

Table S1 and Table S2 illustrated the results of intraobserver variability in healthy and KC eyes, respectively, as supplementary data.

**Table S1.** Repeatability assessment between sessions for AST measurements in healthy eyes.

Meridian	Eccentricity	Mean $\pm$ SD ( $\mu\text{m}$ )	ICC	Sw	CoV	p-value†
Nasal	AST1	525 $\pm$ 51	0.99	21.30	0.04	0.001***
	AST2	531 $\pm$ 58	0.99	23.17	0.04	0.001***
	AST3	532 $\pm$ 65	0.98	18.42	0.03	0.001***
Temporal	AST1	522 $\pm$ 65	0.99	30.52	0.06	0.001***
	AST2	497 $\pm$ 63	0.98	20.24	0.04	0.001***
	AST3	513 $\pm$ 71	0.98	26.13	0.05	0.001***
Superior	AST1	457 $\pm$ 43	0.97	21.02	0.04	0.001***
	AST2	448 $\pm$ 48	0.97	16.60	0.03	0.001***
	AST3	453 $\pm$ 53	0.99	26.5	0.05	0.001***
Inferior	AST1	587 $\pm$ 53	0.99	28.90	0.05	0.001***
	AST2	578 $\pm$ 57	0.98	31.85	0.05	0.001***
	AST3	580 $\pm$ 59	0.99	34.25	0.06	0.001***

\*\*\*p<0.001; † p-value ICC, two-way mixed absolute agreement individual measurements.  
 AST: anterior scleral thickness, SD: standard deviation, ICC: Intraclass Correlation Index, Sw: within-subject standard deviation, CoV: coefficient of variation

**Table S2.** Repeatability assessment between sessions for AST measurements in KC eyes.

Meridian	Eccentricity	Mean $\pm$ SD ( $\mu\text{m}$ )	ICC	Sw	CoV	p-value <sup>†</sup>
Nasal	AST1	514 $\pm$ 61	0.99	22.18	0.04	0.001***
	AST2	527 $\pm$ 58	0.97	23.78	0.04	0.001***
	AST3	537 $\pm$ 71	0.98	25.46	0.04	0.001***
Temporal	AST1	538 $\pm$ 76	0.97	25.22	0.05	0.001***
	AST2	518 $\pm$ 75	0.99	21.21	0.04	0.001***
	AST3	537 $\pm$ 75	0.99	26.31	0.05	0.001***
Superior	AST1	473 $\pm$ 67	0.98	66.77	0.14	0.001***
	AST2	468 $\pm$ 58	0.96	51.15	0.11	0.001***
	AST3	472 $\pm$ 67	0.97	58.65	0.12	0.001***
Inferior	AST1	588 $\pm$ 74	0.98	74.60	0.13	0.001***
	AST2	568 $\pm$ 64	0.99	67.48	0.12	0.001***
	AST3	577 $\pm$ 77	0.99	79.33	0.14	0.001***

\*\*\*p<0.001; <sup>†</sup> p-value ICC, two-way mixed absolute agreement individual measurements.

AST: anterior scleral thickness, SD: standard deviation, ICC: intraclass correlation coefficient, Sw: within-subject standard deviation, CoV: coefficient of variation