

Supplemental Data

Variable	Slope	t-ratio	prob	Partial corr
* Pre-cannulation BMO position	-0.67	-3.81	<0.01	-0.68
* Pre-cannulation MRW	0.10	2.67	0.02	0.54
* Pre-cannulation ALCS position	0.06	2.35	0.03	0.50
Age	-0.15	-0.15	0.361	-0.23
Axial Length	-0.07	-0.36	0.73	-0.09
CCT	-0.09	-0.56	0.58	-0.14
Pre-cannulation RNFL	0.02	0.10	0.93	0.02
Pre-cannulation BMO Area	0.05	0.26	0.8	0.06

Supplemental Table 1. Included and excluded variables for the stepwise linear regression for the maximum change in MRW with 25mmHg pressure challenge. * sig. at p<0.05

Variable	Slope	t-ratio	prob	Partial corr
* Pre-cannulation MRW	0.07	2.88	0.01	0.55
Age	-0.28	-1.44	0.17	-0.32
Axial Length	0.07	0.34	0.74	0.08
CCT	-0.05	-0.23	0.82	-0.05
Pre-cannulation RNFL	-0.08	-0.35	0.73	-0.08
Pre-cannulation BMO position	-0.20	-1.03	0.32	-0.24
Pre-cannulation BMO Area	0.35	1.92	0.07	0.41
Pre-cannulation ALCS position	0.13	0.69	0.50	0.16

Supplemental Table 2. Included and excluded variables for the stepwise linear regression for the time constant at 25mmHg. * sig. at p<0.05

Variable	Slope	t-ratio	prob	Partial corr
* Pre-cannulation ALCS position	-0.09	-2.84	0.01	-0.55
Age	0.07	0.35	0.73	0.08
Axial Length	0.18	0.93	0.36	0.22
CCT	0.002	0.01	0.99	0.002
Pre-cannulation RNFL	0.09	0.41	0.69	0.10
Pre-cannulation MRW	-0.21	-1.07	0.30	-0.24
Pre-cannulation BMO position	0.05	0.27	0.79	0.06
Pre-cannulation BMO Area	0.18	0.93	0.37	0.21

Supplemental Table 3. Included and excluded variables for the stepwise linear regression for the maximum change in BMO position with pressure challenge. * sig. at p<0.05

Variable	Slope	t-ratio	prob	Partial corr
* Pre-cannulation ALCS position	0.13	7.36	<0.01	0.88
* Pre-cannulation MRW	0.11	3.86	<0.01	0.70
* Pre-cannulation CCT	0.17	4.05	<0.01	0.71
* Pre-cannulation BMO area	-8.04	-2.30	0.04	-0.50
Age	0.06	0.40	0.69	0.10
Axial Length	-0.06	-0.55	0.93	-0.14
Pre-cannulation RNFL	0.10	0.69	0.50	0.17
Pre-cannulation BMO position	0.14	1.23	0.24	0.30

Supplemental Table 4. Included and excluded variables for the stepwise linear regression for the maximum change in ALCS position with pressure challenge. * sig. at p<0.05

Variable	Slope	t-ratio	prob	Partial corr
* Change in Axial Length @ 1000mmHg.days	236.46	7.28	<0.01	0.90
Age	0.14	1.170	0.27	0.33
Average IOP	0.22	2.00	0.07	0.52
Days to 1000mmHg.days	-0.11	-0.91	0.38	-0.26
Pre-cannulation CCT	0.21	1.86	0.09	0.49
Pre-cannulation ACD	-0.05	-0.39	0.71	-0.12
Pre-cannulation Axial Length	0.01	0.07	0.95	0.02
Change in ACD @ 1000mmHg.days	0.25	1.09	0.30	0.31

Supplemental Table 5. Included and excluded variables for the stepwise linear regression for the loss of MRW at 1000mmHg.days and changes in biometry. * sig. at p<0.05

Variable	Slope	t-ratio	prob	Partial corr
* Change in Axial Length @ 1000mmHg.days	63.75	6.36	<0.01	0.83
* Pre-cannulation CCT	0.30	2.75	0.02	0.64
Age	0.09	0.68	0.51	0.21
Average IOP	0.06	0.34	0.74	0.11
Days to 1000mmHg.days	0.02	0.17	0.87	0.05
Pre-cannulation ACD	0.06	0.44	0.67	0.14
Pre-cannulation Axial Length	-0.04	-0.28	0.78	-0.09
Change in ACD @ 1000mmHg.days	0.06	0.25	0.81	0.08

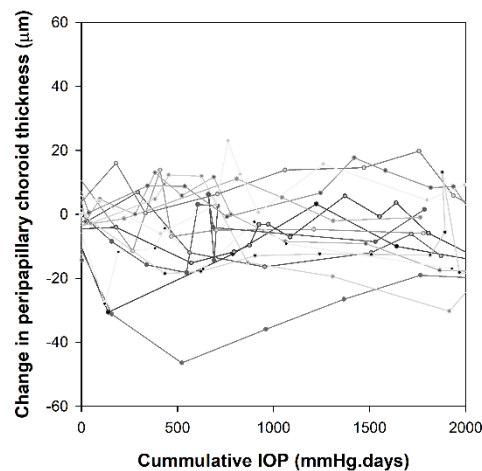
Supplemental Table 6. Included and excluded variables for the stepwise linear regression for the loss of RNFL at 1000mmHg.days and changes in biometry. * sig. at p<0.05

Variable	Slope	t-ratio	prob	Partial corr
* Maximum Return at 10mmHg	14.15	4.63	<0.01	0.80
Age	-0.13	-0.69	0.51	-0.20
Pre-cannulation CCT	-0.18	-0.85	0.42	-0.25
Pre-cannulation AL	0.01	0.03	0.80	0.01
Average IOP	0.01	0.03	0.98	0.01
Days to 1000mmHg.days	-0.20	-1.16	0.27	-0.33
Maximum MRW change at 25mmHg	0.28	1.72	0.11	0.46
Time constant at 25mmHg	0.22	1.28	0.23	0.36
Time constant at 10mmHg	-0.08	-0.46	0.66	-0.14
BMO position change with pressure challenge	-0.12	-0.62	0.55	-0.18
ALCS position change with pressure challenge	-0.08	-0.36	0.73	-0.11

Supplemental Table 7. Included and excluded variables for the stepwise linear regression for the loss of MRW at 1000mmHg.days and cannulated pressure challenge metrics. * sig. at p<0.05

Variable	Slope	t-ratio	prob	Partial corr
* Maximum Return at 10mmHg	4.69	6.30	<0.01	0.88
Age	-0.13	-0.85	0.41	-0.25
Pre-cannulation CCT	-0.05	-0.31	0.77	-0.09
Pre-cannulation AL	-0.05	-0.32	0.76	-0.10
Average IOP	-0.4	-0.26	0.80	-0.08
Days to 1000mmHg.days	-0.15	-1.09	0.30	-3.11
Maximum MRW change at 25mmHg	0.23	1.79	0.1	0.48
Time constant at 25mmHg	0.20	1.48	0.17	0.41
Time constant at 10mmHg	-0.06	-0.40	0.70	-0.12
BMO position change with pressure challenge	0.04	0.23	0.82	0.07
ALCS position change with pressure challenge	-0.1	-0.60	0.56	-0.18

Supplemental Table 8. Included and excluded variables for the stepwise linear regression for the loss of RNFL at 1000mmHg.days and cannulated pressure challenge metrics. * sig. at p<0.05



Supplemental Figure 1. Change in average peripapillary choroid (BMO to 250µm)¹ in experimental glaucoma animals, up to 2000mmHg.days.

References

1. Patel N, McAllister F, Pardon L, Harwerth R. The effects of graded intraocular pressure challenge on the optic nerve head. *Exp Eye Res* 2018;169:79-90.