

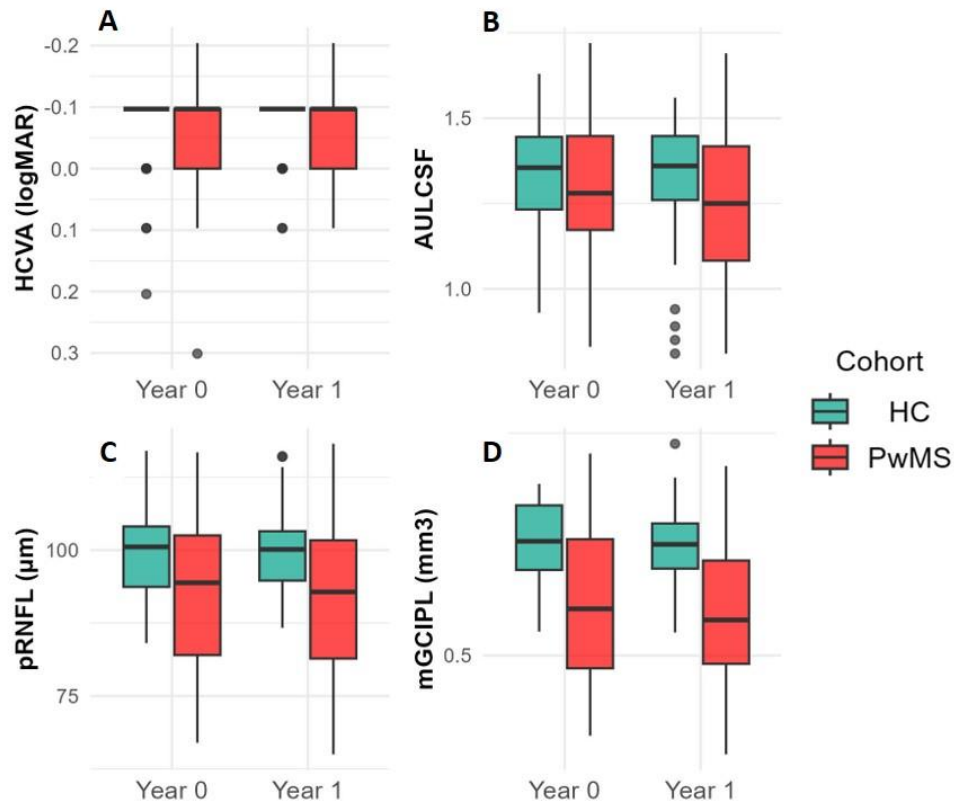
OCT-based Retina Assessment Reflects Visual Impairment in Multiple Sclerosis

Supplementary Materials

	HC n = 290 eyes	PwMS			<i>p-value</i> HC vs total PwMS	<i>p-value</i> PwMS without vs with history of ON
		Total n = 313 eyes	No history of ON n = 204 eyes	History of ON n = 108 eyes		
mGCIPL – CO (μm)	35.4 [33.4; 37.41]	32.27 [30.41; 34.13]	33.97 [31.99; 35.95]	29.41 [27.07; 31.74]	0.027*	< 0.001*
mGCIPL – N1 (μm)	85.84 [83.6; 88.07]	75.55 [73.47; 77.63]	79.16 [76.56; 81.75]	68.5 [65.09; 71.9]	< 0.001*	< 0.001*
mGCIPL – N2 (μm)	100.48 [98.34; 102.61]	88.71 [86.72; 90.7]	92.52 [89.99; 95.05]	80.24 [76.89; 83.59]	< 0.001*	< 0.001*
mGCIPL – S1 (μm)	94.21 [92.11; 96.32]	83.71 [81.74; 85.67]	87.64 [85.16; 90.11]	75.72 [72.5; 78.92]	< 0.001*	< 0.001*
mGCIPL – S2 (μm)	95.31 [93.41; 97.21]	86.36 [84.59; 88.13]	89.61 [87.41; 91.81]	78.91 [76.03; 81.79]	< 0.001*	< 0.001*
mGCIPL – T1 (μm)	84.9 [82.84; 86.95]	76.02 [74.11; 77.93]	80.1 [77.71; 82.5]	67.65 [64.6; 70.71]	< 0.001*	< 0.001*
mGCIPL – T2 (μm)	95.43 [93.41; 97.44]	86.51 [84.63; 88.39]	90.77 [88.37; 93.17]	77.68 [74.53; 80.83]	< 0.001*	< 0.001*
mGCIPL – I1 (μm)	92.54 [90.4; 94.68]	82.05 [80.06; 84.05]	86 [83.48; 88.52]	74.07 [70.78; 77.35]	< 0.001*	< 0.001*
mGCIPL – I2 (μm)	96.14 [94.17; 98.12]	86.62 [84.77; 88.46]	90.28 [87.99; 92.57]	78.34 [75.31; 81.36]	< 0.001*	< 0.001*

mINL – CO (μm)	21.71 [20.71; 22.71]	22.21 [21.28; 23.14]	22.32 [21.23; 23.41]	22.68 [21.32; 24.03]	0.843	0.617
mINL – N1 (μm)	41.95 [40.86; 43.04]	42.26 [41.25; 43.28]	42.34 [41.18; 43.5]	42.95 [41.48; 44.42]	0.843	0.498
mINL – N2 (μm)	46.26 [45.49; 47.02]	47.92 [47.2; 48.64]	47.74 [46.86; 48.63]	48.6 [47.46; 49.74]	0.011*	0.349
mINL – S1 (μm)	44.45 [43.63; 45.28]	44.64 [43.87; 45.41]	44.66 [43.78; 45.54]	45.39 [44.3; 46.47]	0.843	0.349
mINL – S2 (μm)	44.6 [43.89; 45.32]	46.02 [45.36; 46.69]	45.81 [45; 46.62]	46.59 [45.57; 47.6]	0.016*	0.349
mINL – T1 (μm)	40.03 [39.17; 40.89]	39.42 [38.62; 40.22]	39.43 [38.52; 40.34]	39.86 [38.76; 40.97]	0.708	0.498
mINL – T2 (μm)	43.77 [43.06; 44.49]	44.07 [43.4; 44.73]	43.84 [43.05; 44.63]	44.81 [43.86; 45.77]	0.843	0.184
mINL – I1 (μm)	44.07 [43.25; 44.9]	44.04 [43.28; 44.81]	44.25 [43.4; 45.11]	44.73 [43.66; 45.79]	0.959	0.498
mINL – I2 (μm)	44.34 [43.6; 45.07]	45.92 [45.24; 46.61]	45.64 [44.83; 46.46]	46.86 [45.84; 47.89]	0.011*	0.184

Supplementary Table 1: Supplementary data on sectoral macular layer thicknesses. Ocular characteristics: data by eyes, for visit at baseline and at the one-year follow-up visit. Data as adjusted mean with a 95% confidence interval from linear mixed effect models adjusted for center effect, age and sex with the subject as random effect to adjust for inter-eye dependencies. T-test for group comparison. mGCIPL = macular Ganglion Cell – Inner Plexiform Layer, mINL = Macular Inner Nuclear Layer, CO = Central subfield (1 mm around the fovea), N1,N2 = Nasal sectors (3 mm ring and 6 mm ring), S1,S2 = Superior sectors (3 mm ring and 6 mm ring), T1,T2 = Temporal sectors (3 mm ring and 6 mm ring), I1,I2 = Inferior sectors (3 mm ring and 6 mm ring). * p-value < 0.05 (False Discovery Rate adjusted p-values).



Supplementary Figure 1: One-year evolution of HCVA, AULCSF, pRNFL, and mGCIPL in HC eyes ($n = 54$) and PwMS eyes ($n = 42$). Boxplots with whiskers. The line inside the boxplot represents the median. HCVA = High contrast visual acuity, AULCSF = Area under the log CSF (contrast sensitivity function), pRNFL = peripapillary Retinal Nerve Fiber Layer, mGCIPL = macular Ganglion Cell – Inner Plexiform Layer.