**eTable 1**. Annualized change of retinal layers thicknesses in RRMS converters to SPMS before conversion compared to RRMS non-converters (controls) excluding eyes with history of optic neuritis (10 eyes from the converters and 6 eyes from non-converters).

|  |  |  |  |
| --- | --- | --- | --- |
| **Annualized**  **change, mean (SD)**  p value **\***  (within-group testing for annualized change being different than 0) | **MS Subtype**  (Total n = 61; converters = 21,  non-converters = 40)  Excluding ON eyes (total 16 eyes) | | **Difference in annualized changes between groups****a**  p value \* |
| **Non-converters**  **(n = 40)** | **Converters**  **(n = 21)** |
| **pRNFL** (µm/year) | -0.53 (0.16)  0.001 \* | -1.02 (0.27)  p<0.0001 \* | -0.48 (0.25)  0.055 |
| **tRNFL** (µm/year) | -0.6 (0.12)  0.005 \* | -2.82 (0.31)  p<0.0001 \* | -2.21 (0.28)  p<0.0001 \* |
| **GCIPL** (µm/year) | -0.18 (0.1)  0.091 | -1.06 (0.16)    p<0.0001 \* | -0.88 (0.13)  p<0.0001 \* |
| **INL** (µm/year) | -0.07 (0.04)  0.105 | -0.15 (0.07)  0.053 | -0.08 (0.07)  0.284 |
| **MV** (mm3/year) | -0.01 (0.007)  0.063 | -0.04 (0.01)  0.003 \* | -0.02 (0.01)  0.044 |

a Mixed-effects regression, controlling for age, sex, disease duration at first visit, and current DMT, with random intercepts for patient and eye, and random slope for time of follow up.

\* Statistically significant with a p-value < 0.01 after Bonferroni adjustment for multiple comparisons.

**eTable 2.** The progression of clinical measures in converters (until diagnosis of SPMS) and non-converters (until last EDSS visit).

|  |  |  |  |
| --- | --- | --- | --- |
| **Clinical measures** | **Converters**  **(n = 21)** | **Non-converters**  **(n = 40)** | **p-value** \* |
| EDSS progression (%) | 16 (76%) | 5 (12.5%) | < 0.0001\* |
| 25-FWT increase by ≥ 20%  No. (%) | 12 (57%) | 4 (10%) | < 0.0001\* |
| SDMT decrease by ≥ 20%  No. (%) | 6 (29%) | 5 (13%) | 0.12 |
| 9-HPT increase by ≥ 20%  No. (%)  N = 39 in non-converters | 2 (10%) | 1 (3%) | 0.238 |
| New MRI lesions  No. (%) | 16 (76%) | 30 (75%) | 0.918 |
| New gad-enhancing MRI lesions  No. (%) | 4 (19%) | 11 (28%) | 0.466 |

\* Statistically significant with a p-value < 0.05.