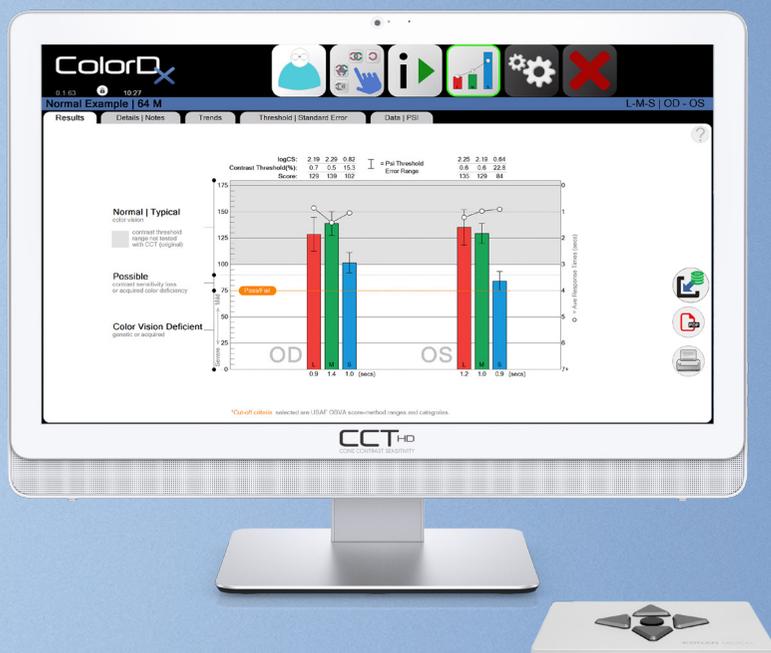


# KONAN<sup>®</sup> MEDICAL

See what you've been missing<sup>™</sup>



**ColorDx**<sup>®</sup>  
COLOR VISION DIAGNOSTICS

**CCT**<sup>™</sup> HD

ColorDx CCT-HD is the state-of-the-art device for assessing color vision deficiencies in high-definition.

Contemporary eye care includes qualitative and quantitative assessment of this important measure of visual pathway function.

FDA Listed





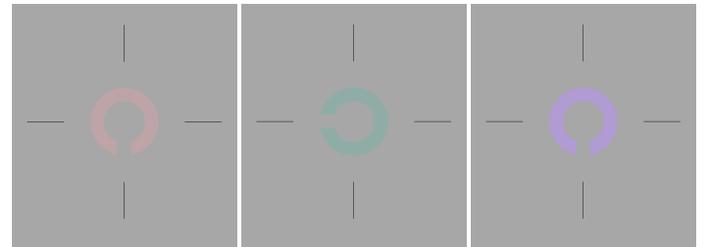
**U.S. AIR FORCE**

*Developed by Konan Medical in collaboration with the United States Air Force School of Aerospace Medicine OBVA (Operational Based Vision Assessment laboratory) under CRADA, CCT-HD represents the new gold standard for color vision diagnostics.*

CCT-HD expands on the strengths of the original cone contrast test (CCT), but is built from the ground up on an entirely new architecture, revealing new information about human color vision performance.

### Key Features:

- Cone-Isolation methodology
- "Landolt C" based test strategies
- Simple to use 4-button response pad
- Robust thresholding and standard error
- Konan custom-calibrated IPS display technology
- Rapid, intuitive, staged calibration
- Expanded low-contrast range testing
- High fidelity cone-contrast granularity
- Expansive illustrated reporting
- Auto trends analysis
- Contrast Sensitivity (achromatic) with auto AUC calculation
- Landolt C high contrast acuity
- CPT Code 92283



A rotated Landolt C is used to assess L (Red), M (Green) and S (Blue) cone cell function. The 4 response options are simply UP, DOWN, LEFT OR RIGHT.



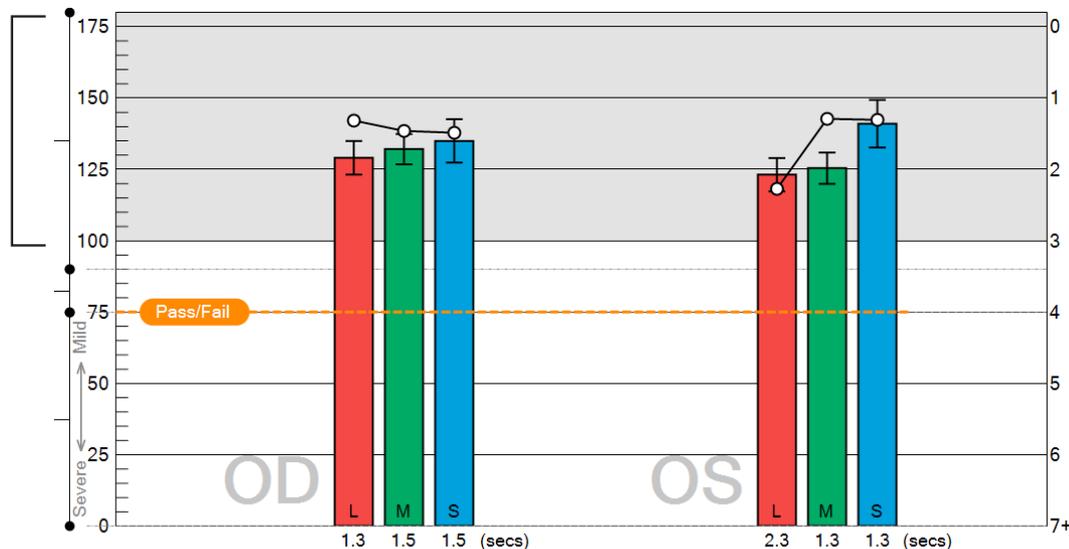
Konan's 4-button USB response pad makes test administration easy.

## Clinical Benefits of Diagnostic Color Vision Testing

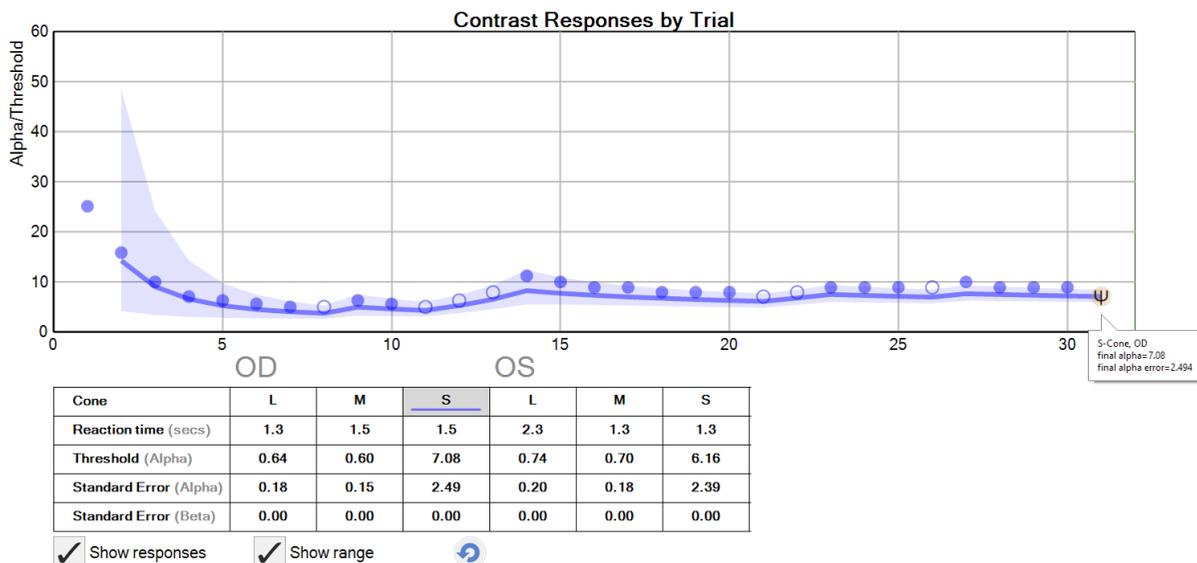
Tritan (S-cone or blue-yellow type) deficiencies are rarely genetic, yet may affect up to 15% of the general population<sup>1</sup>. Acquired deficiencies are commonly S-cone type, but may also affect L and M-cones.

This important but often overlooked clinical sign may be caused by retinal, optic nerve, or neurological disorders, in addition to cataracts and high-risk meds, as well as hundreds of common drugs and substances.

The expanded ceiling shows new information that was not available in the original CCT. Clinically, it may be useful to measure changes in color vision earlier.



An example of a report showing a high-normal range of color vision in all three cone cell populations OD and OS. The 'Pass/Fail' line (Score =75) is the USAF criteria for pilots.

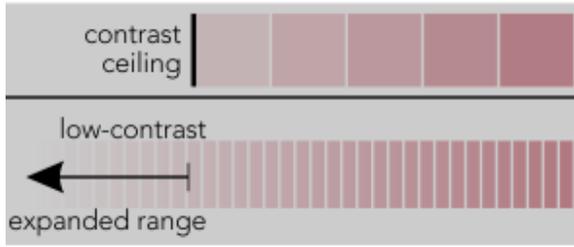


The 'Contrast Responses by Trial' report is an 'interactive' method of viewing highly detailed test results by cone population.

<sup>1</sup>Rayman, R., et al. Rayman's Clinical Aviation Medicine. Castle Connolly. 2013.

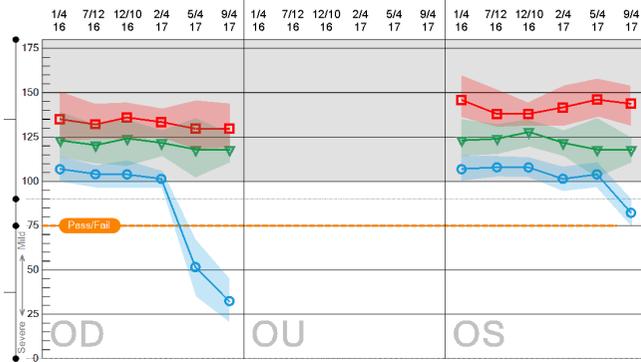
# CCT-HD Highlights

CCT original USAF low granularity

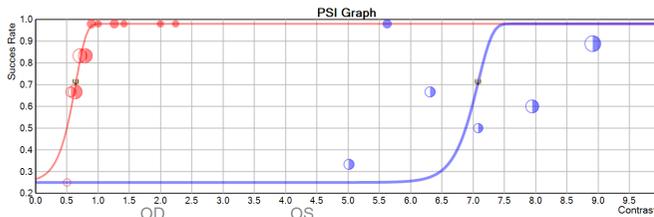


CCT<sub>HD</sub> high granularity

*High Granularity*  
CCT-HD provides highly granular cone-isolation contrast steps for discrete, scalar scoring



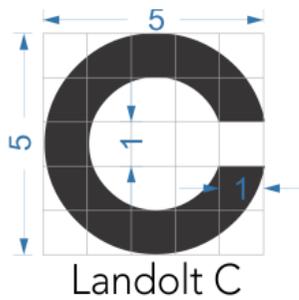
*Automated color vision trends analysis*  
Compare an exam with prior data collected on the same patient



*Robust Psi Marginal Adaptive Threshold and Error Estimation*  
Powerful psychometric function for both threshold and error estimation

Cone	L	M	S	L	M	S
Reaction time (secs)	1.3	1.5	1.5	2.3	1.3	1.3
Threshold (Alpha)	0.04	0.00	7.08	0.74	0.70	6.16
Standard Error (Alpha)	0.18	0.15	2.49	0.20	0.18	2.39
Standard Error (Beta)	0.00	0.00	0.00	0.00	0.00	0.00

Show responses



*Language and literacy neutral, no character bias, Landolt C*  
L, M, and S cone contrast thresholds are tested using a Landolt C