

Study Spotlight: SITA Faster development and clinical evaluation



Seeing beyond

SITA Faster was 30% shorter than SITA Fast and 53.5% shorter than SITA Standard. SITA Fast gave almost identical 24-2 test results, all three tests had similar test-retest variability.

Source



Title

A New SITA Perimetric Threshold Testing Algorithm: Construction and a Multicenter Clinical Study



Authors

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Publication

Am J Ophthalmol 2019;198:154-165
DOI: 10.1016/j.ajo.2018.10.010

Methodology & Setup

Seven modifications were made to SITA Fast to produce SITA Faster

1. The number of stimuli is reduced by starting the test sequence at the age-corrected normal threshold
2. Uses only one Staircase test sequence per primary point instead of two
3. Utilizes updated visual field models based on SITA Fast normal values for improved efficiency
4. No second maximum intensity stimulus for rechecking blind points
5. No False Negative Catch Trials
6. No Blind Spot Catch Trials, uses gaze tracking as an objective measure of patient fixation
7. Removes a 300-ms delay after unseen stimuli

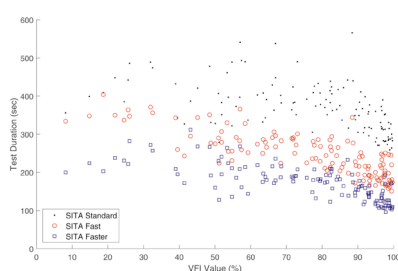
Clinical comparison of 24-2 tests of SITA Faster with SITA Fast and SITA Standard

- Study enrolled 125 patients of different ethnicities, between 20 and 82 years of age with various stages and types of primary open-angle glaucoma (POAG) who had prior experience with HFA SITA tests
- Study was conducted at five clinical centers with renowned glaucoma expertise in Europe, Asia and America
- Test times vs stage of glaucoma were recorded and compared for SITA Standard, SITA Fast and SITA Faster
- Global parameters (Mean Deviation (MD) and Visual Field Index (VFI)) and Total and Pattern Deviation probability maps were also analyzed for differences and agreement
- Test-retest variability was assessed across the full range of threshold values

Results & Observations

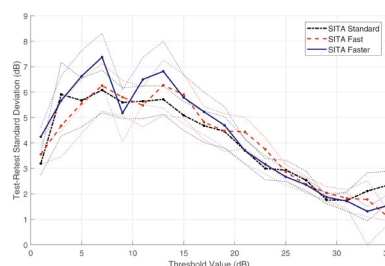
Test times

- SITA Faster test times were shorter than SITA Fast and SITA Standard across the entire range of threshold values
- SITA Faster averages 30.4% shorter test times than SITA Fast and 53.5% shorter test times than SITA Standard



Test-retest variability

- Very similar test-retest results especially in early-moderate disease
- Overlapping confidence limits over the whole range of threshold values



Differences in visual field parameters

- There were no statistically significant differences for MD among the three test algorithms in this study
- Overall, summary parameters and the number of depressed test point locations in probability maps agreed between SITA Fast and SITA Faster, indicating that reference database-driven results for SITA Faster are effective and can be used interchangeably with SITA Fast

Discussion

- SITA Faster can effectively replace SITA Fast, enabling more frequent perimetric testing for earlier detection of progressive visual field loss in glaucoma
- The number of false positive responses were higher for SITA Faster compared to SITA Fast, but not significantly so, for patients with glaucoma or glaucoma suspects SITA Faster, SITA Fast, and SITA Standard had similar test-retest variability over the entire range of threshold values
- Patients with severe glaucoma especially noticed the shorter test duration of SITA Faster