

## Supplemental Online Content

Mahmoudinezhad G, Moghimi S, Nishida T, et al. Association between rate of ganglion cell complex thinning and rate of central visual field loss. *JAMA Ophthalmol*. Published online November 23, 2022. doi:10.1001/jamaophthalmol.2022.4973

**eTable 1.** Factors Contributing to the Rate of Central Visual Field Mean Deviation Change Over Time by Univariable and Multivariable Mixed Model Analysis in POAG Eyes

**eTable 2.** Factors Contributing to the Rate of Central Visual Field Mean Deviation Change Over Time by Univariable and Multivariable Mixed Model Analysis in Glaucoma-Suspect Eyes

**eFigure.** Case Examples of Fast (A) and Slow (B) OCT Progressor Group

This supplemental material has been provided by the authors to give readers additional information about their work.

**eTable 1.** Factors Contributing to the Rate of Central Visual Field Mean Deviation Change Over Time by Univariable and Multivariable Mixed Model Analysis in POAG Eyes

Variable	Univariable Model		Multivariable Model 1	
	$\beta$ , 95 % CI	P value	$\beta$ , 95 % CI	P value
Age, per 10 years older	-0.01 (-0.10, 0.08)	.80	-0.00 (-0.10, 0.09)	.93
Sex: Female	-0.06 (-0.24, 0.12)	.54	NA	NA
Race: African American	0.20 (0.00, 0.39)	<b>.04</b>	0.16 (-0.03, 0.35)	.10
Self-reported diabetes	-0.15 (-0.38, 0.08)	.19	NA	NA
Self-reported hypertension	-0.01 (-0.20, 0.17)	.88	NA	NA
Axial length, per 1mm longer	-0.03 (-0.11, 0.04)	.41	NA	NA
CCT, per 100 $\mu$ m thinner	0.13 (-0.07, 0.34)	.21	NA	NA
Baseline IOP, per 1 mmHg higher	0.00 (-0.02, 0.02)	.94	NA	NA
Mean IOP during follow-up, per 1 mmHg higher	-0.02 (-0.05, 0.00)	.10	-0.02 (-0.04, 0.01)	.12
Baseline 10-2 VF MD, dB	0.01 (-0.00, 0.03)	.14	NA	NA
Follow-up period, per 1 year longer	0.04 (-0.04, 0.12)	.32	NA	NA
No. of VF follow-up visits, per 1 visit	-0.01 (-0.07, 0.05)	.74	NA	NA
<b>OCT macula progressor group</b>				
Fast - slow	-0.28 (-0.52,-0.05)	<b>.02</b>	-0.24 (-0.48,-0.00)	<b>.05</b>

CCT = central corneal thickness; IOP = intraocular pressure; MD = mean deviation; OCT= optical coherence tomography; VF = visual field; No=Number, POAG= Primary Open Angle Glaucoma. Values are shown in  $\beta$  coefficient (95% confidence interval).

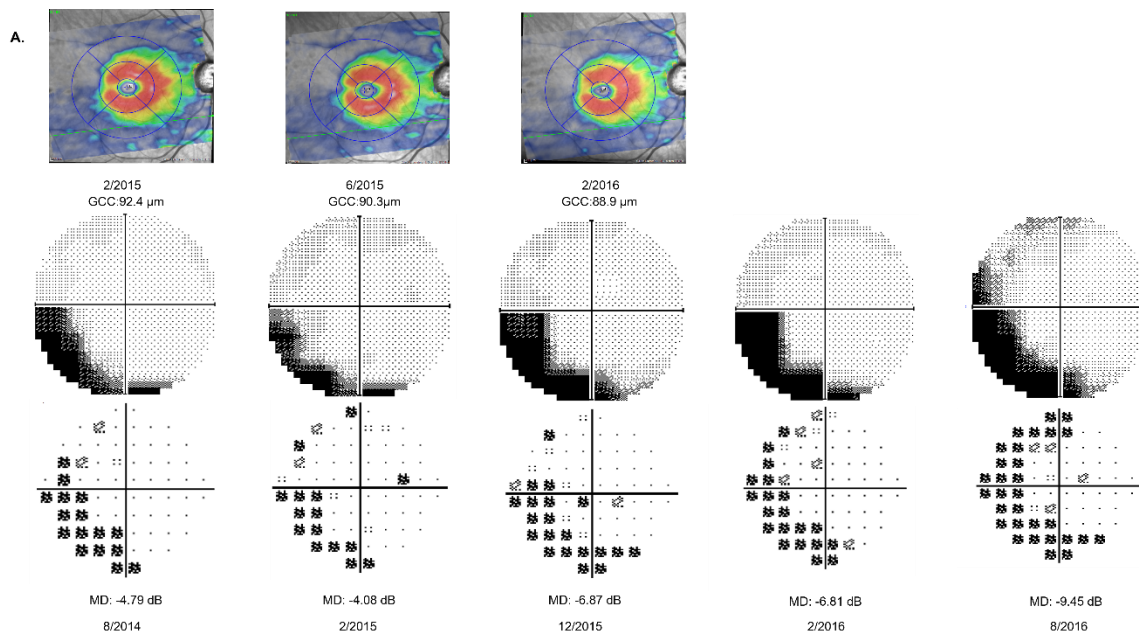
**eTable 2.** Factors Contributing to the Rate of Central Visual Field Mean Deviation Change Over Time by Univariable and Multivariable Mixed Model Analysis in Glaucoma-Suspect Eyes

Variable	Univariable Model		Multivariable Model 1	
	$\beta$ , 95 % CI	P value	$\beta$ , 95 % CI	P value
Age, per 10 years older	0.04 (-0.07, 0.16)	.47	0.06 (-0.07, 0.18)	.37
Sex: Female	0.22 (-0.05, 0.48)	.10	NA	NA
Race: African American	0.07 (-0.21, 0.35)	.60	NA	NA
Self-reported diabetes	0.17 (-0.25, 0.60)	.43	NA	NA
Self-reported hypertension	-0.10 (-0.37, 0.17)	.46	NA	NA
Axial length, per 1mm longer	0.10 (-0.02, 0.22)	.12	NA	NA
CCT, per 100 $\mu$ m thinner	0.08 (-0.25, 0.41)	.65	NA	NA
Baseline IOP, per 1 mmHg higher	-0.01 (-0.03, 0.02)	.72	NA	NA
Mean IOP during follow-up, per 1 mmHg higher	-0.01 (-0.05, 0.03)	.51	0.01 (-0.04, 0.06)	.65
Baseline 10-2 VF MD, dB	-0.04 (-0.13, 0.06)	.45	NA	NA
Follow-up period, per 1 year longer	-0.01 (-0.11, 0.09)	.90	NA	NA
No. of VF follow-up visits, per 1 visit	0.02 (-0.07, 0.10)	.71	NA	NA
<b>OCT macula progressor group</b>				
Fast - slow	-0.26 (-0.55, 0.04)	.09	-.30 (-0.63, -0.04)	.08

CCT = central corneal thickness; IOP = intraocular pressure; MD = mean deviation; OCT = optical coherence tomography; VF = visual field; No = Number. Values are shown in  $\beta$  coefficient (95% confidence interval).

**eFigure.** Case Examples of Fast (A) and Slow (B) OCT Progressor Group

The initial three OCTs used in the study are displayed, while representative 10-2 VF from the total follow-up period are presented. Respective dates are listed. (A) Testing from a 62-year-old white female. The estimated GCC change rate was  $-1.47 \mu\text{m}/\text{year}$  and estimated 10-2 VF MD rate of worsening was  $-1.02 \text{ dB}/\text{year}$ . Initial follow-up period for OCTs was 1 years, while total follow-up period for VFs was 2 years. (B) Testing from a 65-year-old white male. The estimated GCC change rate was  $-0.61 \mu\text{m}/\text{year}$  and estimated 10-2 VF MD rate of worsening was  $-0.28 \text{ dB}/\text{year}$ . Initial follow-up period for OCT was 1 year (GCC thinning are indicated by arrows), while total follow-up period for VF was 4.5 years. Abbreviations: dB = decibel; MD = mean deviation; GCC= ganglion cell complex, Optical Coherence Tomography=OCT, visual field =VF



B.

