Supplementary Table 1 Demographics of study participants (87 normal subjects and 137 patients with glaucoma)

	Normal	Glaucoma	P*
Subjects/eyes	87/152	137/188	
Age (year)	53.4 (14.4)	58.1 (13.5)	0.013
Spherical equivalent (D)	-1.9 (3.6)	-1.5 (3.6)	0.160
Axial length (mm)	24.0 (1.3)	23.9 (1.3)	0.407
Visual field MD (dB)	-0.67 (1.40)	-9.36 (8.31)	<0.001
BMO area (mm^2)	2.31 (0.52)	2.50 (0.56)	0.016
Global BMO-MRW (μm)	314.3 (49.0)	169.5 (50.2)	<0.001
Global RNFLT (μm)	106.6 (10.5)	67.9 (16.6)	<0.001

Data are presented as mean (standard deviation).
D, Diopter; MD, mean deviation; BMO, Bruch's membrane opening; BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness.
*Linear mixed modeling with adjustment of correlation between fellow eyes.

Supplementary Table 2 Demographics of study participants (87 normal subjects and 79 patients with early glaucoma)

	Normal	Mild glaucoma (visual field MD≥-6dB)	P*
Subjects/eyes	87/ 152	79/ 95	
Age (year)	53.4 (14.4)	58.4 (13.3)	0.021
Spherical equivalent (D)	-1.9 (3.6)	-1.5 (3.2)	0.169
Axial length (mm)	24.0 (1.3)	24.1 (1.3)	0.791
Visual field MD (dB)	-0.67 (1.40)	-3.32 (1.59)	<0.001
BMO area (mm^2)	2.31 (0.52)	2.50 (0.56)	0.067
Global BMO-MRW (μm)	314.3 (49.0)	189.8 (46.8)	<0.001
Global RNFLT (μm)	106.6 (10.5)	76.1 (11.3)	<0.001

Data are presented as mean (standard deviation).
D, Diopter; MD, mean deviation; BMO, Bruch's membrane opening; BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness.
*Linear mixed modeling with adjustment of correlation between fellow eyes.

Supplementary Table 3 Sensitivities and specificities of abnormal global BMO-MRW/RNFLT for detection of mild glaucoma

	Global BMO-MRW below the 5th percentile		**Global RNFLT below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	67.37%	57.11% to 77.63%	83.16%	74.72% to 91.60%	-15.79%	-25.11% to -6.47%	0.001
Specificity	99.34%	98.05% to 100.00%	98.68%	96.88% to 100.00%	0.66%	-1.58% to 2.90%	0.565
	Global BMO-MRW below the 1st percentile		**Global RNFLT below the 1st percentile**		**Difference in sensitivities /specificities**		
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	41.05%	30.14% to 51.96%	62.11%	52.07% to 72.14%	-21.05%	-31.12% to -10.98%	<0.001
Specificity	100.00%	-	99.34%	98.05% to 100.00%	0.66%	-0.63% to 1.95%	0.318

BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness

Supplementary Table 4 Sensitivities and specificities of ≥1 sector of abnormal BMO-MRW/RNFLT for detection of mild glaucoma

	≥1 sector of BMO-MRW below the 5th percentile		**≥1 sector of RNFLT below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	91.58%	85.87% to 97.29%	97.89%	94.98% to 100.00%	-6.32%	-12.10% to -0.54%	0.034
Specificity	94.74%	90.78% to 98.69%	87.50%	81.26% to 93.74%	7.24%	0.66% to 13.82%	0.033
	≥1 sector of BMO-MRW below the 1st percentile		**≥1 sector of RNFLT below the 1st percentile**		**Difference in sensitivities /specificities**		
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	69.47%	59.85% to 79.09%	91.58%	85.87% to 97.29%	-22.11%	-32.12% to -12.09%	<0.001
Specificity	99.34%	98.05% to 100.00%	96.71%	93.35% to 100.00%	2.63%	0.09% to 5.17%	0.044

BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness

Supplementary Table 5 Sensitivities and specificities of abnormal superotemporal and/or inferotemporal BMO-MRW/RNFLT for detection of mild glaucoma

	ST/IT BMO-MRW below the 5th percentile		**ST/IT RNFLT below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	88.42%	81.88% to 94.96%	97.89%	94.98% to 100.00%	-9.47%	-16.12 to -2.83%	0.006
Specificity	96.05%	92.48% to 99.62%	96.05%	92.06% to 100.00%	0	-3.67% to 3.67%	1
	ST/IT BMO-MRW below the 1st percentile		**ST/IT RNFLT below the 1st percentile**		**Difference in sensitivities /specificities**		
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	63.16%	52.72% to 73.60%	89.47%	83.21% to 95.73%	-26.32%	-36.80% to -15.84%	<0.001
Specificity	99.34%	98.05% to 100.00%	98.03%	95.16% to 100.00%	1.32%	-0.49% to 3.12%	0.157

BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness
ST, superotemporal; IT, inferotemporal

Supplementary Table 6 Changes in sensitivities and specificities after integrating abnormal superotemporal and/or inferotemporal BMO-MRW to abnormal superotemporal and/or inferotemporal RNFLT for detection of glaucoma

	ST/IT RNFLT below the 5th percentile		**ST/IT RNFLT below the 5th percentile OR ST/IT BMO-MRW below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	98.40%	97.46% to 100.00%	98.94%	96.60% to 100.00%	-0.53%	-1.58% to 0.51%	0.319
Specificity	96.05%	92.06% to 100.00%	94.08%	89.59% to 98.57%	1.97%	-0.24% to 4.19%	0.083

	ST/IT RNFLT below the 5th percentile		**ST/IT RNFLT below the 5th percentile AND ST/IT BMO-MRW below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	98.40%	96.60% to 100.00%	93.09%	89.43% to 96.74%	5.32%	2.10% to 8.53%	0.001
Specificity	96.05%	92.06% to 100.00%	98.03%	95.16% to 100.00%	-1.97%	-4.84% to 0.89%	0.179

BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness
ST, superotemporal; IT, inferotemporal

Supplementary Table 7 Changes in sensitivities and specificities after integrating abnormal superotemporal and/or inferotemporal BMO-MRW to abnormal superotemporal and/or inferotemporal RNFLT for detection of mild glaucoma

	ST/IT RNFLT below the 5th percentile		**ST/IT RNFLT below the 5th percentile OR ST/IT BMO-MRW below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	97.89%	94.98% to 100.00%	98.95%	96.88% to 100.00%	-1.05%	-3.12% to 1.02%	0.320
Specificity	96.05%	92.06% to 100.00%	94.08%	89.59% to 98.57%	1.97%	-0.24% to 4.19%	0.083

	ST/IT RNFLT below the 5th percentile		**ST/IT RNFLT below the 5th percentile AND ST/IT BMO-MRW below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	97.89%	94.98% to 100.00%	87.37%	80.56% to 94.17%	10.53%	4.27% to 16.79%	0.001
Specificity	96.05%	92.06% to 100.00%	98.03%	95.16% to 100.00%	-1.97%	-4.84% to 0.89%	0.179

BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness
ST, superotemporal; IT, inferotemporal

Supplementary Table 8 Changes in sensitivities and specificities after integrating abnormal superotemporal and/or inferotemporal RNFLT to abnormal superotemporal and/or inferotemporal BMO-MRW for detection of glaucoma

	ST/IT BMO-MRW below the 5th percentile		ST/IT BMO-MRW below the 5th percentile OR ST/IT RNFLT below the 5th percentile		Difference in sensitivities /specificities		P
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	93.62%	90.10% to 97.13%	98.94%	97.46% to 100.00%	-5.32%	-8.53% to -2.11%	0.001
Specificity	96.05%	92.48% to 99.62%	94.08%	89.59% to 98.57%	1.97%	-0.89% to 4.84%	0.179

	ST/IT BMO-MRW below the 5th percentile		ST/IT BMO-MRW below the 5th percentile AND ST/IT RNFLT below the 5th percentile		Difference in sensitivities /specificities		P
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	93.62%	90.10% to 97.13%	93.09%	89.43% to 96.74%	0.53%	-0.51% to 1.58%	0.319
Specificity	96.05%	92.48% to 99.62%	98.03%	95.16% to 100.00%	-1.97%	-4.19% to 0.24%	0.083

BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness
ST, superotemporal; IT, inferotemporal

Supplementary Table 9 Changes in sensitivities and specificities after integrating abnormal superotemporal and/or inferotemporal RNFLT to abnormal superotemporal and/or inferotemporal BMO-MRW for detection of mild glaucoma

	ST/IT BMO-MRW below the 5th percentile		**ST/IT BMO-MRW below the 5th percentile OR ST/IT RNFLT below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	88.42%	81.88% to 94.96%	98.95%	96.88% to 100.00%	-10.53%	-16.79% to -4.27%	0.001
Specificity	96.05%	92.48% to 99.62%	94.08%	89.59% to 98.57%	1.97%	-0.89% to 4.84%	0.179

	ST/IT BMO-MRW below the 5th percentile		**ST/IT BMO-MRW below the 5th percentile AND ST/IT RNFLT below the 5th percentile**		**Difference in sensitivities /specificities**		**P**
		95% Confidence Interval		95% Confidence Interval		95% Confidence Interval	
Sensitivity	88.42%	81.88% to 94.96%	87.37%	80.56% to 94.17%	1.05%	-1.02% to 3.12%	0.320
Specificity	96.05%	92.48% to 99.62%	98.03%	95.16% to 100.00%	-1.97%	-4.19% to 0.24%	0.083

BMO-MRW, Bruch's membrane opening-minimum rim width; RNFLT, retinal nerve fiber layer thickness
ST, superotemporal; IT, inferotemporal