## Maternal Biomarkers

|  | At Enrollment |
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| Maternal Biomarker | Median (25th, 75th percentile) or n (%) |
| Vitamin D1 (nmol/L) | 42.1 (32.53, 55.19) |
| Vitamin D deficiency | 108 (19%) |
| RBP (umol/L) | 1.24 (1.02, 1.52) |
| Vitamin A deficiency | 30 (5.2%) |
| Ferritin (ug/L) | 24.64 (12.89, 48.33) |
| sTfR (mg/L) | 4.28 (3.62, 5.42) |
| Iron deficiency | 134 (23%) |
| Cortisol2 (ug/dL) | 18.9 (12.36, 26.16) |
| Estriol (ng/mL) | 3.87 (2.05, 5.59) |
| IL-1B (pg/mL) | 1.12 (0.72, 1.67) |
| IL-63 (pg/mL) | 2.29 (1.26, 3.55) |
| TNF-a (pg/mL) | 3.71 (2.93, 4.55) |
| IL-12 (pg/mL) | 2.72 (1.94, 3.67) |
| IFN-y (pg/mL) | 7.27 (5.22, 10.04) |
| IL-4 (pg/mL) | 52.46 (35.58, 72.29) |
| IL-5 (pg/mL) | 1.43 (1.02, 1.99) |
| IL-13 (pg/mL) | 6.12 (3.46, 9.38) |
| IL-17A (pg/mL) | 4.79 (3.53, 6.49) |
| IL-21 (pg/mL) | 1.71 (0.99, 2.77) |
| IL-10 (pg/mL) | 6.77 (3.92, 11.21) |
| IL-2 (pg/mL) | 1.04 (0.5, 1.71) |
| GM-CSF (pg/mL) | 44.82 (25.58, 71.63) |
| AGP4 (g/L) | 0.44 (0.33, 0.57) |
| CRP (mg/L) | 1.94 (0.91, 4.06) |

Recommended vitamin D serum levels during pregnancy range from 50 to 75 nmol/L.

2 During the first trimester of pregnancy, serum cortisol levels are expected to be 7 to 19 μg/dL, while it is expected to be around 10 to 42 μg/dL during the second trimester.

3 A healthy population less than 45 years of age with no prior history of hypertension, diabetes, cardiovascular disease, cancer, or chronic inflammation had the following serum cytokine measurements in pg/mL: IL-6 (mean 2.91 ± standard deviation 6.45), IL-17 (6.53 ± 7.42), and IL-10 (1.32 ± 3.06).

4 Reference ranges for AGP and CRP are as follows: 0.4 to 1.0 g/L in 5 to 50-year-old women[31](https://www.zotero.org/google-docs/?rwyOq0) and 0 to 5 mg/L in all people respectively.