

Supplemental Material

***In Utero* Pesticide Exposure and Leukemia in Brazilian Children < 2 Years of Age**

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Table S1. Geographical distribution of participants in Brazil, 1999–2007.

State	Cases (<i>n</i>)	Controls (<i>n</i>)
São Paulo	63	66
Rio de Janeiro	60	129
Bahia	35	68
Minas Gerais	32	42
Rio Grande do Sul	13	23
Distrito Federal and Goiás	12	25
Pernambuco	10	19
Santa Catarina	8	26
Paraná	6	6
Paraíba	5	11
Mato Grosso	4	2
Mato Grosso do Sul	2	2
Rio Grande do Norte	2	2

Table S2. Associations between maternal exposure to pesticides by time of exposure stratified by child's skin color among children < 2 years of age, Brazil, 1999–2007.

Pesticide exposure/ ethnic group	Controls (n = 395), n (%)	ALL (n = 193), n (%)	AML (n = 53), n (%)	ALL		AML	
				Crude OR (95% CI)	Adj OR ^a (95% CI)	Crude OR (95% CI)	Adj OR ^a (95% CI)
Pesticide use							
White							
No	122 (79.7)	75 (57.3)	18 (46.2)	1.00	1.00	1.00	1.00
Yes	31 (20.3)	56 (42.7)	21 (53.8)	2.94 (1.74-4.97)	2.14 (1.21-3.79)	4.59 (2.19-9.65)	4.18 (1.87-9.34)
Non-white							
No	184 (71.9)	33 (55.9)	9 (50.0)	1.00	1.00	1.00	1.00
Yes	72 (28.1)	26 (44.1)	9 (50.0)	2.01 (1.13-3.60)	1.97 (1.08-3.60)	2.56 (0.98-6.70)	2.38 (0.87-6.51)
Periconceptual^b							
White							
No	136 (88.9)	85 (72.0)	22 (66.7)	1.00	1.00	1.00	1.00
Yes	17 (11.1)	33 (28.0)	11 (33.3)	3.11 (1.63-5.20)	4.42 (1.75-11.13)	4.00 (1.66-9.66)	3.19 (1.63-6.23)
Non-white							
No	199 (79.9)	39 (69.6)	10 (58.8)	1.00	1.00	1.00	1.00
Yes	50 (20.1)	17 (30.4)	7 (77.3)	1.74 (0.91-3.32)	1.66 (0.85-3.24)	2.79 (1.01-7.68)	2.43 (0.84-7.03)
1st Trimester							
White							
No	129 (84.3)	86 (72.9)	24 (72.7)	1.00	1.00	1.00	1.00
Yes	24 (15.7)	32 (27.1)	9 (27.3)	2.00 (1.10-3.63)	1.79 (0.96-3.37)	2.02 (0.84-4.87)	2.14 (0.86-5.34)
Non-white							
No	207 (83.5)	39 (69.6)	12 (70.6)	1.00	1.00	1.00	1.00
Yes	41 (16.5)	17 (30.4)	5 (29.4)	2.20 (1.14-4.26)	2.15 (1.08-4.25)	2.01 (0.70-6.29)	1.80 (0.57-5.73)

Table S2 continued

Pesticide exposure/ ethnic group	Controls (n = 395), n (%)	ALL (n = 193), n (%)	AML (n = 53), n (%)	ALL		AML	
				Crude OR (95% CI)	Adj OR ^a (95% CI)	Crude OR (95% CI)	Adj OR ^a (95% CI)
2nd Trimester							
White							
No	131(85.6)	90 (72.9)	24 (72.7)	1.00	1.00	1.00	1.00
Yes	22 (14.4)	28 (27.1)	9 (27.3)	1.85 (1.00-3.44)	1.66 (0.86-3.21)	2.23 (0.92-5.43)	2.40 (0.95-6.04)
Non-white							
No	205 (82.3)	39 (69.6)	12 (70.6)	1.00	1.00	1.00	1.00
Yes	44 (17.7)	17 (30.4)	5 (29.4)	2.03 (1.05-3.91)	1.92 (0.97-3.78)	1.94 (0.65-5.79)	1.56 (0.49-5.00)
3rd Trimester							
White							
No	129 (84.3)	91 (77.1)	23 (69.7)	1.00	1.00	1.00	1.00
Yes	24 (15.7)	27 (22.9)	10 (30.3)	1.60 (0.87-2.94)	1.44 (0.75-2.77)	2.34 (0.99-5.53)	2.54 (1.03-6.22)
Non-white							
No	201 (81.0)	39 (69.6)	12 (70.6)	1.00	1.00	1.00	1.00
Yes	47 (19.0)	17 (30.4)	5 (29.4)	1.84 (0.97-3.58)	1.77 (0.90-3.49)	1.78 (0.60-5.30)	1.46 (0.46-4.63)
Breastfeeding^c							
White							
No	136 (88.9)	92 (78.0)	21 (63.6)	1.00	1.00	1.00	1.00
Yes	17 (11.1)	26 (22.0)	12 (36.4)	2.26 (1.16-4.40)	1.96 (0.97-3.97)	4.57 (1.92-10.91)	5.11 (2.05-12.75)
Non-white							
No	210 (84.7)	42 (75.0)	14 (82.4)	1.00	1.00	1.00	1.00
Yes	38 (15.3)	14 (25.0)	3 (17.6)	1.84 (0.92-3.70)	1.81 (0.88-3.71)	1.18 (0.33-4.32)	1.08 (0.28-4.16)

Abbreviations: adj., adjusted; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; OR, odds ratio. ^aAdjusted by oral contraceptive use during pregnancy, maternal age and education, and child's birth weight and skin color. ^bThree months before pregnancy.

^cThree months after delivery.

Table S3. Associations between maternal exposure to pesticides by time of exposure among children < 2 years of age (excluding controls with gastrointestinal infections, parasitic diseases, dehydration, malnutrition, and diarrhea), Brazil, 1999-2007.

Pesticide Exposure	Controls ^a (n = 395), n (%)	ALL (n = 193), n (%)	AML (n = 53), n (%)	ALL		AML	
				Crude OR (95% CI)	Adj OR ^b (95% CI)	Crude OR (95% CI)	Adj OR ^b (95% CI)
Pesticide use							
No	295 (74.7)	111 (57.5)	27 (50.1)	1.00	1.0	1.00	1.00
Yes	100 (25.3)	82 (42.5)	32 (49.9)	2.18 (1.51-3.14)	2.12 (1.40-3.21)	3.50 (2.00-6.12)	3.27 (1.76-6.08)
Periconceptual^b							
No	323 (83.7)	127 (71.8)	32 (62.7)	1.00	1.00	1.00	1.00
Yes	63 (16.3)	50 (28.2)	19 (77.3)	2.02 (1.32-3.09)	2.37 (1.49-3.75)	3.04 (1.62-5.71)	3.34 (1.67-6.69)
1st Trimester							
No	325 (84.2)	128 (72.3)	36 (70.6)	1.00	1.00	1.00	1.00
Yes	61 (15.8)	49 (27.7)	15 (29.4)	2.04 (1.33-3.13)	2.13 (1.33-3.39)	2.22 (1.15-4.30)	2.07 (1.01-4.24)
2nd Trimester							
No	324 (83.7)	132 (74.6)	36 (70.6)	1.00	1.00	1.00	1.00
Yes	63 (16.3)	45 (25.4)	15 (29.4)	1.75 (1.14-2.70)	1.82 (1.14-2.92)	2.14 (1.11-4.15)	1.94 (0.95-3.97)
3rd Trimester							
No	318 (82.4)	133 (75.1)	35 (68.6)	1.00	1.00	1.00	1.00
Yes	68 (17.6)	44 (24.9)	16 (31.4)	1.55 (1.01-2.38)	1.67 (1.05-2.66)	2.14 (1.13-4.08)	2.02 (1.00-4.08)
Breastfeeding^c							
No	333 (86.5)	137 (77.4)	35 (68.6)	1.00	1.00	1.00	1.00
Yes	52 (13.5)	40 (22.6)	16 (31.4)	1.87 (1.18-2.96)	1.98 (1.21-3.26)	2.93 (1.51-5.66)	2.90 (1.41-5.95)

Abbreviations: adj., adjusted; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; OR, odds ratio.

^aAdjusted by oral contraceptive use during pregnancy, maternal age and education, and child's birth weight and skin color ^bThree months before pregnancy. ^cThree months after delivery.

Table S4. Associations between maternal exposure to pesticides by time of exposure among children < 2 years of age (excluding controls with tuberculosis, pneumonia, asthma, bronchitis, and bronchiolitis) Brazil, 1999–2007.

Pesticide Exposure	Controls ^a (n = 283), n (%)	ALL (n = 193), n (%)	AML (n = 53), n (%)	ALL		AML	
				Crude OR (95% CI)	Adj OR ^b (95% CI)	Crude OR (95% CI)	Adj OR ^b (95% CI)
Pesticide use							
No	209 (73.9)	111 (57.5)	27 (50.1)	1.00	1.00	1.00	1.00
Yes	74 (26.1)	82 (42.5)	32 (49.9)	2.10 (1.43-3.07)	2.02 (1.30-3.14)	3.67 (1.90-5.96)	3.21 (1.68-6.12)
Periconceptual^b							
No	228 (83.2)	127 (71.8)	32 (62.7)	1.00	1.00	1.00	1.00
Yes	46 (16.8)	50 (28.2)	19 (77.3)	1.93 (1.24-3.01)	2.19 (1.35-3.58)	2.99 (1.53-5.53)	3.04 (1.48-6.23)
1st Trimester							
No	230 (83.6)	128 (72.3)	36 (70.6)	1.00	1.00	1.00	1.00
Yes	45 (16.4)	49 (27.7)	15 (29.4)	1.88 (1.21-2.94)	1.96 (1.20-3.21)	2.05 (1.05-4.02)	1.89 (0.90-3.97)
2nd Trimester							
No	226 (82.2)	132 (74.6)	36 (70.6)	1.00	1.00	1.00	1.00
Yes	49 (17.8)	45 (25.4)	15 (29.4)	1.60 (1.02-2.51)	1.62 (0.99-2.66)	1.96 (1.00-3.83)	1.69 (0.81-3.54)
3rd Trimester							
No	222 (80.7)	133 (75.1)	35 (68.6)	1.00	1.00	1.00	1.00
Yes	53 (19.3)	44 (24.9)	16 (31.4)	1.42 (0.91-2.22)	1.50 (0.91-2.44)	1.97 (1.02-3.79)	1.18 (0.88-3.75)
Breastfeeding^c							
No	234 (85.4)	137 (77.4)	35 (68.6)	1.00	1.00	1.00	1.00
Yes	40 (14.6)	40 (22.6)	16 (31.4)	1.75 (1.09-2.83)	1.78 (1.05-3.01)	2.74 (1.40-5.38)	2.52 (1.20-5.29)

Abbreviations: adj., adjusted; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; OR, odds ratio.

^aAdjusted by oral contraceptive use during pregnancy, maternal age and education, and child's birth weight and skin color. ^bThree months before pregnancy. ^cThree months after delivery.