**Table S1** Reasons for delivery in study population (*n* = 323)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Maternal***  | ***Fetal*** |  |  | ***Maternal and fetal***  | ***Achieving certain gestational age*** |
| Pre-eclampsia, HELLP syndrome,n(%)  | FGR  | IUD | pPROM, preterm labor, placental abruption  | Pre-eclampsia and FGR  |  |
| 207 (64) | 7 (2) | 3 (1) | 9 (3) | 71 (22) | 26 (8) |

**Table S2** Mixed-effects regression models for association of gestational age at sampling with laboratory variables. Interaction term for composite adverse outcome is maternal. Gestational age at sampling divided into five categories: 1st degree represents earliest gestational ages and 5th degree represents most advanced gestational ages

|  |  |
| --- | --- |
|  | **sFlt-1/PlGF, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 3.12 | 2.14 – 4.11 | **<0.001** |
| GA at sampling [1st degree] | -0.44 | -1.57 – 0.70 | 0.448 |
| GA at sampling [2nd degree] | 2.05 | 1.25 – 2.85 | **<0.001** |
| GA at sampling [3rd degree] | 2.36 | 1.26 – 3.46 | **<0.001** |
| GA at sampling [4th degree] | 1.42 | 0.40 – 2.44 | **0.006** |
| GA at sampling [5th degree] | 2.39 | 1.17 – 3.62 | **<0.001** |
| Composite adverse outcome [Yes] | 0.18 | -1.72 – 2.08 | 0.854 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | 1.38 | -0.27 – 3.04 | 0.102 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | 0.87 | -0.90 – 2.63 | 0.335 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | 1.45 | -1.07 – 3.97 | 0.260 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | -1.70 | -4.92 – 1.51 | 0.299 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | -0.95 | -4.88 – 2.97 | 0.634 |
| **Random Effects** |
| σ2 | 0.12 |
| τ00 Study\_ID | 1.43 |
| τ11 Study\_ID.scale(`GA at sampling`) | 1.02 |
| ρ01 Study\_ID | -0.73 |
| ICC | 0.92 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.195 / 0.938 |
|  | **Creatinine, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | -0.58 | -0.78 – -0.38 | **<0.001** |
| GA at sampling [1st degree] | -0.06 | -0.34 – 0.21 | 0.644 |
| GA at sampling [2nd degree] | -0.03 | -0.22 – 0.15 | 0.735 |
| GA at sampling [3rd degree] | 0.16 | -0.07 – 0.40 | 0.177 |
| GA at sampling [4th degree] | 0.41 | 0.20 – 0.63 | **<0.001** |
| GA at sampling [5th degree] | 0.07 | -0.22 – 0.36 | 0.631 |
| Composite adverse outcome [Yes] | -0.19 | -0.52 – 0.13 | 0.237 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | 0.44 | -0.01 – 0.89 | 0.056 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | 0.32 | -0.09 – 0.74 | 0.126 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | 0.71 | 0.12 – 1.30 | **0.019** |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | -0.23 | -1.09 – 0.64 | 0.608 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | 0.33 | -0.84 – 1.51 | 0.577 |
| **Random Effects** |
| σ2 | 0.01 |
| τ00 Study\_ID | 0.09 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.02 |
| ρ01 Study\_ID | 0.75 |
| ICC | 0.92 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.132 / 0.926 |

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|  | **Alanine transaminase, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 3.15 | 2.31 – 3.99 | **<0.001** |
| GA at sampling [1st degree] | 0.04 | -1.14 – 1.22 | 0.943 |
| GA at sampling [2nd degree] | -0.07 | -0.83 – 0.69 | 0.862 |
| GA at sampling [3rd degree] | -0.06 | -1.02 – 0.90 | 0.905 |
| GA at sampling [4th degree] | 0.05 | -0.82 – 0.91 | 0.916 |
| GA at sampling [5th degree] | 0.06 | -0.99 – 1.10 | 0.914 |
| Composite adverse outcome [Yes] | 0.04 | -1.25 – 1.33 | 0.948 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | -0.07 | -1.85 – 1.71 | 0.939 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | 0.76 | -0.81 – 2.34 | 0.343 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | 0.33 | -1.58 – 2.24 | 0.738 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | -1.17 | -3.92 – 1.57 | 0.402 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | 1.18 | -2.09 – 4.44 | 0.479 |
| **Random Effects** |
| σ2 | 0.18 |
| τ00 Study\_ID | 0.43 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.10 |
| ρ01 Study\_ID | -0.00 |
| ICC | 0.70 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.025 / 0.710 |

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| --- |
| **Aspartate transaminase, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 3.02 | 2.35 – 3.70 | **<0.001** |
| GA at sampling [1st degree] | 0.21 | -0.77 – 1.19 | 0.669 |
| GA at sampling [2nd degree] | 0.18 | -0.43 – 0.79 | 0.563 |
| GA at sampling [3rd degree] | 0.29 | -0.49 – 1.06 | 0.467 |
| GA at sampling [4th degree] | 0.41 | -0.29 – 1.10 | 0.251 |
| GA at sampling [5th degree] | 0.44 | -0.39 – 1.27 | 0.295 |
| Composite adverse outcome [Yes] | 0.51 | -0.54 – 1.57 | 0.339 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | -0.52 | -2.04 – 1.01 | 0.506 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | 0.23 | -1.09 – 1.55 | 0.731 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | -0.06 | -1.64 – 1.52 | 0.940 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | -1.52 | -3.79 – 0.74 | 0.186 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | 1.67 | -0.95 – 4.28 | 0.212 |
| **Random Effects** |
| σ2 | 0.15 |
| τ00 Study\_ID | 0.33 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.03 |
| ρ01 Study\_ID | -0.17 |
| ICC | 0.68 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.038 / 0.692 |

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| --- | --- |
|  | **Platelet count, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 5.47 | 5.09 – 5.85 | **<0.001** |
| GA at sampling [1st degree] | 0.09 | -0.46 – 0.63 | 0.758 |
| GA at sampling [2nd degree] | -0.21 | -0.55 – 0.14 | 0.241 |
| GA at sampling [3rd degree] | -0.19 | -0.63 – 0.25 | 0.396 |
| GA at sampling [4th degree] | -0.40 | -0.79 – -0.01 | **0.047** |
| GA at sampling [5th degree] | -0.12 | -0.60 – 0.35 | 0.614 |
| Composite adverse outcome [Yes] | -0.15 | -0.74 – 0.44 | 0.616 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | 0.33 | -0.51 – 1.18 | 0.441 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | -0.47 | -1.20 – 0.26 | 0.207 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | 0.30 | -0.59 – 1.18 | 0.513 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | -0.46 | -1.74 – 0.82 | 0.481 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | 0.46 | -1.04 – 1.97 | 0.545 |
| **Random Effects** |
| σ2 | 0.05 |
| τ00 Study\_ID | 0.10 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.01 |
| ρ01 Study\_ID | -0.01 |
| ICC | 0.69 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.063 / 0.709 |

**Table S3** Mixed-effects regression models for association of gestational age at sampling with laboratory variables. The interaction term for composite adverse outcome is perinatal. Gestational age at sampling divided into five categories: 1st degree represents earliest gestational ages and 5th degree represents most advanced gestational ages

|  |  |
| --- | --- |
|  | **sFlt-1/PlGF ratio, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 2.26 | 1.41 – 3.11 | **<0.001** |
| GA at sampling [1st degree] | 0.09 | -0.77 – 0.95 | 0.833 |
| GA at sampling [2nd degree] | 2.73 | 2.02 – 3.45 | **<0.001** |
| GA at sampling [3rd degree] | 3.24 | 2.30 – 4.18 | **<0.001** |
| GA at sampling [4th degree] | 2.33 | 1.41 – 3.25 | **<0.001** |
| GA at sampling [5th degree] | 3.23 | 2.13 – 4.32 | **<0.001** |
| Composite adverse outcome [Yes] | 0.95 | -1.23 – 3.14 | 0.393 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | 2.69 | 0.04 – 5.34 | **0.047** |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | -0.06 | -2.10 – 1.99 | 0.956 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | -0.33 | -3.39 – 2.73 | 0.831 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | 1.10 | -3.36 – 5.56 | 0.628 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | -2.87 | -7.52 – 1.78 | 0.226 |
| **Random Effects** |
| σ2 | 0.12 |
| τ00 Study\_ID | 1.35 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.86 |
| ρ01 Study\_ID | -0.68 |
| ICC | 0.92 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.249 / 0.938 |

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| --- |
|  **Creatinine, log scale** |
|  | *Estimates* | *CI* | *p* |
| (Intercept) | -0.69 | -0.86 – -0.53 | **<0.001** |
| GA at sampling [1st degree] | 0.05 | -0.17 – 0.28 | 0.640 |
| GA at sampling [2nd degree] | 0.09 | -0.07 – 0.25 | 0.290 |
| GA at sampling [3rd degree] | 0.29 | 0.10 – 0.48 | **0.003** |
| GA at sampling [4th degree] | 0.52 | 0.33 – 0.71 | **<0.001** |
| GA at sampling [5th degree] | 0.20 | -0.05 – 0.45 | 0.125 |
| Composite adverse outcome [Yes] | -0.15 | -0.61 – 0.32 | 0.536 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | 0.40 | -0.29 – 1.08 | 0.256 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | 0.07 | -0.38 – 0.52 | 0.750 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | 0.60 | -0.13 – 1.33 | 0.105 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | 0.32 | -0.76 – 1.39 | 0.561 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | -0.19 | -1.83 – 1.44 | 0.817 |
| **Random Effects** |
| σ2 | 0.01 |
| τ00 Study\_ID | 0.10 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.02 |
| ρ01 Study\_ID | 0.76 |
| ICC | 0.92 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.122 / 0.930 |

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| --- | --- |
|  | **Alanine transaminase, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 3.16 | 2.50 – 3.83 | **<0.001** |
| GA at sampling [1st degree] | -0.06 | -0.97 – 0.85 | 0.896 |
| GA at sampling [2nd degree] | -0.11 | -0.76 – 0.54 | 0.735 |
| GA at sampling [3rd degree] | -0.06 | -0.83 – 0.71 | 0.878 |
| GA at sampling [4th degree] | -0.02 | -0.74 – 0.71 | 0.966 |
| GA at sampling [5th degree] | 0.14 | -0.75 – 1.03 | 0.757 |
| Composite adverse outcome [Yes] | -0.83 | -2.84 – 1.17 | 0.414 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | 0.93 | -1.97 – 3.84 | 0.529 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | 1.98 | 0.07 – 3.89 | **0.042** |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | 0.44 | -2.43 – 3.32 | 0.762 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | 2.70 | -1.61 – 7.01 | 0.219 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | -1.44 | -5.42 – 2.54 | 0.478 |
| **Random Effects** |
| σ2 | 0.18 |
| τ00 Study\_ID | 0.44 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.10 |
| ρ01 Study\_ID | -0.00 |
| ICC | 0.71 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.032 / 0.716 |

|  |  |
| --- | --- |
|  | **Aspartate transamine, log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 3.21 | 2.66 – 3.75 | **<0.001** |
| GA at sampling [1st degree] | -0.19 | -0.97 – 0.59 | 0.627 |
| GA at sampling [2nd degree] | 0.08 | -0.45 – 0.61 | 0.767 |
| GA at sampling [3rd degree] | 0.06 | -0.58 – 0.70 | 0.854 |
| GA at sampling [4th degree] | 0.24 | -0.35 – 0.84 | 0.422 |
| GA at sampling [5th degree] | 0.34 | -0.38 – 1.06 | 0.356 |
| Composite adverse outcome [Yes] | -0.81 | -2.55 – 0.93 | 0.361 |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | 1.65 | -0.92 – 4.22 | 0.209 |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | 0.90 | -0.73 – 2.54 | 0.279 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | 1.32 | -1.20 – 3.85 | 0.305 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | 0.76 | -3.04 – 4.56 | 0.695 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | 0.45 | -2.85 – 3.74 | 0.789 |
| **Random Effects** |
| σ2 | 0.15 |
| τ00 Study\_ID | 0.33 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.03 |
| ρ01 Study\_ID | -0.11 |
| ICC | 0.68 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.030 / 0.693 |

|  |  |
| --- | --- |
|  | **Platelet count , log scale** |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 5.35 | 5.05 – 5.65 | **<0.001** |
| GA at sampling [1st degree] | 0.32 | -0.11 – 0.74 | 0.144 |
| GA at sampling [2nd degree] | -0.15 | -0.44 – 0.15 | 0.325 |
| GA at sampling [3rd degree] | -0.04 | -0.39 – 0.31 | 0.836 |
| GA at sampling [4th degree] | -0.31 | -0.64 – 0.01 | 0.061 |
| GA at sampling [5th degree] | 0.01 | -0.39 – 0.41 | 0.956 |
| Composite adverse outcome [Yes] | 0.97 | 0.02 – 1.91 | **0.045** |
| GA at sampling [1st degree] × Compositeadverse outcome [Yes] | -1.50 | -2.90 – -0.10 | **0.036** |
| GA at sampling [2nd degree] × Compositeadverse outcome [Yes] | -0.88 | -1.77 – 0.01 | 0.053 |
| GA at sampling [3rd degree] × Compositeadverse outcome [Yes] | -1.28 | -2.66 – 0.10 | 0.069 |
| GA at sampling [4th degree] × Compositeadverse outcome [Yes] | -1.19 | -3.27 – 0.89 | 0.263 |
| GA at sampling [5th degree] × Compositeadverse outcome [Yes] | -0.99 | -2.83 – 0.86 | 0.295 |
| **Random Effects** |
| σ2 | 0.04 |
| τ00 Study\_ID | 0.11 |
| τ11 Study\_ID.scale(`GA at sampling`) | 0.01 |
| ρ01 Study\_ID | -0.01 |
| ICC | 0.70 |
| N Study\_ID | 323 |
| Observations | 885 |
| Marginal R2 / Conditional R2 | 0.062 / 0.720 |