## Table 1 – Nutrition

| Nutrition Biomarkers | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Fully adjusted | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| Vitamin D | Telomeres Year 1 | 566 | 32.62 | 54.53 | 0.03 | -0.03 | -0.06 (-0.17, 0.05) | 0.31 | 0.93 | -0.03 | -0.13 | -0.09 (-0.21, 0.02) | 0.1 | 0.54 |
|  | Telomeres Year 2 | 621 | 32.62 | 55.36 | -0.24 | -0.28 | -0.03 (-0.26, 0.19) | 0.78 | 1 | -0.24 | -0.31 | -0.07 (-0.18, 0.04) | 0.19 | 0.76 |
|  | Telomere Change Year 1 and Year 2 | 485 | 32.62 | 55.3 | -0.22 | -0.22 | 0 (-0.28, 0.28) | 1 | 1 | -0.35 | -0.3 | 0.05 (-0.23, 0.32) | 0.76 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ferritin | Telomeres Year 1 | 566 | 2.53 | 3.81 | 0.01 | 0 | -0.02 (-0.22, 0.18) | 0.87 | 1 | -0.08 | -0.08 | 0 (-0.14, 0.14) | 1 | 1 |
|  | Telomeres Year 2 | 621 | 2.49 | 3.76 | -0.36 | -0.27 | 0.09 (-0.15, 0.34) | 0.46 | 1 | -0.4 | -0.27 | 0.14 (-0.09, 0.37) | 0.24 | 0.76 |
|  | Telomere Change Year 1 and Year 2 | 485 | 2.5 | 3.77 | -0.36 | -0.33 | 0.03 (-0.29, 0.34) | 0.87 | 1 | -0.33 | -0.26 | 0.08 (-0.21, 0.36) | 0.61 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| sTfR | Telomeres Year 1 | 566 | 1.29 | 1.69 | 0.04 | 0.03 | -0.01 (-0.3, 0.28) | 0.95 | 1 | -0.17 | -0.06 | 0.11 (-0.18, 0.41) | 0.45 | 0.89 |
|  | Telomeres Year 2 | 621 | 1.3 | 1.72 | -0.18 | -0.25 | -0.07 (-0.17, 0.03) | 0.16 | 0.84 | -0.24 | -0.28 | -0.04 (-0.13, 0.06) | 0.47 | 0.89 |
|  | Telomere Change Year 1 and Year 2 | 485 | 1.3 | 1.69 | -0.25 | -0.27 | -0.02 (-0.3, 0.27) | 0.92 | 1 | -0.24 | -0.23 | 0.01 (-0.1, 0.12) | 0.88 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RBP | Telomeres Year 1 | 566 | 0.14 | 0.52 | -0.05 | 0.08 | 0.13 (-0.08, 0.33) | 0.22 | 0.84 | -0.12 | 0 | 0.12 (-0.09, 0.33) | 0.27 | 0.76 |
|  | Telomeres Year 2 | 621 | 0.13 | 0.5 | -0.23 | -0.21 | 0.02 (-0.23, 0.28) | 0.86 | 1 | -0.21 | -0.22 | -0.01 (-0.27, 0.24) | 0.92 | 0.97 |
|  | Telomere Change Year 1 and Year 2 | 485 | 0.14 | 0.52 | -0.2 | -0.17 | 0.04 (-0.26, 0.33) | 0.83 | 1 | -0.24 | -0.26 | -0.02 (-0.32, 0.28) | 0.9 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Vit A Deficiency | Telomeres Year 1 | 566 | 0 | 1 | 0.01 | -0.23 | -0.24 (-0.64, 0.16) | 0.24 | 0.84 | -0.14 | -0.54 | -0.4 (-0.83, 0.02) | 0.06 | 0.54 |
|  | Telomeres Year 2 | 621 | 0 | 1 | -0.2 | -0.52 | -0.32 (-0.68, 0.04) | 0.08 | 0.84 | -0.23 | -0.54 | -0.32 (-0.67, 0.04) | 0.08 | 0.54 |
|  | Telomere Change Year 1 and Year 2 | 485 | 0 | 1 | -0.13 | -0.33 | -0.2 (-0.64, 0.24) | 0.38 | 0.99 | -0.23 | -0.18 | 0.05 (-0.42, 0.52) | 0.84 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Iron Deficiency | Telomeres Year 1 | 566 | 0 | 1 | 0.01 | -0.04 | -0.05 (-0.25, 0.14) | 0.59 | 1 | -0.08 | -0.1 | -0.02 (-0.21, 0.18) | 0.86 | 0.97 |
|  | Telomeres Year 2 | 621 | 0 | 1 | -0.19 | -0.31 | -0.12 (-0.3, 0.06) | 0.19 | 0.84 | -0.25 | -0.34 | -0.1 (-0.27, 0.08) | 0.29 | 0.76 |
|  | Telomere Change Year 1 and Year 2 | 485 | 0 | 1 | -0.14 | -0.09 | 0.05 (-0.16, 0.25) | 0.65 | 1 | -0.24 | -0.22 | 0.03 (-0.18, 0.24) | 0.82 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Vitamin D Deficiency | Telomeres Year 1 | 566 | 0 | 1 | -0.02 | 0.11 | 0.14 (-0.08, 0.35) | 0.22 | 0.84 | -0.13 | 0.12 | 0.26 (0.04, 0.48) | 0.02 | 0.42 |
|  | Telomeres Year 2 | 621 | 0 | 1 | -0.22 | -0.21 | 0 (-0.2, 0.21) | 0.99 | 1 | -0.28 | -0.19 | 0.09 (-0.12, 0.29) | 0.41 | 0.89 |
|  | Telomere Change Year 1 and Year 2 | 485 | 0 | 1 | -0.12 | -0.2 | -0.08 (-0.31, 0.15) | 0.5 | 1 | -0.23 | -0.25 | -0.01 (-0.25, 0.22) | 0.91 | 0.97 |

## Table 2 - Stress

| Serum stress biomarker | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Fully adjusted | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| Cortisol | Telomeres Year 1 | 556 | 129,000 | 283,800 | 0.02 | -0.13 | -0.15 (-0.4, 0.1) | 0.23 | 0.23 | -0.21 | -0.33 | -0.12 (-0.24, 0) | 0.05 | 0.05 |
|  | Telomeres Year 2 | 612 | 132,925 | 284,025 | -0.08 | -0.33 | -0.25 (-0.42, -0.08) | 0.00 | 0.01 | -0.27 | -0.46 | -0.19 (-0.3, -0.08) | 0.00 | 0.00 |
|  | Telomere Change Year 1 and Year 2 | 477 | 129,000 | 275,200 | -0.11 | -0.26 | -0.15 (-0.36, 0.07) | 0.18 | 0.23 | -0.14 | -0.38 | -0.24 (-0.46, -0.02) | 0.04 | 0.05 |

## Table 3 - Inflammation

| Inflammation Biomarkers | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Fully adjusted | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| CRP | Telomeres Year 1 | 566 | -0.08 | 1.37 | 0 | 0 | 0 (-0.11, 0.11) | 0.98 | 0.98 | -0.06 | -0.09 | -0.03 (-0.14, 0.09) | 0.64 | 0.71 |
|  | Telomeres Year 2 | 621 | 0 | 1.38 | -0.24 | -0.2 | 0.04 (-0.06, 0.14) | 0.47 | 0.52 | -0.3 | -0.26 | 0.04 (-0.06, 0.14) | 0.47 | 0.63 |
|  | Telomere Change Year 1 and Year 2 | 485 | 0 | 1.4 | -0.27 | 0.09 | 0.36 (0.04, 0.69) | 0.03 | 0.11 | -0.29 | -0.2 | 0.09 (-0.05, 0.23) | 0.21 | 0.5 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AGP | Telomeres Year 1 | 566 | -1.11 | -0.54 | 0.06 | -0.07 | -0.13 (-0.25, 0) | 0.04 | 0.13 | -0.07 | -0.18 | -0.12 (-0.21, -0.02) | 0.02 | 0.12 |
|  | Telomeres Year 2 | 621 | -1.11 | -0.58 | -0.17 | -0.24 | -0.06 (-0.15, 0.02) | 0.14 | 0.22 | -0.21 | -0.25 | -0.03 (-0.12, 0.05) | 0.45 | 0.63 |
|  | Telomere Change Year 1 and Year 2 | 485 | -1.11 | -0.56 | -0.08 | -0.16 | -0.07 (-0.17, 0.02) | 0.13 | 0.22 | -0.19 | -0.24 | -0.05 (-0.15, 0.06) | 0.38 | 0.63 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IFNG | Telomeres Year 1 | 474 | 5.37 | 9.36 | -0.24 | -0.19 | 0.05 (-0.07, 0.17) | 0.44 | 0.52 | 0.05 | 0.07 | 0.02 (-0.07, 0.11) | 0.65 | 0.71 |
|  | Telomeres Year 2 | 584 | 5.31 | 9.36 | -0.14 | -0.33 | -0.2 (-0.46, 0.06) | 0.14 | 0.22 | -0.21 | -0.39 | -0.18 (-0.43, 0.08) | 0.17 | 0.5 |
|  | Telomere Change Year 1 and Year 2 | 458 | 5.34 | 9.33 | 0.16 | -0.23 | -0.4 (-0.68, -0.12) | 0.01 | 0.06 | 0.1 | -0.23 | -0.33 (-0.62, -0.04) | 0.03 | 0.12 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sum Score | Telomeres Year 1 | 474 | -0.57 | 0.59 | -0.23 | -0.17 | 0.06 (-0.1, 0.23) | 0.47 | 0.52 | -0.07 | -0.03 | 0.04 (-0.07, 0.15) | 0.47 | 0.63 |
|  | Telomeres Year 2 | 584 | -0.63 | 0.61 | -0.18 | -0.34 | -0.16 (-0.38, 0.05) | 0.14 | 0.22 | -0.31 | -0.31 | 0 (-0.11, 0.12) | 0.98 | 0.98 |
|  | Telomere Change Year 1 and Year 2 | 458 | -0.61 | 0.58 | 0.14 | -0.16 | -0.3 (-0.56, -0.05) | 0.02 | 0.11 | 0.14 | -0.16 | -0.3 (-0.57, -0.03) | 0.03 | 0.12 |

## Table 4 - Estriol

| Estriol | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Fully adjusted | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| Estriol | Telomeres Year 1 | 562 | 2.25 | 5.63 | 0.02 | -0.01 | -0.03 (-0.13, 0.07) | 0.59 | 0.79 | -0.07 | -0.10 | -0.03 (-0.15, 0.09) | 0.60 | 0.87 |
|  | Telomeres Year 2 | 616 | 2.50 | 5.89 | -0.23 | -0.34 | -0.11 (-0.37, 0.16) | 0.43 | 0.79 | -0.32 | -0.54 | -0.22 (-0.49, 0.05) | 0.11 | 0.32 |
|  | Telomere Change Year 1 and Year 2 | 481 | 2.46 | 5.64 | -0.20 | -0.16 | 0.04 (-0.24, 0.32) | 0.79 | 0.79 | -0.29 | -0.33 | -0.03 (-0.32, 0.27) | 0.87 | 0.87 |