

Supplementary Materials: Novel Use of PLGA Microspheres to Create an Animal Model of Glaucoma with Progressive Neuroretinal Degeneration

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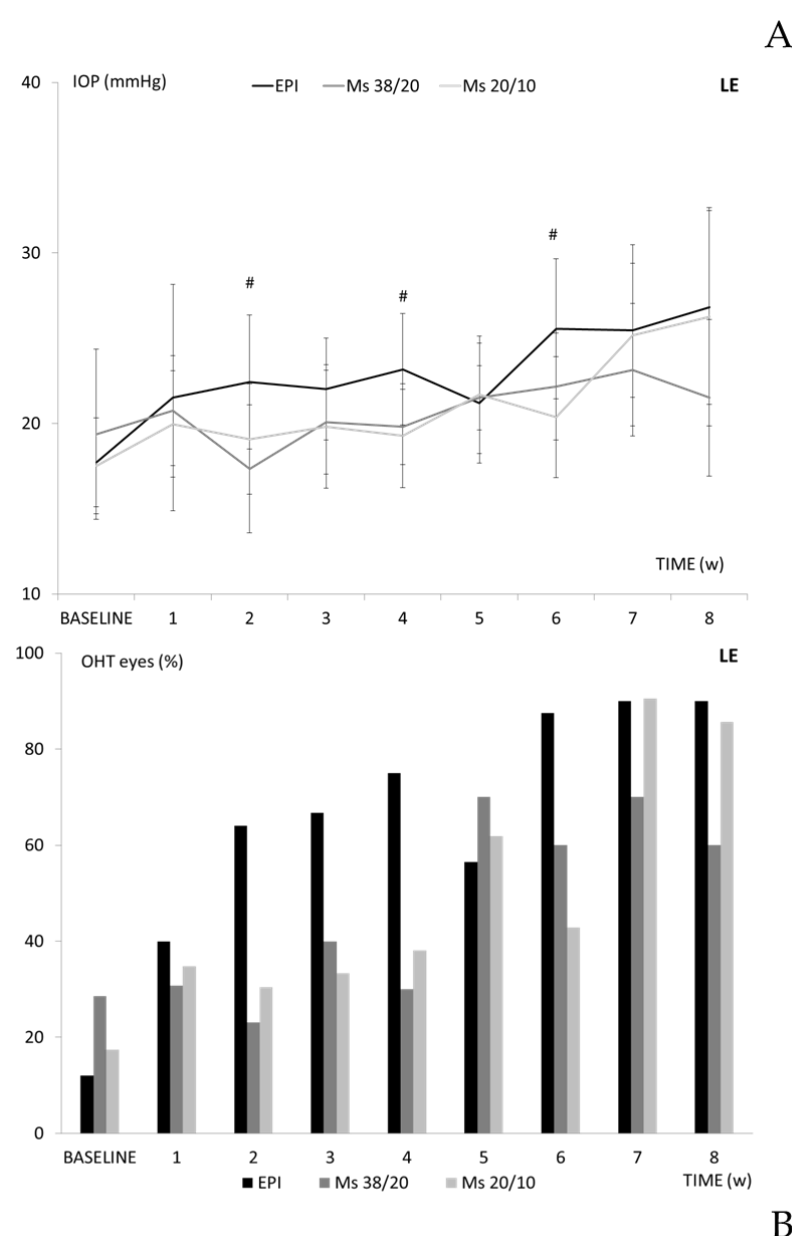


Table S1. Structural neuroretinal analysis using OCT with the Ms38/20 model. Ms38/20: 38/20 microsphere model; RNFL: retina nerve fiber layer; GCL: ganglion cell layer complex; thickness in microns (μm); mean $\pm$ SD (SD: standard deviation); *: $p < 0.050$ statistical significance; #: $p < 0.020$ statistical significance with Bonferroni correction for multiple comparisons. Grey cells show the two thinnest sectors at every examination.

Right eye (Ms38/20)						
OCT parameters (μm)	Baseline Mean $\pm$ SD	2 w Mean $\pm$ SD	4 w Mean $\pm$ SD	6 w Mean $\pm$ SD	8 w Mean $\pm$ SD	p^*
Retinal thickness						
Central	274.63 $\pm$ 13.50	273.41 $\pm$ 16.08	274.90 $\pm$ 15.07	270.44 $\pm$ 24.12	271.00 $\pm$ 16.40	0.441
Inner inferior	268.73 $\pm$ 12.29	263.92 $\pm$ 9.48	269.70 $\pm$ 13.37	263.33 $\pm$ 13.06	259.44 $\pm$ 8.07	0.017 [#]
Outer inferior	265.55 $\pm$ 11.08	261.33 $\pm$ 7.34	264.00 $\pm$ 11.46	256.66 $\pm$ 8.47	253.55 $\pm$ 8.42	0.012 [#]
Inner superior	261.64 $\pm$ 10.23	255.83 $\pm$ 8.41	261.30 $\pm$ 16.82	253.44 $\pm$ 12.84	247.77 $\pm$ 9.53	0.050
Outer superior	270.82 $\pm$ 10.94	264.08 $\pm$ 7.87	267.90 $\pm$ 12.10	261.77 $\pm$ 13.03	258.55 $\pm$ 7.98	0.012 [#]
Inner nasal	265.23 $\pm$ 11.74	262.33 $\pm$ 6.02	262.90 $\pm$ 7.95	259.77 $\pm$ 9.97	255.33 $\pm$ 7.12	0.068
Outer nasal	266.23 $\pm$ 10.04	262.50 $\pm$ 5.36	262.80 $\pm$ 7.36	260.66 $\pm$ 10.07	254.77 $\pm$ 6.64	0.018 [#]
Inner temporal	264.95 $\pm$ 11.12	258.92 $\pm$ 7.65	262.20 $\pm$ 11.96	258.22 $\pm$ 9.32	252.33 $\pm$ 3.60	0.017 [#]
Outer temporal	266.95 $\pm$ 10.34	260.58 $\pm$ 6.33	263.80 $\pm$ 12.70	258.25 $\pm$ 7.24	255.11 $\pm$ 3.44	0.018 [#]
Total volume	1.97 $\pm$ 0.05	1.97 $\pm$ 0.04	1.97 $\pm$ 0.05	1.83 $\pm$ 0.11	1.81 $\pm$ 0.03	0.012 [#]
RNFL thickness						
Global	46.04 $\pm$ 5.65	42.90 $\pm$ 3.41	45.90 $\pm$ 5.19	43.22 $\pm$ 3.30	41.00 $\pm$ 3.95	0.058
Inferior temporal	45.61 $\pm$ 5.08	39.60 $\pm$ 6.04	47.10 $\pm$ 11.29	41.33 $\pm$ 6.00	39.28 $\pm$ 5.93	0.075
Inferior nasal	45.70 $\pm$ 9.10	42.50 $\pm$ 5.56	45.80 $\pm$ 8.89	43.22 $\pm$ 6.75	41.85 $\pm$ 7.24	0.237
Superior temporal	48.48 $\pm$ 11.54	46.90 $\pm$ 11.58	47.10 $\pm$ 9.25	46.11 $\pm$ 10.70	41.42 $\pm$ 11.90	0.674
Superior nasal	45.42 $\pm$ 10.00	44.60 $\pm$ 5.54	42.50 $\pm$ 5.16	46.11 $\pm$ 8.78	42.85 $\pm$ 7.10	0.892
Nasal	44.09 $\pm$ 8.53	39.60 $\pm$ 6.60	44.70 $\pm$ 5.33	39.66 $\pm$ 7.41	37.14 $\pm$ 9.40	0.271
Temporal	43.35 $\pm$ 13.15	45.40 $\pm$ 4.45	47.40 $\pm$ 10.76	45.11 $\pm$ 4.37	43.85 $\pm$ 5.36	0.225
GCL thickness						
Central	20.27 $\pm$ 2.54	21.00 $\pm$ 2.86	19.80 $\pm$ 2.52	18.66 $\pm$ 3.24	16.11 $\pm$ 2.14	0.020 [#]
Inner inferior	28.06 $\pm$ 2.23	26.50 $\pm$ 3.06	25.80 $\pm$ 1.75	22.22 $\pm$ 6.88	24.44 $\pm$ 2.40	0.027
Outer inferior	27.89 $\pm$ 1.37	27.17 $\pm$ 1.89	26.70 $\pm$ 1.33	22.77 $\pm$ 7.99	26.00 $\pm$ 1.50	0.017 [#]
Inner superior	26.50 $\pm$ 1.89	24.17 $\pm$ 4.56	24.20 $\pm$ 3.99	22.22 $\pm$ 3.56	20.44 $\pm$ 3.43	0.028
Outer superior	26.27 $\pm$ 2.86	25.67 $\pm$ 3.28	26.10 $\pm$ 3.57	25.66 $\pm$ 1.93	24.33 $\pm$ 2.50	0.180
Inner nasal	24.68 $\pm$ 4.44	23.00 $\pm$ 4.30	24.60 $\pm$ 2.83	22.33 $\pm$ 3.77	20.89 $\pm$ 3.33	0.141
Outer nasal	25.45 $\pm$ 3.55	24.42 $\pm$ 3.23	26.40 $\pm$ 1.42	24.33 $\pm$ 3.77	24.11 $\pm$ 3.48	0.799
Inner temporal	24.23 $\pm$ 4.93	22.50 $\pm$ 3.45	22.20 $\pm$ 3.19	20.55 $\pm$ 5.41	19.78 $\pm$ 4.65	0.205
Outer temporal	26.50 $\pm$ 3.36	24.33 $\pm$ 2.70	25.20 $\pm$ 2.52	22.75 $\pm$ 5.59	22.33 $\pm$ 3.57	0.049
Total volume	0.18 $\pm$.01	0.17 $\pm$ 0.01	0.15 $\pm$ 0.01	0.13 $\pm$ 0.05	0.15 $\pm$ 0.01	0.026

Table S2. Left eye neuroretinal analysis using OCT in both microsphere models at week 8. Ms38/20: 38/20 microsphere model, Ms20/10: 20/10 microsphere model; RNFL: retina nerve fiber layer; GCL: ganglion cell layer complex; thickness in microns (μm); mean $\pm$ SD (SD: standard deviation); *: $p < 0.050$ statistical significance; #: $p < 0.020$ statistical significance with Bonferroni correction for multiple comparisons; w: week. Grey cells show the two thinnest sectors at every examination.

OCT parameters (μm)	Left eye					
	(Ms38/20)			(Ms20/10)		
	Baseline Mean $\pm$ SD	8 w Mean $\pm$ SD	p^*	BASELINE Mean $\pm$ SD	8 w Mean $\pm$ SD	p^*
Retinal thickness						
Central	274.81 $\pm$ 12.36	262.22 $\pm$ 13.35	0.051	279.25 $\pm$ 23.01	263.611 $\pm$ 32.95	0.050
Inner inferior	273.73 $\pm$ 8.91	258.22 $\pm$ 8.71	0.008 [#]	270.19 $\pm$ 9.64	255.61 $\pm$ 16.28	0.062
Outer inferior	268.64 $\pm$ 8.62	253.11 $\pm$ 8.97	0.056	265.63 $\pm$ 8.60	250.77 $\pm$ 13.31	0.058
Inner superior	262.36 $\pm$ 7.91	248.33 $\pm$ 8.60	0.021	261.56 $\pm$ 14.01	244.72 $\pm$ 24.70	0.050
Outer superior	272.82 $\pm$ 10.19	259.88 $\pm$ 9.70	0.008 [#]	266.37 $\pm$ 12.88	256.27 $\pm$ 19.34	0.091
Inner nasal	266.73 $\pm$ 10.57	255.66 $\pm$ 10.39	0.038	267.31 $\pm$ 11.74	363.94 $\pm$ 463.53	0.286
Outer nasal	267.64 $\pm$ 8.06	256.44 $\pm$ 9.68	0.011 [#]	265.56 $\pm$ 10.44	252.16 $\pm$ 15.05	0.029
Inner temporal	268.55 $\pm$ 9.49	251.44 $\pm$ 9.74	0.008 [#]	269.19 $\pm$ 11.64	250.22 $\pm$ 21.65	0.050
Outer temporal	269.82 $\pm$ 8.78	255.22 $\pm$ 9.35	0.008 [#]	268.38 $\pm$ 9.61	251.22 $\pm$ 13.88	0.018 [#]
Total volume	1.98 $\pm$ 0.02	1.80 $\pm$ 0.04	0.007 [#]	1.93 $\pm$ 0.07	1.79 $\pm$ 0.12	0.050
RNFL thickness						
Global	46.80 $\pm$ 6.10	40.55 $\pm$ 9.23	0.123	48.18 $\pm$ 6.01	39.94 $\pm$ 4.27	0.008 [#]
Inferior temporal	45.45 $\pm$ 4.86	40.66 $\pm$ 11.07	0.172	48.56 $\pm$ 9.74	40.88 $\pm$ 10.84	0.008 [#]
Inferior nasal	46.27 $\pm$ 8.61	47.88 $\pm$ 16.60	0.161	51.50 $\pm$ 10.69	46.27 $\pm$ 10.35	0.013 [#]
Superior temporal	49.10 $\pm$ 9.80	36.33 $\pm$ 9.39	0.018 [#]	47.31 $\pm$ 13.24	35.33 $\pm$ 17.99	0.041
Superior nasal	44.60 $\pm$ 9.61	38.00 $\pm$ 11.34	0.075	43.68 $\pm$ 13.36	31.61 $\pm$ 16.15	0.050
Nasal	44.64 $\pm$ 9.59	39.88 $\pm$ 12.63	0.235	48.44 $\pm$ 7.00	39.72 $\pm$ 6.30	0.015 [#]
Temporal	45.00 $\pm$ 15.89	41.33 $\pm$ 11.62	0.475	47.37 $\pm$ 14.39	41.44 $\pm$ 11.90	0.007 [#]
GCL thickness						
Central	20.40 $\pm$ 2.50	17.22 $\pm$ 3.49	0.018 [#]	20.80 $\pm$ 3.12	17.44 $\pm$ 4.40	0.040
Inner inferior	28.78 $\pm$ 1.20	25.22 $\pm$ 1.56	0.017 [#]	27.08 $\pm$ 2.53	24.89 $\pm$ 4.54	0.182
Outer inferior	28.30 $\pm$ 1.25	25.67 $\pm$ 1.93	0.020 [#]	26.55 $\pm$ 1.69	24.50 $\pm$ 3.14	0.042
Inner superior	26.90 $\pm$ 1.52	21.33 $\pm$ 2.23	0.017 [#]	25.47 $\pm$ 3.02	20.61 $\pm$ 4.88	0.059
Outer superior	27.00 $\pm$ 2.70	21.67 $\pm$ 2.29	0.011 [#]	26.20 $\pm$ 2.17	23.83 $\pm$ 5.45	0.233
Inner nasal	25.20 $\pm$ 3.93	21.11 $\pm$ 4.34	0.075	21.73 $\pm$ 3.34	22.72 $\pm$ 5.95	0.837
Outer nasal	25.80 $\pm$ 3.52	23.22 $\pm$ 3.66	0.249	23.20 $\pm$ 3.34	23.61 $\pm$ 5.19	0.634
Inner temporal	24.00 $\pm$ 5.20	21.89 $\pm$ 4.07	0.496	22.20 $\pm$ 4.14	20.17 $\pm$ 3.94	0.475
Outer temporal	26.40 $\pm$ 4.14	23.89 $\pm$ 4.07	0.360	24.73 $\pm$ 2.65	22.89 $\pm$ 4.18	0.183

Total volume	0.18 ± 0.01	0.16 ± 0.01	0.027	0.17 ± 0.01	0.15 ± 0.02	0.119
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Table S3. Right eye neuroretinal loss rate measured using OCT in the OHT models. EPI: episcleral sclerosis model; Ms38/20: 38/20 microsphere model; Ms20/10: 20/10 microsphere model; RNFL: retina nerve fiber layer; GCL: ganglion cell layer complex; RE: right eye; thickness in microns (μm); w: week. Grey cells show the lowest measurements.

Time	RE loss rate (μm)/mmHg/day (All sectors average)								
	RNFL			GCL			Retina		
	EPI	Ms38/20	Ms20/10	EPI	Ms38/20	Ms20/10	EPI	Ms38/20	Ms20/10
2 w	0.0743	−0.1595	−0.0454	0.0040	−0.0721	−0.0372	−0.0492	−0.2716	−0.0110
4 w	0.0438	0.0029	−0.0116	0	−0.0100	−0.0030	−0.0601	−0.0170	−0.0268
6 w	−0.0024	−0.0094	−0.0080	−0.0043	−0.0134	−0.0105	−0.0063	−0.0295	−0.0350
8 w	−0.0033	−0.0102	−0.0030	−0.009	−0.0072	−0.0059	−0.0095	−0.0221	−0.0145
Average	0.0281	−0.0440	−0.017	−0.0018	−0.0257	−0.0142	−0.0313	−0.0851	−0.021

Table S4. Right eye neuroretinal analysis follow-up using OCT in both OHT models. EPI: episcleral sclerosis model; Ms20/10: 20/10 microsphere model; RNFL: retina nerve fiber layer; GCL: ganglion cell layer complex; thickness in microns (μm); mean $\pm$ SD (SD: standard deviation); % Ch: percentage change in thickness loss; *: $p < 0.050$ statistical significance; #: $p < 0.020$ statistical significance with Bonferroni correction for multiple comparisons; w: week. Cells colored grey when EPI model showed thinner sectors and/or higher percentage loss compared to Ms20/10.

Right eye structural neuroretinal measurements according to oht models (epivsms20/10)														
OCT parameters (μm)	Baseline		2 w			4 w			6 w			8 w		
	Mean $\pm$ SD	p	Mean $\pm$ SD	% Ch	p	Mean $\pm$ SD	% Ch	p	Mean $\pm$ SD	% Ch	p	Mean $\pm$ SD	% Ch	p
Retinal thickness														
Central	273.80 $\pm$ 14.57	0.18	271.66 $\pm$ 12.22	-0.7 8	0.72	271.33 $\pm$ 21.38	-0.90	0.82	265.12 $\pm$ 19.04	-3.17	0.31	265.91 $\pm$ 14.79	-2.88	0.12
	266.69 $\pm$ 20.06	2	268.61 $\pm$ 21.20	0.72	7	265.95 $\pm$ 20.00	-0.27	7	259.76 $\pm$ 20.88	-2.59	5	258.10 $\pm$ 14.88	-3.22	3
Inner inferior	259.90 $\pm$ 17.17	0.97	261.66 $\pm$ 12.74	0.68	0.89	260.66 $\pm$ 4.50	0.29	0.72	261.68 $\pm$ 10.22	0.68	0.25	256.16 $\pm$ 9.18	-1.44	0.25
	261.46 $\pm$ 12.86	5	262.19 $\pm$ 9.99	0.27	6	260.19 $\pm$ 13.66	-0.48	6	257.66 $\pm$ 13.18	-1.45	6	251.78 $\pm$ 11.91	-3.70	6
Outer inferior	258.30 $\pm$ 13.59	0.78	243.33 $\pm$ 17.61	-5.8 0	0.07	244.33 $\pm$ 6.11	-5.41	0.08	259.08 $\pm$ 13.82	0.30	0.16	246.58 $\pm$ 10.57	-4.54	0.61
	258.62 $\pm$ 10.18	0	258.90 $\pm$ 8.70	0.10	3	255.29 $\pm$ 12.19	-1.28	0	252.14 $\pm$ 11.11	-2.50	4	248.68 $\pm$ 11.75	-3.84	2
Inner superior	256.70 $\pm$ 12.38	0.29	261.00 $\pm$ 7.21	1.68	0.18	244.00 $\pm$ 4.35	-4.95	0.48	254.96 $\pm$ 14.92	-0.68	0.04	255.00 $\pm$ 24.93	-0.66	0.31
	250.77 $\pm$ 12.89	1	252.60 $\pm$ 14.21	0.72	6	250.95 $\pm$ 15.77	0.07	5	246.38 $\pm$ 14.81	-1.75	9	245.72 $\pm$ 16.93	-2.01	9
Outer superior	267.40 $\pm$ 15.02	0.26	262.33 $\pm$ 6.50	-1.9 0	0.25	245.00 $\pm$ 9.53	-8.38	0.10	262.80 $\pm$ 15.22	-1.72	0.04	257.66 $\pm$ 18.63	-3.64	0.61
	260.23 $\pm$ 9.71	3	258.32 $\pm$ 11.24	-0.7 3	0	257.62 $\pm$ 13.51	-1.00	5	254.00 $\pm$ 13.93	-2.39	9	254.52 $\pm$ 19.25	-2.19	0
Inner nasal	258.10 $\pm$ 12.99	0.90	261.00 $\pm$ 8.18	1.12	0.51	250.00 $\pm$ 4.58	-3.14	0.27	255.40 $\pm$ 14.03	-1.05	0.31	256.00 $\pm$ 14.07	-0.81	0.52
	257.00 $\pm$ 10.73	1	256.71 $\pm$ 9.52	-0.1 1	2	257.48 $\pm$ 13.46	0.18	4	251.47 $\pm$ 12.83	-2.15	0	251.84 $\pm$ 12.02	-2.00	9
Outer nasal	261.22 $\pm$ 12.42	0.46	253.66 $\pm$ 2.51	-2.8 9	0.38	244.33 $\pm$ 6.65	-6.47	0.08	257.62 $\pm$ 10.87	-1.38	0.10	253.50 $\pm$ 15.90	-2.96	0.62
	258.15 $\pm$ 8.90	2	258.10 $\pm$ 9.78	-0.0 1	4	256.62 $\pm$ 13.72	-0.59	8	251.23 $\pm$ 14.09	-2.68	3	252.41 $\pm$ 11.75	-2.22	6
Inner temporal	261.00 $\pm$ 15.84	0.84	259.00 $\pm$ 3.60	-0.7 7	0.99	247.66 $\pm$ 4.61	-5.11	0.35	256.00 $\pm$ 16.79	-1.92	0.50	256.58 $\pm$ 29.11	-1.69	0.79
	259.15 $\pm$ 14.12	1	257.29 $\pm$ 11.25	-0.7 1	9	254.71 $\pm$ 14.14	-1.71	9	252.09 $\pm$ 14.89	-2.72	8	247.63 $\pm$ 13.63	-4.44	2
Outer temporal	261.80 $\pm$ 13.27	0.80	253.00 $\pm$ 2.64	-3.3 6	0.23	243.33 $\pm$ 7.50	-7.06	0.08	263.56 $\pm$ 19.89	0.67	0.08	258.58 $\pm$ 26.94	-1.23	0.57
		4		6	8			8			7			0

	291.77 ± 11.56		257.90 ± 10.31	−1.47		255.81 ± 12.46	−2.27		253.95 ± 13.09	−2.98		250.89 ± 14.55	−4.15	
Total volume	1.93 ± 0.09	0.418	1.82 ± 0.00	−5.70	0.003 [‡]	1.76 ± 0.05	−8.81	0.001 [‡]	1.83 ± 0.10	−5.18	0.204	1.81 ± 0.11	−6.22	0.597
	1.88 ± 0.10		1.92 ± 0.23	2.07		1.96 ± 0.07	3.78		1.80 ± 0.09	−4.68		1.74 ± 0.15	−7.86	
RNFL thickness														
Global	43.44 ± 2.69	0.267	47.66 ± 6.35	9.71	0.179	50.66 ± 7.76	16.64	0.148	42.96 ± 4.42	−1.10	0.311	41.45 ± 3.53	−4.58	0.367
	44.84 ± 3.64		43.70 ± 4.81	−2.55		44.05 ± 6.61	−1.77		43.50 ± 6.47	−3.00		43.44 ± 9.80	−3.13	
Inferior temporal	46.20 ± 5.13	0.732	46.00 ± 16.82	−0.43	0.615	42.66 ± 3.21	−7.64	0.631	45.40 ± 10.31	−1.73	0.721	40.36 ± 7.24	−12.64	0.072
	50.54 ± 13.31		51.50 ± 15.47	1.89		47.47 ± 14.95	−6.07		48.11 ± 15.02	−4.80		48.94 ± 16.42	−3.16	
Inferior nasal	45.20 ± 7.99	0.400	52.66 ± 5.77	16.50	0.437	48.66 ± 1.52	7.68	0.886	46.96 ± 8.76	3.89	0.786	45.45 ± 5.57	0.55	0.290
	49.15 ± 11.43		48.00 ± 17.56	−2.33		49.00 ± 14.78	−0.30		47.33 ± 11.14	−3.70		49.05	−0.20	
Superior temporal	44.89 ± 10.56	0.999	54.66 ± 9.23	21.76	0.027	62.66 ± 14.74	39.61	0.044	38.75 ± 15.03	−13.68	0.469	43.72 ± 11.84	−2.61	0.499
	42.46 ± 8.05		39.37 ± 10.58	−7.27		42.47 ± 10.99	0.02		42.61 ± 12.53	0.35		40.33 ± 13.88	−5.01	
Superior nasal	41.44 ± 4.06	0.947	44.66 ± 7.23	7.77	0.201	56.00 ± 20.07	35.14	0.150	33.36 ± 13.67	−19.50	0.107	36.00 ± 14.58	−13.13	0.719
	39.23 ± 13.08		36.75 ± 11.84	−6.32		39.47 ± 15.67	0.60		39.88 ± 15.05	1.65		35.88 ± 17.52	−8.54	
Nasal	39.30 ± 6.68	0.320	46.66 ± 5.03	18.73	0.119	43.66 ± 2.30	11.12	0.363	43.76 ± 7.82	11.35	0.004 [‡]	41.81 ± 3.40	6.39	0.215
	43.31 ± 9.18		39.35 ± 10.40	−9.14		40.42 ± 9.92	−6.67		38.33 ± 8.87	−11.49		39.94 ± 16.86	−7.78	
Temporal	42 ± 10.89	0.709	43.66 ± 8.02	3.98	0.464	53.00 ± 15.71	26.19	0.631	45.32 ± 10.50	7.90	0.482	41.18 ± 7.11	−1.95	0.170
	45.54 ± 6.72		47.20 ± 7.45	3.64		46.42 ± 7.64	1.93		46.44 ± 8.43	1.97		46.94 ± 13.43	3.07	
GCL thickness														
Central	20.50 ± 2.66	0.321	22.00 ± 3.00	7.32	0.040	20.66 ± 1.52	0.78	0.455	17.76 ± 3.19	−13.37	0.885	18.92 ± 3.47	−7.71	0.009 [‡]
	19.16 ± 3.48		18.52 ± 2.46	−3.35		19.61 ± 3.00	2.31		17.71 ± 3.13	−7.60		15.68 ± 2.23	−18.19	
Inner inferior	26.50 ± 3.78	0.877	24.00 ± 3.00	−9.43	0.309	25.66 ± 0.57	−3.17	0.560	23.48 ± 4.23	−11.40	0.548	26.25 ± 2.05	−0.94	0.001 [‡]
	26.44 ± 3.04		25.71 ± 2.17	−2.76		26.33 ± 1.65	−0.41		24.42 ± 2.87	−7.63		22.21 ± 4.32	−15.99	

Outer inferior	27.40 ± 1.67	0.59 6	26.00 ± 2.64	-5.1 1	0.62 7	24.66 ± 2.08	-10.0 0	0.17 0	24.48 ± 4.31	-10.6 6	0.69 7	26.25 ± 3.59	-4.20 7	0.27 6
	26.25 ± 2.25		25.43 ± 2.73	-3.1 2		26.57 ± 2.18	1.21		25.66 ± 2.30	-2.24		22.74 ± 5.68	-13.3 7	
Inner superior	26.17 ± 2.63	0.57 0	26.33 ± 2.30	0.61	0.11 9	23.00 ± 1.73	-12.1 1	0.50 8	22.84 ± 3.28	-12.7 2	0.38 0	22.42 ± 4.18	-14.3 3	0.07 9
	25.25 ± 2.17		22.80 ± 3.59	-9.7 0		23.80 ± 3.40	-5.74		21.71 ± 3.73	-14.0 1		20.06 ± 3.88	-20.5 5	
Outer superior	25.50 ± 3.93	0.66 9	26.33 ± 2.30	3.25	0.52 4	23.00 ± 3.46	-9.80	0.18 6	25.04 ± 2.74	-1.80	0.41 7	23.50 ± 3.89	-7.84	0.75 4
	26.33 ± 2.27		25.37 ± 1.89	-3.6 4		25.57 ± 2.27	-2.88		24.80 ± 2.69	-5.81		22.71 ± 5.12	-13.7 4	
Inner nasal	23.83 ± 4.35	0.70 6	24.00 ± 1.00	0.71	0.23 5	20.66 ± 4.04	-13.3 0	0.23 3	21.88 ± 4.98	-8.18	0.72 3	23.50 ± 1.78	-1.38	0.03 4
	23.25 ± 2.83		21.95 ± 3.41	-5.5 9		22.61 ± 3.35	-2.75		21.71 ± 4.06	-6.62		20.21 ± 4.45	-13.0 7	
Outer nasal	23.67 ± 4.13	0.18 2	26.33 ± 0.57	11.2 4	0.12 9	24.00 ± 3.00	1.39	0.62 6	23.79 ± 5.25	0.51	0.29 9	25.50 ± 1.62	7.73	0.14 0
	25.75 ± 2.05		23.60 ± 3.88	-8.3 4		24.71 ± 2.55	-4.03		23.19 ± 4.30	-9.94		22.76 ± 5.19	-11.6 1	
Inner temporal	21.67 ± 5.50	0.96 3	23.33 ± 2.51	7.66	0.27 1	23.33 ± 2.88	7.66	0.56 6	21.40 ± 4.76	-1.25	0.20 7	23.50 ± 4.70	8.44	0.01 8 [‡]
	21.83 ± 5.00		21.10 ± 3.41	-3.3 4		22.71 ± 3.75	4.03		20.00 ± 3.80	-8.38		19.68 ± 3.74	-9.84	
Outer temporal	25.17 ± 3.97	0.92 5	24.66 ± 2.51	-1.9 9	0.82 6	24.66 ± 2.88	-2.03	0.62 8	24.64 ± 4.56	-2.11	0.08 3	25.42 ± 3.47	0.99	0.14 7
	24.75 ± 3.74		23.76 ± 3.72	-4.0 0		24.95 ± 3.33	0.80		23.19 ± 3.85	-6.30		23.26 ± 4.70	-6.02	
Total volume	0.17 ± 0.02	0.94 2	0.17 ± 0.00	0.00	0.36 3	0.16 ± 0.01	-5.88	0.67 0	0.13 ± 0.07	-23.5 3	0.78 7	0.15 ± 0.04	-11.7 6	0.07 6
	0.17 ± 0.02		0.16 ± 0.01	-5.5 5		0.17 ± 0.01	-1.67		0.15 ± 0.03	-13.2 4		0.14 ± 0.02	-19.0 2	