

Supplementary Table 5: Estimated parameters of the mixed effects models fitted separately on each of the four mammographic density measures but including both Cumulus (left MLO) and the ImageJ-based (left MLO only) readings; control women only.

		Percent density (%)	Dense Area (cm ²)	Non Dense area, log scale (cm ²)	Breast Area, log scale (cm ²)
Fixed affect parameters		Coefficient ^a (95% CI)	Coefficient ^a (95% CI)	Coefficient ^a (95% CI)	Coefficient ^a (95% CI)
Intercept		32.3 (29.75, 4.85)	38.67 (35.28, 2.05)	4.42 (4.34, 4.51)	4.86 (4.81, 4.92)
Age centred at age 45 yrs	Linear term	-0.49 (-0.76, -0.21)	-0.25 (-0.61, 0.11)	0.03 (0.03, 0.04)	0.02 (0.02, 0.02)
	Quadratic term			0 (0, 0)	
Variables influencing the mean level					
Methods	Cumulus (left MLO)	referent		referent	referent
	ImageJ-based (left MLO)	3.26 (2.76, 3.76)		-0.05 (-0.06, -0.04)	-0.03 (-0.04, -0.02)
BMI (kg/m ²)	16-21	4.68 (2.62, 6.73)	0.38 (-2.43, 3.19)	-0.16 (-0.21, -0.1)	-0.07 (-0.1, -0.04)
	22-24	referent	Referent	referent	referent
	25-29	-5.01 (-6.56, -3.46)	-2.08 (-4.2, 0.04)	0.13 (0.09, 0.17)	0.05 (0.03, 0.07)
	30-40	-8.27 (-10.89, -5.66)	-1.63 (-5.19, 1.92)	0.23 (0.16, 0.3)	0.12 (0.08, 0.15)
Menopause	Pre-	referent	Referent	referent	referent
	Post-	-1.23 (-2.94, 0.48)	-2.26 (-4.61, 0.1)	0.01 (-0.03, 0.06)	
Reader	1	referent	referent	referent	referent
	2	2.4 (-0.91, 5.71)	5.17 (0.79, 9.54)	-0.01 (-0.12, 0.1)	0.01 (-0.07, 0.08)
	3	2.39 (-1.21, 5.99)	2.52 (-2.24, 7.28)	-0.07 (-0.2, 0.05)	-0.03 (-0.11, 0.05)
Variables influencing the rate of change					
Method	Cumulus (left MLO)			referent	referent
	ImageJ-based (left MLO)			-0.01 (-0.02, -0.01)	-0.01 (-0.01, -0.01)
Menopause	Pre	referent	referent	referent	
	Post	-0.37 (-0.73, -0.01)	-0.67 (-1.17, -0.18)	0.01 (0, 0.02)	
Reader	1	referent	referent		
	2	-0.59 (-0.96, -0.22)	-0.66 (-1.16, -0.17)		
	3	-0.44 (-0.85, -0.03)	-0.49 (-1.03, 0.05)		
Random effects parameters					
	SD slope	14.48 (0.86, 1.19)	1.24 (1.02, 1.5)	0.02 (0.02, 0.02)	0.03 (0.03, 0.04)
	SD intercept	14.48 (13.42, 15.63)	19.11 (17.71, 20.62)	0.33 (0.3, 0.35)	0.49 (0.46, 0.53)
	Correlation	-0.2 (-0.35, -0.04)	-0.25 (-0.41, -0.07)	-0.02 (-0.14, 0.11)	-0.18 (-0.31, -0.04)
Residuals by method	SD for Cumulus	7.62 (7.26, 8)	11.25 (10.64, 11.89)	0.07 (0.07, 0.08)	0.15 (0.15, 0.16)
	SD for ImageJ	10.17 (9.75, 10.6)	13.65 (13, 14.33)	0.14 (0.13, 0.14)	0.29 (0.28, 0.3)
	LRT ^b	<0.0001	0.0001	<0.0001	<0.0001

BMI: body mass index (kg/m²); CI: confidence interval; MLO: medio-lateral oblique view; SD: standard deviation

^a BMI and reader indicators were included as a priori confounders, other predictors were identified by backward selection if p value <0.05.

^b Likelihood ratio test (LRT) for the equality of the residual SDs of the two methods