

Supplementary Table S6 Comparison of trends in mean change in percent mammographic breast density after the one-year intervention among arms receiving vitamin D₃ or placebo, according to baseline characteristics - Per protocol analysis

Baseline characteristics	Vitamin D ₃								Linear trend in change in percent density ^b		Interaction ^b <i>P</i> -value
	Placebo		1,000 IU/d		2,000 IU/d		3,000 IU/d		β (95% CI)	<i>P</i> -value	
	N	Change in density ^a	N	Change in density ^a	N	Change in density ^a	N	Change in density ^a			
Serum 25(OH)D ₃ ^c											
< 50 nmol/L	17	-5.8 ± 1.3	21	-5.4 ± 1.2	25	-5.1 ± 1.1	28	-3.9 ± 1.0	0.63 (-0.36, 1.62)	0.21	0.95
≥ 50 nmol/L	63	-6.2 ± 0.7	64	-5.6 ± 0.7	64	-6.1 ± 0.7	56	-3.8 ± 0.7	0.67 (0.07, 1.27)	0.03	
Body mass index											
< 25 kg/m ²	55	-6.8 ± 0.7	53	-6.1 ± 0.7	55	-5.8 ± 0.7	59	-4.7 ± 0.7	0.67 (0.06, 1.28)	0.03	0.95
≥ 25 kg/m ²	25	-4.6 ± 1.0	32	-4.7 ± 0.9	34	-5.8 ± 0.9	25	-1.7 ± 1.0	0.70 (-0.21, 1.60)	0.13	
Total calcium intake ^d											
< 1000 mg/d	47	-6.3 ± 0.8	42	-5.5 ± 0.8	45	-6.1 ± 0.8	42	-3.6 ± 0.8	0.73 (0.04, 1.42)	0.04	0.91
≥ 1000 mg/d	33	-6.0 ± 0.9	42	-5.7 ± 0.8	42	-5.7 ± 0.8	40	-3.8 ± 0.8	0.67 (-0.09, 1.43)	0.08	
Percent breast density											
< 40%	45	-4.4 ± 0.8	46	-4.1 ± 0.7	58	-5.3 ± 0.7	52	-2.6 ± 0.7	0.43 (-0.21, 1.07)	0.19	0.45
≥ 40%	35	-8.4 ± 0.9	39	-7.3 ± 0.8	31	-6.8 ± 0.9	32	-5.9 ± 0.9	0.82 (0.04, 1.59)	0.04	
Month of mammography											
October – February	28	-4.8 ± 1.0	33	-4.7 ± 0.9	34	-5.4 ± 0.9	32	-2.9 ± 0.9	0.50 (-0.33, 1.34)	0.24	0.65
March – September	52	-6.9 ± 0.7	52	-6.1 ± 0.7	55	-6.0 ± 0.7	52	-4.4 ± 0.7	0.75 (0.11, 1.38)	0.02	
Type of mammography											
CR	40	-7.4 ± 0.9	42	-5.6 ± 0.8	44	-5.7 ± 0.8	44	-3.1 ± 0.8	1.28 (0.57, 1.99)	0.0004	0.02
DR	40	-4.9 ± 0.9	43	-5.5 ± 0.8	45	-5.9 ± 0.8	40	-4.7 ± 0.9	0.03 (-0.69, 0.76)	0.93	

^a Mean ± SE of the difference between percent mammographic breast density at the end of the one-year intervention and that at baseline.

^b β (95% confidence interval) and *P*-values for trend in mean change in mammographic breast density, and *P*-values for interaction, are estimated from regression models. Study arm is treated as a continuous variable, and β represents mean difference in change in percent mammographic breast density for increments of 1,000 IU/d vitamin D₃. Models are adjusted for sites.

^c Median serum 25(OH)D₃ was 39 nmol/L in the subgroup with baseline 25(OH)D₃ <50 nmol/L, and 69 nmol/L in that with baseline 25(OH)D₃ ≥ 50 nmol/L.

^d Among women who completed the C-DHQ1 at baseline (n=333).