

**Supplementary Table 2. Summary of GRS results for additional glaucoma phenotypes among POAG cases in the NEIGHBORHOOD consortium.**

**A. Age at diagnosis (in years)**

GRS	GRS Percentile	Mean (SD) Top GRS Percentile	Mean (SD) Bottom GRS Percentile	p-value
TXNRD2	1%	63.1 (14.1) (n=25)	67.9 (14.0) (n=22)	0.24
	5%	66.0 (12.8) (n=119)	64.8 (14.2) (n=121)	0.47
	10%	64.6 (12.7) (n=242)	64.4 (14.1) (n=241)	0.90
ME3	1%	65.3 (14.4) (n=22)	65.1 (17.0) (n=25)	0.96
	5%	63.6 (13.6) (n=124)	65.6 (15.4) (n=124)	0.28
	10%	64.0 (13.6) (n=250)	64.8 (15.1) (n=245)	0.57
TXNRD2 + ME3	1%	65.3 (12.2) (n=24)	61.5 (17.2) (n=24)	0.38
	5%	63.2 (13.7) (n=126)	65.2 (14.6) (n=123)	0.26
	10%	63.8 (13.4) (n=253)	65.6 (14.1) (n=246)	0.15

**B. Maximal cup-to-disc ratio**

GRS	GRS Percentile	Mean (SD) Top GRS Percentile	Mean (SD) Bottom GRS Percentile	p-value
TXNRD2	1%	0.78 (0.15) (n=24)	0.79 (0.14) (n=24)	0.72
	5%	0.80 (0.16) (n=115)	0.80 (0.16) (n=115)	0.87
	10%	0.80 (0.15) (n=232)	0.81 (0.15) (n=224)	0.65
ME3	1%	0.82 (0.10) (n=20)	0.76 (0.14) (n=22)	0.15
	5%	0.83 (0.13) (n=115)	0.80 (0.14) (n=105)	0.08
	10%	0.83 (0.13) (n=228)	0.81 (0.14) (n=211)	0.14
TXNRD2 + ME3	1%	0.84 (0.11) (n=21)	0.83 (0.15) (n=22)	0.76
	5%	0.82 (0.14) (n=115)	0.80 (0.14) (n=109)	0.27
	10%	0.83 (0.14) (n=230)	0.80 (0.15) (n=214)	0.05

**C. Visual field mean deviation (in dB)**

GRS	GRS Percentile	Mean (SD) Top GRS Percentile	Mean (SD) Bottom GRS Percentile	p-value
TXNRD2	1%	-8.3 (6.8) (n=20)	-8.1 (5.3) (n=15)	0.93
	5%	-9.5 (8.3) (n=97)	-8.2 (7.0) (n=95)	0.22
	10%	-9.9 (7.8) (n=192)	-8.8 (6.7) (n=188)	0.14
ME3	1%	-7.0 (6.1) (n=20)	-9.4 (6.6) (n=18)	0.25
	5%	-8.6 (6.7) (n=87)	-8.4 (6.8) (n=100)	0.83
	10%	-8.7 (6.9) (n=182)	-9.6 (7.7) (n=201)	0.26
TXNRD2 + ME3	1%	-7.2 (4.7) (n=16)	-7.9 (6.4) (n=20)	0.74
	5%	-7.9 (6.4) (n=91)	-8.7 (7.6) (n=89)	0.46
	10%	-8.1 (6.5) (n=179)	-9.1 (7.3) (n=186)	0.17

**D. Visual field pattern standard deviation (in dB)**

GRS	GRS Percentile	Mean (SD) Top GRS Percentile	Mean (SD) Bottom GRS Percentile	p-value
<i>TXNRD2</i>	1%	6.0 (3.1) (n=18)	5.5 (3.7) (n=13)	0.71
	5%	6.1 (3.0) (n=83)	5.7 (3.2) (n=80)	0.39
	10%	6.3 (3.2) (n=165)	6.3 (3.6) (n=160)	0.86
<i>ME3</i>	1%	5.4 (3.5) (n=18)	7.1 (3.6) (n=16)	0.18
	5%	6.0 (3.5) (n=74)	5.7 (3.2) (n=87)	0.59
	10%	6.2 (3.7) (n=153)	6.0 (3.4) (n=166)	0.61
<i>TXNRD2 + ME3</i>	1%	6.6 (3.3) (n=15)	7.1 (3.6) (n=19)	0.73
	5%	6.1 (3.7) (n=82)	5.8 (3.2) (n=76)	0.67
	10%	5.8 (3.3) (n=154)	6.0 (3.2) (n=157)	0.64

**E. Need for glaucoma surgery**

GRS	GRS Percentile	Prevalence Top GRS Percentile	Prevalence Bottom GRS Percentile	p-value
<i>TXNRD2</i>	1%	50.0% (n=6)	0% (n=3)	Unable
	5%	27.3% (n=33)	18.2% (n=22)	0.44
	10%	31.3% (n=67)	24.4% (n=41)	0.44
<i>ME3</i>	1%	20.0% (n=5)	12.5% (n=8)	0.72
	5%	29.2% (n=24)	25.0% (n=28)	0.74
	10%	34.6% (n=52)	28.5% (n=49)	0.51
<i>TXNRD2 + ME3</i>	1%	25.0% (n=8)	20.0% (n=5)	0.86
	5%	25.8% (n=31)	22.2% (n=18)	0.78
	10%	37.1% (n=62)	25.6% (n=39)	0.23

POAG=primary open-angle glaucoma; GRS= genetic risk score; SD= standard deviation; dB=decibels