**Supplementary Tables**

*Table S1. Random effects estimates for participants*

|  |  |  |
| --- | --- | --- |
| **Participant Level** | **Estimate** | **Confidence Interval** |
| SD Intercept | 0.484 | 0.380 – 0.617 |
| SD Gestational Age | 0.062 | 0.051 – 0.075 |
| Cor (intercept, Gestational Age) | -0.132 | -0.412 – 0.171 |

*95% confidence intervals. SD, standard deviation.*

*Table S2. Fixed effects estimates for Renal parenchymal thickness(log10) to Head Circumference(log10).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Estimate** | **Confidence Interval** | **SE** | **p-value** |
| Intercept | -4.515 | -4.760 - -4.269 | 0.1252 | <0.0001 |
| Head Circumference (log10) | 0.195 | 1.122 – 1.211 | 0.0225 | <0.0001 |
| Growth (AGA to FGR) | -0.0.57 | -0.095 - -0.019 | 0.0191 | 0.0032 |
| Side (right to left) | -0.015 | -0.023 - -0.005 | 0.0046 | 0.0014 |

*95% confidence intervals. AGA, appropriate-for-gestational-age; FGR, Fetal growth restriction; SE, standard error.*

*Table S3. Random effects estimates for participants for Renal parenchymal thickness(log10) to Head Circumference(log10).*

|  |  |  |
| --- | --- | --- |
| **Participant Level** | **Estimate** | **Confidence Interval** |
| SD Intercept | 1.080 | 0.888 – 1.314 |
| SD Head Circumference (log10) | 0.195 | 0.161 – 0.237 |
| Cor (intercept, head circumference(log10)) | -0.997 | -0.998 - -0.995 |

*95% confidence intervals. SD, standard deviation.*

*Table S4. Fixed effects estimates for Renal artery resistivity index (RI).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Estimate** | **Confidence Interval** | **SE** | **p-value** |
| Intercept | 0.874 | 0.865 – 0.884 | 0.0047 | <0.0001 |
| Gestational age | 0.006 | 0.004 – 0.007 | 0.0009 | <0.0001 |
| Growth (AGA to FGR) | 0.004 | -0.014 – 0.021 | 0.0090 | 0.6856 |
| Side (right to left) | 0.005 | 0.001 – 0.009 | 0.0022 | 0.0224 |
| Gestational age (quadratic) | -0.000 | <-0.001 - <-0.001 | <0.0001 | <0.0001 |
| Gestational age: Growth | -0.001 | -0.003 – <0.001 | 0.0008 | 0.2031 |

*95% confidence intervals. AGA, appropriate-for-gestational-age; FGR, Fetal growth restriction; SE, standard error.*

*Table S5. Random effects estimates for Renal artery resistivity index (RI).*

|  |  |  |
| --- | --- | --- |
| **Participant Level** | **Estimate** | **Confidence Interval** |
| SD Intercept | 0.029 | 0.033 – 0.046 |
| SD Gestational age | 0.003 | 0.003 – 0.004 |
| Cor (intercept, gestational age) | -0.804 | -0.891 - -0.662 |

*95% confidence intervals. SD, standard deviation.*

*Table S6. Fixed effects estimates for Renal artery pulsatility index (PI).*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Estimate** | **Confidence Interval** | **SE** | **p-value** |
| Intercept | 2.245 | 2.177 – 2.311 | 0.0341 | <0.0001 |
| Gestational age | 0.025 | 0.011 – 0.038 | 0.0068 | 0.0003 |
| Growth (AGA to FGR) | 0.056 | -0.068 – 0.179 | 0.0626 | 0.3762 |
| Side (right to left) | 0.023 | -0.010 – 0.056 | 0.0168 | 0.1632 |
| Gestational age (quadratic) | -0.002 | -0.002 - -0.001 | 0.0003 | <0.0001 |
| Gestational age: Growth | -0.007 | -0.019 – 0.005 | 0.0061 | 0.2787 |

*95% confidence intervals. AGA, appropriate-for-gestational-age; FGR, Fetal growth restriction; SE, standard error.*

*Table S7. Random effects estimates for Renal artery pulsatility index (PI).*

|  |  |  |
| --- | --- | --- |
| **Participant Level** | **Estimate** | **Confidence Interval** |
| SD Intercept | 0.180 | 0.132 – 0.246 |
| SD Gestational age | 0.019 | 0.015 – 0.025 |
| Cor (intercept, gestational age) | -0.697 | -0.839 - -0.466 |

*95% confidence intervals. SD, standard deviation.*