

Visual Field Testing

A guide for glaucoma patients

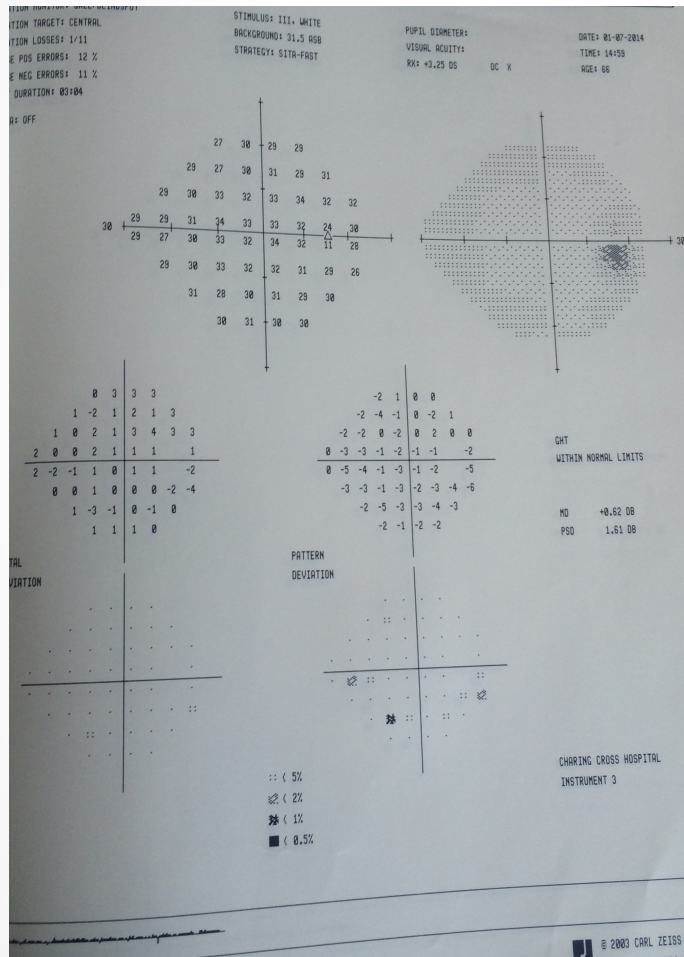
Visual Field Tests

- Glaucoma affects the outer or peripheral portion of your vision first.
- You will not notice this until it reaches the central part of the vision by which time it is too late
- It tests the level of light at which you can only just see it so some people find it frustrating. This is normal
- You cannot fail the test. It provides useful information on the well being of your optic nerves
- There is a learning curve to doing the test. We do not expect the first test to be perfect.

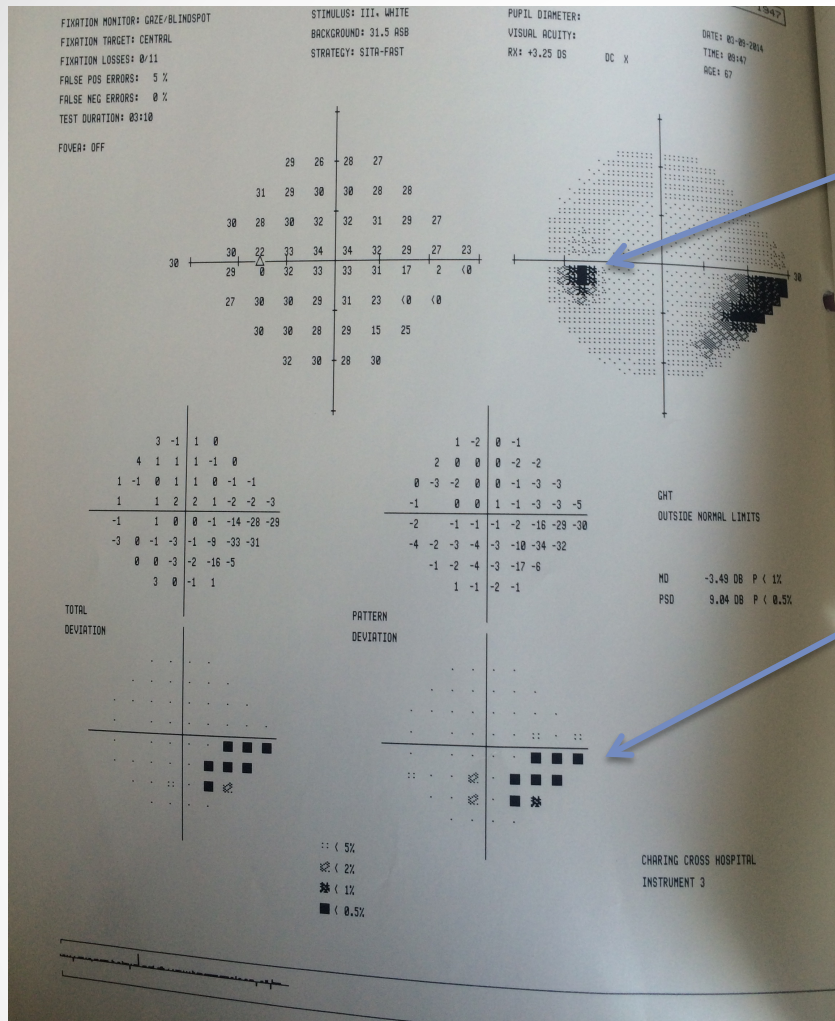


This is a common visual field test machine known as a Humphrey Visual Field Machine. The ophthalmic technician will measure your glasses and put a special near vision lens in front of the eye being tested. It is important that your neck and chin feel comfortable when doing the tests to get the best result. The technician will make sure that the machine is set up properly for you.

Normal Visual Field Test



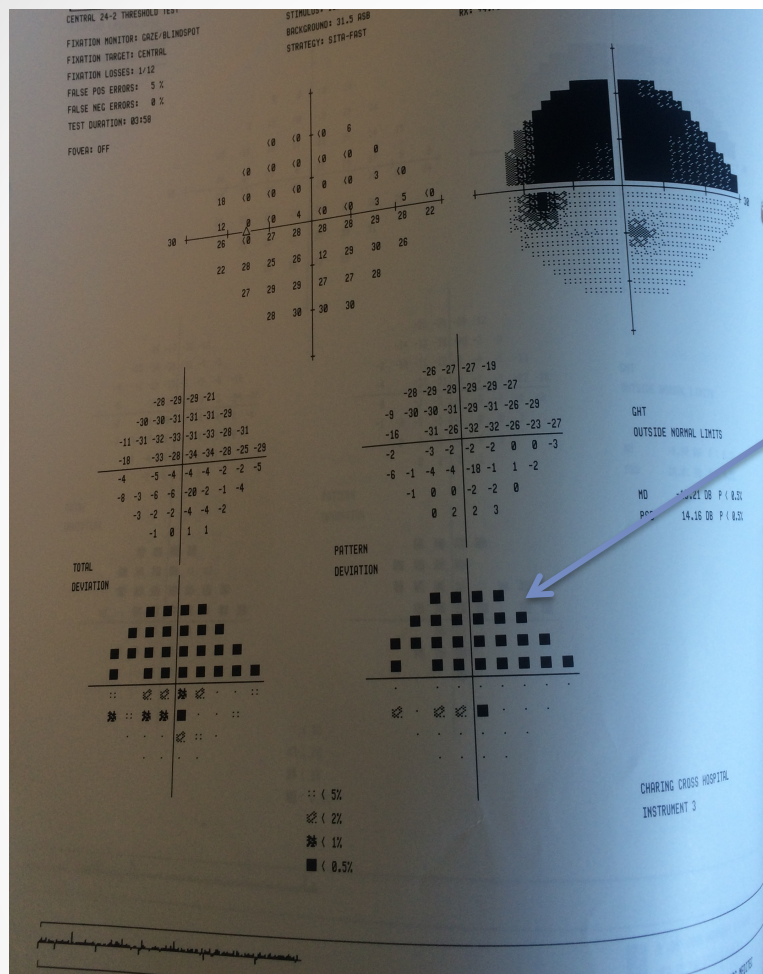
- In the top right hand corner of this visual field you will see the plot known as the greyscale plot.
- This has a small black circle just below the midline and to the right. This is the human blind spot and is normal. At the point where the optic nerve leaves the back of your eye there are no light sensitive cells in the retina and so you cannot see the light when it is shone here.
- This also helps Ms. Crawley to see if the test is accurate and reliable. If your eyes move around a lot in the test then the blind spot moves too much to be plotted as the small dark circle and is missing from the plot



This black spot should be seen on all visual field tests. This is the normal blind spot that all people have.

This visual field shows loss of the peripheral vision in the lower half of the visual field next to the nose.

Left visual field test



This patient has lost the upper portion of their left visual field completely due to glaucoma.

Central 24-2 Threshold Test

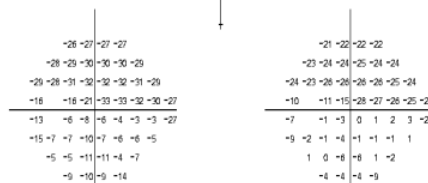
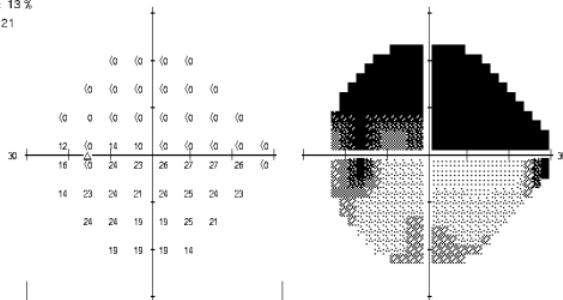
Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 1/16
False POS Errors: 1 %
False NEG Errors: 13 %
Test Duration: 07:21

Stimulus: III, White
Background: 31.5 ASB
Strategy: SITA-Standard

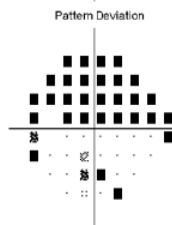
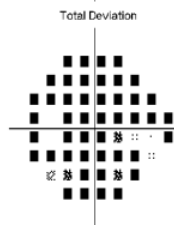
Pupil Diameter: 3.7 mm
Visual Acuity:
RX: +3.25 DS DC X

Date: 14-07-2015
Time: 13:41
Age: 82

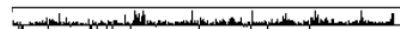
Fovea: OFF



GHT
Outside Normal Limits
VFI 49%
MD -17.15 dB P < 0.5%
PSD 12.10 dB P < 0.5%



∴ < 5%
∴ < 2%
∴ < 1%
■ < 0.5%



Central 24-2 Threshold Test

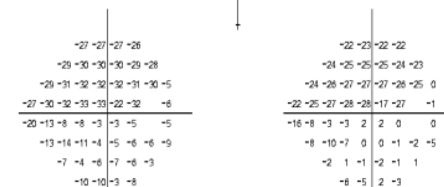
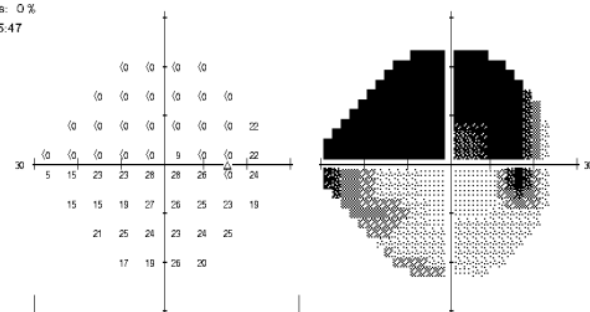
Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 0/14
False POS Errors: 2 %
False NEG Errors: 0 %
Test Duration: 05:47

Stimulus: III, White
Background: 31.5 ASB
Strategy: SITA-Standard

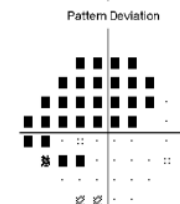
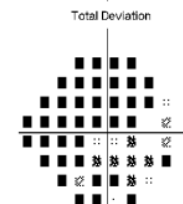
Pupil Diameter: 4.5 mm
Visual Acuity:
RX: +3.25 DS DC X

Date: 14-07-2015
Time: 13:34
Age: 82

Fovea: OFF



GHT
Outside Normal Limits
VFI 49%
MD -16.83 dB P < 0.5%
PSD 12.67 dB P < 0.5%



∴ < 5%
∴ < 2%
∴ < 1%
■ < 0.5%



Bilateral superior visual field defects in glaucoma. This person will not see only shadows or darkness at the top of their vision. They will be unable to see the detail in this part of their field of view and their brain tries to fill in the gaps with a 'best guess.' This is why you do not notice your visual field defects until they are very advanced and you start bumping into things.

Central 24-2 Threshold Test

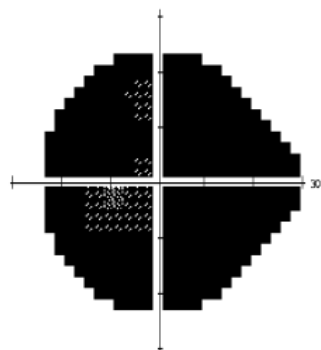
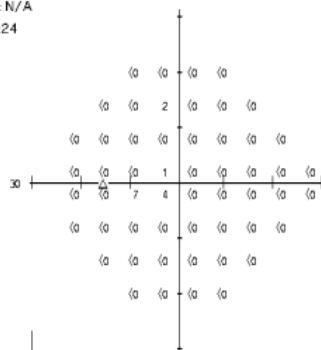
Fixation Monitor: Gaze/Blind Spot
 Fixation Target: Central
 Fixation Losses: 0/11
 False POS Errors: 0 %
 False NEG Errors: N/A
 Test Duration: 05:24

Stimulus: III, White
 Background: 31.5 ASB
 Strategy: SITA-Fast

Pupil Diameter:
 Visual Acuity:
 RX: +6.00 DS -5.00 DC X 113 Age: 64

Date: 11-11-2014
 Time: 11:32

Fovea: 29 dB ■



-28 -29 -29 -29
 -30 -30 -27 -31 -31 -30
 -31 -31 -32 -33 -33 -33 -32 -31
 -32 -33 -31 -34 -34 -33 -31 -29
 -32 -25 -28 -35 -34 -33 -32 -29
 -32 -33 -33 -34 -34 -34 -33 -31
 -32 -33 -33 -33 -33 -33
 -32 -32 -31 -31

Pattern Deviation not shown for severely depressed fields. Refer to Total Deviation.

GHT
 Outside Normal Limits

VFI 2 %
 MD -31.86 dB P < 0.5 %
 PSD 2.08 dB P < 5 %

Pattern Deviation

Pattern Deviation not shown for severely depressed fields. Refer to Total Deviation.

■ < 5 %
 ■ < 2 %
 ■ < 1 %
 ■ < 0.5 %

Central 24-2 Threshold Test

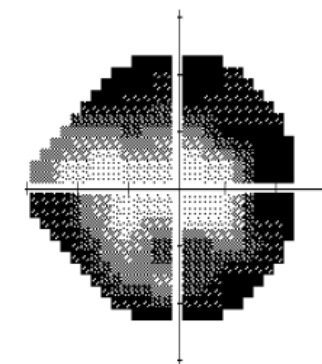
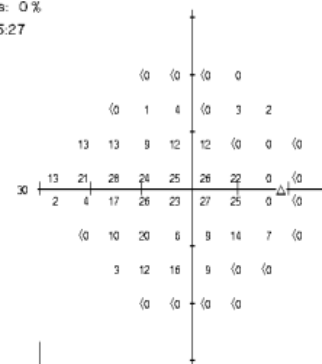
Fixation Monitor: Blind Spot
 Fixation Target: Central
 Fixation Losses: 0/14
 False POS Errors: 0 %
 False NEG Errors: 0 %
 Test Duration: 05:27

Stimulus: III, White
 Background: 31.5 ASB
 Strategy: SITA-Fast

Pupil Diameter:
 Visual Acuity:
 RX: +4.00 DS DC X

Date: 30-06-2015
 Time: 10:16
 Age: 65

Fovea: 9 dB ■



-25 -25 -25 -26
 -30 -28 -26 -31 -25 -26
 -16 -17 -22 -19 -19 -32 -29 -31
 -14 -9 -3 -8 -7 -6 -9 -31
 -25 -26 -14 -6 -10 -6 -6 -32
 -31 -21 -12 -26 -23 -17 -24 -32
 -27 -18 -15 -22 -33 -32
 -31 -31 -32 -32

Pattern Deviation not shown for severely depressed fields. Refer to Total Deviation.

GHT
 Outside Normal Limits

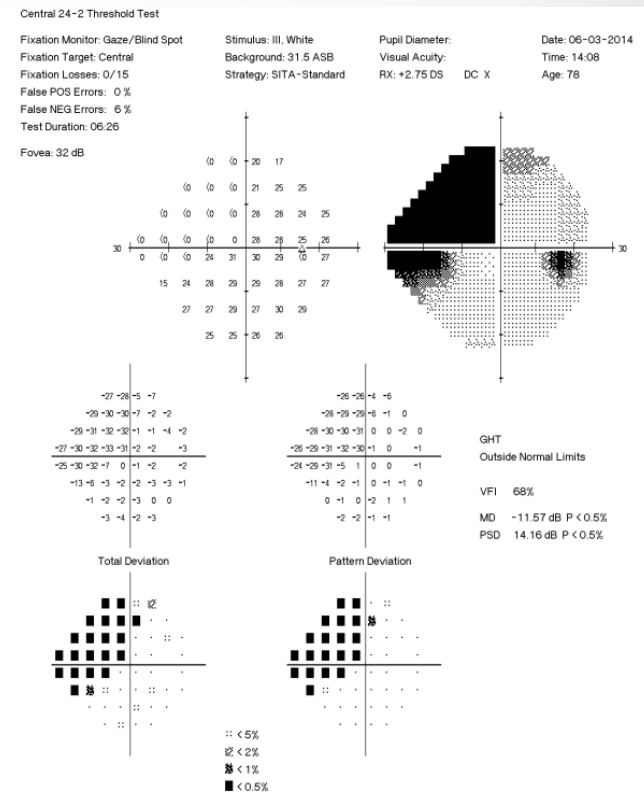
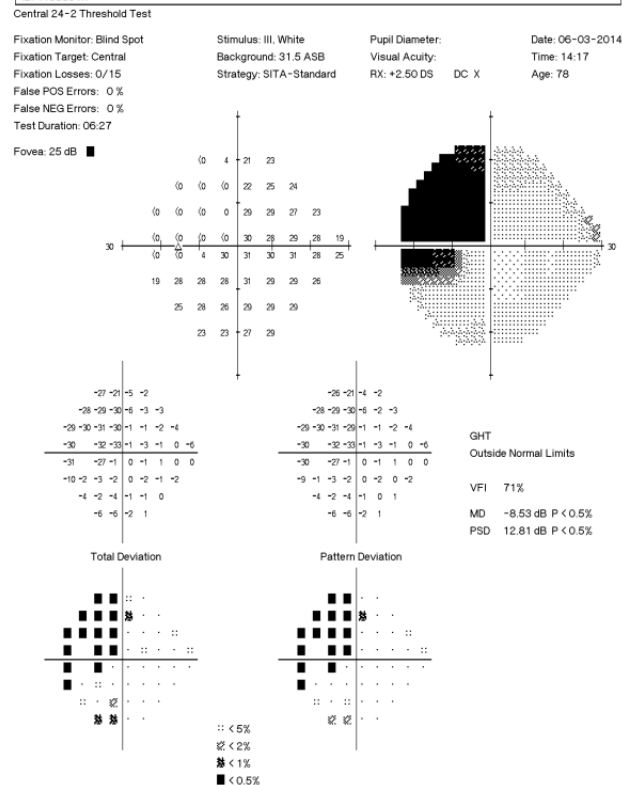
VFI 42 %
 MD -20.26 dB P < 0.5 %
 PSD 9.93 dB P < 0.5 %

Pattern Deviation

Pattern Deviation not shown for severely depressed fields. Refer to Total Deviation.

■ < 5 %
 ■ < 2 %
 ■ < 1 %
 ■ < 0.5 %

End stage glaucoma. In this person they have only a small central area of visual field left even with both eyes open. It is crucial that glaucoma is diagnosed and treated early to try to prevent this devastating loss of vision.



Not all defects on a visual field test are due to glaucoma. This patient presented with bilateral visual field defects that do not cross the vertical midline suggesting a problem in the brain rather than in the eye or optic nerve. These defects are often seen in patients who have had a stroke. Interpretation of the visual field tests is critical and Ms. Crawley is very experienced in this.

Visual Fields

- Visual field tests are usually carried out 2-3 times a year. They may be needed more frequently if you are learning to do the test accurately or if Ms. Crawley suspects there is a change that needs to be confirmed.
- Relax, you cannot 'fail' the test.
- It is important to press the button only if you see a light. 'Trigger happy' tests do not provide useful information.