# VEP Testing in Clinical Practice

## VEP Aids in Decision Not to Treat a Glaucoma Suspect

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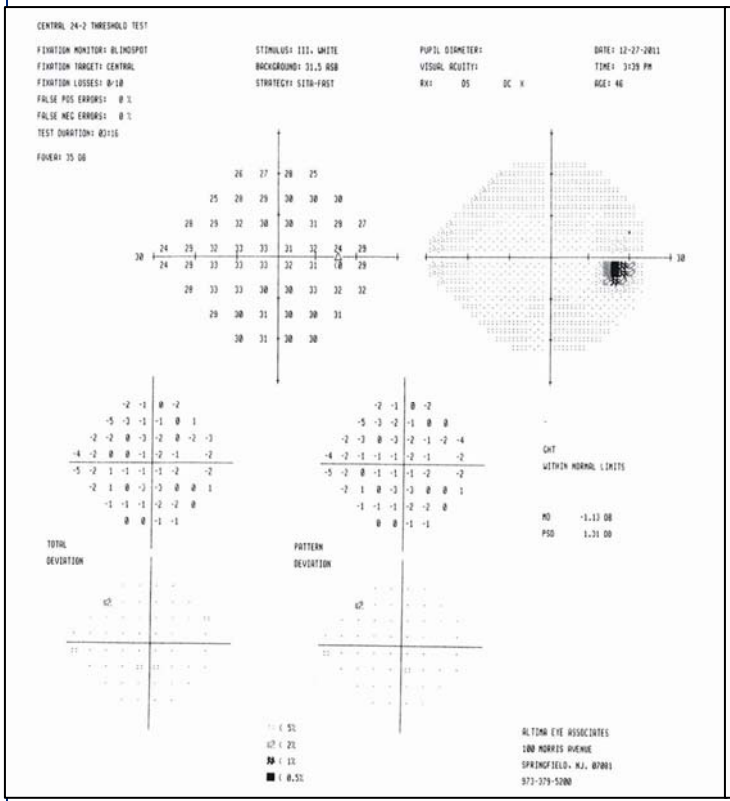
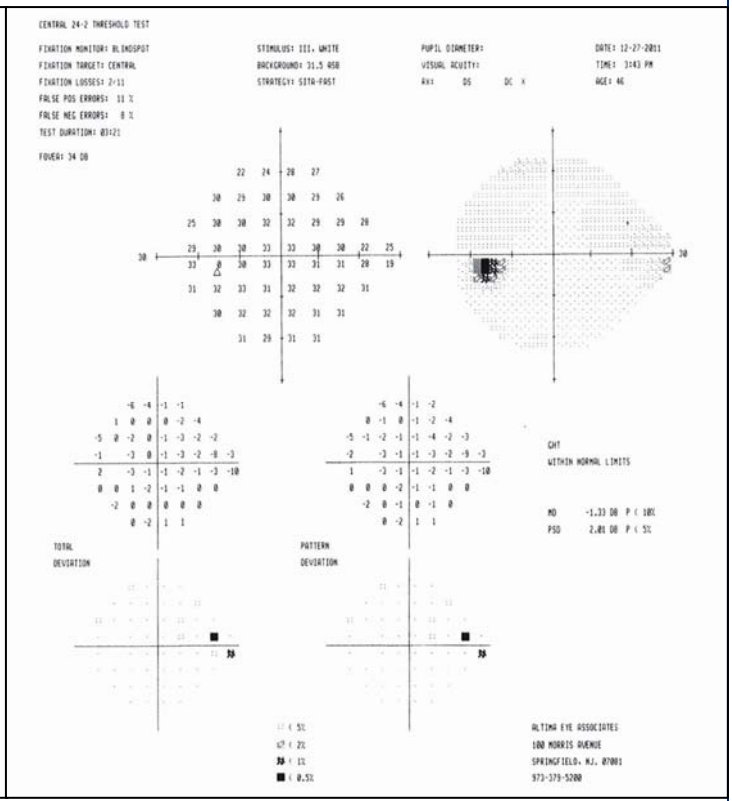
**Introduction:** A 45 year old white male presented to our office for a routine eye exam without any significant complaints. General health and family health histories were negative as were eye histories. He denied taking any medicines and was not allergic to any medicines. Social history revealed he was a non-smoker and an occasional drinker.

**Findings:** Examination revealed best corrected visual acuities with a small compound myopic correction of 20/20 in each eye. His pupils were normal as was color vision, motilities, and muscle balance. Intraocular pressures at 3:30 pm were 15mmHg in each eye. Fundoscopic exam revealed asymmetric cupping as determined with a 78 D lens of .65 OD and .40 OS. The rest of the fundoscopic exam was unremarkable. Based on the patient's asymmetric cupping, I asked him to return for AM IOP's and a more extensive glaucoma workup.

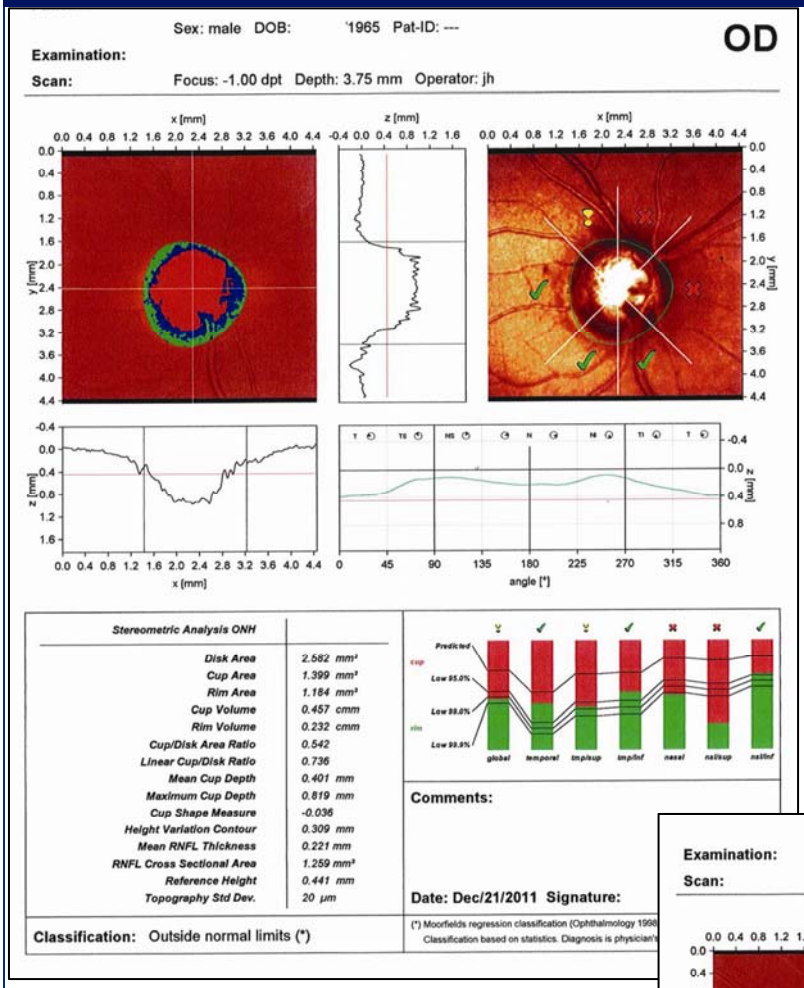
He returned two days later for his evaluation. Intraocular pressures at 10:30 in the morning were 15mmHg OU. Central corneal thickness was 550 OD and 550 OS. Gonioscopic view of the angles was open to the ciliary body OU with a 30 degree approach angle and grade II pigmentation. Threshold Humphrey 24-2 visual fields were full without defects in both eyes.

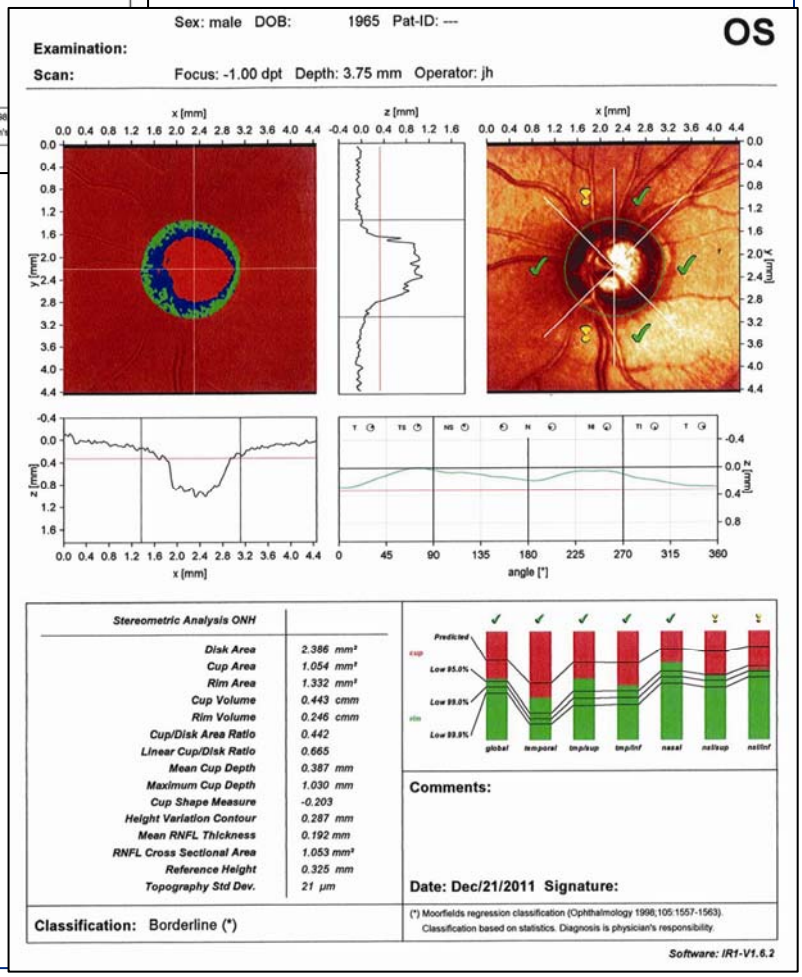
**OD** **OS**



# VEP Testing in Clinical Practice (cont.)

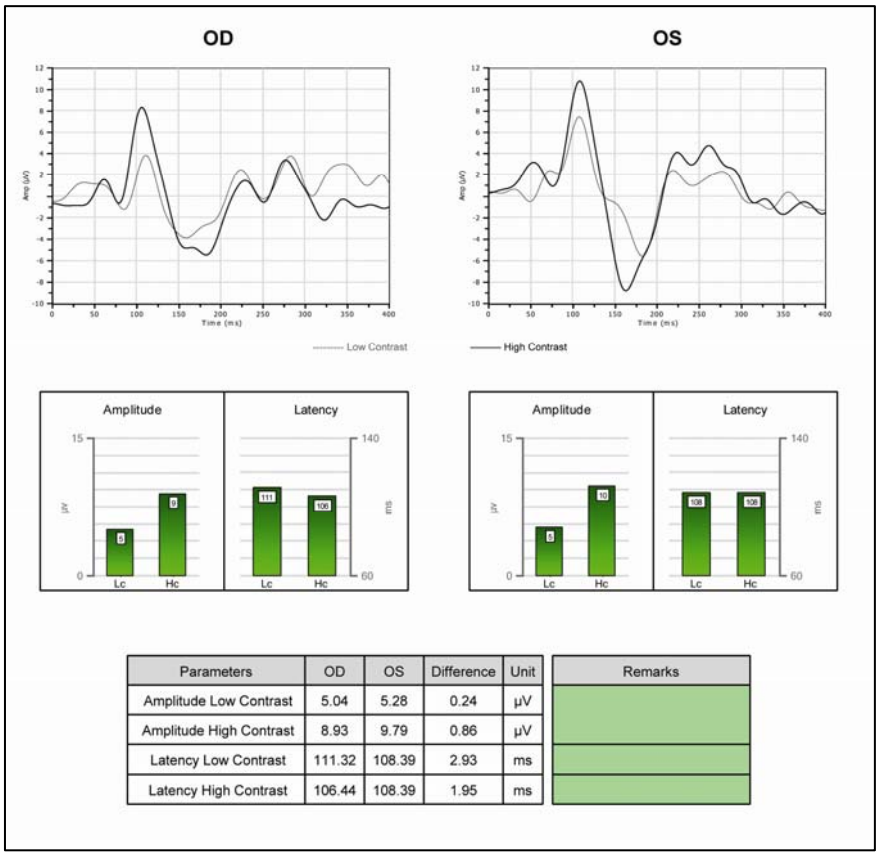



HRT optic nerve scans confirmed the asymmetric cupping and findings were abnormal in the right eye and borderline in the left eye.

# VEP Testing in Clinical Practice (cont.)

In the past this is a patient I would have considered treating. I would have at least discussed the risk vs. benefits of treating this relatively young patient. Since I have access to the Diopsys® NOVA-LX Fixed Protocol with Multi-Contrast Stimuli, I decided to perform a VEP on this patient. The results were normal at both contrast levels.




| Parameters | OD | OS | Difference | Unit | Remarks |
|---|---|---|---|---|---|
| Amplitude Low Contrast | 5.04 | 5.28 | 0.24 | µV | |
| Amplitude High Contrast | 8.93 | 9.79 | 0.86 | µV | |
| Latency Low Contrast | 111.32 | 108.39 | 2.93 | ms | |
| Latency High Contrast | 106.44 | 108.39 | 1.95 | ms | |

**Diagnosis and Treatment:** This case illustrates the kind of patients that come into our offices every day. He had asymmetric cupping and an abnormal SLO. All other glaucoma findings were negative. The decision becomes, does he have very early normal tension glaucoma or is his cupping asymmetry "normal" for him? By performing the VEP I felt I was on firmer ground in telling this patient that he does not have glaucoma and that we should just monitor him closely by repeating the diagnostic glaucoma battery in one year.