**Table 3. Comparative analyses of the variables under study**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **RRMS**  (n=62) | **PMS**  (n=13) | *Sign.* | **NEDA-3**  (n=62) | **EDA-3**  (n=13) | *Sign.* |
| **Demographic characteristics** |  |  |  |  |  |  |
| Age (years), mean (SD) | 40.48 (9.8) | 49.46 (9.98) | *p=*0.004 | 42.59 (9.73) | 39.5 (13.3) | *p*=0.26 |
| **Clinical characteristics** |  |  |  |  |  |  |
| Disease duration (years), mean (SD) | 9.4 (6.24) | 18.07 (10.33) | *p=*0.001 | 11.15 (7.49) | 10.2 (9.69) | *p*=0.3 |
| EDSS, mean (SD) | 3.14 (0.98) | 5.07 (0.53) | *p=*0.001 | 3.39 (1.21) | 3.88 (0.89) | *p*=0.08 |
| **MRI measures** |  |  |  |  |  |  |
| FLAIR lesions volume (ml), median, IQR | 6.33  (3.56–13.45) | 17.13  (6.98–25.85) | *p*=0.017  U=518.5 | 7.07  (3.23–3.95) | 10.31  (5.44–18.06) | p=0.17  U=291.5 |
| FLAIR lesions volume change (ml), median, IQR | 0.03  (-0.08- 0.28) | 0.15  (-0.01–0.38) | *p*= 0.421  U=331.5 | 0.02  (-0.08–0.24) | 0.39  (0.03–0.72) | *p*=0.06  U=173 |
| FLAIR lesions enlarging, median (ml), IQR | 0.25  (0.08–0.53) | 0.39  (0.18–0.95) | *p* =0.253  U=335.5 | 0.25  (0.08–0.53) | 0.42  (0.11–0.85) | *p*=0.33  U=210 |
| T1 hypointense lesions volume (ml), median, IQR | 4.12  (2.11–8.35) | 12.56  (3.62–20.29) | p=0,026  U=470,0 | 4.36  (2.07–9.55) | 5.35  (2.7–12.31) | *p*=0.34  U=292 |
| T1 hypointense lesions volume change (ml), median, IQR | 0.05  (-0.09–0.26) | 0.25  (-0.01–0.71) | *p*=0.066  U=387.5 | 0.05  (-0.09–0.26) | 0.26  (0.06–0.5) | *p*=0.06  U=172.5 |
| T1 hypointense lesions new (ml), median, IQR | 0.01  (0.00–0.04) | 0.02  (0.01–0.06) | *p*=0.171  U=319.5 | 0.01  (0–0.04) | 0.02  (0.01–0.12) | *p*=0.13  U=180.5 |
| T1 hypointense lesions enlarging (ml), median, IQR | 0.21  (0.08–0.46) | 0.63  (0.11–1) | *p*=0.059  U=390.0 | 0.27  (0.07–0.05) | 0.41  (0.1–0.8) | *p*=0.37  U=223.5 |
| WB volume (ml), median, IQR | 1530  (1458–1570) | 1435  (1403–1501) | *p*=0,003  U=180,5 | 1515  (1444.3–1565.8) | 1492  (1439.5–1535.5) | *p*=0.43  U=444 |
| WB volume normative percentile, median, IQR | 13.7  (1.0–38.5) | 3.2  (1.18–7.3) | *p*=0.073  U=261.0 | 10.2  (1.16–38.27) | 3.9  (1.1–23.37) | *p*=0.33  U=424 |
| WB annualized volume change (ml), median, IQR | -0.13  (-0.36–0.03) | -0.52  (-0.71– -0.04) | *p*=0.048  U=204.0 | -0.19  (-0.4–0.05) | -0.32  (-0.56–0.09) | *p*=0.26  U=340.5 |
| WB normal annualised volume change (ml), median, IQR | -0.19  (-0.22– -0.15) | -0.22  (-0.28 - -0.18) | *p*=0.043  U=201.5 | -0.2  (-0,24– -0.15) | -0.2  (-0.23– -0.15) | *p*=0.95  U=277.5 |
| GM volume (ml), median, IQR | 906  (858.3–940) | 85  3 (807– 909.5) | *p*=0.008  U=207.5 | 902.5  (849.3–931.5) | 904  (839–942) | *p*=0.99  U=390.5 |
| GM volume normative percentile, median, IQR | 21.4  (8.75–50) | 14.0  (2.68–32.2) | *p*=0.227  U=311.5 | 22.2  (6.6–49.25) | 14.0  (5.45–31.3) | *p*=0.39  U= 456.5 |
| GM annual volume change (ml), median, IQR | -0.3  (-0.66–0.25) | -0.27  (-1.01– 0.18) | *p*=0.535  U=288.5 | -0.18  (-0.74–0.28) | -0.4  (-0.84– -0.27) | *p*=0.26  U=347.5 |
| GM normal annual volume change (ml), median, IQR | -0.3  (-0.32– -0.29) | -0.31  (-0.33– -0.29) | *p*=0.472  U=283.0 | -0.3  (-0.33– -0.29) | -0.3  (-0.32– -0.29) | *p*=0.55  U= 253.5 |
| Periventricular lesions volume (ml), median, IQR | 5.1  (2.09–12.29) | 15.92  (6.16– 26.89) | *p*=0.008  U=500.5 | 5.67  (1.6–13.33) | 9.53  (4.8–16.89) | *p*=0.09  U=251.5 |
| Juxtacortical lesions volume (ml), median, IQR | 0.2  (0.08–0.41) | 0.40  (0.2–0.59) | *p*=0.074  U=447.0 | 0,24  (0.1–0.47) | 0.25  (0.12–0.48) | *p*=0.80  U=341.5 |
| Infratentorial lesions volume (ml), median, IQR | 0.01  (0.0–0.07) | 0.04  (0.002–0.1) | *p*=0.285  U=386.5 | 0.01  (0–0.07) | 0.05  (0.01–0.17) | *p*=0.17  U=262.5 |
| Deep white matter lesions volume (ml), median, IQR | 0.25  (0.29–0.9) | 0.51  (0.24–0.84) | *p*=0.889  U=321.5 | 0.53  (0.22–0.9) | 0.52  (0.37–0.85) | *p*=0.63  U=321 |
| **OCT measures** |  |  |  |  |  |  |
| pRNFL (µm), median, IQR | 92.8  (84.5–104.7) | 85.97  (81.5–90.43) | *p*=0.11  U=171.0 | 92.56  (84.49– 104.33) | 89.86  (82.16–89.86) | *p*=0.73  U´=322 |
| GCC (µm), median, IQR | 85.74  (78.39–92.7) | 79.29  (71.75–86.8) | *p*=0.09  U=168 | 85.33  (78.38–93.2) | 81.3  (75.8–89.3) | *p*=0.19  U=378 |

*EDSS – Expanded Disability Status Scale, FLAIR – Fluid-attenuated inversion recovery, GCC – ganglion cell complex, OCT – optical coherence tomography, pRNFL – peripapillary retinal nerve fibre layer, WB – Whole Brain Volume,*

*bold values \* – Correlation is significant at the 0.05 level (2-tailed), \*\* – Correlation is significant at the 0.01 level (2-tailed).*

**Table 4. Multivariate linear regression analyses: T1-lesion volume change regressed on demographic variables, disease duration, EDSS, RNFL and GCC**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Beta** | **F** | **Adjusted R2** |
| **Model 1** |  | **4.328\*** | 0.11 |
| Age | **0.31\*** |  |  |
| Gender | 0.16 |  |  |
| **Model 2** |  | 2.370 | 0.09 |
| Age | 0.26 |  |  |
| Gender | 0.16 |  |  |
| Disease duration | 0.13 |  |  |
| EDSS | -0.03 |  |  |
| **Model 3** |  | **4.015\*\*** | 0.24 |
| Age | **0.30\*** |  |  |
| Gender | 0.20 |  |  |
| Disease duration | 0.06 |  |  |
| EDSS | -0.19 |  |  |
| pRNFL | **-0.38\*\*** |  |  |
| GCC | **-0.31\*** |  |  |

*\*p<0.05; \*\*p<0.01; EDSS – Expanded Disability Status Scale; pRNFL – Peripapillary Retinal Nerve Fibre Layer; GCC – Ganglion Cell Layer*