**Appendix Table 1: Anterior surface measurements of corneal aberrations by birth weight groups. Data from the population-based Gutenberg Health Study (2012-17) using Scheimpflug tomography.** Mean ± Standard Deviation or Median and 25%/75% Quantiles.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable in µm (n)** | **< 2.5 kg (313)**  | **2.5-4.0 kg (4629)**  | **> 4.0 kg (686)**  | **P value** |
| **Corneal front** |  |  |  |  |
| **Astigmatism** |  |  |  |  |
|  Oblique (Z2-2) OD | -0.03 ± 0.48 | 0.00 ± 0.45 | 0.02 ± 0.42 | .040 |
|  Oblique (Z2-2) OS | 0.09 ± 0.55 | 0.08 ± 0.45 | 0.09 ± 0.45 | .64 |
|  Vertical (Z22) OD | -0.55 ± 0.75  | -0.59 ± 0.74 | -0.53 ± 0.76 | .10 |
|  Vertical (Z22) OS | -0.56 ± 0.74 | -0.61 ± 0.72 | -0.55 ± 0.73 | .29 |
| **Coma** |  |  |  |  |
|  Horizontal (Z31) OD | -0.03 ± 0.16 | -0.03 ± 0.14 | -0.03 ± 0.13 | .92 |
|  Horizontal (Z31) OS | 0.04 ± 0.15 | 0.04 ± 0.14 | 0.05 ± 0.13 | .056 |
|  Vertical (Z3-1) OD | 0.07 ± 0.25 | 0.07 ± 0.23 | 0.09 ± 0.23 | .28 |
| Vertical (Z3-1) OS | 0.04 ± 0.22 | 0.05 ± 0.23 | 0.06 ± 0.23 | .47 |
| **Trefoil** |  |  |  |  |
|  Horizontal (Z33) OD | -0.01 ± 0.12 | 0.01 ± 0.12 | 0.02 ± 0.12 | .002 |
|  Horizontal (Z33) OS | 0.00 ± 0.13 | -0.01 ± 0.12 | -0.02 ± 0.13 | <.001 |
|  Vertical (Z3-3) OD | -0.06 ± 0.13 | -0.06 ± 0.13 | -0.07 ± 0.13 | .016 |
|  Vertical (Z3-3) OS | -0.07 ± 0.12 | -0.08 ± 0.13 | -0.08 ± 0.14 | .75 |
| **Spherical aberration** (Z40) OD | 0.32 ± 0.11 | 0.30 ± 0.10 | 0.28 ± 0.10 | <.001 |
| **Spherical aberration** (Z40) OS | 0.32 ± 0.10 | 0.30 ± 0.10 | 0.28 ± 0.10 | <.001 |
| **Corneal aberrations (RMS)** |  |  |  |  |
|  Total OD | 1.78 (1.37/2.19) | 1.61 (1.31/1.99) | 1.58 (1.28/1.92) | <.001 |
|  Total OS | 1.76 (1.47/2.14) | 1.60 (1.32/1.99) | 1.57 (1.29/1.92) | <.001 |
|  Higher-order aberrations (HOA) OD | 0.48 (0.40/0.58) | 0.43 (0.36/0.54) | 0.43 (0.36/0.53) | <.001 |
|  Higher-order aberrations (HOA) OS | 0.48 (0.40/0.57) | 0.44 (0.37/0.54) | 0.44 (0.36/0.54) | <.001 |
|  Lower-order aberrations (LOA) OD | 1.71 (1.32/2.09) | 1.54 (1.25/1.92) | 1.51 (1.22/1.86) | <.001 |
|  Lower-order aberrations (LOA) OS | 1.68 (1.40/2.06) | 1.53 (1.25/1.92) | 1.50 (1.24/1.84) | <.001 |

All aberrations are reported in µm. OD – right eye; OS – left eye.