

Supplementary

Table S1. Device-generated quality and normality indicators extracted from each CSV file and their recoding into fewer categories.

Variable	Indicative of	Unit/Categories	New Code
QS Error	Error during imaging	0	OK
		1, 2	Error
KKS	KCN grade or other abnormality	0	Normal
		1, 1-2, 2	KCN1-2
		2-3, 3, 3-4, 4	KCN3-4
		Possible, Abnormal, Cataract Surgery?	Abnormal

QS: quality specification; KKS: keratoconus score; KCN: keratoconus.

Table S2. Combining the recoded quality and normality indicators into 6 bilateral categories.

KKS	QS Error	Bilateral Category
Normal (bilateral)	OK (bilateral)	Bilateral-normal/QS-OK
KCN1–2 (at least 1 eye)		KCN-1-2/QS-OK
KCN3–4 (at least 1 eye)		KCN-3-4/QS-OK
Abnormal (at least 1 eye)		KS-abnormal/QS-OK
Abnormal (at least 1 eye)	Error (at least 1 eye)	Bilateral-normal/QS-error
Abnormal (at least 1 eye)		KS-abnormal/QS-error

KKS: keratoconus score; QS: quality specification; KCN: keratoconus. Note: If one eye was KCN and the fellow eye Abnormal, it was placed in the KCN category.

Table S3. The mean \pm standard deviation (central 95% range) of the descriptive statistics of the interocular elevation difference values (μm) in the central 2.0 mm – 6.0 mm zones of the cornea within each individual (n=4613).

Statistic	2.0 mm	3.0 mm	4.0 mm	5.0 mm	6.0 mm
Data points	317	709	1257	1961	2821
Skew	0.0 \pm 0.5 (1.9)	0.0 \pm 0.6 (2.2)	0.0 \pm 0.9 (3.4)	0.1 \pm 1.6 (6.4)	0.3 \pm 2.5 (9.7)
Abs-Skew	0.4 \pm 0.3 (1.2)	0.5 \pm 0.3 (1.3)	0.6 \pm 0.7 (2.6)	0.7 \pm 1.5 (5.8)	1.0 \pm 2.3 (9.0)
Kurtosis	−0.1 \pm 0.8 (3.2)	0.0 \pm 0.7 (2.8)	0.6 \pm 10.0 (39.3)	3.0 \pm 50.3 (197.3)	7.2 \pm 77.7 (304.8)
Mean	0.0 \pm 2.1 (8.3)	0.0 \pm 2.5 (9.7)	0.0 \pm 3.1 (12.0)	0.0 \pm 3.9 (15.3)	0.2 \pm 5.4 (21.3)
SD	1.3 \pm 2.0 (7.9)	2.0 \pm 3.1 (12.3)	2.9 \pm 4.5 (17.8)	4.4 \pm 6.9 (27.0)	7.3 \pm 13.3 (52.1)
Abs-Mean	0.5 \pm 2.1 (8.1)	0.8 \pm 2.3 (9.1)	1.3 \pm 2.8 (11.0)	1.8 \pm 3.5 (13.6)	2.6 \pm 4.8 (18.7)
Mean-Abs	1.03 \pm 2.4 (9.4)	1.7 \pm 3.1 (12.2)	2.5 \pm 4.1 (16.1)	3.6 \pm 5.3 (20.8)	5.0 \pm 7.1 (27.7)
Median	0.0 \pm 2.0 (7.7)	0.0 \pm 2.2 (8.7)	0.0 \pm 2.6 (10.3)	−0.1 \pm 3.1 (12.2)	−0.1 \pm 3.7 (14.3)
Abs-Median	0.3 \pm 1.9 (7.6)	0.6 \pm 2.1 (8.3)	1.0 \pm 2.4 (9.5)	1.3 \pm 2.8 (11.1)	1.7 \pm 3.2 (12.7)
Minimum	−2.8 \pm 3.6 (14.0)	−4.8 \pm 6.6 (25.9)	−7.5 \pm 10.5 (41.0)	−11.1 \pm 15.1 (59.3)	−16.0 \pm 20.9 (81.9)
Maximum	2.9 \pm 6.1 (24.1)	4.8 \pm 9.1 (35.7)	7.8 \pm 15.4 (60.3)	13.6 \pm 35.5 (139.3)	31.3 \pm 92.6 (363.0)
Abs-Maximum	3.7 \pm 6.5 (25.4)	6.3 \pm 9.8 (38.5)	10.2 \pm 16.5 (64.5)	17.4 \pm 36.4 (142.5)	36.8 \pm 92.4 (362.3)
Range	5.7 \pm 8.6 (33.7)	9.6 \pm 14.3 (56.0)	15.3 \pm 23.0 (90.1)	24.7 \pm 43.3 (169.7)	47.3 \pm 99.3 (389.1)
Central 95% Range	5.0 \pm 7.9 (31.0)	7.8 \pm 12.3 (48.4)	11.6 \pm 17.8 (69.8)	17.1 \pm 27.0 (105.7)	28.5 \pm 52.1 (204.1)
Negative Volume	−1.6 \pm 2.4 (9.6)	−6.0 \pm 9.5 (37.3)	−16.1 \pm 25.7 (100.7)	−35.4 \pm 55.4 (217.3)	−68.4 \pm 104.1 (407.9)
Positive Volume	1.7 \pm 6.8 (26.5)	6.0 \pm 17.5 (68.4)	15.7 \pm 37.5 (147.2)	34.6 \pm 72.1 (282.8)	73.6 \pm 143.3 (561.8)
Total Volume	3.3 \pm 7.6 (29.8)	12.1 \pm 22.0 (86.2)	31.8 \pm 51.5 (201.8)	69.9 \pm 103.8 (407.0)	142.0 \pm 199.5 (782.1)
Volume Difference	0.1 \pm 6.7 (26.4)	0.0 \pm 17.5 (68.8)	−0.4 \pm 38.6 (151.2)	−0.8 \pm 76.0 (297.8)	5.2 \pm 151.4 (593.7)

Abs: absolute value; SD: standard deviation; Mean-Abs: Average of absolute differences; Abs-Maximum: the larger of the maximum and absolute minimum.