**Supplementary Table 1 Association between parental age and infant AML**

|  | **Complete Case Analysis** | **Complete Case – Restricted to 16+ years** | **Imputed parental ages b** |
| --- | --- | --- | --- |
|  | **Controls****N = 39,845** | **Cases****N = 109** | **OR a****95% CI** | **Controls****N = 39,700** | **Cases****N = 109** | **OR a****95% CI** | **OR a****95% CI****Ncontrols = 44,832****Ncases = 130** |
| **Maternal Age**  |  |  |  |  |  |  |  |
|  ≤ 19 | 3274(8) | 11 (10) | 1.22 (0.50, 2.96) | 3,129 (8) | 11 (10) | 1.26 (0.52, 3.04) | 1.39 (0.65, 2.96) |
|  20-24 | 9,510 (24) | 23 (21) |  0.94 (0.52, 1.72) | 9,510 (24) | 23 (21) | 0.94 (0.52, 1.71) | 0.89 (0.52, 1.53) |
|  25-29 | 13,004 (33) | 31 (28) | *1.00 (Reference)* | 13,004 (33) | 31 (28) | *1.00 (Reference)* | *1.00 (Reference)* |
|  30-34 | 9,625 (24) | 25 (23) | 1.25 (0.70, 2.24) | 9,625 (24) | 25 (23) | 1.26 (0.70, 2.24) | 1.09 (0.63, 1.87) |
|  35-39 | 3,744 (9) | 11 (10) |  1.42 (0.64, 3.15) | 3,744 (9) | 11 (10) | 1.42 (0.64, 3.15) | 1.09 (0.50, 2.34) |
|  40 + | 688 (2) | 8 (7) |  4.80 (1.80, 12.76) | 688 (2) | 8 (7) | 4.80 (1.80, 12.76) | 4.27 (1.72, 10.64) |
|  |  |  |  |  |  |  |  |
| **Paternal Age**  |  |  |  |  |  |  |  |
|  ≤ 19 | 1,293 (3) | 4 (4) |  0.85 (0.25,2.94) | 1,197 (3) | 4 (4) | 0.92 (0.27, 3.13) | 0.89 (0.29, 2.72) |
|  20-24 | 6,875 (17) | 19 (17) |  0.92 (0.48,1.75) | 6,837(17) | 19 (17) | 0.92 (0.48, 1.75) | 0.89 (0.48, 1.65) |
|  25-29 | 11,756 (30) | 33 (30) | *1.00 (Reference)* | 11,752(30) | 33 (30) | *1.00 (Reference)* | *1.00 (Reference)* |
|  30-34 | 11,203 (28) | 26 (24) |  0.72 (0.41,1.27) | 11,199 (28) | 26 (24) | 0.72 (0.41, 1.27) | 0.77 (0.45, 1.34) |
|  35-39 | 5,861 (15) | 13 (12) |  0.59 (0.28,1.24) | 5,858 (15) | 13 (12) | 0.59 (0.28, 1.24) | 0.68 (0.32, 1.44) |
|  40 + | 2,857 (7) | 14 (13) |  0.93 (0.41,2.14) | 2,857 (7) | 14 (13) | 0.93 (0.41, 2.14) | 0.98 (0.43, 2.26) |

OR = Odds Ratio; CI = Confidence Interval

a OR adjusted for sex, year of birth category (1981-1989, 1990-1997, 1998-2004), maternal race (white, Hispanic, other), state, maternal age, paternal age

b Imputed via fully conditional specification logistic regression

**Supplementary Table 2 Association between parental age and infant ALL**

|  | **Complete Case Analysis** | **Complete Case – Restricted to 16+ years** | **Imputed parental ages b** |
| --- | --- | --- | --- |
|  | **Controls****N = 39,845** | **Cases****N = 177** | **OR a****95% CI** | **Controls****N = 39,700** | **Cases****N = 176** | **OR a****95% CI** | **OR a****95% CI****Ncontrols = 44,832****Ncases = 218** |
| **Maternal Age**  |  |  |  |  |  |  |  |
|  ≤ 19 | 3274(8) | 17 (10) | 0.51 (0.24, 1.09) | 3,129 (8) | 16 (9) | 0.52 (0.24, 1.11) | 0.54 (0.27, 1.09) |
|  20-24 | 9,510 (24) | 38 (21) | 0.77 (0.47, 1.24) | 9,510 (24) | 38 (21) | 0.76 (0.47, 1.23) | 0.81 (0.52, 1.24) |
|  25-29 | 13,004 (33) | 52 (29) | *1.00 (Reference)* | 13,004 (33) | 52 (29) | *1.00 (Reference)* | *1.00 (Reference)* |
|  30-34 | 9,625 (24) | 49 (28) | 1.39 (0.90, 2.13) | 9,625 (24) | 49 (28) | 1.39 (0.90, 2.13) | 1.28 (0.87, 1.89) |
|  35-39 | 3,744 (9) | 18 (10) | 1.35 (0.73, 2.49) | 3,744 (9) | 18 (10) | 1.34 (0.73, 2.49) | 1.22 (0.69, 2.13) |
|  40 + | 688 (2) | 3 (2) | 1.07 (0.31, 3.76) | 688 (2) | 3 (2) | 1.07 (0.30, 3.75) | 1.43 (0.52, 3.93) |
|  |  |  |  |  |  |  |  |
| **Paternal Age**  |  |  |  |  |  |  |  |
|  ≤ 19 | 1,293 (3) | 13 (7) | 3.69 (1.62, 8.41) | 1,197 (3) | 12 (7) | 3.67 (1.59, 8.43) | 2.55 (1.08, 6.04) |
|  20-24 | 6,875 (17) | 33 (19) | 1.47 (0.88, 2.45) | 6,837(17) | 33 (19) | 1.47 (0.88, 2.45) | 1.31 (0.75, 2.28) |
|  25-29 | 11,756 (30) | 44 (25) | *1.00 (Reference)* | 11,752(30) | 44 (25) | *1.00 (Reference)* | *1.00 (Reference)* |
|  30-34 | 11,203 (28) | 51 (29) | 0.98 (0.63, 1.52) | 11,199 (28) | 51 (29) | 0.98 (0.63, 1.52) | 1.02 (0.67, 1.55) |
|  35-39 | 5,861 (15) | 21 (12) | 0.70 (0.39, 1.27) | 5,858 (15) | 21 (12) | 0.71 (0.39, 1.28) | 0.79 (0.46, 1.38) |
|  40 + | 2,857 (7) | 15 (8) | 1.04 (0.52, 2.07) | 2,857 (7) | 15 (8) | 1.04 (0.52, 2.07) | 1.06 (0.53, 2.10) |

OR = Odds Ratio; CI = Confidence Interval

a OR adjusted for sex, year of birth category (1981-1989, 1990-1997, 1998-2004), maternal race (white, Hispanic, other), state, maternal age, paternal age

b Imputed via fully conditional specification logistic regression