Improved experience for children and adults in visual field testing

This optometry device uses a technique that is more natural for the patient than current gold standard visual field tests for diagnosing ophthalmologic conditions, resulting in more comfortable experience for patients and thus accessible to a wider patient group, including young children.

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<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
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<td>No need to maintain constant central fixation; measures patient’s natural eye responses to stimuli</td>
<td>Less demanding test for the patient; accessible to a wider range of patients</td>
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<td>No physical constraints (does not require use of a chin and headrest)</td>
<td>An improved and more comfortable patient experience</td>
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<td>Software-based luminance innovation for stimulus presentation</td>
<td>Device is smaller in size than projector based, current gold standard devices</td>
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<td>Patient responses to seeing stimuli can be identified faster than tests which use push button response</td>
<td>The test has the potential to be faster than the format of current visual field tests</td>
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<td>Less patient concentration and skill required</td>
<td>Technology has child mode for use in children</td>
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The Challenge
The measurement of visual field defects is used to diagnose various ophthalmologic conditions, from glaucoma to brain tumours, and in age groups ranging from small children to the elderly. However, there are several issues with current visual field tests that include a lack of patient compliance and inaccurate test results due to incorrect patient responses.

Technology
The technology developed by researchers at the University of Edinburgh overcomes the patient compliance issues observed with current devices by avoiding the need for uncomfortable head restraints and a requirement to gaze at one location for prolonged periods. The child mode contains animations to keep the interest of the child on the screen and uses their natural eye movement in response to the animation stimuli to measure their visual field.

Exemplification Data
The device was tested with glaucoma patients in a clinical study and in comparison to the current gold standard and which have shown encouraging results. Visual field defects were also correctly identified by the test in the eyes of children with suspected visual field defects.

Applications
- Device for measuring visual field defects
- Device for glaucoma diagnosis and monitoring

IP Status
A patent has been granted in key territories (including US, UK, Germany, France, Japan)

Development Status
Phase I trial data / Phase 1b / II trial data

Publications

Commercial Offering
Commercial licence and/or collaborative research

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Sally Mardikian
Telephone: +44 (0)131 651 4081
Email: Sally.Mardikian@ed.ac.uk

www.research-innovation.ed.ac.uk