

492 **Supplementary Table 1. Adjusted hazard ratios for prostate, colon and rectum, and**
 493 **pediatric brain cancer in offspring with and without 17-OHPC exposure**

| | Person-years | n | aHR ¹ | 95% CI |
|--|--------------|---|------------------|--------------|
| Prostate | | | | |
| Any exposure (vs. else) | 4765.5 | 3 | 4.55 | 1.59, 13.03 |
| First exposure in first trimester (vs. else) | 3310.0 | 2 | 5.10 | 1.24, 21.00 |
| Colon and rectum | | | | |
| Any exposure (vs. else) | 9551.0 | 3 | 3.45 | 1.08, 11.00 |
| First exposure in first trimester (vs. else) | 6155.0 | 3 | 5.51 | 1.73, 17.59 |
| Pediatric brain | | | | |
| Any exposure (vs. else) | 3827.0 | 2 | 22.43 | 4.73, 106.45 |
| First exposure in first trimester (vs. else) | 2496.0 | 2 | 34.72 | 7.29, 165.33 |

494 Abbreviations: aHR, adjusted hazard ratio; CI, confidence interval

495 ¹Adjusted for year of birth

496

497 **Supplementary Table 2. Adjusted hazard ratios for any cancer in offspring with and**
 498 **without 17-OHPC exposure, overall and by trimester of first exposure and number of**
 499 **injections, using multiple imputation for missing values**

| | aHR ¹ | 95% CI | p-value |
|-------------------------------------|------------------|------------|---------|
| <i>In utero</i> exposure to 17-OHPC | | | <0.01 |
| Not exposed | 1.00 | | |
| Any exposure | 1.85 | 1.23, 2.77 | |
| Trimester of first 17-OHPC exposure | | | <0.01 |
| Not exposed | 1.00 | | |
| First trimester | 2.28 | 1.45, 3.60 | |
| Second trimester | 1.03 | 0.33, 3.20 | |
| Third trimester | 0.82 | 0.11, 5.81 | |
| Number of 17-OHPC injections | | | <0.01 |
| Not exposed | 1.00 | | |
| 1-2 injections | 1.68 | 1.06, 2.66 | |
| ≥3 injections | 2.86 | 1.25, 6.56 | |

500 Abbreviations: aHR, adjusted hazard ratio; CI, confidence interval

501 ¹Adjusted for year of birth and maternal body mass index

502

503 **Online Supplement. Probabilistic bias analysis**

504 We conducted a probabilistic bias analysis to model error from unmeasured confounding. We
 505 assigned a trapezoidal distribution for each of three bias parameters:

- 506 • Prevalence of unmeasured confounder in exposed offspring
- 507 • Prevalence of unmeasured confounder in unexposed offspring
- 508 • Association between unmeasured confounder and any cancer in offspring

509 For each bias parameter, we chose a range for the modes that seemed reasonable based on effect
 510 estimates reported in the literature and then extended the trapezoidal distribution to the lower and
 511 upper bounds such that the width of the trapezoid was approximately twice the width of the
 512 range between modes. We repeated the simulation 10,000 times each for any 17-OHPC exposure
 513 (any vs. none) and gestational week at first 17-OHPC exposure (first trimester vs. else) and
 514 report the median bias-corrected HR and 95% simulation interval (corresponding to the 2.5th and
 515 97.5th percentile of the distribution, including both random and systemic error).

| Bias parameter | Description | Minimum | Mode 1 | Mode 2 | Maximum |
|------------------|---|---------|--------|--------|---------|
| p1 (%) | Prevalence of unmeasured cofounder among exposed offspring | 60 | 65 | 75 | 80 |
| p0 (%) | Prevalence of unmeasured confounder among unexposed offspring | 20 | 25 | 35 | 40 |
| RR _{CD} | Association between unmeasured confounder and any cancer in offspring | 0.9 | 1.2 | 1.7 | 2.0 |

516
 517 As shown in the tables below, the median bias corrected-HRs from all simulations were slightly
 518 attenuated from but similar to the observed HRs.

519 Any 17-OHPC exposure (any vs. else)

| | Adjusted HR | 95% confidence interval |
|---------------------------|--------------------------|-------------------------|
| Observed | 1.99 | 1.31, 3.02 |
| | | |
| | Median bias-corrected HR | 95% simulation interval |
| Systemic error | 1.66 | 1.46, 1.91 |
| Systemic and random error | 1.67 | 1.04, 2.71 |

520
 521 Trimester of first 17-OHPC exposure (first trimester vs. else)

| | Adjusted HR | 95% confidence interval |
|---------------------------|--------------------------|-------------------------|
| Observed | 2.52 | 1.58, 4.02 |
| | | |
| | Median bias-corrected HR | 95% simulation interval |
| Systemic error | 1.87 | 1.64, 2.15 |
| Systemic and random error | 1.88 | 1.20, 2.94 |