

Supplementary Table S1. Corneal front and back surface aberrations stratified for gestational age and ROP: group 1 (full term born infants with GA \geq 37 weeks), group 2 (preterm infants with GA between 29 and 32 weeks without ROP), group 3 (preterm infants with GA \leq 28 weeks without ROP), group 4 (preterm infants with GA \leq 32 weeks with ROP).

All aberrations are reported in μm	Group 1 \geq 37 weeks n = 259	Group 2 29-32 weeks no ROP n = 124	Group 3 \leq 28 weeks no ROP n = 51	Group 4 \leq 32 weeks with ROP n = 51	P value*
<u>CORNEAL FRONT SURFACE</u>					
Astigmatism					
Oblique (Z^2_{-2})	-0.087 \pm 0.365	0.022 \pm 0.423	0.035 \pm 0.328	-0.002 \pm 0.460	0.037
Vertical (Z^2_{-2})	-0.721 \pm 0.461	-0.692 \pm 0.619	-0.809 \pm 0.551	-0.565 \pm 0.763	0.19
Coma					
Horizontal (Z^3_{-1})	-0.060 \pm 0.167	-0.063 \pm 0.203	-0.067 \pm 0.220	-0.099 \pm 0.278	0.78
Vertical (Z^3_{-1})	-0.015 \pm 0.178	0.014 \pm 0.181	0.108 \pm 0.181	0.054 \pm 0.167	<0.001
Trefoil					
Oblique (Z^3_{-3})	-0.009 \pm 0.126	0.001 \pm 0.111	0.021 \pm 0.095	-0.001 \pm 0.183	0.18
Vertical (Z^3_{-3})	-0.042 \pm 0.115	-0.039 \pm 0.125	-0.088 \pm 0.146	-0.025 \pm 0.156	0.15
Spherical aberration (Z^4_0)	0.199 \pm 0.070	0.203 \pm 0.081	0.199 \pm 0.106	0.197 \pm 0.099	0.91
Higher-order aberrations (RMS)					
Total	1.413 \pm 0.422	1.519 \pm 0.555	1.615 \pm 0.453	1.644 \pm 0.593	0.001
Higher-order aberrations (HOA)	0.389 \pm 0.148	0.412 \pm 0.132	0.454 \pm 0.182	0.482 \pm 0.212	<0.001
Lower-order aberrations (LOA)	1.352 \pm 0.416	1.460 \pm 0.549	1.543 \pm 0.439	1.559 \pm 0.589	0.003
<u>CORNEAL BACK SURFACE</u>					
Astigmatism					
Oblique (Z^2_{-2})	-0.011 \pm 0.139	-0.022 \pm 0.142	-0.029 \pm 0.201	-0.016 \pm 0.242	0.82
Vertical (Z^2_{-2})	0.219 \pm 0.173	0.165 \pm 0.176	0.167 \pm 0.137	0.125 \pm 0.262	0.001
Coma					
Horizontal (Z^3_{-1})	-0.004 \pm 0.034	0.006 \pm 0.401	-0.001 \pm 0.038	0.008 \pm 0.096	0.009
Vertical (Z^3_{-1})	-0.027 \pm 0.045	-0.030 \pm 0.044	-0.034 \pm 0.028	-0.038 \pm 0.044	0.16
Trefoil					
Oblique (Z^3_{-3})	-0.001 \pm 0.080	0.008 \pm 0.098	-0.031 \pm 0.091	-0.031 \pm 0.131	0.09
Vertical (Z^3_{-3})	-0.018 \pm 0.102	-0.010 \pm 0.109	-0.026 \pm 0.117	-0.032 \pm 0.169	0.69
Spherical aberration (Z^4_0)	-0.146 \pm 0.026	-0.151 \pm 0.030	-0.146 \pm 0.036	-0.159 \pm 0.035	0.021
Higher-order aberrations (RMS)					
Total	0.770 \pm 0.179	0.767 \pm 0.162	0.792 \pm 0.181	0.818 \pm 0.403	0.045
Higher-order aberrations (HOA)	0.218 \pm 0.081	0.228 \pm 0.094	0.237 \pm 0.096	0.285 \pm 0.139	<0.001
Lower-order aberrations (LOA)	0.736 \pm 0.170	0.728 \pm 0.157	0.750 \pm 0.170	0.826 \pm 0.216	0.025

Z - Zernike, ROP – retinopathy of prematurity. Only data of the right eye were included in the analysis, and the Kruskal-Wallis test was used to compare data between the different groups.