Supplement

Saßmannshausen et al. “Structure-Function Analysis in Patients with Intermediate Age-related Macular Degeneration”

Supplemental Figure 1

Supplemental Figure 1 shows the comparison of corrected retinal thickness in central versus peripheral stimulus points. The boxes indicate the interquartile range (IQR) with the median. The whiskers are at the 1.5 IQR and the black circles represent the outliers.
Supplemental Figure 2

A. Controls
   Inner Retina - R PEDC Thickness
   Slope: 1.236, p < 0.001

B. Patients
   Inner Retina - R PEDC Thickness
   Slope: 0.021, p > 0.328

C. Controls
   ONL - R PEDC Thickness
   Slope: 1.62, p < 0.001

D. Patients
   ONL - R PEDC Thickness
   Slope: 0.231, p < 0.001

E. Controls
   Photoreceptors - R PEDC Thickness
   Slope: 1.00, p < 0.001

F. Patients
   Photoreceptors - R PEDC Thickness
   Slope: 0.951, p < 0.001

G. Controls
   PR-Segments - R PEDC Thickness
   Slope: -0.00, p = 0.989

H. Patients
   PR-Segments - R PEDC Thickness
   Slope: -0.171, p < 0.001
Supplemental Figure 2 demonstrates the correlation of RPEDC thickness to Inner Retina, ONL, Photoreceptors and PR-Segments thickness in controls (left column) and patients (right column).
Odds Ratio Analysis

Out of the overall 1960 test stimuli and for each retinal layer separately, only the test points with a localized change in retinal thickness by > 2 SD were selected (Table 1). The highest number was found for RPEDC thickening (n = 290) and PR thickening (n = 270), followed by Total Retina thickening (n = 120), PR-Segments thinning (n = 98) and ONL thinning (n = 100). Only 27 test locations were identified for thinning > 2 SD for the Inner Retina. The odds ratios for a localized reduction of both mesopic and scotopic sensitives by 5 dB or 10 dB at these locations with thickness changes > 2 SD were significant for all layers (except for the Inner retina at a reduction of 5 dB in scotopic function, p=0.0735), ranging between 2.4 to 27.8. They were always higher for a reduction by 10 dB as compared to 5 dB (except for PR thickening and RPEDC thickening and mesopic function).

Table 1

<table>
<thead>
<tr>
<th>Retinal Layer</th>
<th>Total number of points at thickness change &gt; 2 SD</th>
<th>Reduction</th>
<th>Odds-Ratio</th>
<th>95% confidence level</th>
<th>Number of points</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Retina</td>
<td>120</td>
<td>5 dB</td>
<td>6.8</td>
<td>4.2-11.3</td>
<td>26</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Inner Retina</td>
<td>27</td>
<td>5 dB</td>
<td>8.7</td>
<td>4.1-17.5</td>
<td>8</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>PR-Segments</td>
<td>100</td>
<td>5 dB</td>
<td>8.8</td>
<td>5.3-14.6</td>
<td>20</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>OPL Thinning</td>
<td>15</td>
<td>5 dB</td>
<td>10.4</td>
<td>5.2-33.8</td>
<td>9</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>ONL Thinning</td>
<td>100</td>
<td>5 dB</td>
<td>10.4</td>
<td>5.2-33.8</td>
<td>9</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>RPEDC Thinning</td>
<td>270</td>
<td>5 dB</td>
<td>6.2</td>
<td>4.1-9.5</td>
<td>47</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Inner Retina</td>
<td>27</td>
<td>10 dB</td>
<td>9.2</td>
<td>4.6-17.8</td>
<td>15</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>PR-Segments</td>
<td>100</td>
<td>10 dB</td>
<td>10.4</td>
<td>5.2-33.8</td>
<td>9</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Supplemental table 1 demonstrates the odds ratios and corresponding p-values for a reduction of 5 and 10 dB of scotopic and mesopic testing and simultaneous RPEDC and PR thickening as well as ONL, PR-Segments and Inner Retina thinning > 2SD.