend			<0.001			<0.001			<0.001			<0.001			<0.001			0.014			<0.001	
p-heterogeneity ^c																						0.41
Age ≥55^b																						
<25	14,206	12,849	(ref)	44	51	(ref)	141	259	(ref)	43	50	(ref)	313	299	(ref)	*	13	(ref)	13,658	12,177	(ref)	
≥25-<30	16,629	7,681	0.67 (0.66, 0.69)	76	23	0.41 (0.27, 0.63)	62	51	0.71 (0.57, 0.87)	66	26	0.50 (0.35, 0.72)	406	190	0.65 (0.56, 0.75)	23	11	0.46 (0.26, 0.82)	15,996	7,380	0.67 (0.66, 0.69)	
≥30	12,245	3,206	0.44 (0.42, 0.45)	65	11	0.26 (0.15, 0.46)	*	*	0.54 (0.34, 0.87)	75	14	0.27 (0.16, 0.46)	318	89	0.44 (0.36, 0.54)	31	*	0.24 (0.11, 0.53)	11,733	3,074	0.44 (0.42, 0.45)	
p-trend			<0.001			<0.001			<0.001			<0.001			<0.001			0.037			<0.001	
p-heterogeneity ^c																						0.11

Abbreviations: AIAN=American Indian or Alaska Native; NHPI=Native Hawaiian or Pacific Islander; White=non-Hispanic White

*Consistent with Utah Population Database confidentiality policies, we have masked low counts (n<11) and any counts that could be used to re-create the low counts.

^aLow MD is defined as BI-RADS A or B, and high MD defined as BI-RADS C or D.

^bMultivariable models are adjusted for age (continuous), education (less than high school or high school diploma, more than high school, missing), parity (0 births in Utah, 1 birth in Utah, 2+ births in Utah, parous with number of births not known), and hormone therapy (HT) use (never, past, current). The model for the full population, "All," is additionally adjusted for the combined race and ethnicity variable.

^cTest for heterogeneity is a likelihood ratio test comparing models with and without interaction terms between the combined race and ethnicity variable and BMI

^dMultivariable models are adjusted for age (continuous), education (less than high school or high school diploma, more than high school, missing), and parity (0 births in Utah, 1 birth in Utah, 2+ births in Utah, parous with number of births not known). The model for the full population, "All," is additionally adjusted for the