

**Supplementary Table S1.** The change in peripapillary RNFL thickness in patients with and without previous optic neuritis.

	Baseline	Follow-up	<i>P</i> value*
RNFL in patients with previous ON (n=18) ( $\mu\text{m}$ )	80.4 $\pm$ 15.3	79.1 $\pm$ 15.8	<b>0.01</b>
RNFL in patients without previous ON (n=13) ( $\mu\text{m}$ )	89.1 $\pm$ 9.9	88.1 $\pm$ 9.6	0.13

Abbreviations: ON, optic neuritis; RNFL, retinal nerve fiber layer.

Data are expressed as mean  $\pm$  SD.

\* Paired samples t-test

**Supplementary Table S2.** Study parameters at baseline and follow-up in patients receiving fingolimod compared to interferon-beta.

		Patients receiving fingolimod (n=13)	Patients receiving interferon-beta (n=10)	P value
CNFD (no./mm <sup>2</sup> )	Baseline	29.3 ± 4.8	24.9 ± 9.9	0.18*
	Follow-up	26.1 ± 7.2	24.3 ± 5.9	0.55*
	Change	-1.6 (-7.3 – 1.0)	0.4 (-8.3 – 5.2)	0.41†
CNBD (no./mm <sup>2</sup> )	Baseline	41.9 ± 21.7	31.6 ± 16.6	0.23*
	Follow-up	33.2 ± 15.0	31.0 ± 16.6	0.74*
	Change	-8.9 (-22.4 – 7.8)	-5.4 (-8.5 – 5.2)	0.52†
CNFL (mm/mm <sup>2</sup> )	Baseline	16.6 ± 3.1	15.4 ± 3.5	0.41*
	Follow-up	15.2 ± 2.6	14.4 ± 3.0	0.49*
	Change	-1.3 (-3.0 – -0.6)	-1.0 (-3.1 – -0.1)	0.61†
CTBD (no./mm <sup>2</sup> )	Baseline	58.6 ± 28.9	49.9 ± 19.5	0.43*
	Follow-up	49.6 ± 19.2	46.1 ± 20.8	0.68*
	Change	-2.1 (-20.8 – 5.7)	-11.2 (-15.3 – 12.0)	>0.99†
CNFA (µm <sup>2</sup> /mm <sup>2</sup> )	Baseline	7330.7 ± 1328.7	7040.0 ± 1352.5	0.61*
	Follow-up	6361.5 ± 2121.9	5560.0 ± 1572.1	0.33*
	Change	-600.0 (-2050.0 – 250.0)	-1800.0 (-2625.0 – -575.0)	0.26†
CNFW (µm)	Baseline	22.5 ± 1.3	21.9 ± 1.4	0.25*
	Follow-up	21.3 ± 1.2	20.8 ± 0.8	0.24*
	Change	-0.8 (-1.4 – -0.3)	-0.9 (-2.5 – 0.7)	0.83†
DC density (no./mm <sup>2</sup> )	Baseline	29.0 (3.5 – 61.7)	15.9 (11.3 – 36.2)	0.74†
	Follow-up	75.3 (13.2 – 111.6)	21.7 (4.7 – 55.4)	0.23†
	Change	44.3 (0 – 81.2)	-4.2 (-20.3 – 11.3)	<b>0.04</b> †
RNFL (µm)	Baseline	82.8 ± 10.6	90.3 ± 12.7	0.14*
	Follow-up	81.3 ± 11.6	89.7 ± 12.4	0.11*
	Change	-2.0 (-3.0 - 0)	0 (-0.8 – 1.0)	0.23†
EDSS	Baseline	3.0 (2.5 – 3.5)	2.5 (2.0 – 3.5)	0.34†
	Follow-up	3.5 (2.8 – 4.0)	2.5 (2.0 – 3.6)	0.17†
	Change	0.5 (0 – 0.5)	0.3 (0 – 0.5)	0.38†
MSSS	Baseline	4.7 ± 1.8	4.4 ± 1.9	0.68*
	Follow-up	4.7 ± 1.7	4.0 ± 1.7	0.34*
	Change	0 (-0.6 – 0.2)	-0.3 (-0.6 – -0.1)	0.38†

Abbreviations: CNFD, corneal nerve fiber density; CNBD, corneal nerve branch density; CNFL, corneal nerve fiber length; CTBD, corneal total branch density; CNFA, corneal nerve fiber area; CNFW, corneal nerve fiber width; DC, dendritic cell; RNFL, retinal nerve fiber layer; EDSS, Expanded Disability Status Scale; MSSS, Multiple Sclerosis Severity Score.

Data are expressed as mean  $\pm$  SD for CNFD, CNBD, CNFL, CTBD, CNFA, CNFW, RNFL and MSSS, and median (interquartile range) for DC density, EDSS and change in the parameters.

\* Independent samples t-test, † Mann Whitney U-test.