History of Hyperacuity Deviation Maps

**Title:** Patient name, ID, tested eye

**Maps:** Up to four Hyperacuity Deviation Maps are displayed: The “current map” (identical to the one displayed in the main page) and up to three maps of preceding tests. The maps are ordered from earliest on the left to the most current on the right. If there are less than four maps, the remaining maps will be denoted as “N/A”.

**History Tracking of Test Parameters**

2. **P-Value**
   This chart is similar to the one shown on the Examination History chart on Page 1 – Test Results. There are slight differences: only three color ranges, a slightly different symbol for the baseline, and the Normal range is accompanied by a vertical layer next to it on the vertical axis. The vertical axis has a truly logarithmic scale.

3. **Total Area**
   Displays the progression, in time, of the level areas of all clusters in the test. The area is calculated in square degrees.

   **Legend:** Displays Area 1 (up) to Area 6 samples. The legend displays only clusters that appear in the Hyperacuity Deviation Map.

4. **Total Integrated Intensity**
   Total volume in map. Displays the progression, in time, of the integrated intensity over all clusters in the test.
1. **Hyperacuity Deviation Map**

This is a plot of all visual field hyperacuity abnormalities. The cross in the center represents the fixation point (which is not necessarily the fovea). This map may contain zero, one, or more areas of high hyperacuity disturbance level(s). These areas reflect some degree of retinal abnormality that may be due to Drusen, CNV, atrophy or others. A metamorphopsia scale legend is provided; darker colors correspond to larger disturbances.

2. **Hyperacuity Defect Clusters**

During analysis, the analysis engine defines areas that are suspected as being related to AMD progression. Such areas are called Hyperacuity Defect Clusters. These areas (if any are found) are marked on the map, and the three largest ones are also described in a table. The table lists the following properties for each Hyperacuity Defect Cluster:

   a. **Cluster Number** – Presented from largest to smallest.
   b. **Parameters** –
      i. **Consistency:** A value indicating the intentional of the abnormal response in the region. The higher the value, the higher the likelihood that this abnormality was caused by a genuine visual field defect.
      ii. **Area (sq.deg.):** Total area of all clusters in map. Presented in square degrees (14º x 14º map).
      iii. **Integrated Intensity:** Total volume of the defect clusters on map. (Think of this as a topographical map and the volume of its clusters).
   c. **Estimated Location** – Anatomical location of the defect cluster on the retina.

3. **Results**

The result section represents the average deviation of the patient's overall field compared to a normal reference. If the deviation is significantly outside the population norms, a “p” value is given. For example, if p < 2%, this means that fewer than 2% of the normal population shows a hyperacuity defect larger than that found in this test.

   - **Test Reliability:** The test is reliable only if both indices are reliable. When at least one of the indices is unreliable, the test is to be considered unreliable.
   - **Baseline examination:** Indicates whether a baseline examination (a within normal limits and reliable test) exist(s).
   - **Reliability indices:** These indices determine the reliability of the report’s result. There are two indices:
      i. **False Negative Error** – this index indicates the level of reliability using the test result and the frequency with which the patient fails to respond to stimuli expected to be visible.
      ii. **False Positive Error** – this index indicates the level of reliability using the test result and the frequency with which the patient responds to distortions that could not have been seen.

Each of the above indices can be either Reliable or Unreliable, as indicated using a bar chart for each index. This bar chart also provides a measure for the level of reliability. If the black triangle indicator points to the blue part of the bar, then the index is Reliable. If it points to the black part, it is Unreliable.

4. **Examination History**

This feature helps to track and monitor patient results over time. Once a baseline examination is performed (marked with two concentric circles), the patient disease monitoring has begun. Each test is marked on this graph in terms of result, p-value, and reliability.

5. **Comments**

This section includes a recommendation of next steps in patient management. It is based on the test results and baseline protocol.

6. **Additional Test Result**

   - **P-Value:** Average deviation of the patient’s field compared to a normal reference.
   - **No. of Clusters:** The max number of clusters presented on the hyperacuity deviation cluster table.
   - **Total Area (sq deg):** Total area of all clusters in map.
   - **Test Score:** Based on the analysis of the patient’s responses as they relate to the presented signal. Translates to the P-value, which compares the patient to the population.