

## Supplement

Center	Number of Patients	Device type
Bangkok, Thailand	25	Cirrus
Barcelona, Spain	13	Cirrus and Spectralis
Belo Horizonte, Brazil	57	Spectralis
Berlin, Germany	76	Spectralis
Düsseldorf, Germany	11	Spectralis
Goyang, Korea	50	Topcon
Isfahan, Iran	40	Spectralis
Istanbul, Turkey	8	Cirrus
Lyon, France	8	Spectralis
Mangalore, India	40	Spectralis
Maracaibo, Venezuela	3	Spectralis
Michigan, USA	5	Spectralis
Milan, Italy	30	Spectralis
Munich, Germany	11	Spectralis
New York City, USA	6	Cirrus and Spectralis
Odense, Denmark	9	Spectralis
Oxford, United Kingdom	48	Spectralis
Petah Tikva, Israel	25	Cirrus
Sao Paulo, Brazil	9	Spectralis
Seattle, USA	30	Cirrus
Strasbourg, France	25	Spectralis
<b>Total</b>	<b>539</b>	

**Table 1: Participating centers with number of patients included in this study and the devices used for the OCT imaging**

	HC	AQP4-IgG	MOG-IgG	AQP4-IgG vs HC			AQP4-IgG vs MOG-IgG			MOG-IgG vs HC		
				B	SE	p	B	SE	p	B	SE	p
Number of eyes	148	317	55									
mRNFL $\mu\text{m}$ (mean $\pm$ SD)	17.42 $\pm$ 2.33	17.59 $\pm$ 2.22	17.56 $\pm$ 2.60	-1.39	0.27	<0.001	-0.45	0.41	0.262	-1.58	0.42	<0.001
GCIP $\mu\text{m}$ (mean $\pm$ SD)	66.30 $\pm$ 19.47	64.81 $\pm$ 21.53	64.76 $\pm$ 17.87	-20.62	2.24	<0.001	-4.52	4.01	0.261	-22.67	2.43	<0.001
INL $\mu\text{m}$ (mean $\pm$ SD)	40.98 $\pm$ 6.55	39.54 $\pm$ 6.04	41.02 $\pm$ 7.18	-0.75	0.71	0.295	-3.19	1.19	0.007	0.36	1.11	0.746
OPL $\mu\text{m}$ (mean $\pm$ SD)	27.24 $\pm$ 6.86	27.08 $\pm$ 7.72	27.12 $\pm$ 7.26	-1.18	0.98	0.226	-1.39	1.32	0.293	-0.74	1.41	0.601
ONL $\mu\text{m}$ (mean $\pm$ SD)	78.61 $\pm$ 11.37	77.85 $\pm$ 11.83	79.10 $\pm$ 13.98	2.91	1.43	0.043	-0.66	2.43	0.787	4.18	2.36	0.079
OPNL $\mu\text{m}$ (mean $\pm$ SD)	105.86 $\pm$ 9.15	104.93 $\pm$ 9.35	106.22 $\pm$ 11.86	1.81	1.07	0.091	-1.34	2.05	0.514	3.00	1.61	0.064
PR $\mu\text{m}$ (mean $\pm$ SD)	87.89 $\pm$ 3.51	87.82 $\pm$ 3.71	88.41 $\pm$ 3.05	-0.54	0.42	0.203	-0.24	0.75	0.750	0.03	0.60	0.953
RT $\mu\text{m}$ (mean $\pm$ SD)	318.50 $\pm$ 23.80	314.70 $\pm$ 25.27	318.12 $\pm$ 25.86	-20.80	2.73	<0.001	-10.37	4.72	0.030	-24.46	3.52	<0.001

**Table 2: 3mm Study - Cross-sectional OCT results (Spectralis devices only).** Abbreviations: mRNFL, macular retinal nerve fiber layer; GCIP, ganglion cell and inner plexiform layer; INL, inner nuclear layer; OPL, outer plexiform layer; ONL, outer nuclear layer; OPNL, outer plexiform and nuclear layer; PR, photoreceptor

layer; RT, total retinal thickness; HC, healthy control, AQP4-IgG, aquaporin-4 immunoglobulin G; MOG-IgG, myelin oligodendrocyte glycoprotein immunoglobulin-G.

	HC	AQP4-IgG	MOG-IgG	AQP4-IgG vs HC			AQP4-IgG vs MOG-IgG			MOG-IgG vs HC		
				B	SE	p	B	SE	p	B	SE	p
Number of eyes	148	317	55									
mRNFL $\mu\text{m}$ (mean $\pm$ SD)	13.38 $\pm$ 1.57	13.09 $\pm$ 1.48	13.03 $\pm$ 1.55	-0.05	0.18	0.758	0.12	0.27	0.648	-0.53	0.21	0.012
GCIP $\mu\text{m}$ (mean $\pm$ SD)	32.43 $\pm$ 10.68	25.13 $\pm$ 10.45	24.93 $\pm$ 9.28	-6.97	1.22	<0.001	-1.59	1.97	0.420	-7.23	1.50	<0.001
INL $\mu\text{m}$ (mean $\pm$ SD)	18.95 $\pm$ 5.36	18.93 $\pm$ 4.77	19.66 $\pm$ 4.76	-0.53	0.57	0.353	-1.51	0.95	0.114	0.43	0.75	0.567
OPL $\mu\text{m}$ (mean $\pm$ SD)	20.99 $\pm$ 5.14	20.49 $\pm$ 5.49	19.90 $\pm$ 4.60	-1.30	0.64	0.044	-0.92	0.99	0.334	-1.64	0.73	0.002
ONL $\mu\text{m}$ (mean $\pm$ SD)	88.66 $\pm$ 8.67	89.45 $\pm$ 10.25	90.73 $\pm$ 14.31	0.64	1.23	0.600	-1.71	2.33	0.463	1.65	1.66	0.321
OPNL $\mu\text{m}$ (mean $\pm$ SD)	109.74 $\pm$ 9.23	109.94 $\pm$ 10.26	110.63 $\pm$ 14.57	-0.72	1.15	0.530	-2.69	2.19	0.221	-0.19	1.58	0.904
PR $\mu\text{m}$ (mean $\pm$ SD)	94.31 $\pm$ 2.95	93.53 $\pm$ 3.37	93.66 $\pm$ 3.20	-0.63	0.39	0.106	-0.06	0.69	0.934	-0.43	0.46	0.348
RT $\mu\text{m}$ (mean $\pm$ SD)	268.70 $\pm$ 23.45	260.55 $\pm$ 20.91	261.76 $\pm$ 23.82	-9.21	2.40	<0.001	-6.09	4.06	0.135	-8.99	3.11	<0.001

**Table 3: Imm Study - Cross-sectional OCT results (Spectralis devices only).** Abbreviations: mRNFL, macular retinal nerve fiber layer; GCIP, ganglion cell and inner plexiform layer; INL, inner nuclear layer; OPL, outer plexiform layer; ONL, outer nuclear layer; OPNL, outer plexiform and nuclear layer; PR, photoreceptor layer; RT, total retinal thickness; HC, healthy control, AQP4-IgG, aquaporin-4 immunoglobulin G; MOG-IgG, myelin oligodendrocyte glycoprotein immunoglobulin-G.

	AQP4-ON	AQP4-NON	AQP4-ON vs. AQP4-NON			AQP4-ON vs HC			AQP4-NON vs HC		
			B	SE	p	B	SE	p	B	SE	p
Number of eyes	232	85									
mRNFL $\mu\text{m}$ (mean $\pm$ SD)	17.20 $\pm$ 2.44	18.32 $\pm$ 2.83	-1.09	0.31	<0.001	-1.64	0.30	<0.001	-0.71	0.45	0.116
GCIP $\mu\text{m}$ (mean $\pm$ SD)	59.33 $\pm$ 16.21	76.21 $\pm$ 15.98	-21.67	2.69	<0.001	-27.35	2.34	<0.001	-1.00	2.24	0.655

<b>INL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	42.12 $\pm$ 6.98	38.68 $\pm$ 7.20	0.75	0.95	0.433	0.07	0.76	0.923	-1.26	1.33	0.348
<b>OPL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	27.08 $\pm$ 7.41	27.21 $\pm$ 7.12	0.47	1.09	0.662	-0.61	1.04	0.562	-1.59	1.56	0.313
<b>ONL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	83.28 $\pm$ 12.43	70.32 $\pm$ 13.22	3.52	1.89	0.066	3.70	1.62	0.024	-0.01	2.09	0.995
<b>OPNL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	110.35 $\pm$ 10.22	97.53 $\pm$ 10.4	3.88	1.57	0.141	3.02	1.22	0.014	-1.17	1.60	0.469
<b>PR <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	88.67 $\pm$ 2.90	87.84 $\pm$ 3.34	0.91	0.63	0.148	-0.40	0.47	0.391	-1.49	0.61	0.170
<b>RT <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	317.90 $\pm$ 22.87	318.58 $\pm$ 31.96	-16.88	3.51	<0.001	-25.27	2.98	<0.001	-6.15	4.07	0.134

**Table 4: 3mm Study - Cross-sectional AQP4-ON vs AQP4-NON OCT results (Spectralis devices only).**

Abbreviations: mRNFL, macular retinal nerve fiber layer; GCIP, ganglion cell and inner plexiform layer; INL, inner nuclear layer; OPL, outer plexiform layer; ONL, outer nuclear layer; OPNL, outer plexiform and nuclear layer; PR, photoreceptor layer; RT, total retinal thickness; HC, healthy control, AQP4-IgG, aquaporin-4 immunoglobulin G; MOG-IgG, myelin oligodendrocyte glycoprotein immunoglobulin-G.

	AQP4-ON	AQP4-NON	AQP4-ON vs. AQP4-NON			AQP4-ON vs. HC			AQP4-NON vs HC		
			B	SE	p	B	SE	p	B	SE	p
<b>Number of eyes</b>	232	85									
<b>mRNFL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	13.10 $\pm$ 1.54	13.05 $\pm$ 1.36	-0.05	0.22	<0.001	0.06	0.20	0.764	-0.33	0.20	0.135
<b>GCIP <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	22.45 $\pm$ 9.56	30.79 $\pm$ 10.11	-6.91	1.49	<0.001	-7.86	1.30	<0.001	-2.58	1.64	0.116
<b>INL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	18.99 $\pm$ 5.06	18.99 $\pm$ 5.06	0.24	0.77	0.756	0.30	0.62	0.625	-1.62	0.81	0.047
<b>OPL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	21.30 $\pm$ 5.75	21.30 $\pm$ 5.75	-1.38	0.83	0.100	-1.54	0.69	0.027	-0.60	0.87	0.494
<b>ONL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	87.96 $\pm$ 8.81	87.96 $\pm$ 8.81	3.41	1.77	0.056	1.76	1.38	0.204	-0.98	1.49	0.513
<b>OPNL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	109.26 $\pm$ 9.12	109.26 $\pm$ 9.12	-3.94	3.25	0.227	0.21	1.30	0.872	-1.76	1.45	0.225
<b>PR <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	93.93 $\pm$ 3.07	93.39 $\pm$ 3.07	0.45	0.56	0.427	-0.67	0.43	0.118	-0.75	0.50	0.132
<b>RT <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	265.42 $\pm$ 21.79	265.42 $\pm$ 21.79	-3.95	3.25	0.227	-8.21	2.65	0.002	-7.58	3.37	0.025

**Table 5. 1mm Study - Cross-sectional AQP4-ON vs AQP4-NON OCT results (Spectralis devices only).**

Abbreviations: mRNFL, macular retinal nerve fiber layer; GCIP, ganglion cell and inner plexiform layer; INL, inner nuclear layer; OPL, outer plexiform layer; ONL, outer nuclear layer; OPNL, outer plexiform and nuclear layer; PR, photoreceptor layer; RT, total retinal thickness; HC, healthy control, AQP4-IgG, aquaporin-4 immunoglobulin G; MOG-IgG, myelin oligodendrocyte glycoprotein immunoglobulin-G.

	MOG-ON	MOG-NON	MOG-ON vs. MOG-NON			MOG-ON vs. HC			MOG-NON vs HC		
			B	SE	p	B	SE	p	B	SE	p
<b>Number of eyes</b>	43	12									
<b>mRNFL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	13.15 $\pm$ 1.51	12.79 $\pm$ 1.65	-0.15	0.44	0.729	0.62	0.25	0.013	-0.36	0.30	0.237
<b>GCIP <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	22.40 $\pm$ 7.43	30.26 $\pm$ 10.65	-12.20	2.49	<0.001	-11.84	1.69	<0.001	-0.64	2.22	0.773
<b>INL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	20.05 $\pm$ 4.50	18.84 $\pm$ 5.30	0.05	1.14	0.968	0.35	0.90	0.384	0.42	1.14	0.711
<b>OPL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	19.82 $\pm$ 4.78	20.05 $\pm$ 4.30	-2.00	1.28	0.127	-2.51	0.87	0.004	-0.15	1.09	0.887
<b>ONL <math>\mu\text{m}</math> (mean<math>\pm</math>SD)</b>	95.38 $\pm$ 10.69	80.95 $\pm$ 16.23	17.53	3.44	<0.001	5.73	1.69	0.001	-6.46	2.35	0.007

OPNL $\mu\text{m}$ (mean $\pm$ SD)	115.20 $\pm$ 11.64	101.00 $\pm$ 15.67	15.86	2.06	<0.001	3.03	1.69	0.075	-6.21	2.28	0.007
PR $\mu\text{m}$ (mean $\pm$ SD)	93.85 $\pm$ 2.70	93.26 $\pm$ 4.12	1.72	0.90	0.063	-0.14	0.52	0.793	-0.96	0.73	0.191
RT $\mu\text{m}$ (mean $\pm$ SD)	264.52 $\pm$ 19.08	255.95 $\pm$ 31.41	5.35	5.66	0.352	-10.04	3.56	0.005	-7.76	4.89	0.114

**Table 6. 1mm Study - Cross-sectional MOG ON vs MOG-NON OCT results (Spectralis devices)**

Abbreviations: mRNFL, macular retinal nerve fiber layer; GCIP, ganglion cell and inner plexiform layer; INL, inner nuclear layer; OPL, outer plexiform layer; ONL, outer nuclear layer; OPNL, outer plexiform and nuclear layer; PR, photoreceptor layer; RT, total retinal thickness; HC, healthy control, AQP4-IgG, aquaporin-4 immunoglobulin G; MOG-IgG, myelin oligodendrocyte glycoprotein immunoglobulin-G; ON, optic neuritis; NON, non-optic neuritis.

	Cirrus		Topcon	
	AQP4-IgG	MOG-IgG	AQP4-IgG	MOG-IgG
Number of eyes	47	5	36	8
mRNFL $\mu\text{m}$ (mean $\pm$ SD)	25.40 $\pm$ 6.82	23.16 $\pm$ 3.94	25.37 $\pm$ 5.30	28.05 $\pm$ 5.85
GCIP $\mu\text{m}$ (mean $\pm$ SD)	65.98 $\pm$ 11.14	68.00 $\pm$ 6.39	65.61 $\pm$ 10.94	67.28 $\pm$ 10.46
INL $\mu\text{m}$ (mean $\pm$ SD)	42.01 $\pm$ 3.54	44.72 $\pm$ 3.92	38.45 $\pm$ 2.69	38.73 $\pm$ 0.97
OPL $\mu\text{m}$ (mean $\pm$ SD)	24.13 $\pm$ 1.86	26.10 $\pm$ 2.55	26.22 $\pm$ 1.46	27.07 $\pm$ 1.10
ONL $\mu\text{m}$ (mean $\pm$ SD)	64.30 $\pm$ 6.01	65.82 $\pm$ 9.67	56.51 $\pm$ 5.35	65.79 $\pm$ 9.02
PR $\mu\text{m}$ (mean $\pm$ SD)	78.32 $\pm$ 2.36	79.25 $\pm$ 2.11	83.34 $\pm$ 2.13	86.68 $\pm$ 3.40
RT $\mu\text{m}$ (mean $\pm$ SD)	300.14 $\pm$ 18.63	307.06 $\pm$ 18.29	295.51 $\pm$ 13.78	313.60 $\pm$ 10.57

**Table 7. 5mm Study - Cross-sectional OCT results (Topcon and Cirrus devices)** Abbreviations: mRNFL, macular retinal nerve fiber layer; GCIP, ganglion cell and inner plexiform layer; INL, inner nuclear layer; OPL, outer plexiform layer; ONL, outer nuclear layer; PR, photoreceptor layer; RT, total retinal thickness; HC, healthy control, AQP4-IgG, aquaporin-4 immunoglobulin G; MOG-IgG, myelin oligodendrocyte glycoprotein immunoglobulin-G.