**Supplementary table 1**. Influence of the physiological determinants on the middle cerebral artery

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| --- | --- | --- | --- | --- | --- |
|  |  | **Coefficient** | **S.E.** | **t value** | **p** |
| **5th centile** | **Constant** | -0.064 | 0.483 | -0.132 | 0.895 |
| **GA** | 0.135 | 0.032 | 4.278 | <0.001 |
| **GA2** | -0.002 | 0.001 | -4.603 | <0.001 |
| **BMI** | -0.005 | 0.005 | -1.092 | 0.275 |
| **Age** | -0.008 | 0.003 | -2.409 | 0.016 |
| **Nulliparity** | -0.003 | 0.034 | -0.101 | 0.920 |
| **Gender** | -0.050 | 0.050 | -1.005 | 0.315 |
| **10th centile** | **Constant** | -1.092 | 0.510 | -2.141 | 0.033 |
| **GA** | 0.200 | 0.033 | 6.023 | <0.001 |
| **GA2** | -0.003 | 0.001 | -6.156 | <0.001 |
| **BMI** | -0.004 | 0.004 | -1.019 | 0.309 |
| **Age** | -0.004 | 0.005 | -0.896 | 0.371 |
| **Nulliparity** | 0.013 | 0.035 | 0.377 | 0.706 |
| **Gender** | -0.030 | 0.036 | -0.833 | 0.406 |
| **50th centile** | **Constant** | -2.201 | 0.399 | -5.512 | <0.001 |
| **GA** | 0.291 | 0.029 | 10.093 | <0.001 |
| **GA2** | -0.005 | 0.0004 | -10.189 | <0.001 |
| **BMI** | -0.001 | 0.005 | -0.210 | 0.833 |
| **Age** | -0.002 | 0.004 | -0.479 | 0.632 |
| **Nulliparity** | 0.009 | 0.041 | 0.212 | 0.832 |
| **Gender** | 0.057 | 0.037 | 1.531 | 0.126 |
| **90th centile** | **Constant** | -3.186 | 0.498 | -6.391 | <0.001 |
| **GA** | 0.375 | 0.034 | 10.867 | <0.001 |
| **GA2** | -0.006 | 0.001 | -10.753 | <0.001 |
| **BMI** | 0.006 | 0.007 | 0.934 | 0.351 |
| **Age** | -0.001 | 0.006 | -0.234 | 0.815 |
| **Nulliparity** | -0.047 | 0.056 | -0.836 | 0.404 |
| **Gender** | 0.162 | 0.051 | 3.141 | 0.002 |
| **95th centile** | **Constant** | -3.241 | 0.604 | -5.363 | <0.001 |
| **GA** | 0.389 | 0.041 | 9.489 | <0.001 |
| **GA2** | -0.007 | 0.001 | -9.328 | <0.001 |
| **BMI** | 0.003 | 0.007 | 0.387 | 0.699 |
| **Age** | -0.001 | 0.006 | -0.236 | 0.813 |
| **Nulliparity** | -0.080 | 0.058 | -1.399 | 0.162 |
| **Gender** | 0.173 | 0.056 | 3.082 | 0.002 |