

## Early-Life Growth and Benign Breast Disease

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**Web Table 1. Multivariable models of maternal pre-pregnancy BMI, gestational weight gain and benign breast disease diagnosis, Early Determinants of Mammographic Density (EDMD) Study, 1959-2008.**

	No.	Age and site adjusted		Multivariable-adjusted	
		OR	95% CI	OR	95% CI
Pre-pregnancy BMI <sup>a,b</sup>					
< 18.5	59	1.11	0.56, 2.20	0.94	0.45, 1.99
18.5 - <25.0	739	1.00	Referent	1.00	Referent
25.0 - <30.0	185	1.00	0.65, 1.55	1.07	0.69, 1.66
≥30.0	64	0.50	0.21, 1.19	0.51	0.22, 1.23
Gestational Weight Gain <sup>c</sup>					
5 kg or less	122	0.63	0.34, 1.15	0.69	0.35, 1.37
>5-10 kg	534	1.00	Referent	1.00	Referent
>10-15 kg	368	1.08	0.77, 1.53	1.10	0.76, 1.58
>15kg	63	0.53	0.23, 1.20	0.52	0.22, 1.24
Gestational Weight Gain and Maternal Pre-pregnancy BMI <sup>a</sup> , categorized <sup>d</sup>					
Maternal pre-pregnancy BMI <sup>a</sup> < 25 and gestational weight gain ≤10 kg	460	1.00	0.69, 1.46	1.02	0.69, 1.51
Maternal pre-pregnancy BMI <sup>a</sup> ≥ 25 and gestational weight gain ≤10 kg	159	0.74	0.43, 1.26	0.80	0.46, 1.40
Maternal pre-pregnancy BMI <sup>a</sup> < 25 and gestational weight gain >10 kg	324	1.00	Referent	1.00	Referent
Maternal pre-pregnancy BMI <sup>a</sup> ≥ 25 and gestational weight gain >10 kg	90	1.07	0.60, 1.90	1.15	0.64, 2.07

BMI: body mass index; CI: confidence interval; kg: kilograms; OR: odds ratio

<sup>a</sup>Weight(kg)/height(m)<sup>2</sup>

<sup>b</sup>Multivariable model includes site, age at interview, race, maternal cigarettes smoked per day, maternal height, maternal age at registration, maternal education and family history of breast cancer

<sup>c</sup>Multivariable model adjusted for everything in <sup>b</sup> plus maternal pre-pregnancy BMI and prematurity

<sup>d</sup>Multivariable model includes everything in <sup>b</sup> plus prematurity

**Web Table 2. Multivariable models of birth size and growth in infancy and early childhood and benign breast disease diagnosis, Early Determinants of Mammographic Density (EDMD) Study, 1959-2008.**

	Model 1 <sup>a,b</sup>		Model 2 <sup>a,c</sup>		Model 3 <sup>a,d</sup>	
	OR	95% CI	OR	95% CI	OR	95% CI
Birthweight (per 1 kg increase)	0.69	0.46, 1.04	0.71	0.46, 1.10	0.74	0.47, 1.15
Percentile rank change in weight, 0-4 months (per 10 unit increase)	0.98	0.91, 1.05	0.99	0.93, 1.07	0.99	0.92, 1.07
Percentile rank change in weight, 4-12 months (per 10 unit increase)	1.09	0.98, 1.21	1.11	0.99, 1.23	1.10	0.99, 1.23
Percentile rank change in weight, 1-4 years (per 10 unit increase)	0.94	0.86, 1.03	0.95	0.86, 1.05	0.95	0.85, 1.05
Birthlength (per 1 cm increase)	1.04	0.97, 1.12	1.05	0.97, 1.15	1.05	0.96, 1.14
Percentile rank change in length, 0-4 months (per 10 unit increase)	1.02	0.95, 1.09	1.01	0.93, 1.08	1.00	0.92, 1.08
Percentile rank change in length, 4-12 months (per 10 unit increase)	1.01	0.93, 1.09	0.99	0.91, 1.07	1.00	0.91, 1.09
Percentile rank change in length, 1-4 years (per 10 unit increase)	1.02	0.92, 1.12	1.01	0.91, 1.11	1.01	0.90, 1.12

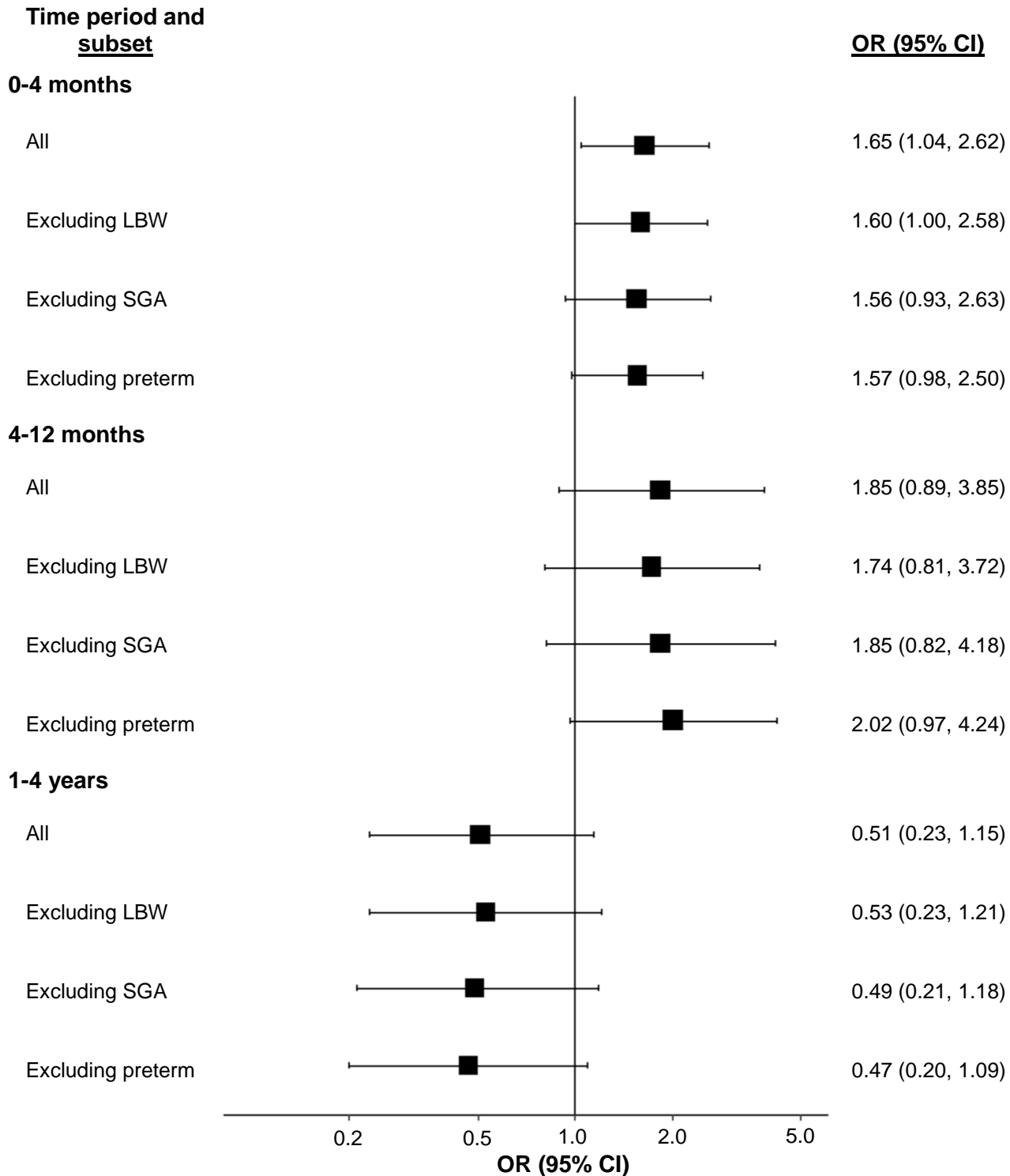
CI: confidence interval; cm: centimeters; kg: kilograms; OR: odds ratio

<sup>a</sup>Estimates are only adjusted for growth measures in the same or earlier time periods.

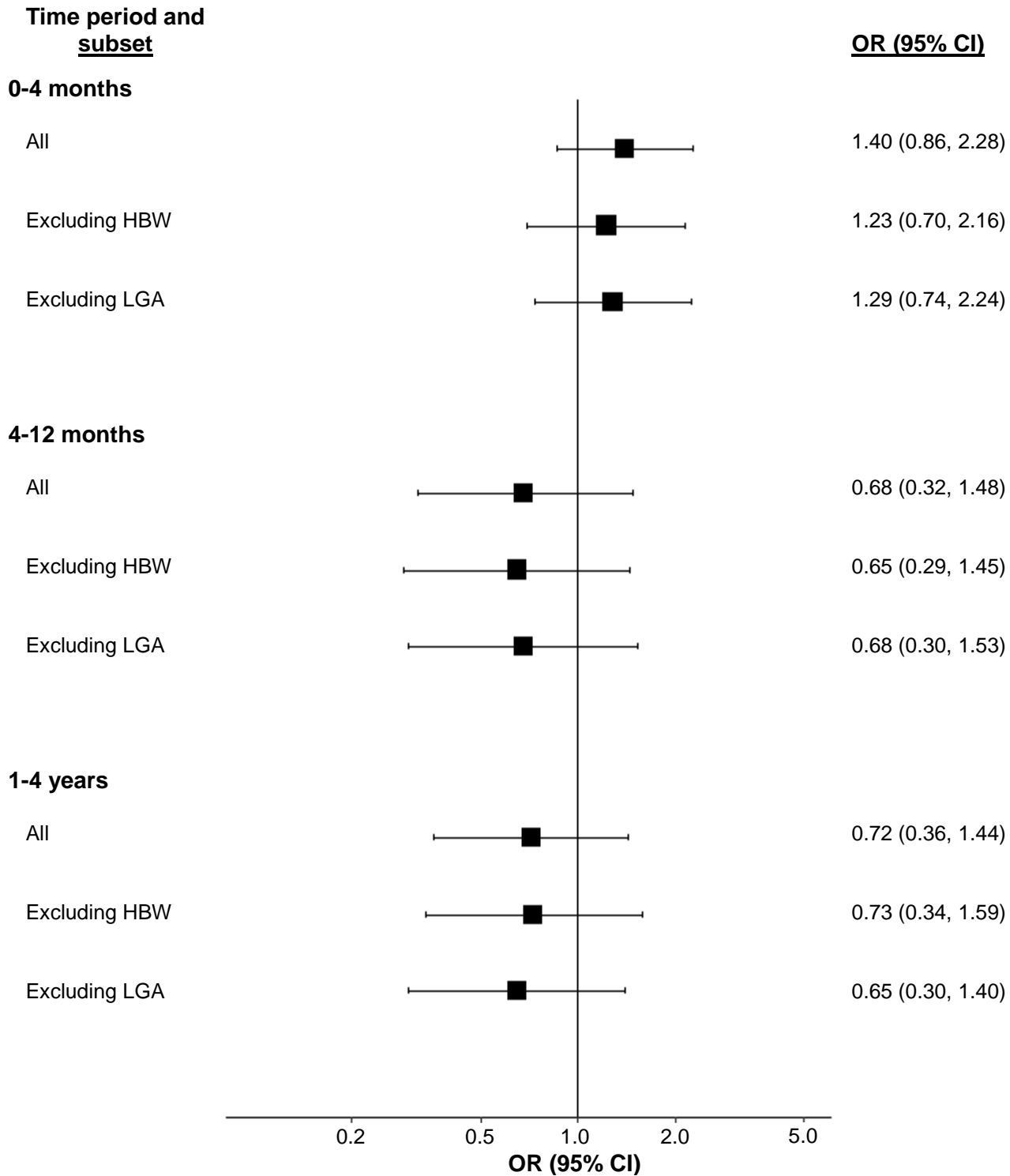
<sup>b</sup>Model 1 includes site, age at interview, birthweight, birthlength, changes in weight and height from 0-4 months, 4-12 months, and 1-4 years

<sup>c</sup>Model 2 includes all variables from Model 1 plus maternal age at registration, maternal pre-pregnancy BMI, maternal height, and maternal education

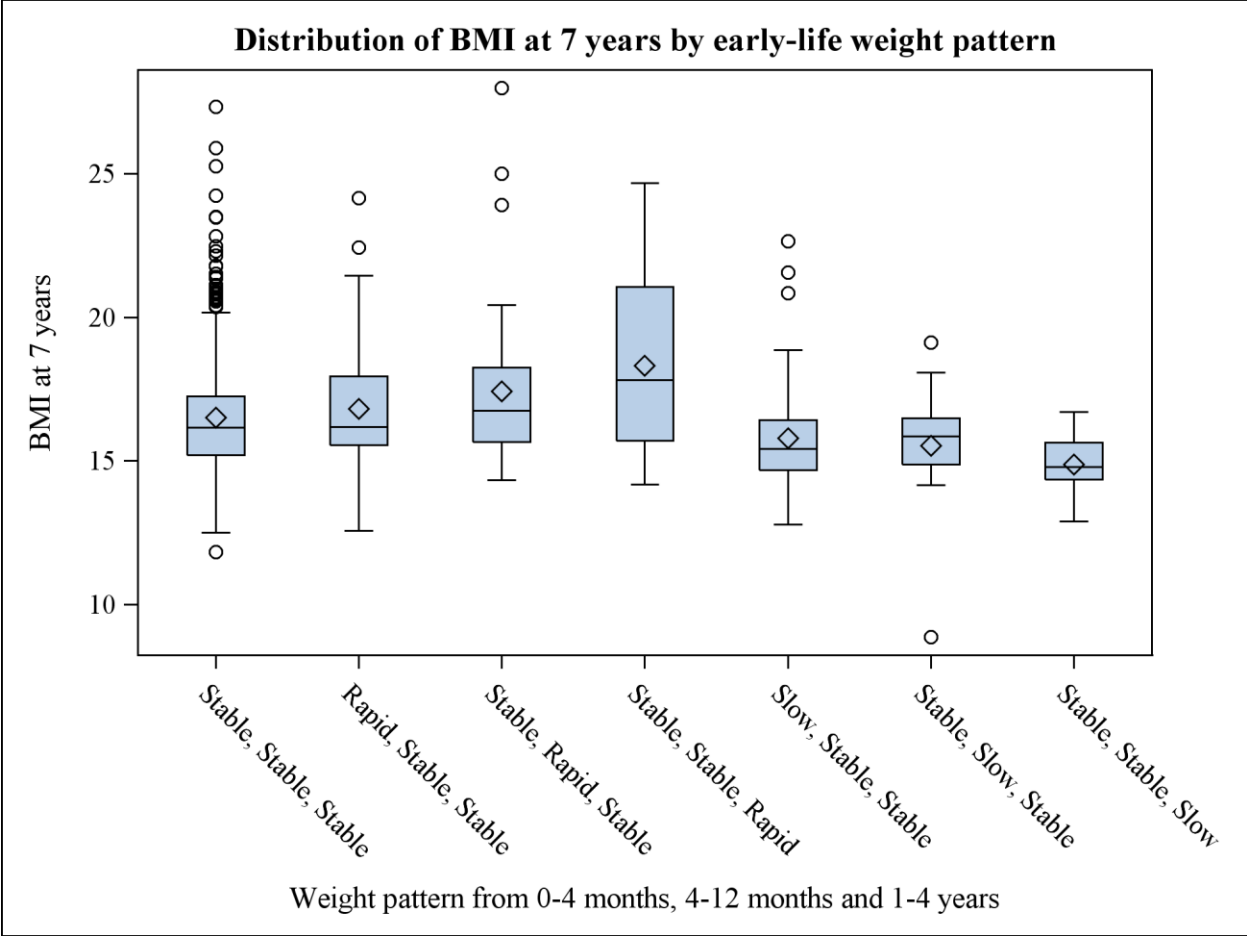
<sup>d</sup>Model 3 includes all variables from Model 1 plus maternal pre-pregnancy BMI, maternal height, maternal cigarettes per day, maternal weight gain during pregnancy and prematurity



**Web Figure 1. Sensitivity analyses for the association between rapid weight gain and benign breast disease diagnosis, Early Determinants of Mammographic Density (EDMD) Study, 1959-2008.** CI: confidence interval; LBW: low birthweight (less than 2.5kg); SGA: small-for-gestational age (less than 10<sup>th</sup> percentile of within-cohort birthweight/gestational age); OR: odds ratio; preterm (less than 37 weeks). Rapid weight gain is defined as an increase of  $\geq 2$  major percentiles (5<sup>th</sup>, 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, 95<sup>th</sup>). Referent group is stable weight gain, defined as staying within 2 major percentiles. Models adjusted for birthweight, birthlength, height gain pattern in the same time period, height and weight gain pattern of previous time periods, maternal pre-pregnancy BMI, maternal height, maternal cigarettes per day, maternal weight gain during pregnancy and prematurity\* (\*except for model excluding preterm)



**Web Figure 2. Sensitivity analyses for the association between slow weight gain and benign breast disease diagnosis, Early Determinants of Mammographic Density (EDMD) Study, 1959-2008.** CI: confidence interval; HBW: high birthweight (more than 4 kg); LGA: large-for-gestational age (more than 90<sup>th</sup> percentile of within-cohort birthweight/gestational age); OR: odds ratio. Slow weight gain is defined as a decrease of  $\geq 2$  major percentiles (5<sup>th</sup>, 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, 95<sup>th</sup>). Referent group is stable weight gain, defined as staying within 2 major percentiles. Models adjusted for birthweight, birthlength, height gain pattern in the same time period, height and weight gain pattern of previous time periods, maternal pre-pregnancy BMI, maternal height, maternal cigarettes per day, maternal weight gain during pregnancy and prematurity (model excluding preterm did not adjust for prematurity).



**Web Figure 3. Distribution of body mass index at age 7 years by early-life weight pattern, Early Determinants of Mammographic Density (EDMD) Study, 1959-2008.**