Supplementary Figure 1. Posterior Pole Algorithm of the Spectralis OCT (left panel) and the 36 superpixels (right panel, gray superpixels) that were analyzed in the study.

Supplementary Figure 2. Heat map displaying the difference in population rates between the subgroups with visual field $MD \le -6$ and MD > -6 dB for the ganglion cell layer (GCL, left panel) and inner plexiform layer (IPL, right panel) in the Established Glaucoma (EG) group. Numbers represent rates in the subgroup with $MD \le -6$ dB minus that of MD > -6 dB subgroup. A white asterisk indicates a Bayesian p-value <0.025 and identifies a superpixel with a significantly negative rate of change difference; black asterisk indicates p-value <0.075 and identifies a superpixel with a significantly positive rate of change difference.

Supplementary Figure 3. Heat map displaying the difference in population intercepts between the subgroups with visual field $MD \le -6$ and MD > -6 dB for the ganglion cell layer (GCL, left panel) and inner plexiform layer (IPL, right panel) in the Established Glaucoma (EG) group. Numbers represent rates in the subgroup with $MD \le -6$ dB minus that of MD > -6 dB subgroup. A white asterisk indicates a Bayesian p-value <0.025 and identifies a superpixel with a significantly negative intercept difference; black asterisk indicates p-value >0.975 and identifies a superpixel with a significantly positive intercept difference.

Supplementary Figure 4. Heat map with superpixel population slope posterior means for the ganglion cell layer (top) and inner plexiform layer (bottom) for the Glaucoma Suspect group (left) and the Established Glaucoma group (right). A white asterisk indicates a Bayesian p-value <0.025 and identifies a superpixel with a significantly negative population rate of change; black asterisk indicates p-value >0.975 and identifies a superpixel with a significantly positive population rate of change.

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		1				0		-		8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8
7 2	247	264	281	2	89	284	284	300	1	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8
52	271	296	31		375	359	339	335		6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8
168	293	338	1	128	325	381	361	554		5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8
260	285	311	,	312	330	37	8 355	322	M	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
247	26	0 21	88	325	34	s 5	H 20 70 2	55 2	10	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
23	8 2	46 2	241	281	0 2	257	270	277	268	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
	33									1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
	2 68 260 247 23 25	247 2 771 668 293 260 294 260 294 247 20 238 2 233 3	247 264 2 271 206 66 293 256 260 294 939 260 255 21 247 266 2 238 246 2 238 246 2	247 264 281 2 271 296 31 68 293 336 3 68 293 336 3 69 293 336 3 60 294 939 3 260 285 318 247 266 295 247 266 295 243 246 264 233 230 241	247 264 281 2 271 296 319 68 293 338 366 260 294 939 328 260 265 319 328 247 266 298 328 247 266 298 328 248 246 264 281 238 246 264 281	247 264 281 293 2 771 296 319 227 68 293 926 366 375 90 294 399 326 325 900 294 399 326 325 200 295 319 322 320 247 266 298 325 44 233 246 264 281 24	247 264 287 259 284 2 771 206 339 927 917 68 293 355 366 375 359 68 293 355 366 375 359 60 294 359 225 620 381 200 255 319 372 200 37 247 205 298 325 446 24 238 246 264 251 280 2 233 230 241 249 257	247 264 281 268 284 284 2 771 205 319 227 917 905 68 293 926 366 375 359 996 900 294 339 228 925 381 391 900 294 339 228 925 344 393 910 295 319 312 300 376 359 920 295 319 312 300 376 359 9247 266 298 325 344 324 29 923 246 264 261 280 270 27 923 230 241 249 257 270 37	247 264 281 263 284 284 284 200 2 771 205 310 227 117 025 383 68 293 525 365 375 350 595 525 68 293 525 325 525 381 391 524 60 294 539 525 525 381 391 524 60 294 539 525 544 563 595 526 600 295 319 312 500 376 355 526 200 255 319 312 500 376 356 526 247 266 298 225 444 564 286 27 233 246 264 251 250 270 270 270 270	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	247 264 287 268 224 264 200 7.1 7.2 2 771 206 310 22 217 025 025 025 025 68 203 026 375 359 025 025 025 026 6.1 6.2 700 204 029 225 025 376 355 220 0 5.1 5.2 200 205 219 325 444 624 206 271 4.1 4.2 247 266 204 261 260 270 255 216 3.1 3.2 233 230 241 249 257 270 277 268 2.1 2.2 1.1 1.2 1.1 1.2 1.1 1.2	247 264 287 289 284 200 7.1 7.2 7.3 2 771 206 399 277 205 295 66 7.1 7.2 7.3 66 205 295 366 375 359 295 225 6.1 6.2 6.3 7.1 7.2 7.3 7.3 7.1 5.2 5.3 200 205 219 272 200 378 355 220 1.1 4.2 4.3 3.1 3.2 3.3 3.1 3.2 3.3 3.1 3.2 3.3 233 230 241 249 257 270 777 768 1.1 1.2 2.3 1.1 1.2 1.3 1.3 1.1 1.2 1.3	247 204 287 209 284 205 205 205 27.1 7.2 7.3 7.4 2 271 205 399 227 317 205 225 7.3 7.4 60 205 205 365 375 359 255 225 6.1 6.2 6.3 6.4 5.1 5.2 5.3 5.4 4.1 4.2 4.3 4.4 3.1 3.2 3.3 3.4 2.1 2.2 2.3 2.4 1.1 1.2 1.3 1.4	247 264 287 289 284 8.5 2 711 205 310 227 417 7.2 7.3 7.4 7.5 60 205 205 205 205 205 205 6.1 6.2 6.3 6.4 6.5 5.1 5.2 5.3 5.4 5.5 4.1 4.2 4.3 4.4 4.5 3.1 3.2 3.3 3.4 3.5 2.3 205 241 249 257 270 277 268 1.1 1.2 1.3 1.4 1.5	247 264 281 28.2 8.3 8.4 8.5 8.6 7.1 7.2 7.3 7.4 7.5 7.6 200 285 370 350 292 200 66.1 6.2 6.3 6.4 6.5 6.6 5.1 5.2 5.3 5.4 5.5 5.6 247 200 295 210 270 <td< td=""><td>247 204 287 209 214 201 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 2</td></td<>	247 204 287 209 214 201 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 217 200 2

		Establ	ished G	laucoma	a-GCL	
	2	3	4	5	6	7
7	0.071	0.030	0.175	-0.070	-0.100	-0.058
6	-0.040	-0.066	-0.021	-0.094	-0.017	-0.059
5	0.046	0.029	-0.012	-0.132	0.057	* 0.222
4	0.052	0.090	0.116	-0.085	0.083	0.155
3	0.000	0.129	-0.057	0.105	0.226	0.029
2	-0.136	-0.145	-0.029	0.174	-0.010	-0.123

	Estab	lished C	Blaucom	a-IPL	
2	3	4	5	6	7
-0.010	0.017	-0.034	0.019	0.076	-0.055
-0.108	-0.101	-0.109	0.070	-0.026	0.005
-0.093	0.135	0.029	0.059	0.114	0.007
-0.002	0.126	0.095	-0.064	0.112	0.044
-0.057	-0.039	0.188	* 0.267	0.113	0.093
-0.043	0.034	0.089	-0.037	-0.021	-0.070

0.2

Slope Difference

0.0 0.1

-0.1

Established Glaucoma-GCL 3 4 5 6 2 7 ***** -2.47 -2.51 ***** -2.40 -1.72 7 -1.03 -0.71 *** *** -4.42 -4.77 ***** -4.25 ***** -3.32 ***** -4.01 -1.59 6 *** * * * *** -6.16 -4.58 -5.15 -5.21 -2.90 ***** -4.14 5 *** * *** -4.69 -4.05 -3.91 ***** -3.35 -1.79 4 ***** -4.19 -5.13 -4.08 -3.83 ***** -2.77 -1.26 3 2 -2.55 -2.36 -1.19 -0.57

	Estab	lished C	Blaucom	a-IPL							
2	3	4	5	6	7						
0.53	-0.32	-0.50	-0.76	-0.17	0.06						
-0.52	* -1.61	* -2.60	* -2.74	* -2.01	-1.06						
* -2.74	* -4.08	* -2.43	* -3.26	* -3.10	-1.66						
* -2.11	* -3.16	* -2.21	-1.77	-1.64	-0.64						
-0.52	-0.90	-1.72	-1.64	-0.95	-0.19						
0.67	0.41	0.03	0.50	* 1.29	0.73						

Intercept Difference

-6

-4

-2 0

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	Glaucoma Suspect-GCL							Established Glaucoma-GCL					
	2	3	4	5	6	7		2	3	4	5	6	7
7	-0.072	-0.193 *	-0.140 *	-0.213 *	-0.215 *	-0.005		0.005	0.011	0.074	0.004	0.018	-0.0
6	-0.186 *	-0.124 *	-0.154 *	-0.211 *	-0.292*	-0.148 *		-0.027	-0.065	-0.111	-0.065	-0.042	-0.0
5	-0.303*	-0.196	-0.112	-0.144	-0.262*	-0.278 *		-0.147 *	-0.252 *	-0.452 *	-0.447 *	-0.371 *	-0.2
ŧ	-0.169	-0.179*	-0.096	-0.030	-0.339*	-0.271*		-0.062	-0.142*	-0.062	-0.092	-0.507*	-0.34
3	-0.196 *	-0.231*	-0.344 *	-0.339 *	-0.268 *	-0.102		-0.063	-0.110	-0.169 *	-0.297*	-0.281 *	-0.06
2	-0.083	-0.117	-0.157 *	-0.218*	-0.141 *	-0.011		-0.074	-0.070	-0.032	-0.072	-0.119*	-0.0
Glaucoma Suspect-IPL									Estab	lished G	Blaucom	a-IPL	
7	-0.029	0.024	-0.108	-0.124	-0.022	-0.028		0.009	-0.039	-0.079	-0.080	-0.108*	-0.04
6	-0.027	-0.049	-0.228*	-0.115	-0.090	-0.135 *		-0.055	-0.168 *	-0.159 *	-0.078	-0.140*	-0.11
5	-0.160*	-0.097	-0.160*	-0.148	-0.165 *	-0.094		-0.077	-0.311 *	-0.326 *	-0.247*	-0.191*	-0.22
4	-0.167 *	-0.120	-0.065	-0.165 *	-0.084	-0.113		-0.090	-0.274 *	-0.110 *	-0.114	-0.379 *	-0.2
3	-0.110	-0.169*	-0.115	-0.098	-0.092	-0.041		-0.090*	-0.207*	-0.304 *	-0.320*	-0.270*	-0.18
2	-0.003	-0.030	-0.110	-0.064	-0.033	0.193*		-0.021	-0.059	-0.167 *	-0.154 *	-0.092*	-0.03

-0.4

Population Slope

-0.2

0.0

24