


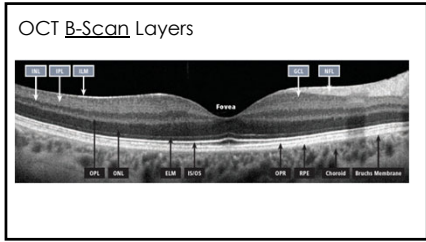
On behalf of Vision Expo, we sincerely thank you for being with us this year.

Vision Expo Has Gone Green!

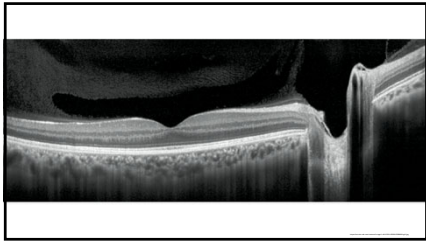
We have eliminated all paper session evaluation forms. Please be sure to complete your electronic session evaluations online when you login to request your CE Letter for each course you attended! Your feedback is important to us as our Education Planning Committee considers content and speakers for future meetings to provide you with the best education possible.



1



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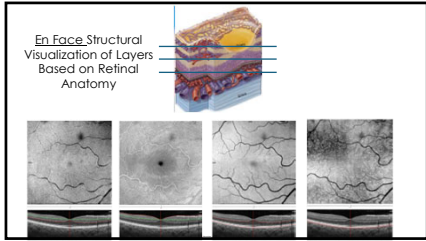


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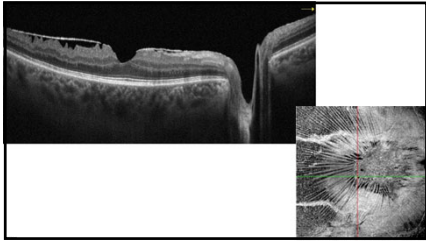
OCT Workshop

Timothy Bossie OD, FAAO
 Danica Marrelli OD, FAAO
 Shalu Pal OD, FAAO
 Julie Rodman OD, MSc, FAAO

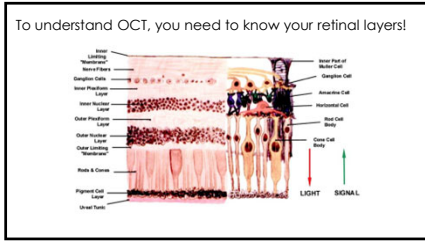
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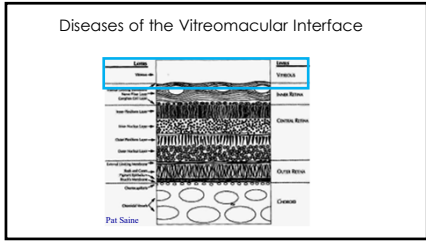
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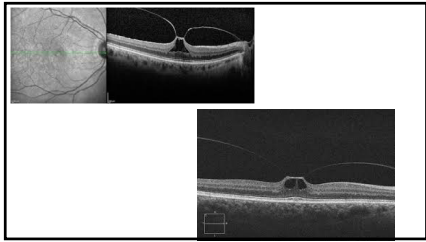
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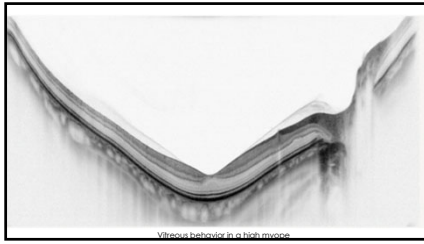
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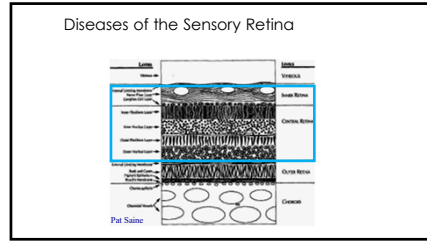
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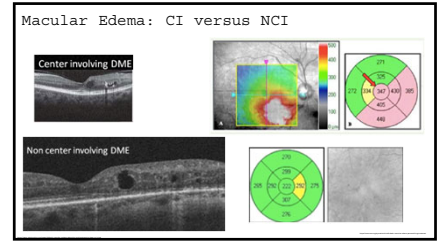
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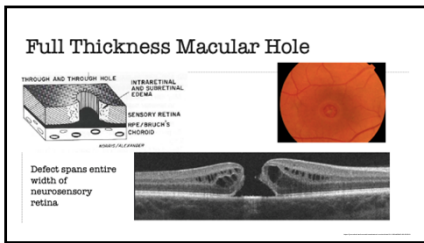
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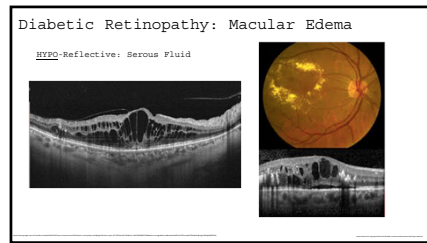
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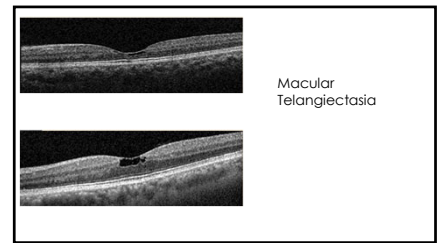
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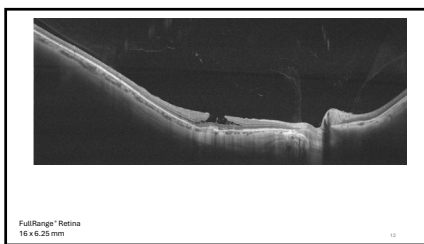
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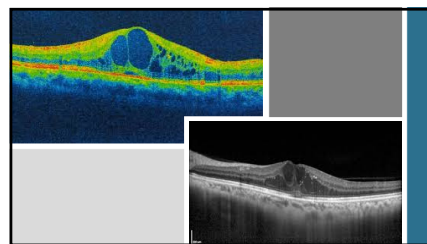
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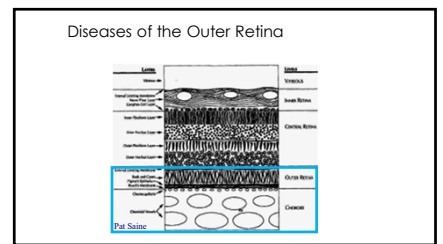
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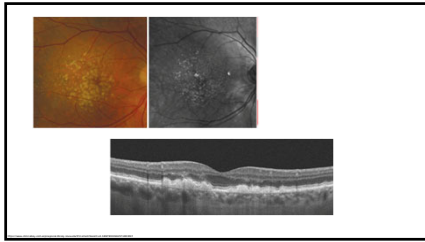
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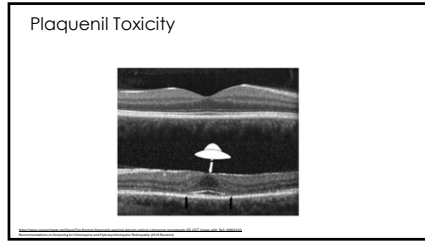
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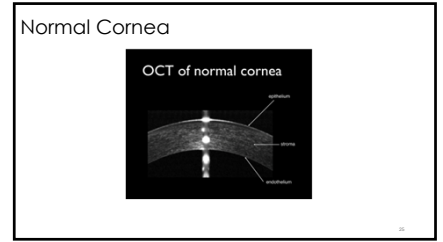
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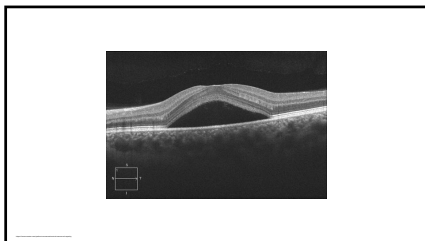
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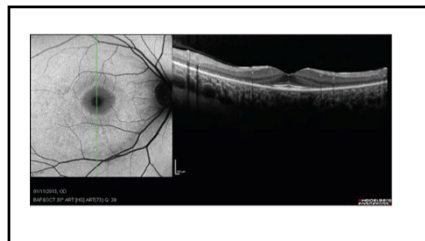
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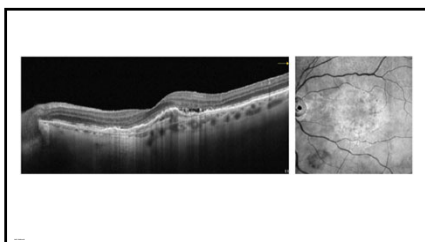
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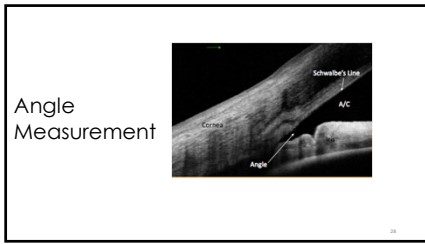
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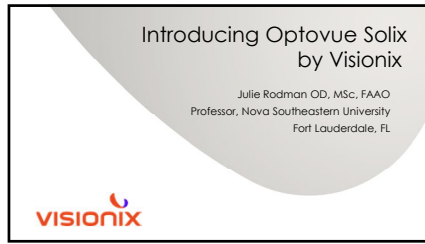
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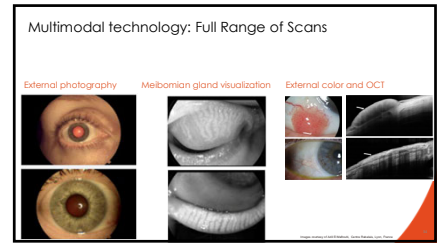
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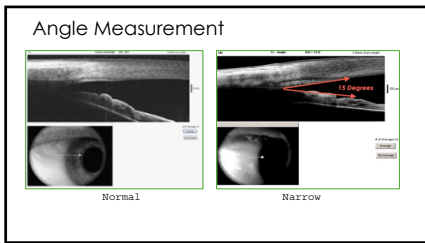
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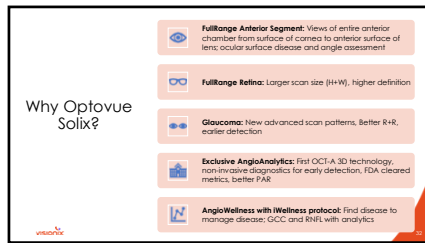
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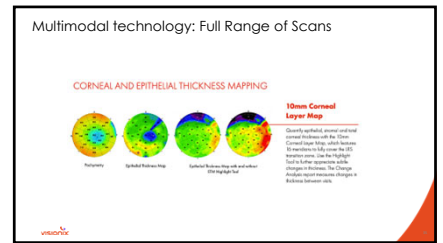
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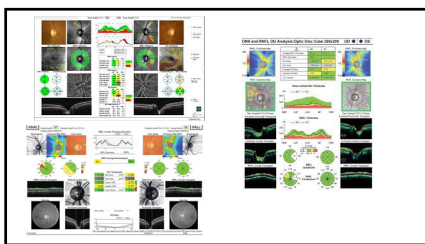
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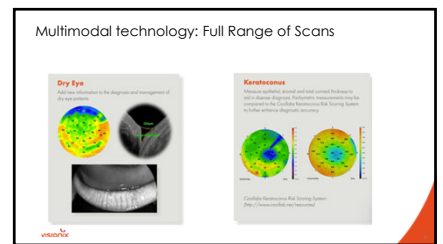
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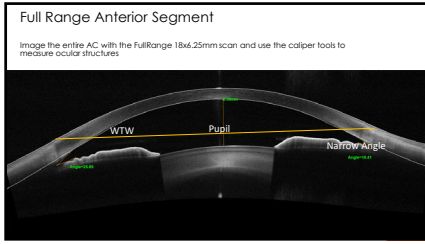
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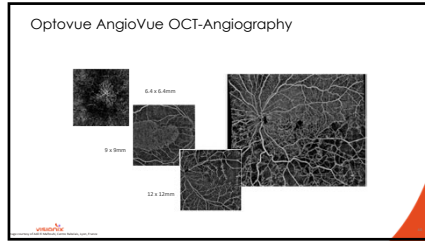
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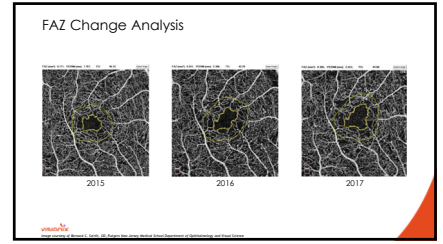
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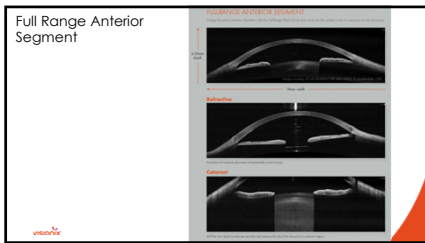
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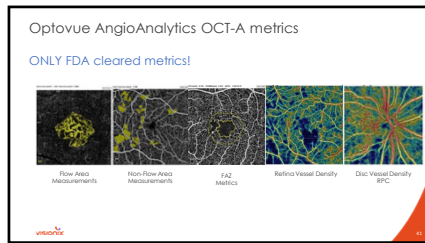
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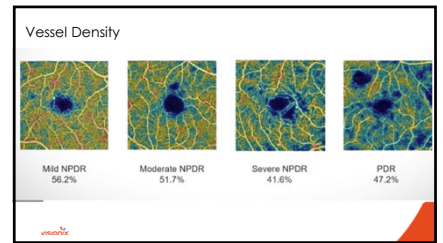
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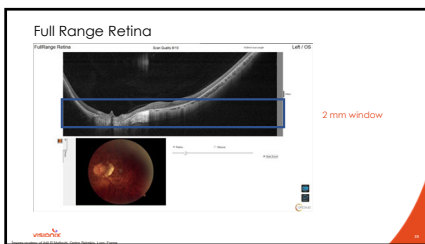
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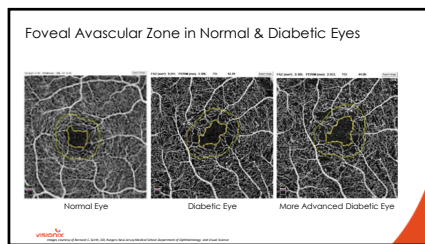
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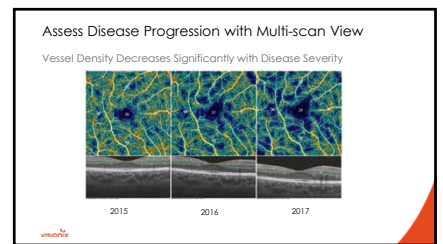
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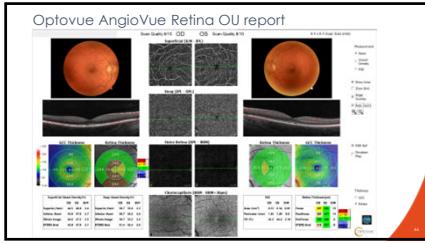
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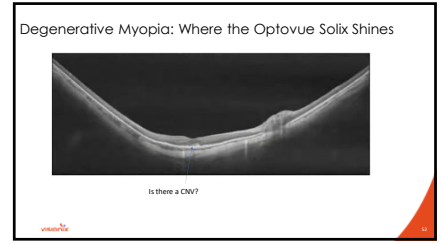
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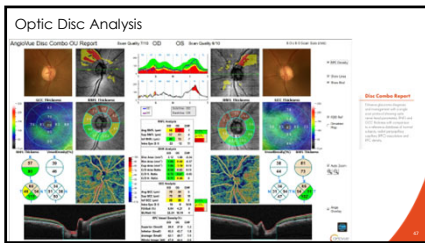
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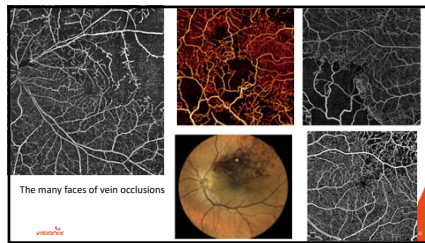
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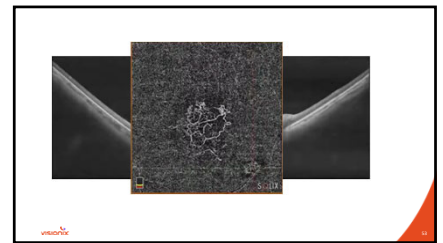
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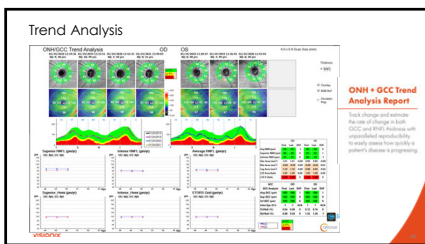
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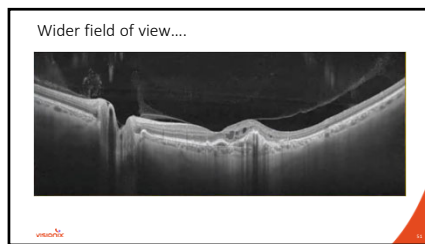
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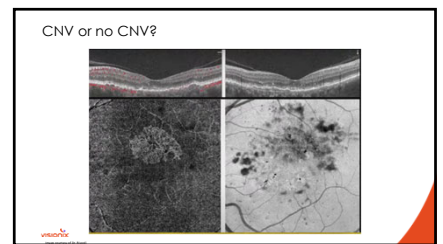
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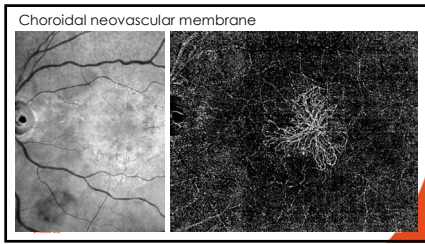
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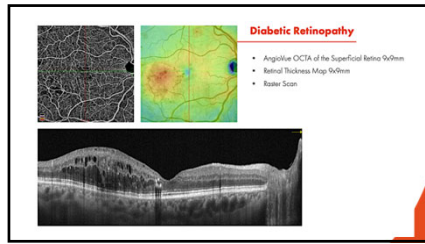
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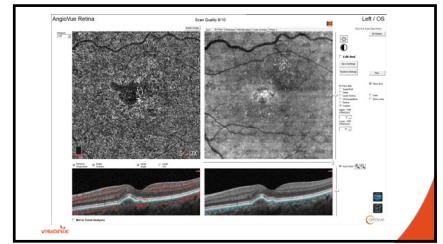
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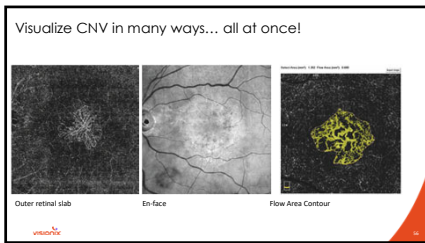
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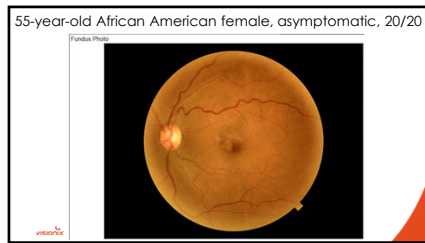
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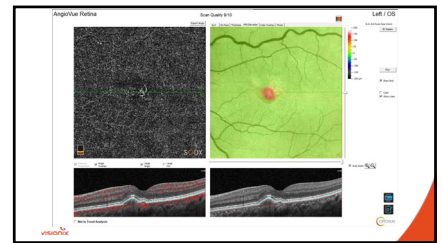
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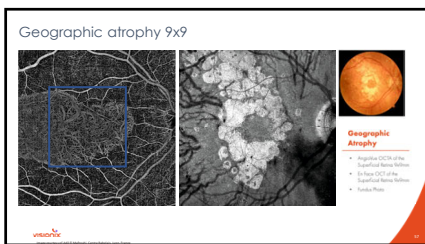
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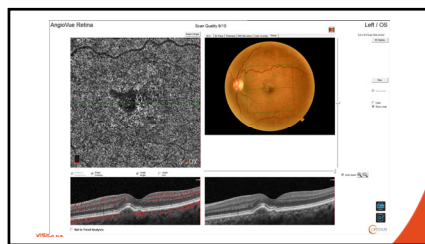
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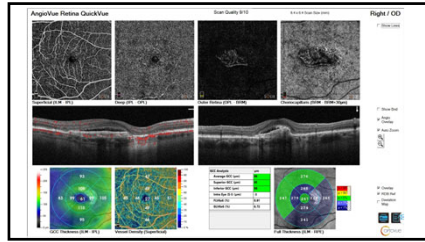


63

Wellness Case Study

- 78-year-old Hispanic female
- Routine eye examination; asymptomatic
 - BCVA: OD 20/25; OS 20/25
- Nuclear sclerosis bilaterally; consistent with mild decrease in visual acuity

64

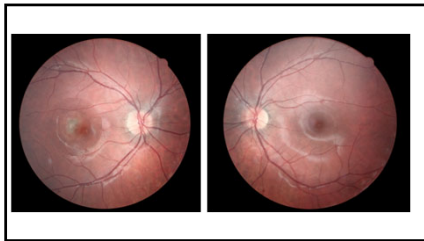


67

Maestro2 OCT Features

- Multimodal Imaging
 - Non-mydratric imaging
- Fully Robotic OCT
- Unique OCT Scans & Clinical Reports
- **New to Maestro2:** OCT Angiography (OCTA)

70



65

OCT WORKSHOP

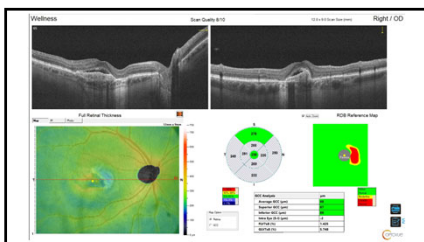
Vision Expo West 2024
TIMOTHY BOSSIE, OD, FAAO

68

MULTIMODAL IMAGING: OCT & COLOR FUNDUS CAMERA

- Single-touch automated capture
- Simultaneous capture
 - OCT & true color fundus image
- Pin-Point Registration
 - Correlate OCT with fundus image
 - Localize ocular conditions

71



66

3D OCT-1 Maestro2

- Spectral Domain (SD) OCT
 - Combination OCT and True Color Fundus Camera
 - Automated Acquisition
 - Pin-Point™ Registration
 - Widefield OCT
 - Anterior Segment OCT
 - Panoramic Fundus Imaging

69

MULTIMODAL IMAGING: OCT & COLOR FUNDUS CAMERA

- Advantages of Multimodal Imaging:
 - Efficient for staff & doctors
 - No need to move patient
 - 1 scan = OCT & fundus image
 - Less training
 - Maestro2 saves space with a small footprint
 - Assists clinical documentation

72

ROBOTICS IN PRACTICE

- Fully automated, robotic OCT
- Automation aids less experienced users
 - One touch - align, focus & optimize imaging
- Combination of automation + multi-modal imaging saves time

Patient Cohort	3D Wide Scan - Image Acquisition Time
All Subjects	2:06 (1:03 - 4:31)
Healthy Subjects	2:03 (1:03 - 4:23)
Subjects with Disease	2:16 (1:13 - 4:31)

73

3D WIDEFIELD OCT SCAN - Wellness Exam

76

CASE #1: 3D Wide Glaucoma Report OU

79

UNIQUE SCAN PATTERNS & REPORTS

- Variety of scans to assess anterior segment, ONH & macular anatomy
- Scan & reports to discuss today:
 - 3D Wide Scan Pattern
 - 3D Wide Glaucoma Report
 - Hood Report

74

3D Widefield OCT - Macular Drusen

77

CASE #1: Glaucoma: Evaluating Structure & Function

80

3D WIDEFIELD OCT SCAN

- 12mm x 9mm
- Comprehensive scan
 - Macular & ONH Anatomy
 - Thickness maps & grids
 - Reference database comparison
- Ideal scan for eye wellness checks or OCT screening

75

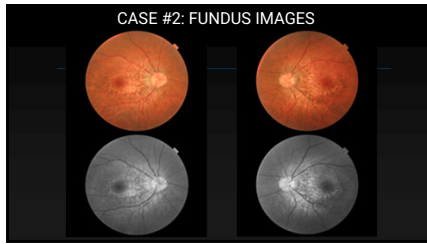
3D WIDEFIELD SCAN: OCULAR DISEASE POPULATION

- 3D Wide Scan - standard scan
- Beneficial diagnosing & monitoring ocular disease
 - Earlier detection
 - Advanced reports - progression
- Glaucoma: Ability to better correlate structure and function
 - 3D Wide Glaucoma Report
 - Hood Report

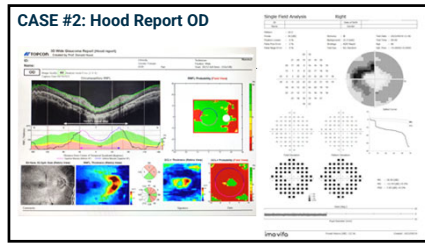
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CASE #1: Glaucoma: Evaluating Structure & Function

81



82



85

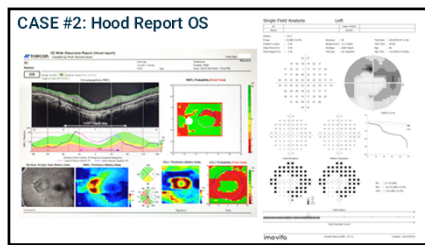
Maestro2: Robotic OCTA

- **Maestro 2 - the first robotic OCTA on the market**
 - Fully robotic OCTA acquisition
- **Range of OCTA scan sizes**
 - 3 x 3 mm cube
 - 4.5 x 4.5 mm cube
 - 6 x 6 mm cube
- Optimize OCTA imaging for ocular structures and disease conditions
- **Eye Tracking**

88



83

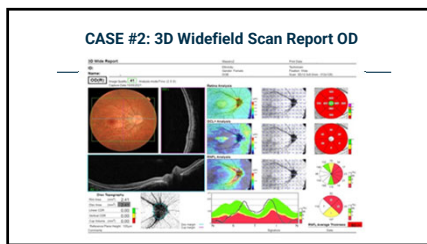


86

Maestro2 OCT-A

- **EnFace OCTA:**
 - Allows for visualization of retinal vasculature plexus
- **Angio B or B-Scan OCTA:**
 - Location of blood flow
 - Normal vs abnormal blood flow
- **Composite Angiography:**
 - Colorations match depth of scan

89

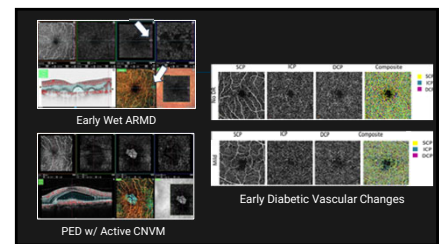


84

Why Use OCTA in Clinical Practice?

- Easy to obtain especially with robotics
- Current with diagnostic technology - patient expectations
- More informed about patient's ocular condition
 - Wet vs. dry ARMD
 - Diabetes
- New CPT Code: 92137 (Jan 2025)


87



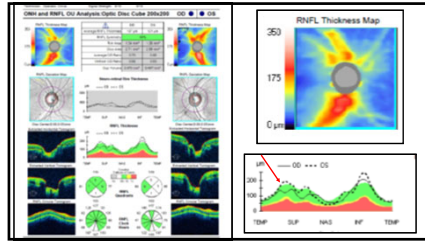
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Cirrus OCT (Zeiss)

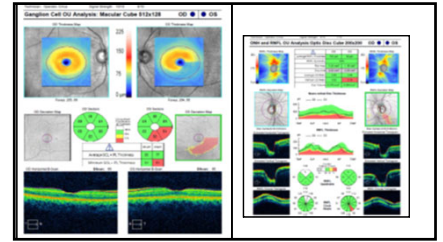
- Danica J. Marelli, OD, FAAD



91




94



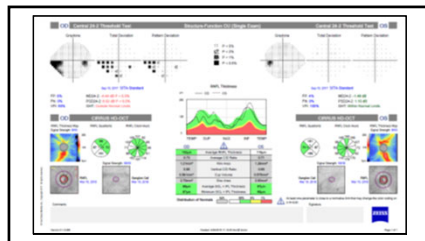
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Cirrus OCT (Zeiss)

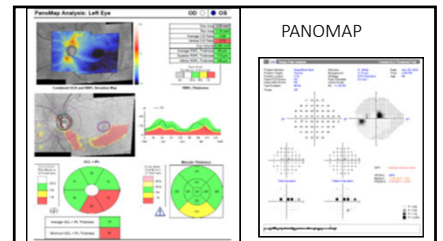
- Glaucoma:**
 - ONH/RNFL
 - Macular GC-IPL
 - Panomap
 - Progression Software
- Retina**
 - Raster scans
 - Cube scans
 - Change Analysis
 - Advanced RPE Analysis
- Anterior Segment



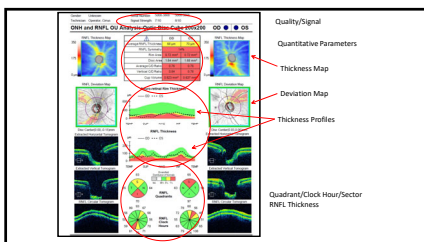
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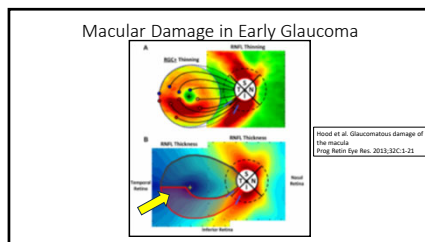
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93

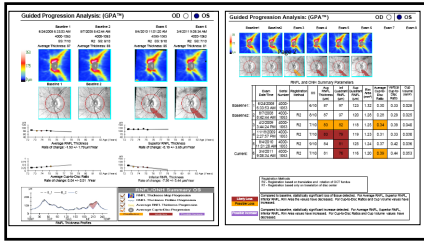


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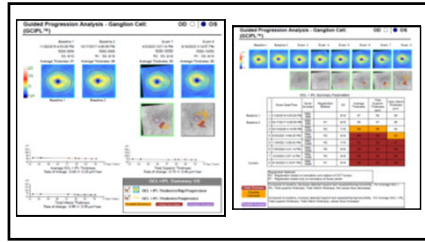
Guided Progression Analysis (GPA)

- Event Analysis:**
 - "Yes/No" – is today's test worse than baseline?
 - Based on test-retest variability
 - Suspected progression yellow
 - Confirmed progression red
- Trend Analysis:**
 - How quickly is this patient changing?
 - RNFL
 - GD
 - Macula GC-IPL

99



100



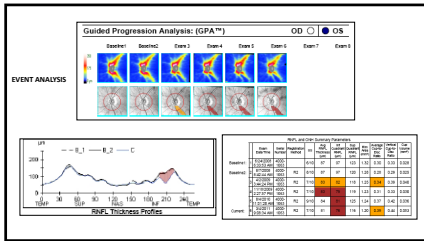
103

AMD: OCT-A and Advanced RPE Analysis

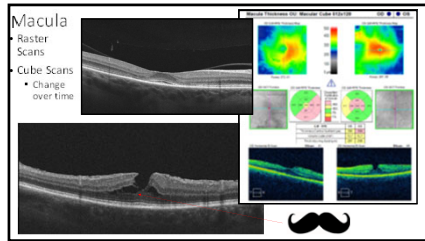
- OCT-A
- Advanced RPE Analysis
 - Combination of two algorithms:
 - RPE Elevation Map (measure drusen burden)
 - Sub-RPE Slab (measures Geographic Atrophy or GA)
 - Provides reproducible, quantifiable OCT-based measurements of drusen and GA.
 - "Advanced RPE Analysis" is not a SCAN but an algorithm
 - Can be applied to any macular cube scan

EVALUATION OF AMD RELIES ON CLINICAL EXAM, FAF AND COLOR PHOTOGRAPHY, OCT, AND OCT-A

106



101

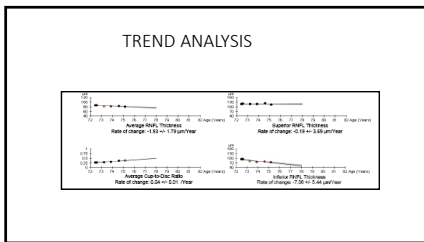


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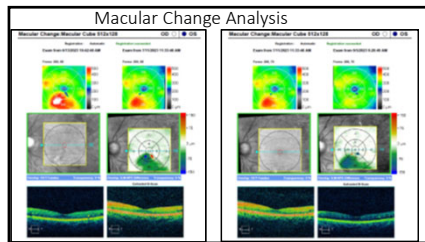
RPE Elevation Map / Drusen Detection

- RPE Elevation map is OCT surrogate for drusen detection
 - Can measure drusen area, volume
 - Detects and RPE elevation greater than 19.4 microns
 - Color coded RPE elevation map is transparent color-coded image overlaying the fundus image
 - Can measure RPE elevation/volume within central 3mm or 5mm circle
 - Not a replacement for clinical examination

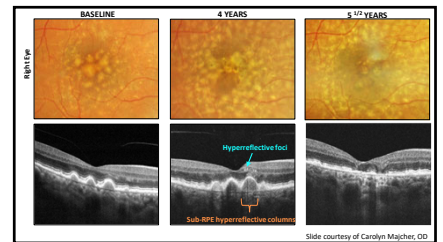
107



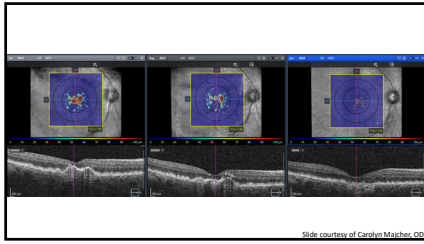
102



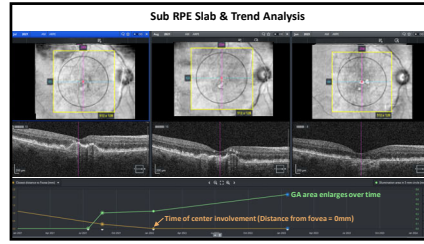
105



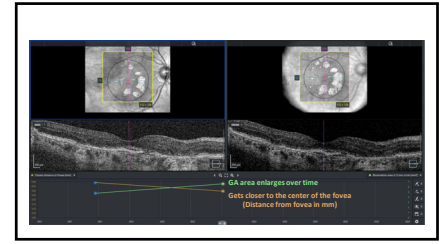
108



109



112



115

Sub-RPE Slab and Geographic Atrophy (GA) Detection

- Algorithm for detection of absent or attenuated RPE
- As RPE thins, underlying choroid is hyper-illuminated (more easily visualized on OCT)
- Sub-RPE slab quantifies area of RPE atrophy (OCT-based surrogate for GA)
- Visualized as an en face overlay → quantitatively as summation within 5mm circle
 - Measures shortest distance from any area of illumination and fovea
- Detects enlargement and/or encroachment on fovea

Sub-RPE Illumination

110

Advanced RPE Analysis Macular Cube 512x128

Prior Visit Current Visit

RPE Region Map

Sub-RPE Slab

RPE Profile™

Parameter	Unit	Value	% Change
GA Area	mm²	1.2	+15%
Time to Center Involvement	mm	0.8	-10%
Choroid Thickness	µm	250	+5%
Sub-RPE Slab	µm	150	-2%
RPE Profile	µm	100	+1%

113

Complement Inhibition – The Game Has Changed

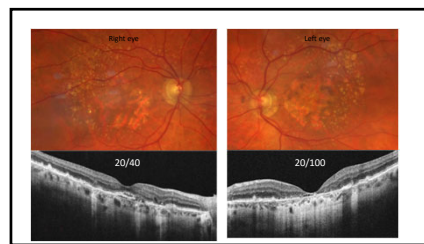
- Pre-treatment for GA, management was document and loosely monitor
- Now document, *carefully* monitor, *potentially* treat
- HEAVILY dependent on OCT imaging

116

New Terminology

- Geographic Atrophy: Clinical term (clinical exam, FAF) to denote areas of retinal and RPE atrophy without the presence of CNV
- Complete RPE and retinal atrophy (cRORA): OCT-based definition of atrophic AMD lesions (loosely synonymous with GA); RPE attenuated/disrupted/absent with degeneration of overlying outer retina; choroid hyper-reflective
- Incomplete RPE and retinal atrophy (iRORA): Precursor to cRORA

111



114