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**Abstract Title:** **Reliability Parameters and Corrective Mechanisms During Self Testing With a New Home Macular Perimeter (HMP) for Monitoring Visual Field Changes in Intermediate AMD Patients**

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**Purpose:** The Home Macular Perimetry (HMP) is a home perimeter that monitors the visual field of intermediate AMD patients. Its capacity to detect visual field changes depends on the patient's ability to produce reliable tests. A set of Pre-, During- and Post-test mechanisms were thus embedded in HMP's operation. *Pre-test* mechanisms included training and calibration. Successful performance indicated that the patient is able to perform reliable tests. *During-test* mechanisms ensured that patients maintain their ability to produce reliable tests. In *Post-test* mechanisms a classifier determined if a series of tests satisfied the minimal requirements for patient reliability. The objective of the study is to describe and estimate the performance of mechanisms used to ensure reliable operation in repeated usage of HMP.

**Methods:** Tests done repeatedly at home were evaluated to determine if the patient produced a cohort of reliable tests that could serve as a baseline for monitoring for visual field changes.

**Results:** *Pre test* mechanisms: Of 66 eyes from 64 patients, 62 (94%) successfully completed training and calibration. *During test* mechanisms included: Spatial adaptation of stimulus amplitude was applied in 19/77 tests (25%); Projection of wake up stimuli- 693/1283 tests (addition of 2.4%±2.6% signals in 54 % of the tests) ; Filtration of unintentional responses - 798/1283 tests (5.2%±6.1% responses in 62% of the tests); Filtration of multimarking responses- 289/1283 tests (3.67%±4.24% responses in 23% of the tests); Addition of attended but unmarked responses- 29/1283 tests (2.5%±2% responses in 2% of the tests); *Post test analysis* : 34 of 37 patients (92%) were classified as reliable.

**Conclusions:** With the aid of Pre- and During-test mechanisms, most intermediate AMD patients were qualified by Post-test analysis as reliable patients, and could thus rely on HMP for monitoring their macular visual field.

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