|  |  |
| --- | --- |
|  | Linear regression with interaction effects of diagnosis and ON history corrected for GCIPL |
| MS vs. NMOSD | ON- vs. ON+ | GCIPL (mm3) | NMOSD x ON |  |  |
| [B (SE)] | [p] | [B (SE)] | [p] | [B (SE)] | [p] | [B (SE)] | [p] | [$R\_{Marg}^{2}$] | [$R\_{Cond}^{2}$] |
| Major Pit Flat Disk Length (mm) | 0.0018 (0.0009) | **0.045** | -5.3e-6 (0.0004) | 0.989 | -0.0031 (0.0011) | **0.007** | 0.0026 (0.0008) | **0.003** | 0.221 | 0.868 |
| Minor Pit Flat Disk Length (mm) | 0.0016 (0.0007) | **0.023** | -0.0001 (0.0003) | 0.763 | -0.0025 (0.0009) | **0.014** | 0.0015 (0.0007) | **0.032** | 0.201 | 0.848 |
| Average Slope Disk Diameter (mm) | 0.095 (0.035) | **0.014** | 0.007 (0.010) | 0.596 | 0.008 (0.029) | 0.773 | 0.052 (0.020) | **0.014** | 0.116 | 0.955 |
| Slope Disk Area (mm2) | 0.102 (0.042) | **0.033** | 0.010 (0.011) | 0.475 | 0.003 (0.034) | 0.925 | 0.053 (0.023) | **0.033** | 0.096 | 0.957 |
| Minor Slope Disk Length (mm) | 0.017 (0.006) | **0.017** | 0.001 (0.002) | 0.728 | -2.6e-4 (0.006) | 0.964 | 0.008 (0.004) | 0.081 | 0.111 | 0.941 |
|  | Linear regression with interaction effects of diagnosis and ON history corrected for INL |
| MS vs. NMOSD | ON- vs. ON+ | INL (mm3) | NMOSD x ON |  |  |
| [B (SE)] | [p] | [B (SE)] | [p] | [B (SE)] | [p] | [B (SE)] | [p] | [$R\_{Marg}^{2}$] | [$R\_{Cond}^{2}$] |
| Major Pit Flat Disk Length (mm) | 0.0022 (0.0009) | **0.029** | 0.0003 (0.0004) | 0.662 | 0.0082 (0.0044) | 0.108 | 0.0028 (0.0008) | **0.003** | 0.198 | 0.862 |
| Minor Pit Flat Disk Length (mm) | 0.0020 (0.0007) | **0.019** | 0.0001 (0.0003) | 0.892 | 0.0054 (0.0035) | 0.209 | 0.0017 (0.0007) | **0.028** | 0.185 | 0.835 |
| Average Slope Disk Diameter (mm) | 0.091 (0.036) | **0.017** | 0.007 (0.009) | 0.525 | -0.085 (0.135) | 0.525 | 0.053 (0.020) | **0.015** | 0.116 | 0.956 |
| Slope Disk Area (mm2) | 0.100 (0.042) | **0.029** | 0.010 (0.011) | 0.449 | -0.052 (0.158) | 0.742 | 0.054 (0.023) | **0.029** | 0.096 | 0.958 |
| Minor Slope Disk Length (mm) | 0.017 (0.006) | **0.037** | 0.001 (0.002) | 0.695 | -0.001 (0.026) | 0.975 | 0.008 (0.004) | 0.085 | 0.111 | 0.941 |
|  | Linear regression with interaction effects of diagnosis and ON history corrected for pRNFL |
| MS vs. NMOSD | ON- vs. ON+ | pRNFL (µm) | NMOSD x ON |  |  |
| [B (SE)] | [p] | [B (SE)] | [p] | [B (SE)] | [p] | [B (SE)] | [p] | [$R\_{Marg}^{2}$] | [$R\_{Cond}^{2}$] |
| Pit Flat Disk Area (mm2) | 0.011 (0.005) | **0.024** | -0.001 (0.002) | 0.697 | -2.7e-4 (8.7e-5) | **0.004** | 0.010 (0.004) | **0.029** | 0.221 | 0.867 |
| Average Pit Flat Disk Diameter (mm) | 0.032(0.011) | **0.005** | -0.001 (0.005) | 0.874 | -5.5e-4 (1.9e-4) | **0.005** | 0.020 (0.010) | 0.053 | 0.229 | 0.892 |
| Inner Rim Volume (mm3) | -0.012 (0.004) | **0.013** | -0.001 (0.001) | 0.340 | 5.8e-5 (5.8e-5) | 0.340 | -0.006 (0.003) | **0.035** | 0.145 | 0.941 |
| Major Slope Disk Length (mm) | 0.017 (0.008) | 0.050 | 0.002 (0.002) | 0.354 | 9e-6 (8.8e-5) | 0.918 | 0.010 (0.004) | **0.039** | 0.083 | 0.962 |
| Major Pit Flat Disk Length (mm) | 0.0019 (0.0009) | **0.032** | -0.0001 (0.0004) | 0.815 | -5e-5 (1.6e-5) | **0.004** | 0.0022 (0.0008) | **0.012** | 0.224 | 0.873 |
| Minor Pit Flat Disk Length (mm) | 0.0018 (0.0007) | **0.014** | -0.0002 (0.0003) | 0.598 | -4.1e-5 (1.3e-5) | **0.004** | 0.0012 (0.0007) | 0.094 | 0.210 | 0.858 |
| Average Slope Disk Diameter (mm) | 0.094 (0.035) | **0.016** | 0.007 (0.010) | 0.572 | 1.6e-4 (4.3e-4) | 0.711 | 0.053 (0.020) | **0.016** | 0.116 | 0.955 |
| Slope Disk Area (mm2) | 0.102 (0.042) | **0.037** | 0.009 (0.012) | 0.535 | -5.9e-5(0.001) | 0.906 | 0.051 (0.024) | 0.050 | 0.096 | 0.958 |
| Minor Slope Disk Length (mm) | 0.017 (0.006) | **0.017** | 0.001(0.002) | 0.799 | -2.2e-5 (8.7e-5) | 0.799 | 0.008 (0.004) | 0.115 | 0.110 | 0.942 |

**Table e-3:** Linear regression results for the foveal shape analysis parameters with AUC≥0.7 corrected for GCIPL and INL (except the four selected parameters) and pRNFL.

Abbreviations: NMOSD = patients with neuromyelitis optica spectrum disorders; MS = patients with multiple sclerosis; vs = versus; ON = optic neuritis; ON- = eyes without a history of ON; ON+ = eyes with a history of ON; GCIPL = combined macular ganglion cell and inner plexiform layer volume; INL = inner nuclear layer volume; pRNFL = peripapillary retinal nerve fiber layer thickness; NMOSD x ON = interaction effect of diagnosis and ON; B = estimate; SE = standard error of B, p = p-value; R2Marg = marginal R-squared, R2Cond = conditional R-Squared. Significant p-values are marked in bold.