


Optometric Education Consultants

OCT
Red, Yellow, and Blue Disease
What is Real Disease
and
What is Physiologically Normal


Greg Caldwell, OD, FAAO
February 13, 2021



1

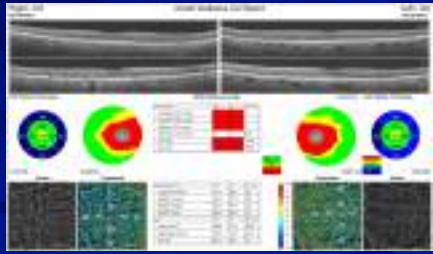
Disclosures- Greg Caldwell, OD, FAAO

- ~ The content of this activity was prepared independently by me - Dr. Caldwell
- ~ Lectured for: Alcon, Allergan, Aerie, BioTissue, Kala, Maculogix, Optovue,
- ~ Advisory Board: Allergan, Sun, Alcon, Maculogix, Dompe
- ~ Involve: PA Medical Director, Credential Committee
- ~ Healthcare Registries – Chairman of Advisory Council
- ~ The content and format of this course is presented without commercial bias and does not claim superiority of any commercial product or service
- ~ I have no direct financial or proprietary interest in any companies, products or services mentioned in this presentation
- ~ Optometric Education Consultants - Scottsdale, Minneapolis, Florida (Ponte Verda Beach), Mackinac Island, MI, Nashville, and Quebec City - Owner



2

Question: 79-year-old-woman with DM
A) Normal B) Disease



4

Green, Red, Yellow, and Blue Disease

Physiologically Normal
OCT measure structure

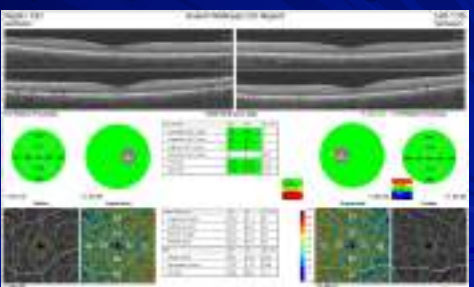
5

Green, Red, Yellow, and Blue Disease
Hints to this Disease

- ~ If the disease is a bilateral disease
 - * Glaucoma
 - It is usually asymmetric
- ~ If the scans are symmetric
 - * Then it most likely not disease – physiologically normal
 - * Anatomical variation
 - Normal for that patient
- ~ Another hint is the GCC expected values
 - * 85-100 microns
 - * 92-95 microns

6

Symmetry and What is Being Tested



7

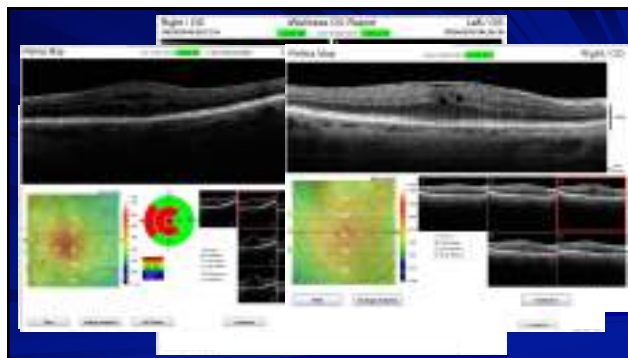
46-year-old woman with red-yellow disease

OD -0.75 20/20
 OS -1.25 20/20

Systemic hx: thyroid dysfunction, high cholesterol
 * Medications for the above

IOPs 15 mm Hg OU 8:30 am

8



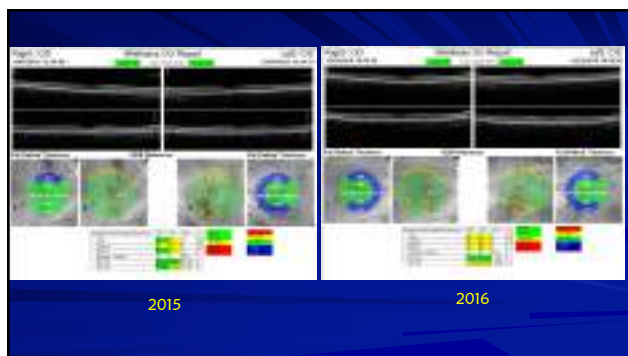
9

63-year-old woman with red, yellow, blue, and green disease

OD plano/ +2.00 20/20
 OS -0.50/ +2.00 20/20

IOPs 15-18 mm Hg OU 2011-2015

10



11

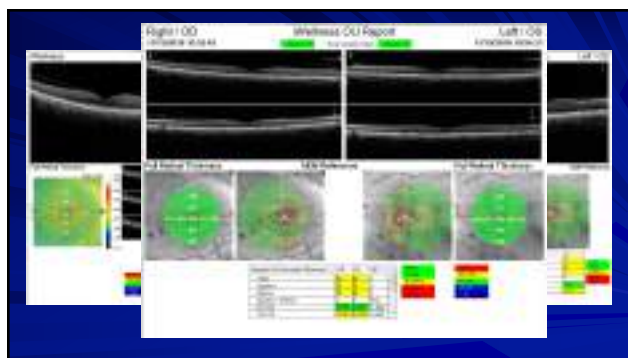
58-year-old with yellow disease

OD +1.00 20/20
 OS +1.25 20/20

IOPs: 13/15 mm Hg at 11:24 am

(pay attention to FLV and GLV)

12



13

40 yo man with red, blue, green disease

OD -7.50 - 0.75 x 110 20/20
OS -7.50 - 0.75 x 105 20/20

IOPs: 15/13 mm Hg at 6:30 pm

14

March 16, 2015

15

January 9, 2017

16

22 months apart

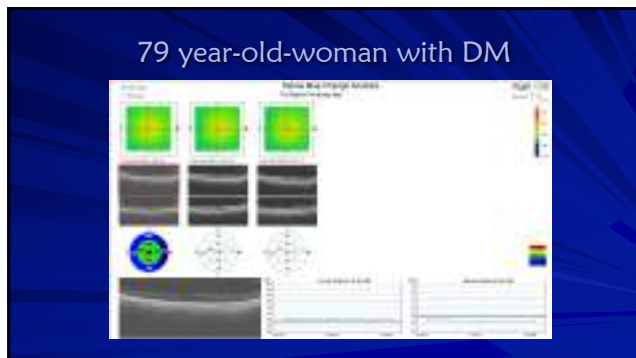
17

Question: 79-year-old-woman with DM
A) Normal B) Disease

18

79 year-old-woman with DM

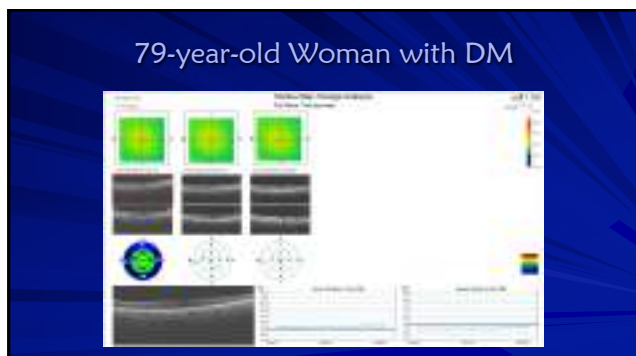
19



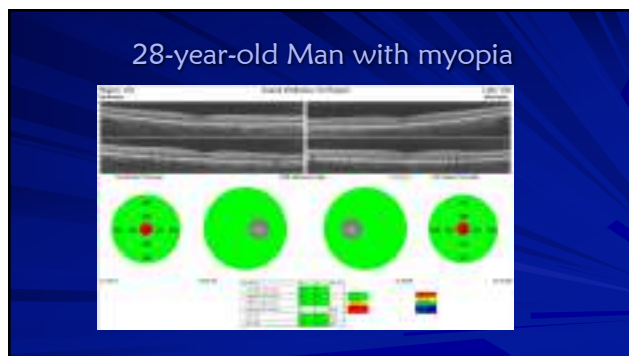
20



21



22



23

Green, Red, Yellow, and Blue Disease

Real Disease

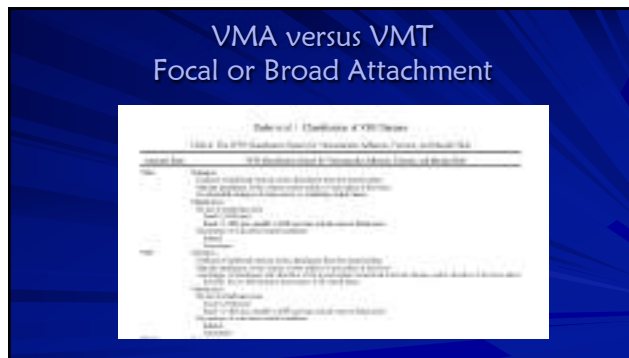
24



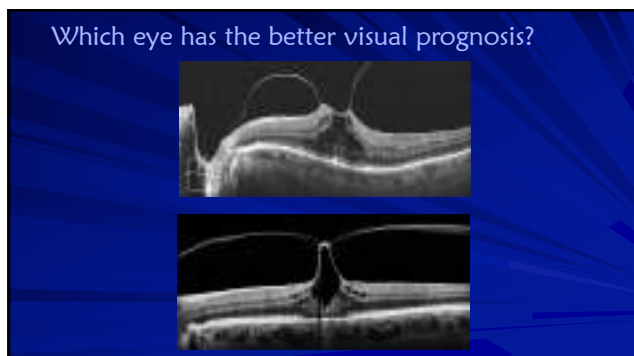
25



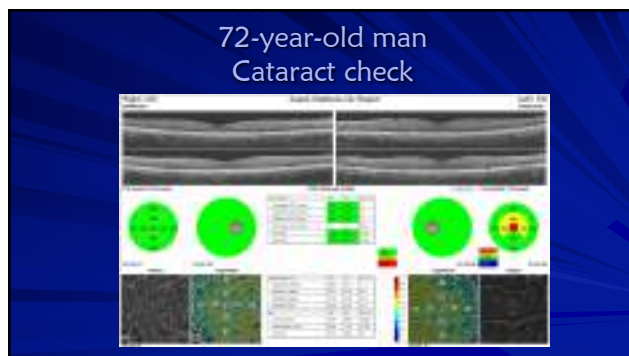
26



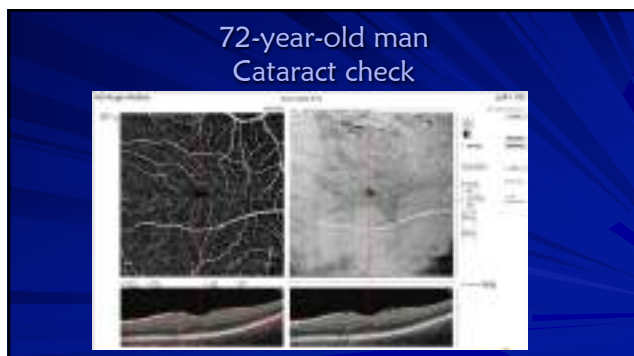
27



28



29

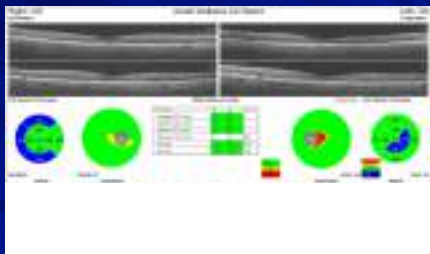


30



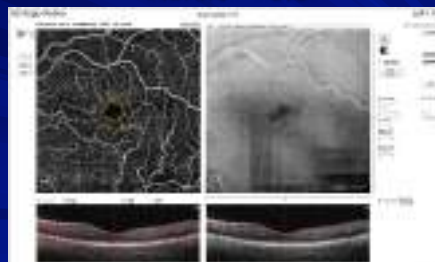
31

63-year-old woman with DM
HbA1c = 8.0



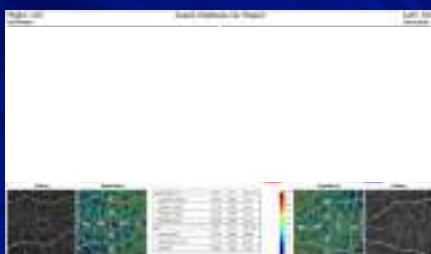
32

63-year-old woman with DM
HbA1c = 8.0



33

59-year-old man with DM
HbA1c = 7.8



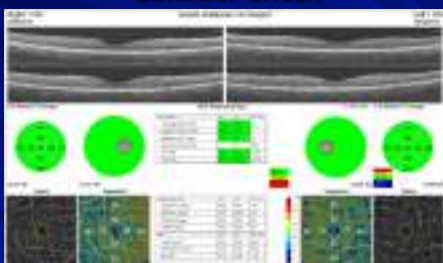
34

Advanced Interpretation

Green Disease

35

71-year-old woman
Cataract Check

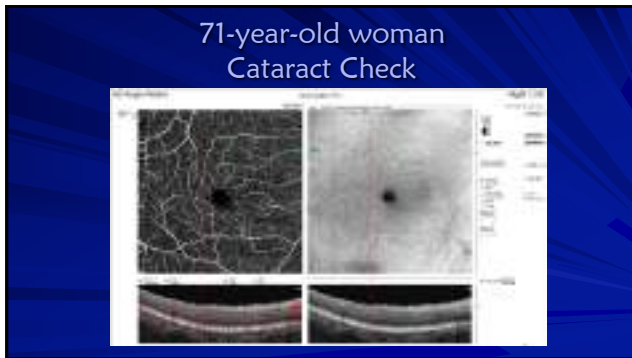


36

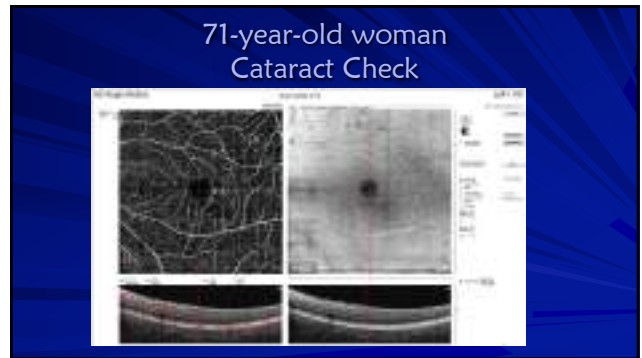
71-year-old woman
Cataract Check



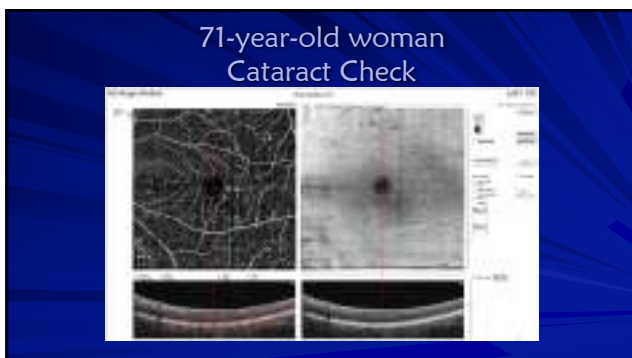
37



38



39



40

 <p>Optometric Education Consultants</p>	<p>Thank you!</p> <p>OCT Red, Yellow, and Blue Disease What is Real Disease and What is Physiologically Normal</p>
---	--

41