

Collaboration in the care of glaucoma patients and glaucoma suspects

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Nico Ristorante

November 29, 2012

Goals of Collaboration

- Patient-centred and evidence based approach
- Timely access
- Effective communication
- Minimal duplication of tests and services

Objectives

- Understand the different categories of glaucoma
- Understand the basic management of open angle and angle-closure glaucoma
- Identify and refer patients at risk for damage caused by glaucoma
- Recognize current testing modalities which assist in early detection

Outline

- Case studies
- Anatomy of anterior chamber angle and optic nerve
- Epidemiology
- Categories of glaucoma
- Risk Factors
- Signs
- Management
 - Testing
 - Treatment
- Case studies revisited



Case Studies

Case 1

- 69 yo male presented May 2001
- IOP 19 OD 16 OS
- CD 0.9 OU
- Alphagan, Pilocarpine, Timolol OU
- Baseline IOP unknown

Single Field Analysis

Name: JONATHAN MURRAY
ID: 1031.1211.DF06.F315.BF3.8128
Central 30-2 Threshold Test

Eye: Right
DOB: 12-11-1991

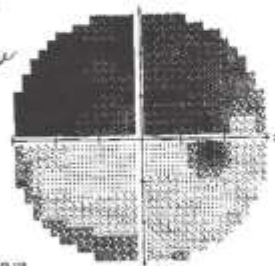
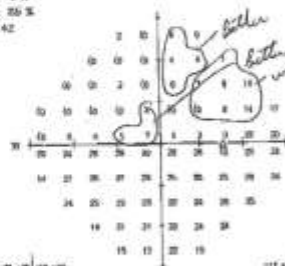
Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 6/14 sec
False POS Errors: 5 %
False NEG Errors: 55 %
Test Duration: 06:42

Stimulus: TL, White
Background: 31.5 ASD
Strategy: SITA-Fast

Pupil Diameter:
Visual Acuity:
RX: +4.15 DS -1.50 DC X 98

Date: 10-09-2012
Time: 1:13 PM
Age: 80

Fixes: OFF



Total Deviation

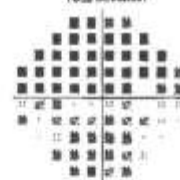


Pattern Deviation

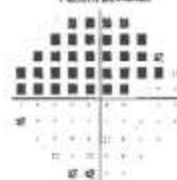
*** Low Test Reliability ***

GHT
Outside Normal Limits

VF: 56%
MD: -14.83 dB P < 0.5%
PMD: 12.43 dB P < 0.5%



MD: -14.83 dB
PMD: 12.43 dB



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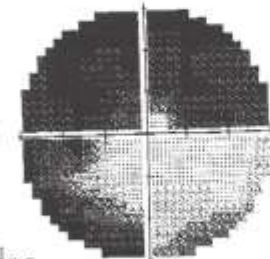
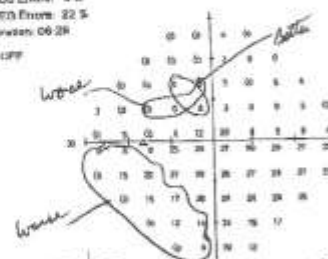
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Visual Acuity:
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DC: X

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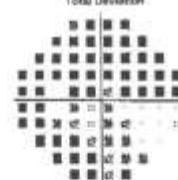
Total Deviation



Pattern Deviation

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Outside Normal Limits

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PMD: 10.29 dB P < 0.5%



MD: +16.42 dB
PMD: 10.29 dB

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Case 1

- Category?
- Target IOP? OD OS
- Follow-up?

Case 2

- 65 yo orthodontist presented Aug 2001
- IOP 28 OD 24 OS
- CD 0.65 OU
- Alphagan & Xalatan OU
- Laser OD 1999
- Unknown baseline IOP

Case 2

- Category?
- Target IOP? OD OS
- Follow-up?

Case 3

- 70 yo male presented Nov 2003
- IOP 41 OD 43 OS
- CD 0.6 OS 0.75-0.8 OD

Single Field Analysis

Name: DESMARAIS, LEONARD

ID:

Eye: Right

DOB: 08-28-33

Central 30-2 Threshold Test

Fixation Monitor: Pass/Blindspot

Stimulus: R, White

Pupil Diameter:

Date: 05-02-05

Fixation Target: Central

Background: 31.5 ASD

Visual Acuity:

Time: 9:36 AM

Fixation Losses: 2/12

Strategy: SITA-Fast

Rx: +2.50 DS

DC: X

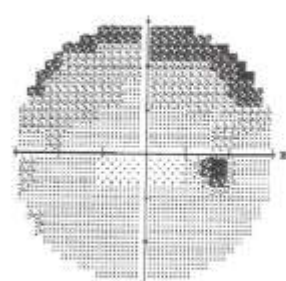
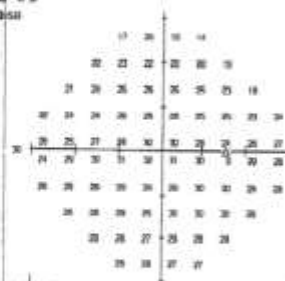
Age: 71

False POS Errors: 0%

False NEG Errors: 0%

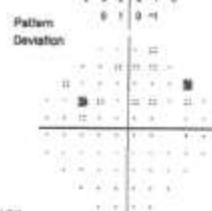
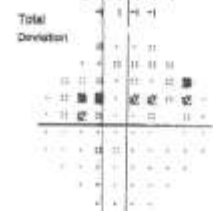
Test Duration: 0:45

Fixes: 34 dB



GHT
Within normal limits

MD: -2.34 dB P < 0%
PSD: 2.15 dB



□ P < 0%
■ P < 0.5%
■ P < 1%
■ P < 0.5%

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Single Field Analysis

Name: DESMARAIS, LEONARD

ID:

Eye: Left

DOB: 08-28-33

Central 30-2 Threshold Test

Fixation Monitor: Pass/Blindspot

Stimulus: R, White

Pupil Diameter:

Date: 05-03-05

Fixation Target: Central

Background: 31.5 ASD

Visual Acuity:

Time: 9:54 AM

Fixation Losses: 0/13

Strategy: SITA-Fast

Rx: +0.00 DS

DC: X

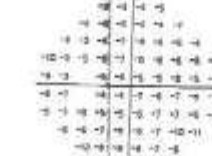
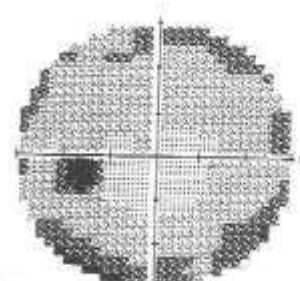
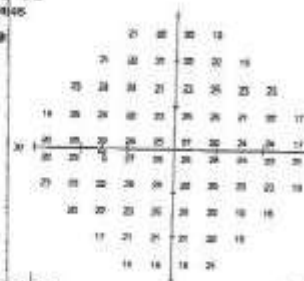
Age: 71

False POS Errors: 0%

False NEG Errors: 0%

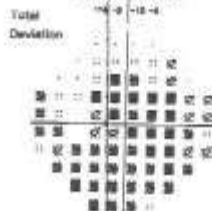
Test Duration: 0:45

Fixes: 30 dB



GHT
General Reduction of Sensitivity

MD: -5.38 dB P < 0.5%
PSD: 2.33 dB P < 10%



□ P < 0%
■ P < 0.5%
■ P < 1%
■ P < 0.5%

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Case 2

Normal Visual Fields

Case 3

- Category?
- Target IOP? OD OS
- Follow-up?

Case 4

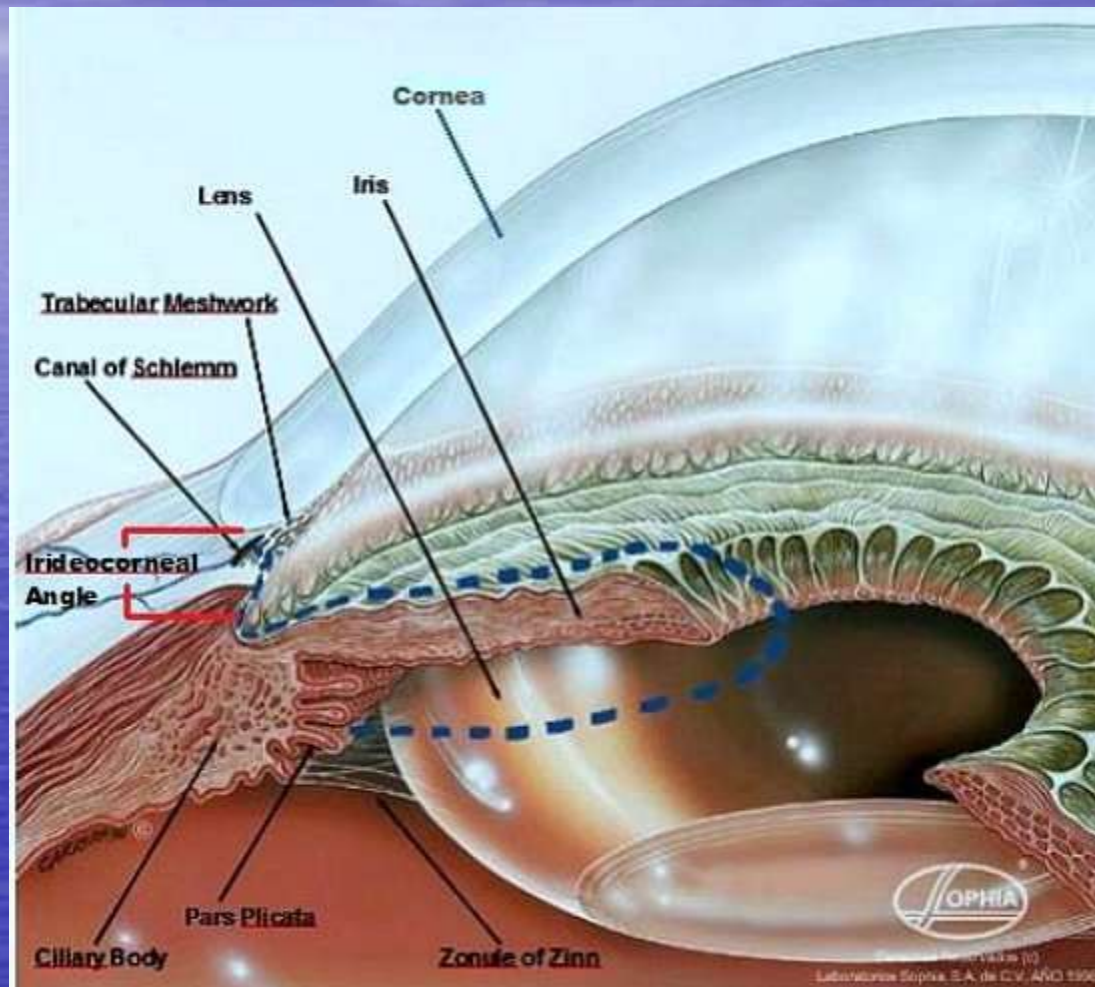
- 22 yo female presented Feb 2006
- IOP 27 OD 28 OS
- CD 0.95 OD 0.6 OS
- Cosopt OU
- Baseline IOP 42 OU

Case 4

- Category?
- Target IOP? OD OS
- Follow-up?

Anatomy

Anterior Chamber Anatomy



Glaucoma



Epidemiology

Open Angle Glaucoma: Epidemiology

- Primary open-angle glaucoma is a significant public health problem
- Affects 1 in 100 Canadians over age 40
- Prevalence of POAG for adults 40 and older in the United States was estimated to be about 2%
- 45 million people in the world have open-angle glaucoma (OAG)
- 8.4 million people blind from glaucoma

Categories

Glaucoma: Categories

1. Stable Glaucoma i)Early ii)Moderate iii)Advanced
2. Unstable Glaucoma
3. Glaucoma suspect i) High risk ii) Low risk
4. Acute Glaucoma

Stable Glaucoma

Stable Glaucoma

Early

- Early glaucomatous disc features (e.g., C/D* 0.65) and/or mild VF defect not within 10° of fixation (e.g., MD 6 dB on HVF 24-2)

Moderate

- Moderate glaucomatous disc features (e.g., vertical C/D* 0.7–0.85) and/or moderate visual field defect not within 10° of fixation (e.g., MD from 6 to 12 dB on HVF 24-2)

Advanced

- Advanced glaucomatous disc features (e.g., C/D* 0.9) and/or VF defect within 10° of fixation† (e.g., MD worse than 12 dB on HVF 24-2)

Unstable Glaucoma

Unstable glaucoma patient

Unstable patients are those with IOP above target or with proven optic disc or visual field deterioration in the recent past.

Glaucoma Suspects

Glaucoma suspect with low/moderate risk

This group will involve one of the following clinical scenarios:

- (1) Presence of elevated applanation IOP not $>27\text{mmHg}$, with normal visual fields (normal glaucoma hemifield test or equivalent tests) and normal optic discs;
- (2) Positive family history of glaucoma with normal visual fields and optic discs;
- (3) Suspicious optic disc(s) in patients with normal IOP (22 mm Hg) and normal visual fields;
- (4) Suspicious visual field tests not yet confirmed on a second test; or
- (5) Presence of other conditions commonly associated with glaucoma but without elevated IOP (such as pigment dispersion, pseudoexfoliation).

Glaucoma suspect with high risk (or already on topical treatment)

This group will involve one of the following clinical scenarios:

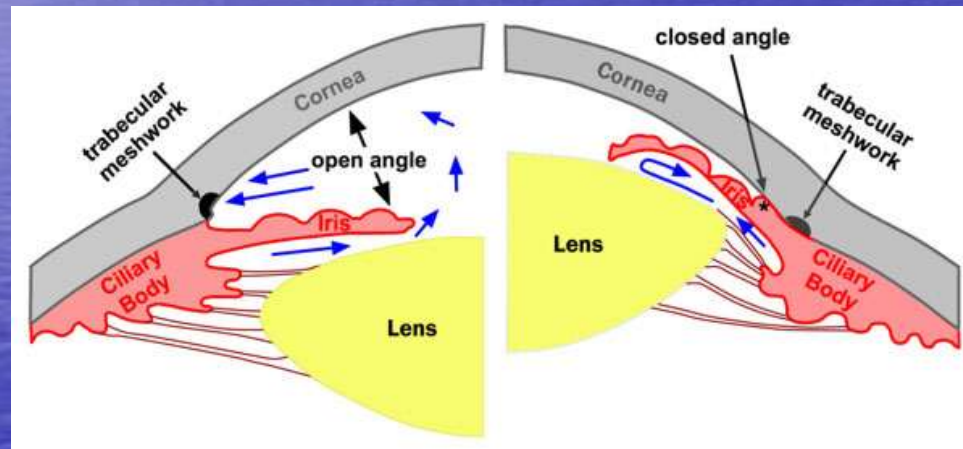
1. Presence of elevated IOP >27 mm Hg (or 24 mm Hg associated with relatively thin central corneal thickness 550 m);
2. Presence of very suspicious optic disc findings, such as rim notches, disc hemorrhages, localized RNFL defects, but with normal visual fields;
3. Elevated IOP associated with other causes of secondary glaucoma such as pseudoexfoliation, pigment dispersion, uveitis, iris or angle neovascularization, but without clear signs of optic disc damage or visual field loss;
4. Glaucoma suspect patients who are already being treated with IOP-lowering therapy;
or
5. Patient with an angle deemed at high risk for closure (typically 180° or more of iridotrabecular contact).

Acute Glaucoma

Acute glaucoma (or patients with any chronic form of glaucoma presenting with a very high IOP)

This group includes patients presenting with very high IOP (usually 40mmHg), being either of acute onset (usually characterized by symptoms such as nausea, pain, reduced visual acuity, halos) or a more chronic presentation.

Anterior Chamber Angle



The Risk Factors

Primary Open Angle Glaucoma

NON-OCULAR RISK FACTORS

- Increasing age
- African ancestry
- Lower systolic and diastolic blood pressure
- Hispanic ancestry
- Family history
- Genetics
- Myocillin
- Optineurin
- Apolipoprotein
- Migraine
- Corticosteroids

Primary Open Angle Glaucoma

OCULAR RISK FACTORS

- Higher IOP
- Lower ocular perfusion pressure
- Thinner central cornea
- Disc hemorrhage
- Parapapillary atrophy
- Larger cup-to-disc ratio (deviation from the ISNT rule (inferior superior nasal temporal))
- Larger mean pattern standard deviation on threshold visual field testing
- Pseudoexfoliation, Pigment dispersion, Myopia

Primary Angle Closure Glaucoma

NON-OCULAR RISK FACTORS

- Family history of angle closure
- Older age
- Female sex
- Asian or Inuit descent

Primary Angle Closure Glaucoma

OCULAR RISK FACTORS

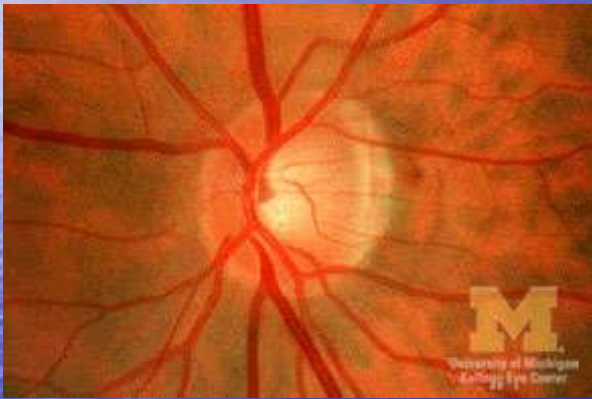
- Hyperopia
- Shallow peripheral anterior chamber depth
- Shallow central anterior chamber depth
- Steep corneal curvature
- Thick crystalline lens
- Short axial length

The background of the slide is a photograph of a vast blue ocean under a bright sky. On the left side, the sun is shining, creating a bright, hazy glow that fades into the blue of the water. The sky is a deep blue with some wispy white clouds. The horizon line is visible in the distance.

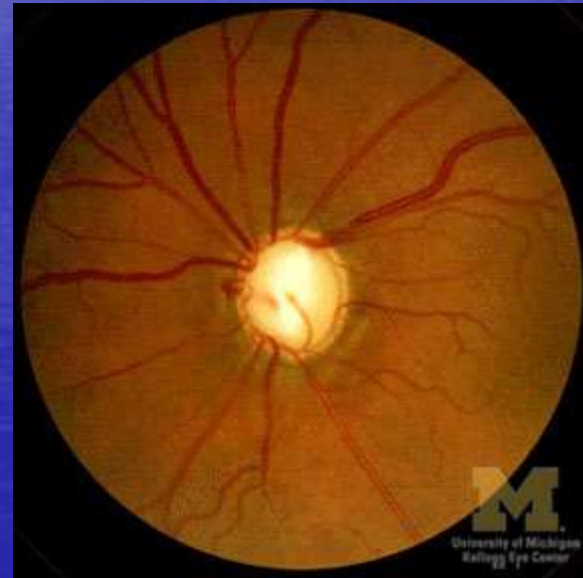
Signs

Open Angle Glaucoma Signs

SUBTLE



- Normal cup-disc ratio

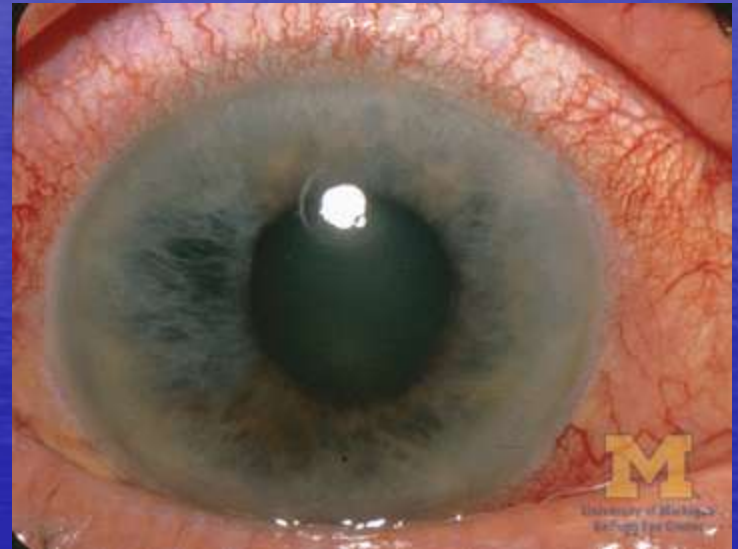


- Increased cup-disc ratio

Angle Closure Glaucoma Signs

DRAMATIC

- Cloudy/steamy cornea
- Fixed mid-dilated pupil
- Conjunctival injection
- Elevated IOP

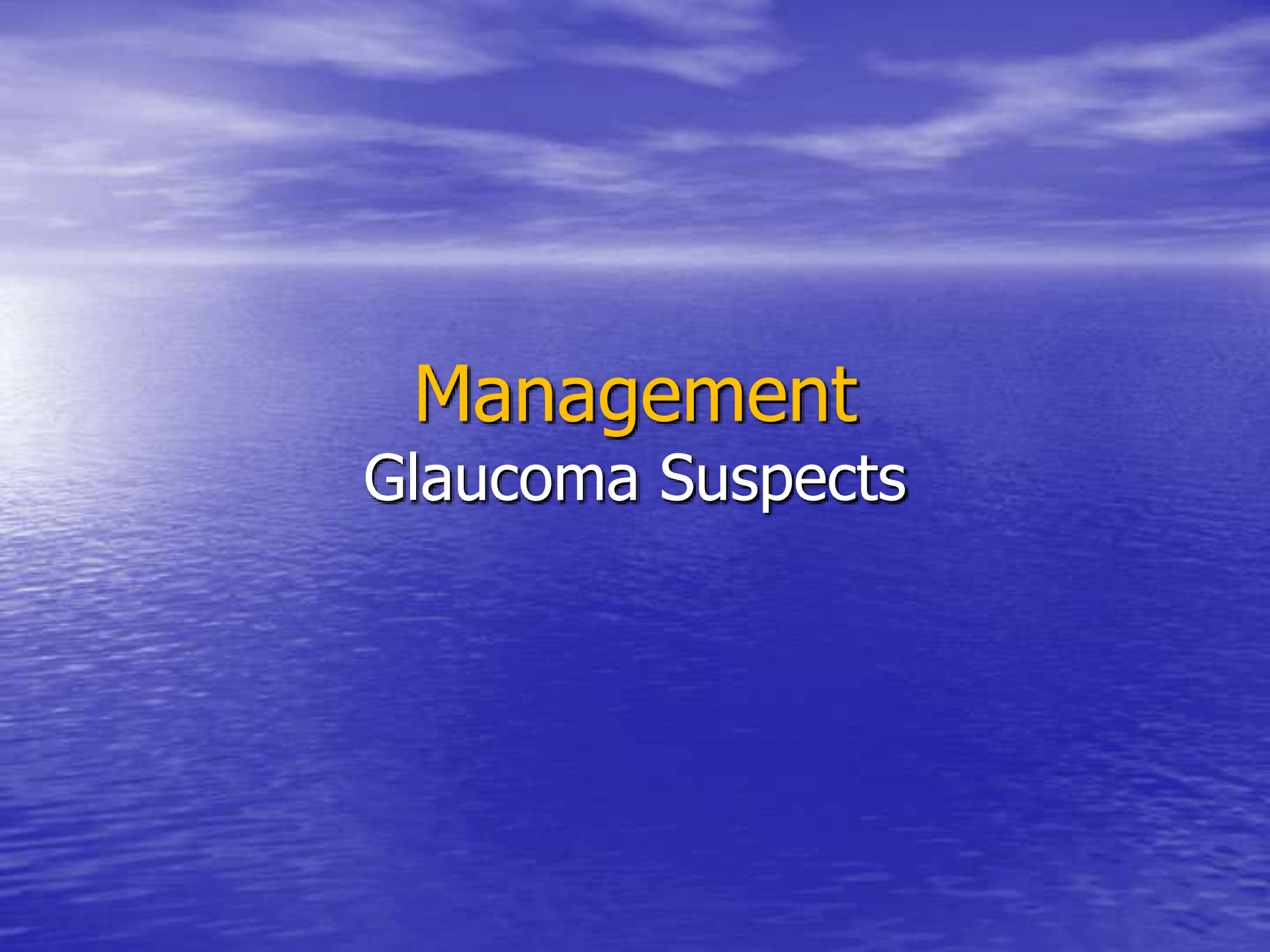


Management

Goals of Management: Open Angle Glaucoma

PRESERVE VISION

- Intraocular pressure controlled in the target range
- Stable optic nerve/retinal nerve fiber layer status
- Stable visual fields



Management

Glaucoma Suspects

Management


Glaucoma suspect—low/moderate risk

- Ocular hypertension (IOP <27 mm Hg)
 - Positive family history of glaucoma
 - Suspicious optic disc(s)
 - First suspicious visual field defect
 - Presence of conditions such as such as pseudoexfoliation, pigment dispersion and early glaucoma, respectively
- Managed primarily by the optometrists, or ophthalmologists (based on availability)
 - If patient has several risk factors or change occurred, please follow recommendations for high-risk suspect

Management

Glaucoma suspect—high risk

- Ocular hypertension (IOP >27 mm Hg)
 - Very suspicious optic disc(s) (notching, optic disc hemorrhages)
 - Elevated IOP caused by secondary causes (pseudoexfoliation, pigment dispersion, uveitis, iris or angle neovascularization)
 - Glaucoma suspects on treatment
 - High risk for angle closure
- Shall be initially sent to ophthalmologist; then when agreed on by both parties, may be monitored by optometrist, with periodic consultation by ophthalmologist (at least every 3–4 years)
 - Patient shall be referred to ophthalmologist before initiating IOP-lowering therapy or if progression is suspected



Management

Stable glaucoma patients

Management

Stable early glaucoma patients

- Early glaucoma recently diagnosed
 - Stable disease (IOP within target, no visual field or disc progression in the last 3 years)
- Initial referral to ophthalmologist is required—initiation of therapy and goals recommended by the ophthalmologist
 - Once stable, many patients can be managed by optometrist with periodic consultation by ophthalmologist (at least every 2 years)

Management

Stable moderate/advanced patients

- Moderate or advanced patients known to be stable for the last 3 years
 - Managed primarily by ophthalmologists, unless transportation barriers or nonavailability of an ophthalmologist are significant issues



Management

Any unstable glaucoma

Management

Any unstable glaucoma

- Patient not achieving target IOP
 - Shall be referred to and managed by ophthalmologist
- Evidence of visual field or optic disc deterioration in the recent past
 - If stability is achieved, can be referred back to the optometrist for further follow-up;
 - However, patients with moderate or severe disease should be maintained under the care of the ophthalmologist

Management

Acute glaucoma or very high IOP

Management

Acute glaucoma or very high IOP

- Primary acute glaucoma
 - Other causes of very high IOP such as pigmentary, pseudoexfoliation, uveitic, or neovascular glaucoma
- Acute treatment can be started by optometrist after phone consultation with the ophthalmologist, but immediate contact and transfer to ophthalmologist shall be arranged

Management Summary: Follow-Up

- Glaucoma suspect ➤ 1–2 years
- Early glaucoma ➤ At least every 12 months
- Moderate glaucoma ➤ At least every 6 months
- Advanced glaucoma ➤ At least every 4 months

Management Summary: Target IOP

Stage

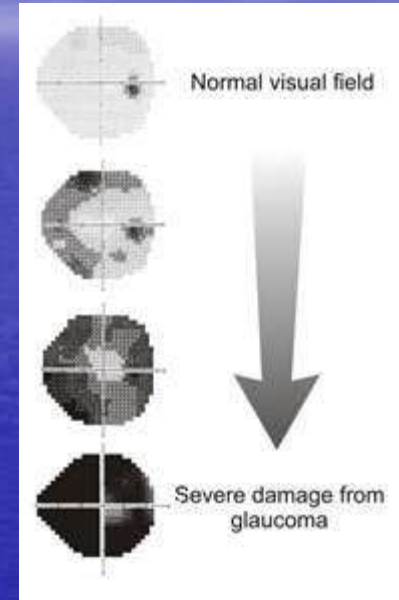
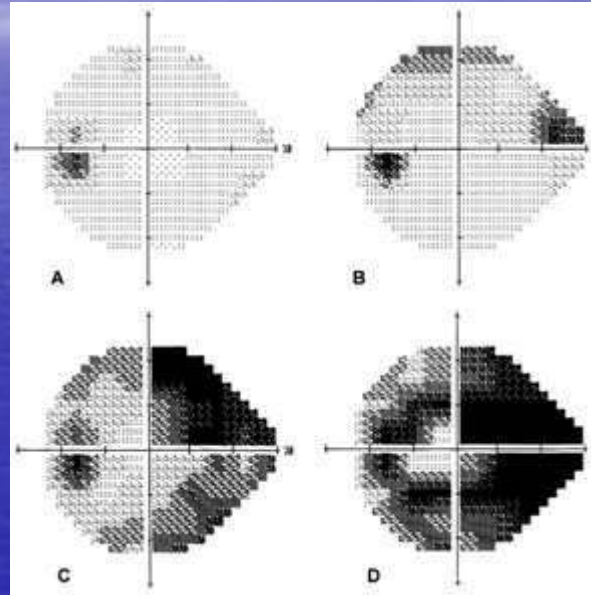
Suggested upper limit of target IOP

- Suspect in whom a clinical decision is made to treat
- Early
- Moderate
- Advanced

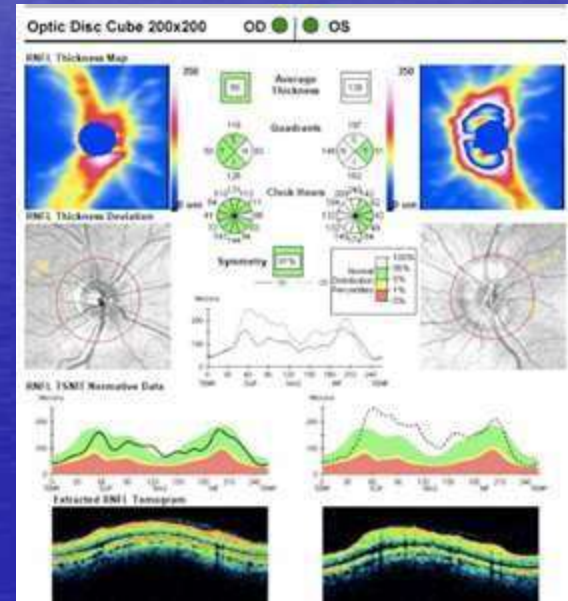
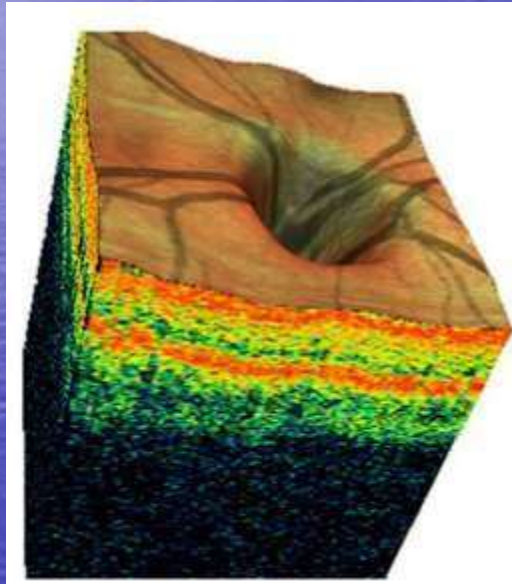
- 24 mm Hg with at least 20% reduction from baseline
- 20 mm Hg with at least 25% reduction from baseline
- 17 mm Hg with at least 30% reduction from baseline
- 14 mm Hg with at least 30% reduction from baseline

Testing

Visual Fields



Optical Coherence Tomography



Treatment

Management: Open Angle Glaucoma

1. Medications
2. Laser
3. Incisional filtering surgery

Pressure Lowering Agents

- Aqueous suppressants
 1. Beta blockers (Timolol, Betagan)
 2. Alpha agonists (Alphagan)
 3. Carbonic anhydrase inhibitors (Trusopt, Azopt)

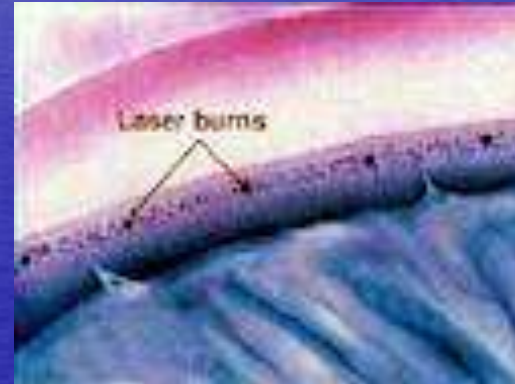


Pressure Lowering Agents

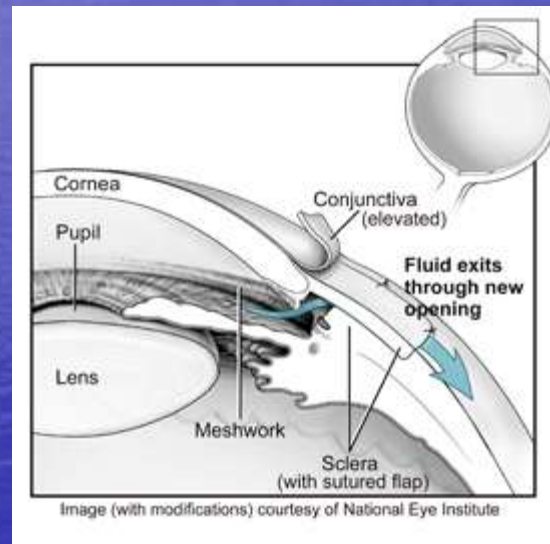
- Increased uveoscleral outflow
 1. Prostaglandin analogues
(Xalatan, Lumigan, Travatan)
 2. Cholinergics (pilocarpine)



Laser Trabeculoplasty



Trabeculectomy



Goals of Management: Acute Angle Closure Glaucoma

- Reverse or prevent angle-closure process
- Control IOP
- Prevent damage to the optic nerve

Management: Acute Angle Closure Glaucoma

- 1.** Medications to lower pressure
- 2.** Laser peripheral iridotomy



Case Studies Revisited

Case 1

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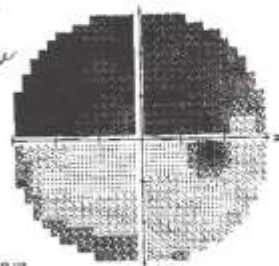
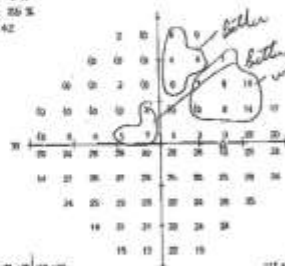
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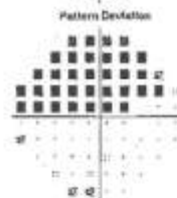
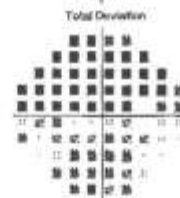
Fixes: OFF



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≤ -2.0%
≤ -1.5%
≤ -0.5%

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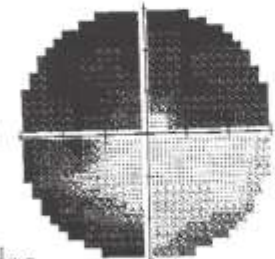
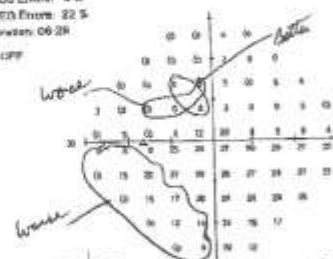
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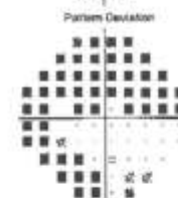
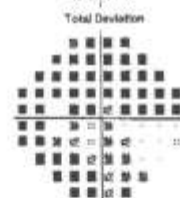
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Case 1

- Timolol changed to Cosopt May 2004
- Lumigan added Oct 2004
- IOP 10-13 OU since then
- VF defects stable

Case 1

- Category? Stable Advanced Glaucoma
- Target IOP? OD <14 OS <14
- Follow-up? 4-6 months

Case 2

- 65 yo orthodontist presented Aug 2001
- IOP 28 OD 24 OS
- CD 0.65 OU
- Alphagan & Xalatan OU

Case 2

- Switched from Alphagan to Cosopt
- Switched from Xalatan to Lumigan
- OD Trabeculectomy Oct 2009
- OD Seton implant tube shunt Dec 2011
- OS SLT Nov 2012 OD 15 OS 24

Case 2

- Category? High risk glaucoma suspect
- Target IOP? OD <24 OS <24
- Follow-up? 6-12 months

Case 3

- 70 yo male presented Nov 2003
- IOP 41 OD 43 OS
- CD 0.6 OS 0.75-0.8 OD

Single Field Analysis

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Eye: Right

DOB: 08-28-33

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Time: 9:36 AM

Fixation Losses: 2/12

Strategy: SITA-Fast

Rx: +2.50 DS

DC: X

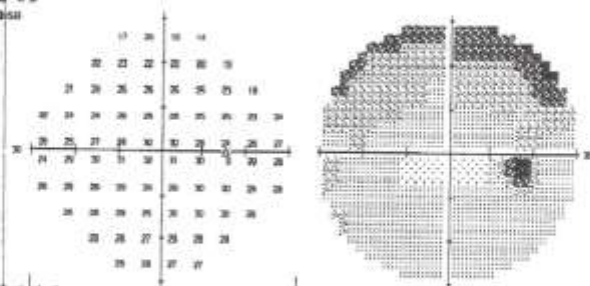
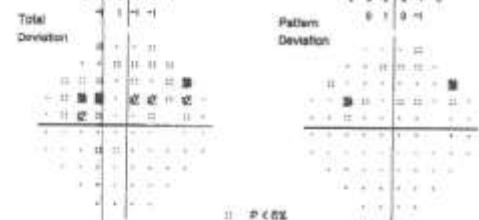
Age: 71

False POS Errors: 0%

False NEG Errors: 0%

Test Duration: 09:58

Fixes: 34 dB

GHT
Within normal limitsMD: -2.34 dB P < 0%
PSD: 2.15 dB

□ P < 0%
 □ P < 0%
 □ P < 1%
 □ P < 0.5%

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 2224 WALKER RD, SUITE 101
 WINDSOR, ONT. N9W 3R6
 519-253-1532

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 HFA II 740-3233-Rev. A9

Single Field Analysis

Name: DESMARAIS, LEONARD

ID:

Eye: Left

DOB: 08-28-33

Central 30-2 Threshold Test

Fixation Monitor: Pass/Blindspot

Stimulus: R, White

Pupil Diameter:

Date: 05-03-05

Fixation Target: Central

Background: 31.5 ASD

Visual Acuity:

Time: 9:54 AM

Fixation Losses: 0/13

Strategy: SITA-Fast

Rx: +0.00 DS

DC: X

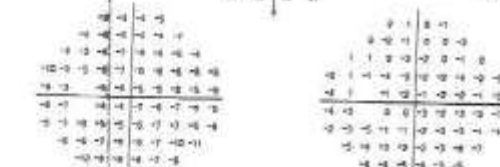
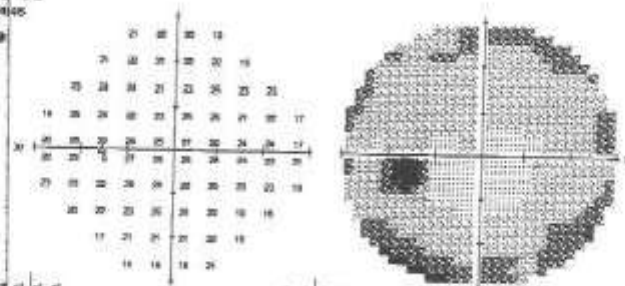
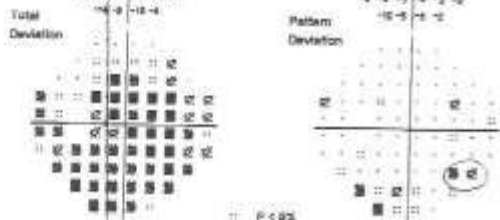
Age: 71

False POS Errors: 0%

False NEG Errors: 0%

Test Duration: 09:45

Fixes: 30 dB

GHT
General Reduction of SensitivityMD: -5.38 dB P < 0.5%
PSD: 2.33 dB P < 10%

□ P < 0%
 □ P < 0%
 □ P < 1%
 □ P < 0.5%

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Case 3

- Timolol OU IOPs 34 OD 37 OS
- Switched to Cosopt & Alphagan Dec 2003
28 OD 30 OS
- Cataract surgery January 2004
16 OD 17 OS
- Lumigan added May 2007
22-27 OD 20-22 OS

Single Field Analysis

Name: DEB MARAIS, LEONARD

ID:

Eye: Right

DOB: 08-25-1933

Central 30-2 Threshold Test

Fixation Monitor: Blankset

Stimulus: 1L White

Field Diameter:

Date: 07-09-2010

Fixation Target: Central

Background: 31.5 ADB

Visual Acuity:

Time: 10:32 AM

Fixation Losses: 7/12 X

Strategy: SITA-Fast

RX: +3.50 DS DC X

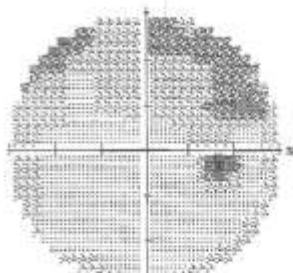
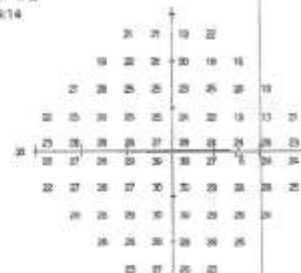
Age: 76

False POS Errors: 0 %

False NEG Errors: 0 %

Test Duration: 04:14

Power: 32 dB



Low Patient Reliability

GHT

Outside normal limits

MD -3.27 dB P < 1%

PSD 2.75 dB P < 5%

Total Deviation

Pattern Deviation

□ < 2%
 □ < 5%
 □ < 1%
 ■ < 0.5%

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 HFA 3 740-3233-12.5/12.5

Single Field Analysis

Name: DEB MARAIS, LEONARD

ID:

Eye: Left

DOB: 08-25-1933

Central 30-2 Threshold Test

Fixation Monitor: Blankset

Stimulus: 1L White

Field Diameter:

Date: 07-09-2010

Fixation Target: Central

Background: 31.5 ADB

Visual Acuity:

Time: 10:30 AM

Fixation Losses: 4/13 X

Strategy: SITA-Fast

RX: +3.50 DS DC X

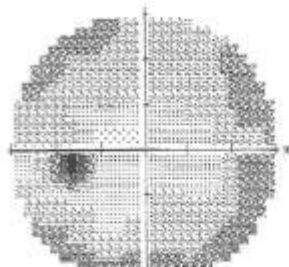
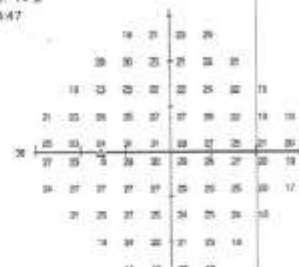
Age: 76

False POS Errors: 4 %

False NEG Errors: 14 %

Test Duration: 04:47

Power: 34 dB



Low Patient Reliability

GHT

Within normal limits

MD -6.21 dB P < 1%

PSD 3.17 dB P < 5%

Total Deviation

Pattern Deviation

□ < 2%
 □ < 5%
 □ < 1%
 ■ < 0.5%

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 HFA 3 740-3233-12.5/12.5

Case 3

- Category? Acute glaucoma now stable
- Target IOP? OD <27 OS <30
- Follow-up? 4-6 months

Case 4

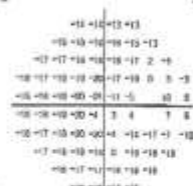
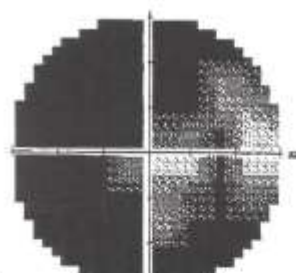
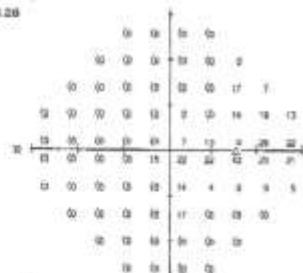
- 22 yo female presented Feb 2006
- Pigment dispersion syndrome
- IOP 27 OD 28 OS
- CD 0.95 OD 0.6 OS
- Cosopt OU
- Baseline IOP 42 OU

Name: COYLE, CYNDY ID: DOB: 07-20-1983

Central 30-2 Threshold Test

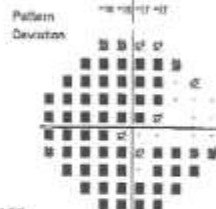
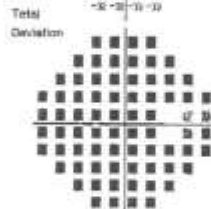
Fixation Monitor: Gaze/Blindspot
 Fixation Target: Central
 Fixation Losses: 0/18
 False POS Errors: 0 %
 False NEG Errors: 28 %
 Test Duration: 06:28

Power: OFF



GHT
 Outside normal limits

MD: -22.50 dB P < 0.05
 PSD: 0.10 dB P < 0.05



11 < 0%
 12 < 2%
 13 < 1%
 14 < 0.5%

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 NPA # 740-10804-3 2/3 2

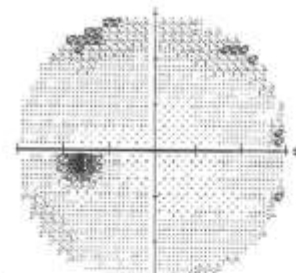
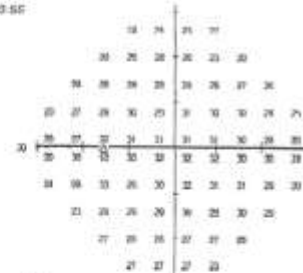
1994-03-28 10:46 P. 000

Name: COYLE, CYNDY ID: DOB: 07-20-1983

Central 30-2 Threshold Test

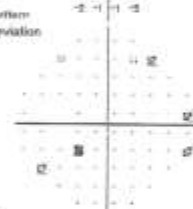
Fixation Monitor: Gaze/Blindspot
 Fixation Target: Central
 Fixation Losses: 0/12
 False POS Errors: 4 %
 False NEG Errors: 4 %
 Test Duration: 02:55

Power: OFF



GHT
 Within normal limits

MD: -3.77 dB P < 1%
 PSD: 1.83 dB



11 < 0%
 12 < 2%
 13 < 1%
 14 < 0.5%

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1994-03-28 10:46 P. 000

Case 4

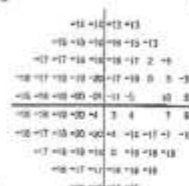
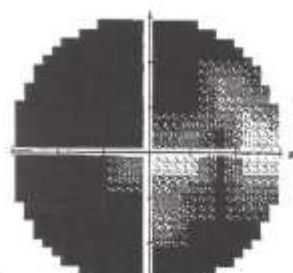
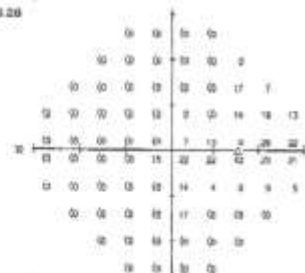
- Alphagan added Feb 2006
24 OD 29 OS
- Lumigan added March 2006
- Irritated eyes, discontinued
- Switched to Xalatan 18 OD 17 OS
- 16-22 OD 17- 23 OS

Name: COYLE, CYNDY ID: DOB: 07-20-1983

Central 30-2 Threshold Test

Fixation Monitor: Gaze/Blindspot
 Fixation Target: Central
 Fixation Losses: 0/18
 False POS Errors: 0 %
 False NEG Errors: 28 %
 Test Duration: 06:28

Power: OFF

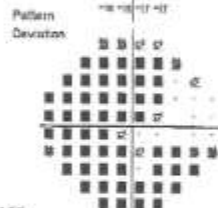
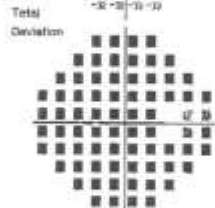


GHT

Outside normal limits

MD: -22.50 dB P < 0.05

PSD: 0.10 dB P < 0.05



11 < 0%
 12 < 2%
 13 < 1%
 14 < 0.5%

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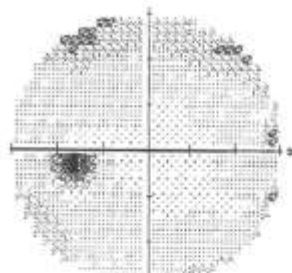
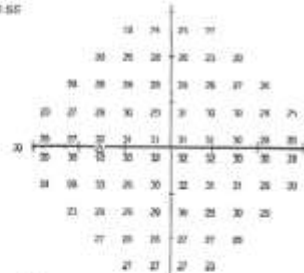
© 1994-2000 Humphrey Systems
 NPA # 740-10804-3 2/3 2

Name: COYLE, CYNDY ID: DOB: 07-20-1983

Central 30-2 Threshold Test

Fixation Monitor: Gaze/Blindspot
 Fixation Target: Central
 Fixation Losses: 0/12
 False POS Errors: 4 %
 False NEG Errors: 4 %
 Test Duration: 02:55

Power: OFF

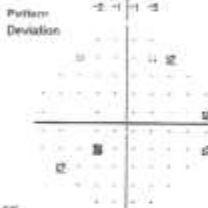


GHT

Within normal limits

MD: -3.77 dB P < 1%

PSD: 1.83 dB



11 < 0%
 12 < 2%
 13 < 1%
 14 < 0.5%

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SINGLE FIELD ANALYSIS

NAME: COYLE, CINDY

ID:

EYE: RIGHT

DOB: 20-07-1983

CONTROL 30-0 THRESHOLD TEST

FIXATION MONITOR: BLIND SPOT

STIMULUS: 121. 4015

PAPIL. SENSITIVITY

DATE: 20-09-1983

FIXATION TARGET: CENTRAL

BACKGROUND: 31.5 000

VISUAL ACUITY

TIME: 12:45 PM

FIXATION LENSES: 0-15

STIMULUS: 1219-1007

AGE: 00

SEX: F

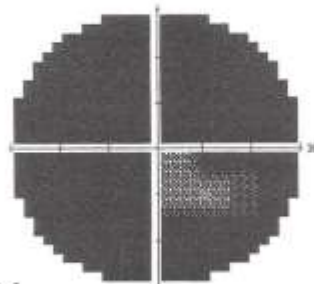
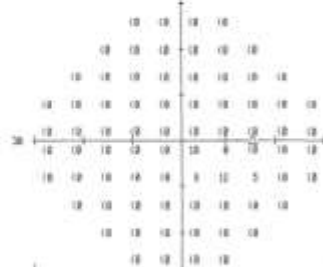
HGT: 10

FALSE POS. ERRORS: 0-1

FALSE NEG. ERRORS: 0-1

TEST DURATION: 0-15

PAGES: 0-1



10 10 10 10 10 10 10 10 10 10
10 10 10 10 10 10 10 10 10 10
10 10 10 10 10 10 10 10 10 10
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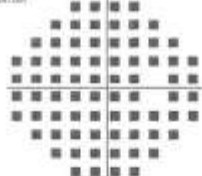
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OUT

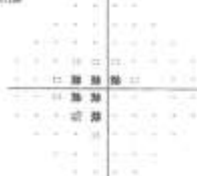
OUTSIDE NORMAL LIMITS

PS -10.21 00 P 1 0.20

PSS 0.22 00 P 1 0.20

TOTAL
DEVIATION

10 10
10 10
10 10
10 10

PATTERN
DEVIATION

© 2000 CNV. 22100 000000
MFG. 11 790-0220-14.2.3/14.2.3

SINGLE FIELD ANALYSIS

NAME: COYLE, CINDY

ID:

EYE: LEFT

DOB: 20-07-1983

CONTROL 30-0 THRESHOLD TEST

FIXATION MONITOR: BLIND SPOT

STIMULUS: 121. 4015

PAPIL. SENSITIVITY

DATE: 20-09-1983

FIXATION TARGET: CENTRAL

BACKGROUND: 31.5 000

VISUAL ACUITY

TIME: 1:00 PM

FIXATION LENSES: 1/10

STIMULUS: 1219-1007

AGE: 00

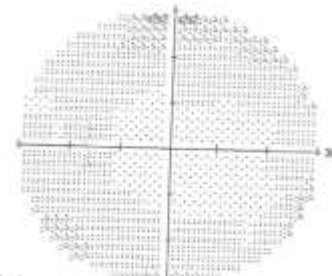
SEX: F

FALSE POS. ERRORS: 0-1

FALSE NEG. ERRORS: 0-1

TEST DURATION: 0-15

PAGES: 0-1



10 10 10 10 10 10 10 10 10 10
10 10 10 10 10 10 10 10 10 10
10 10 10 10 10 10 10 10 10 10
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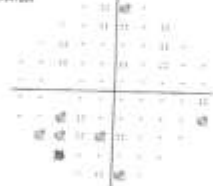
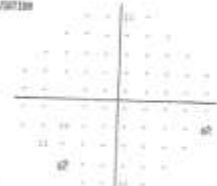
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10 10 10 10 10 10 10 10 10 10
10 10 10 10 10 10 10 10 10 10
10 10 10 10 10 10 10 10 10 10
10 10 10 10 10 10 10 10 10 10

OUT

OUTSIDE NORMAL LIMITS

PS -2.27 00 P 1 0.20

PSS 1.73 00

TOTAL
DEVIATIONPATTERN
DEVIATION

10 10
10 10
10 10
10 10

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MFG. 11 790-0220-14.2.3/14.2.3

Case 4

- Category?
 - Acute glaucoma OD now stable
 - High risk glaucoma suspect OS
- Target IOP? OD <18 OS <24
- Follow-up? 4-6 months

References

Model of interprofessional collaboration in the care of glaucoma patients and glaucoma suspects. CJO. Vol.46 Suppl 1. S1-10.

Eye care America, The Foundation of the American Academy of Ophthalmology (www.eyecareamerica.org)

Canadian Ophthalmological Society website (www.eyesite.ca)

Albert DM, Jakobiec FA. *Principles and Practice of Ophthalmology*. Philadelphia, WB Saunders Co, 2000.

Preferred Practice Patterns, Primary Open Angle Glaucoma. www.aao.org

Preferred Practice Patterns, Primary Angle Closure Glaucoma. www.aao.org



Thank you

Questions



Lucentis ODB coverage for DME

Location, date