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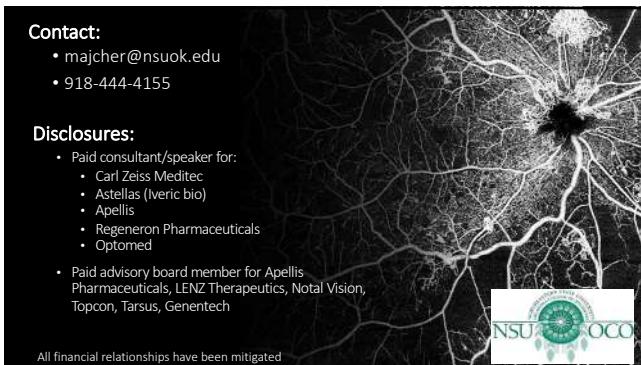
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2



3

Disclosures- Greg Caldwell, OD, FAAO

All relevant relationships have been mitigated

- Lectured for: Alcon, B&L, Dompé, Lenz
- ** Disclosure: Receive speaker honorariums
- ** Advisory Board: Dompé, Envision, Tarsus
- ** Disclosure: Receive participant honorariums
- I have no direct financial or proprietary interest in any companies, products or services mentioned in this presentation
- ** Disclosure: Non-salaried financial affiliation with Pharnex
- Healthcare Registries – Chairman of Advisory Council for Diabetes and AMD
- The content of this activity was prepared independently by me - Dr. Caldwell
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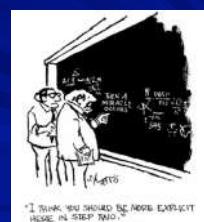
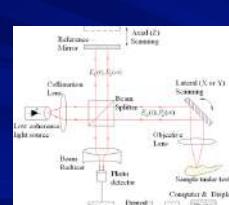


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**Optical Coherence Tomography
Course Design**



6

OCT and OCT Angiography

Both are Becoming Equally Important in Diagnosis, Management, and Treatment

7

Optical Coherence Tomography

- ~ OCT is an optical signal acquisition and processing method
- ~ **Time domain OCT**
 - * 15-16 microns of resolution
 - * Stratus (Zeiss)
- ~ **Spectral domain (SD-OCT) or Fourier domain OCT**
 - * Spatially encoded frequency domain OCT (SFD-OCT)
 - * 5-6 microns of resolution
 - Able to see photoreceptor morphology (inner/outer segments)
 - * 50 times faster than time domain
- ~ **Swept source OCT**
 - * Time encoded frequency domain OCT
 - * 1 micron of resolution
- ~ Future of OCT: intraoperative imaging, blood flow and oxygenation measurements
- ~ May have the possibility to assess retinal pathology like a pathologist

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OCT Angiography: the Next Chapter in Posterior Imaging

- ☞ Images retinal microvasculature without dye injection
- ☞ Displays structure and function from a single imaging system



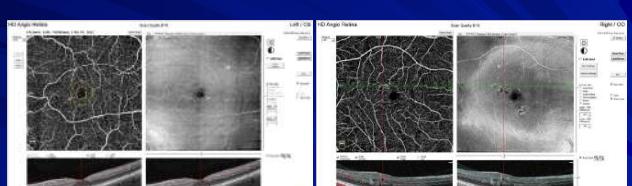
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Inner Retina versus Outer Retina



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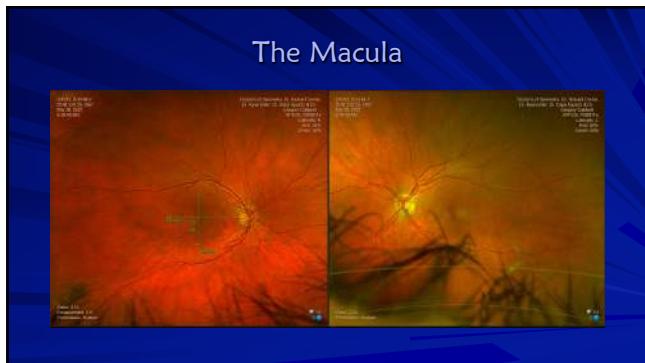
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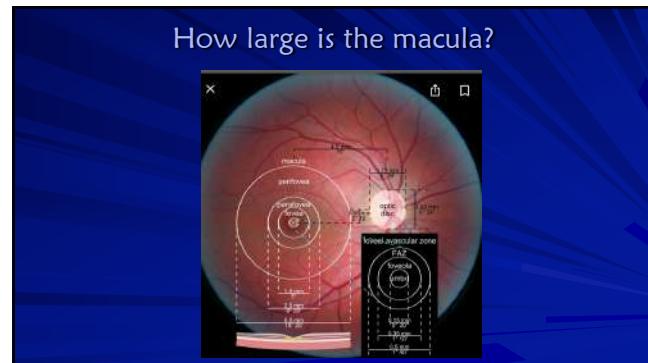
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Where is the macula?

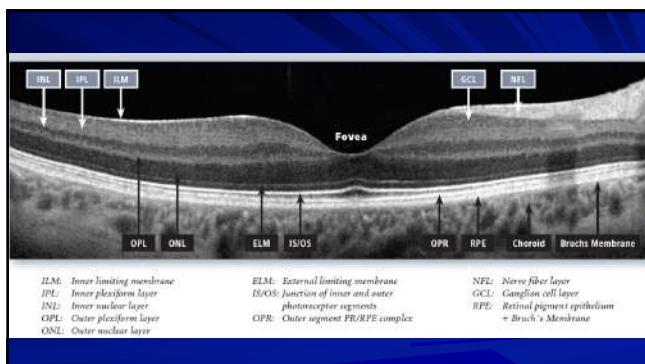
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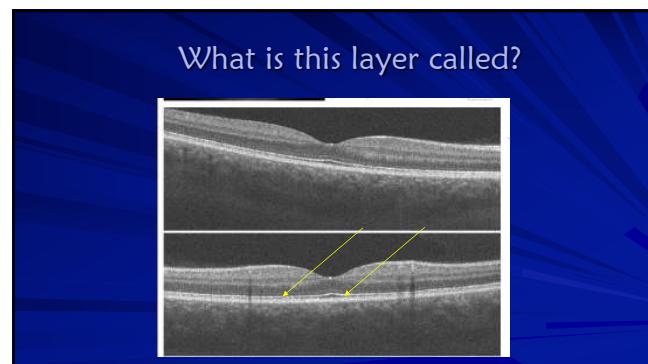
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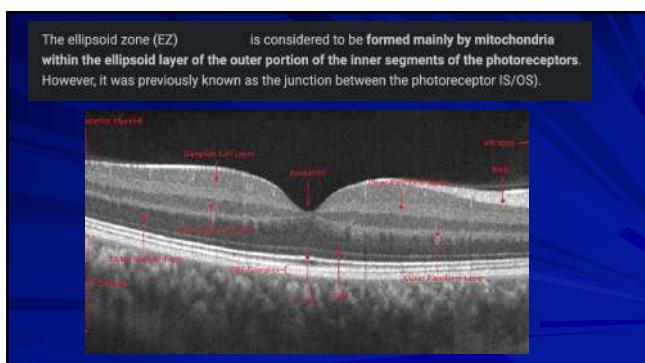
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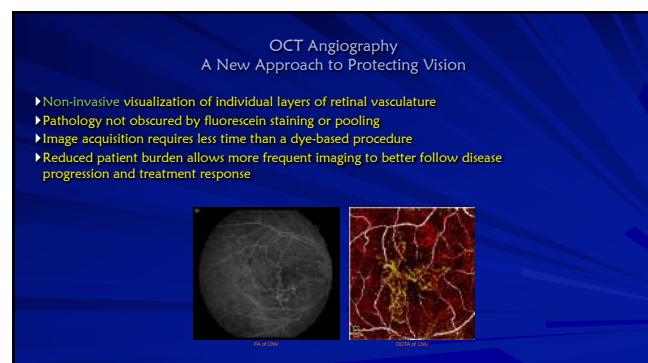
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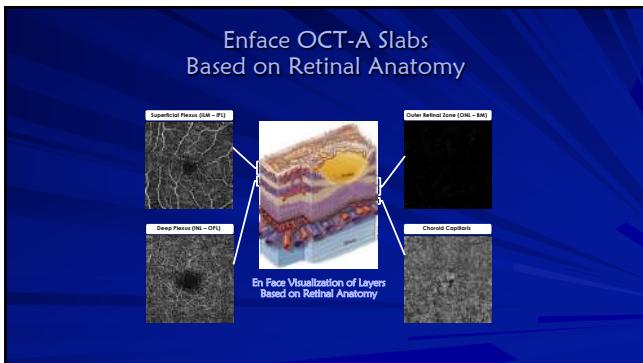
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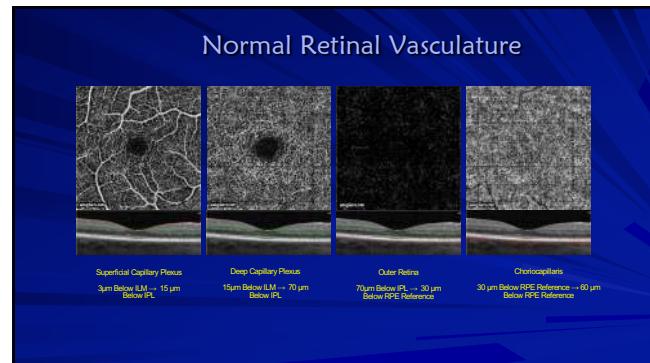
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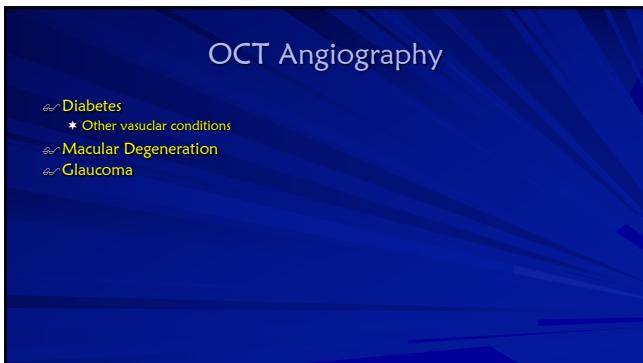
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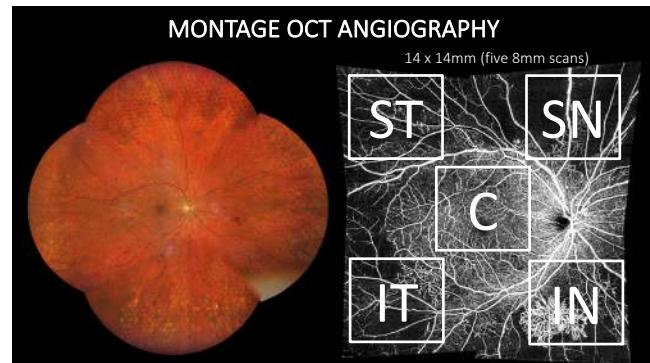
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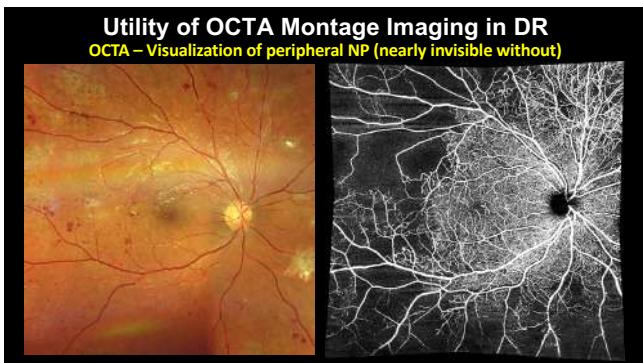
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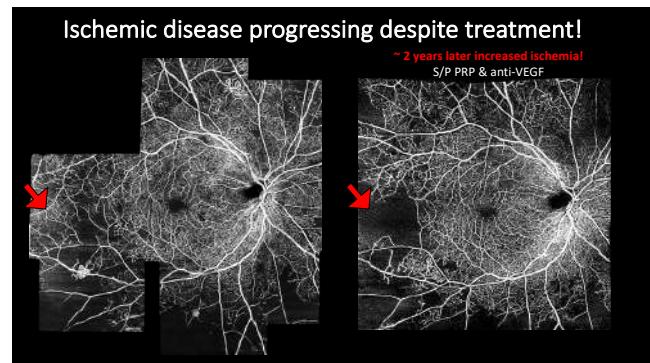
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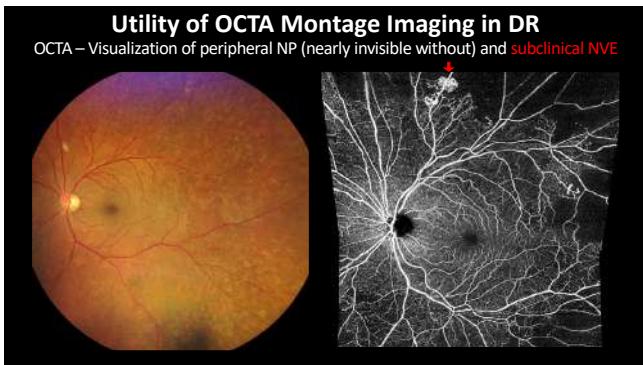
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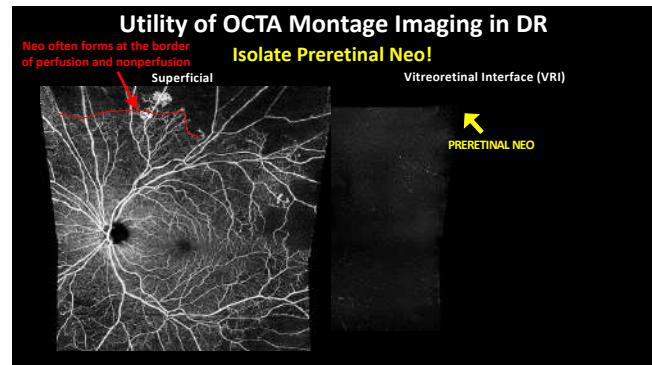
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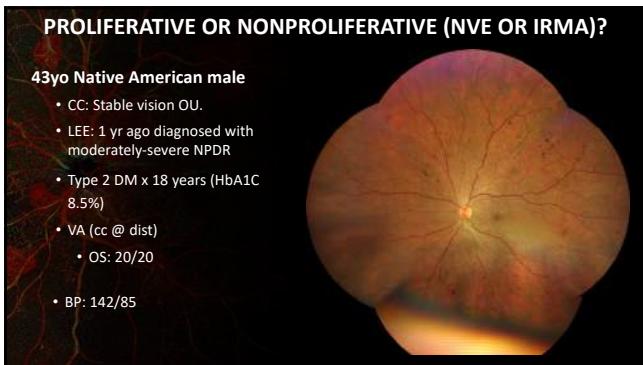
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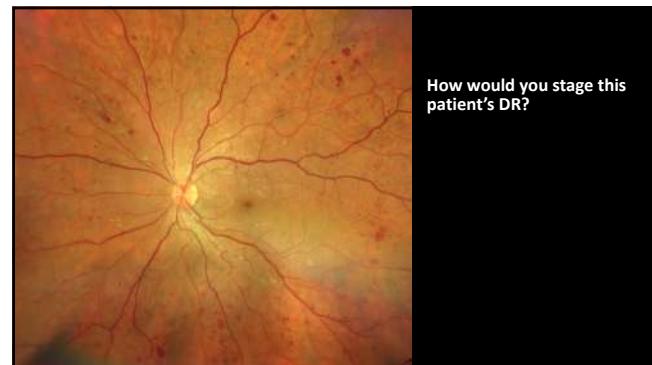
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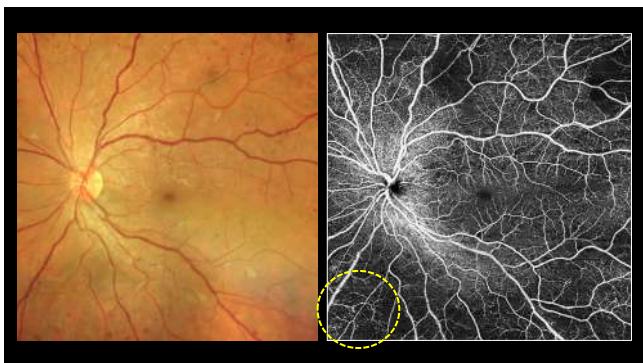
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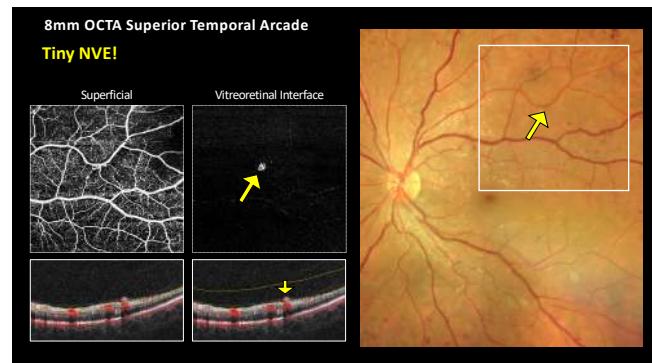
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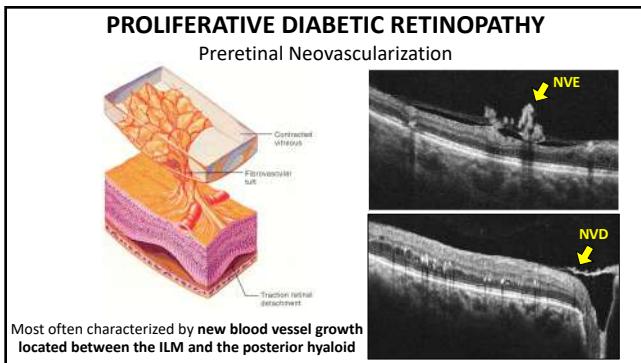
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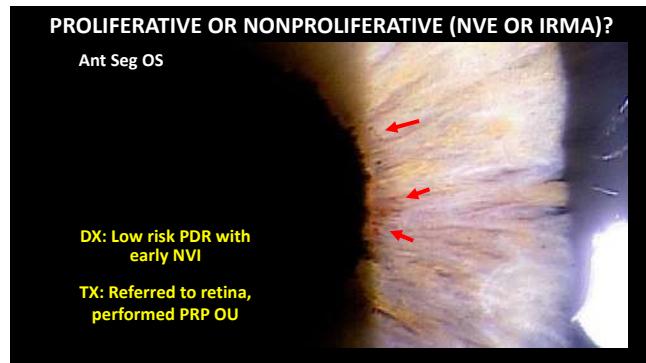
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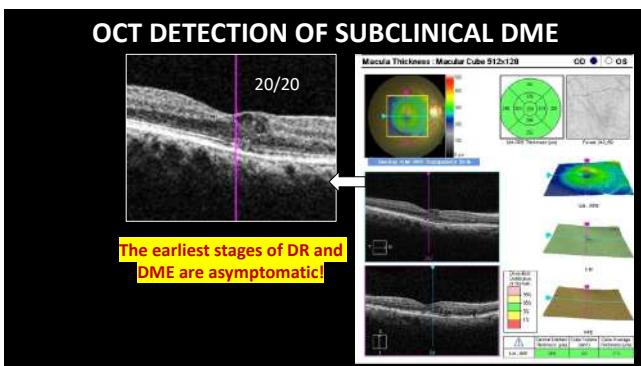
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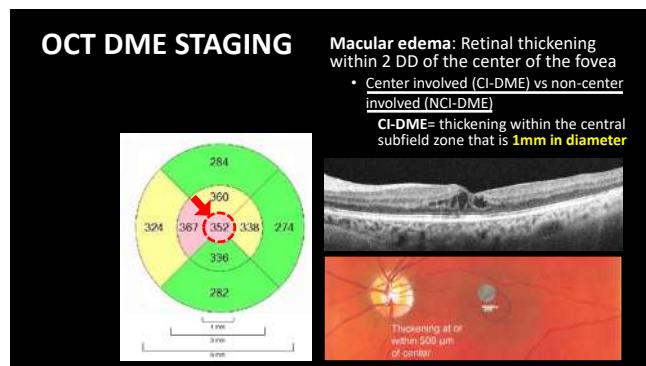
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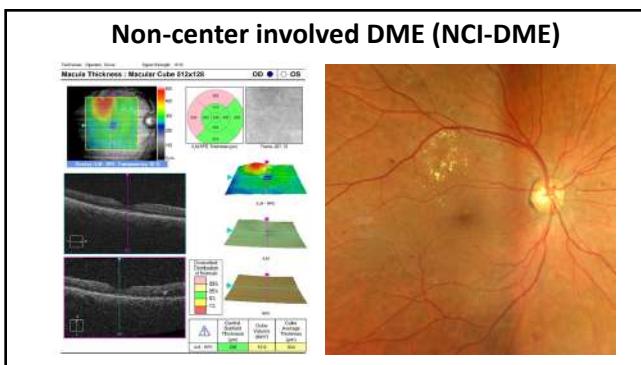
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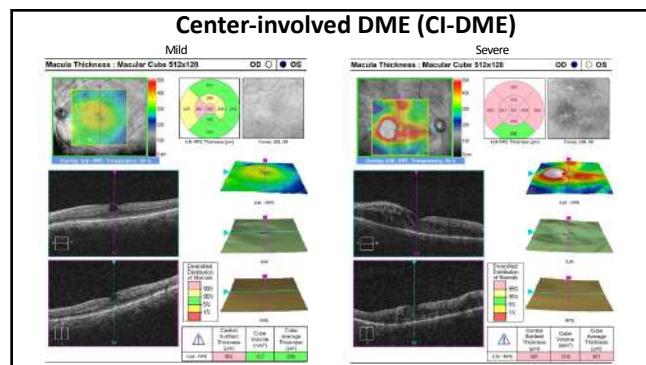
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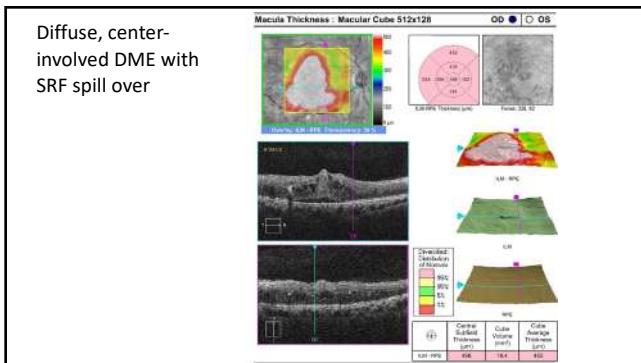
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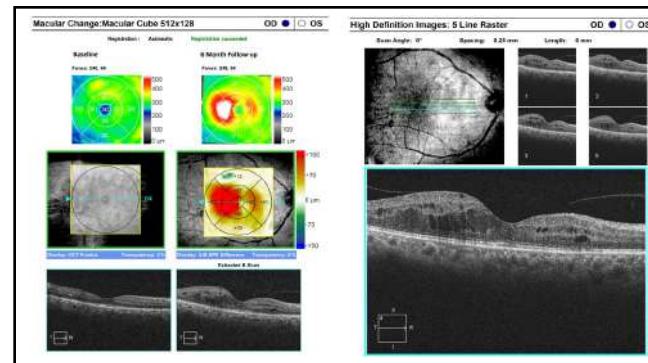
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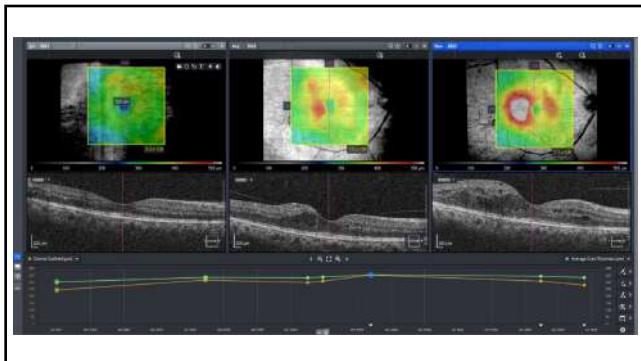
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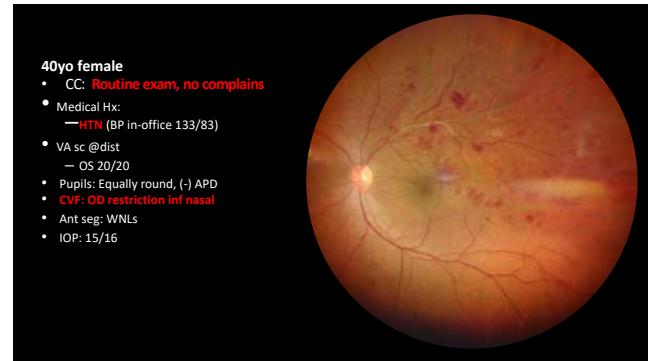
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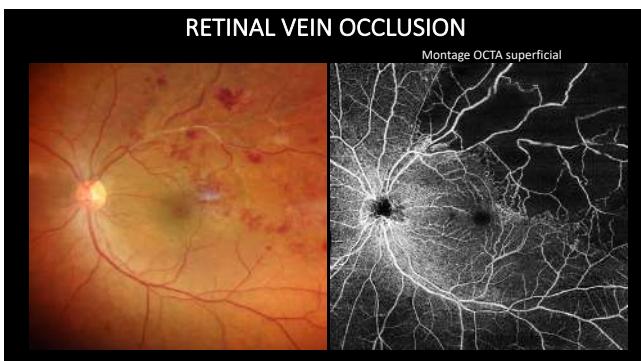
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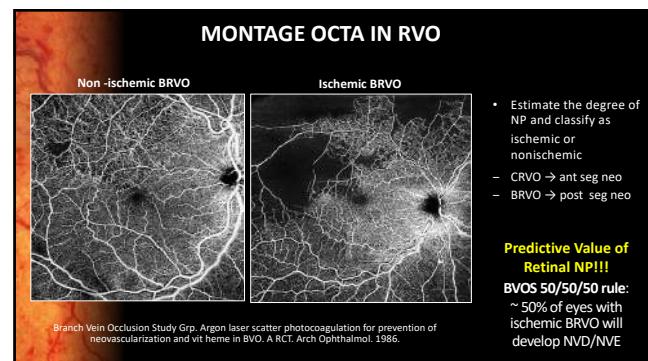
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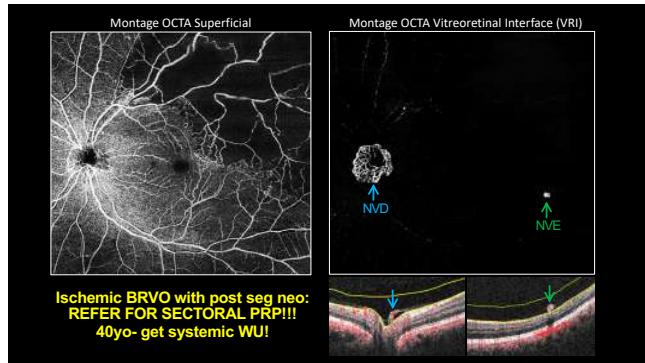
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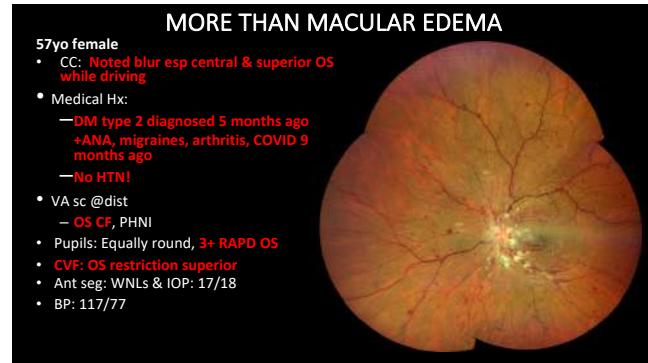
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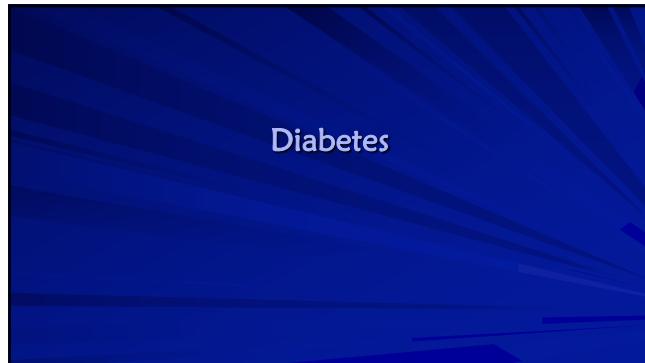
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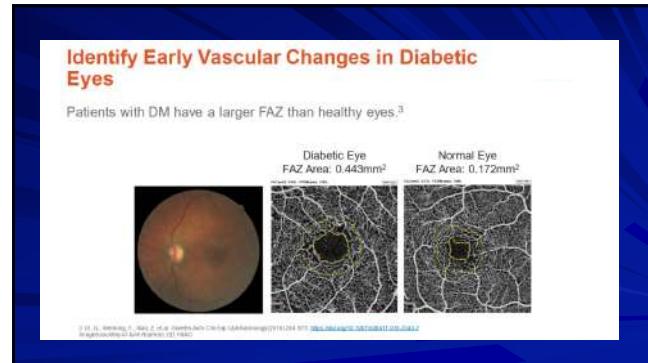
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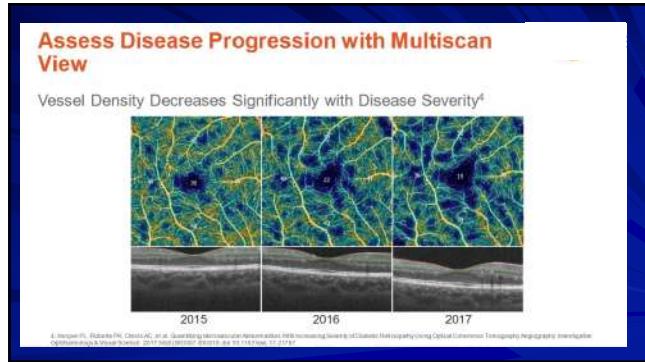
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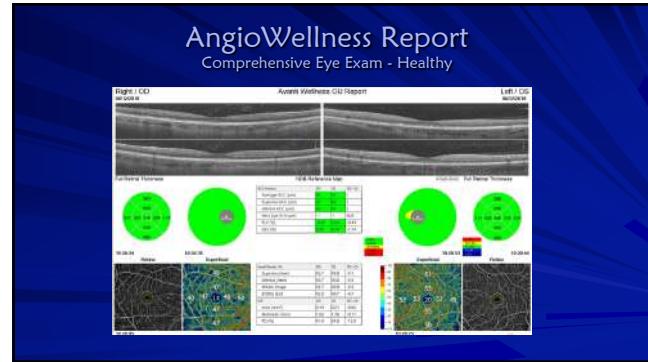
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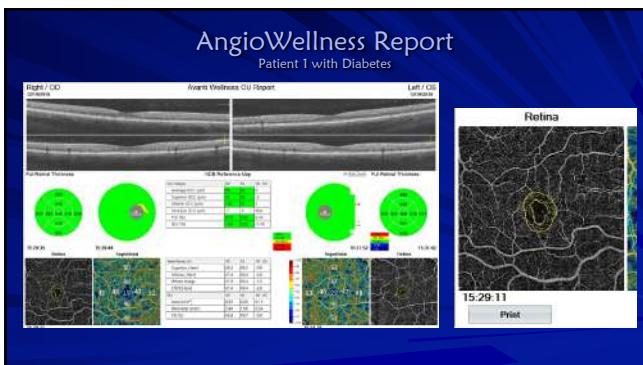
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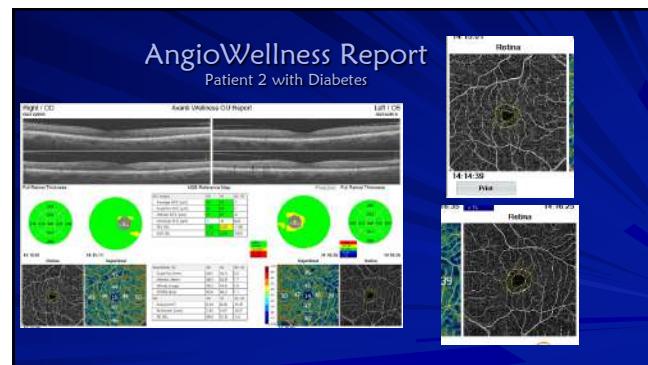
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OCT & OCT Angiography - Real World Case Studies for Enhanced Interpretation

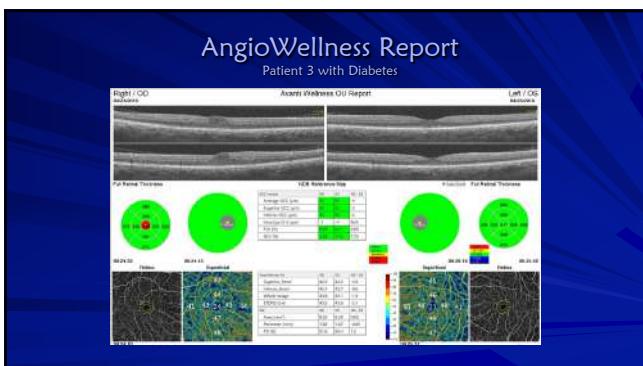
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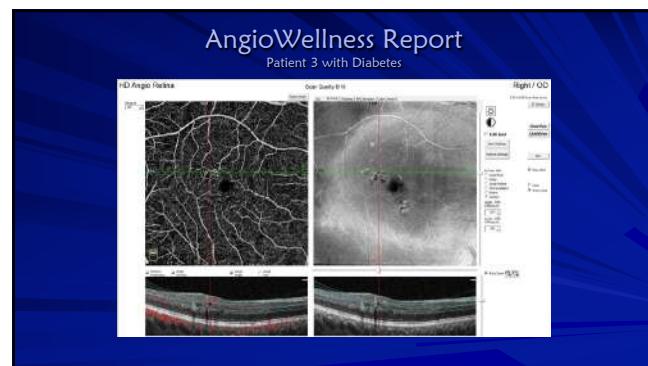
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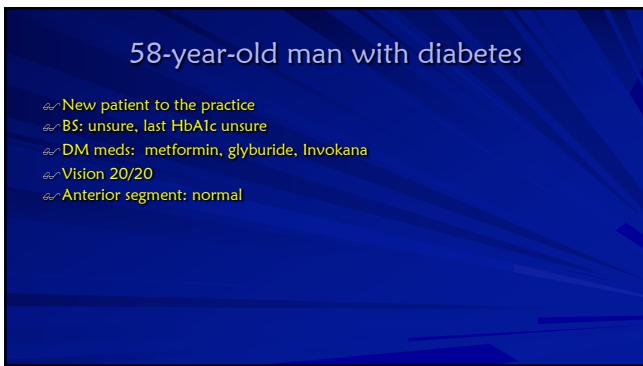
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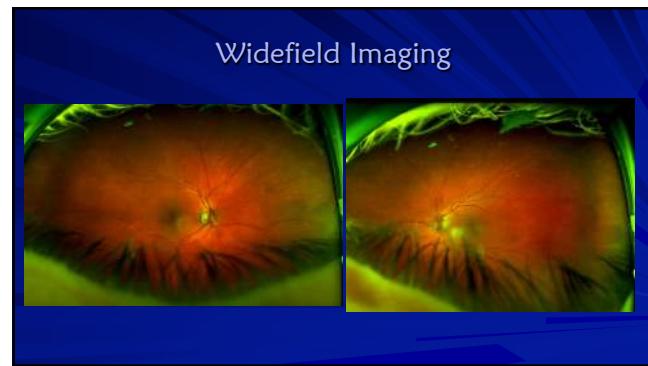
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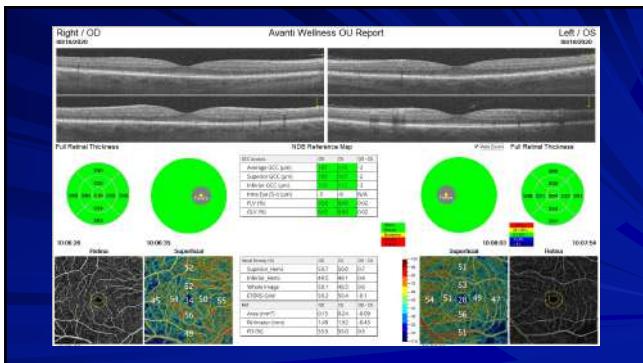


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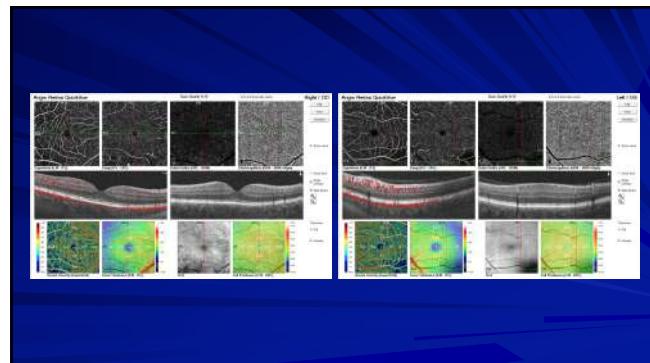
Greg Caldwell, OD, FAAO
Greg@optometricedu.com 814-931-
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OCT & OCT Angiography - Real World Case Studies for Enhanced Interpretation

Thursday, March 12, 2026



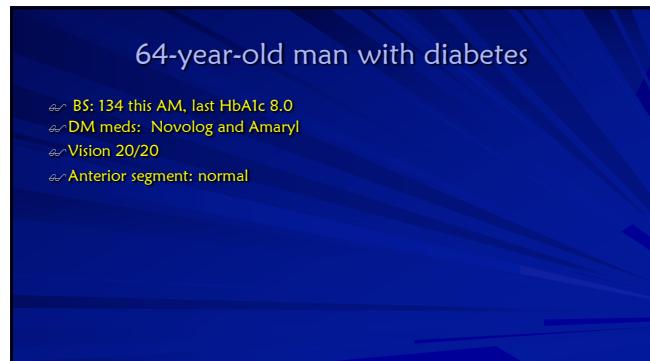
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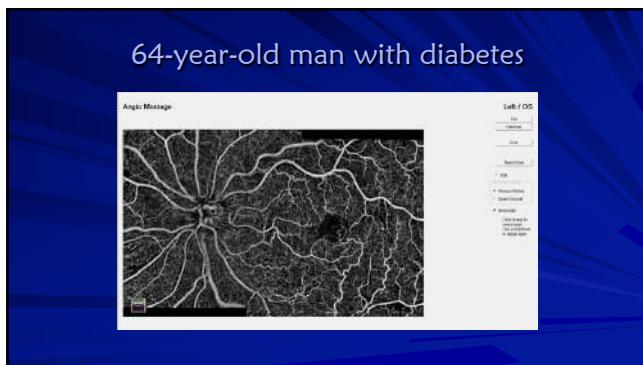
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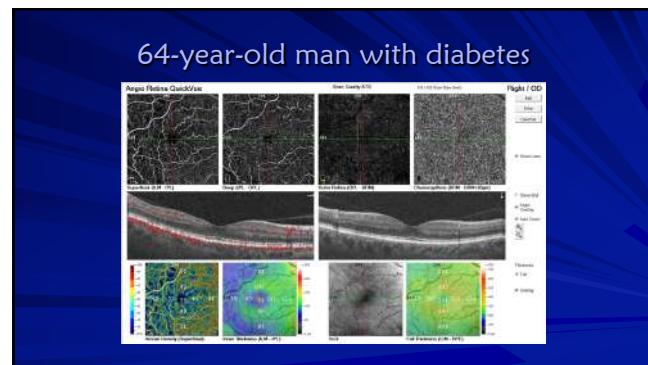
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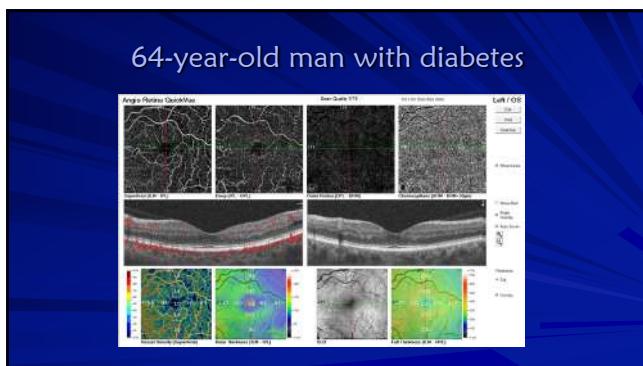
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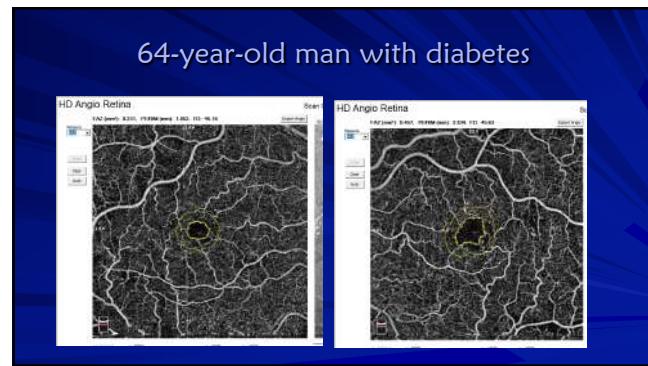
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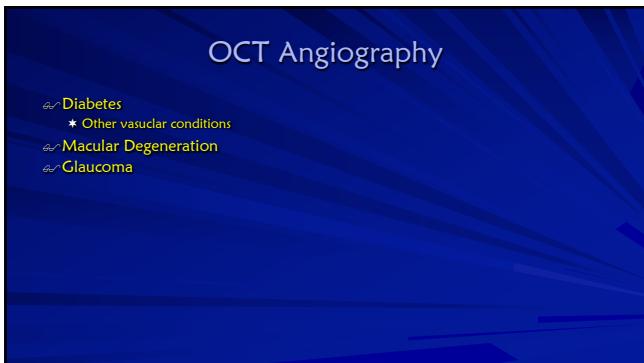
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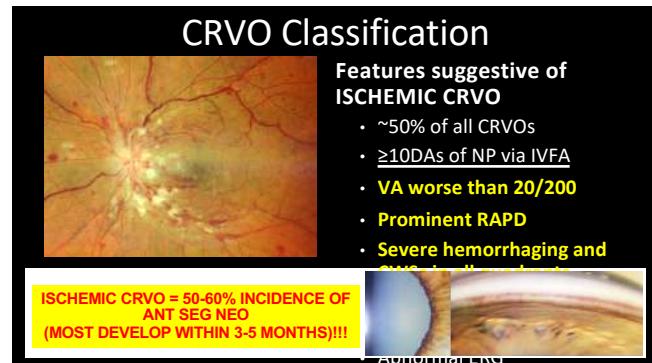
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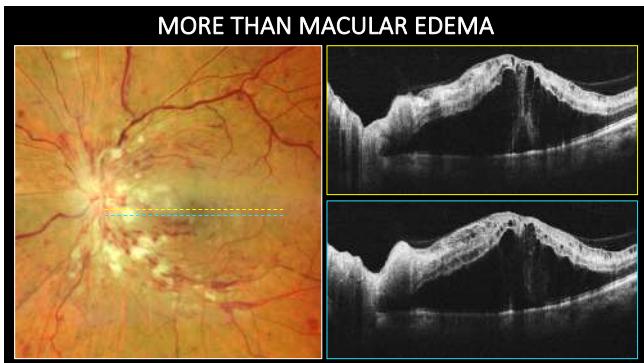
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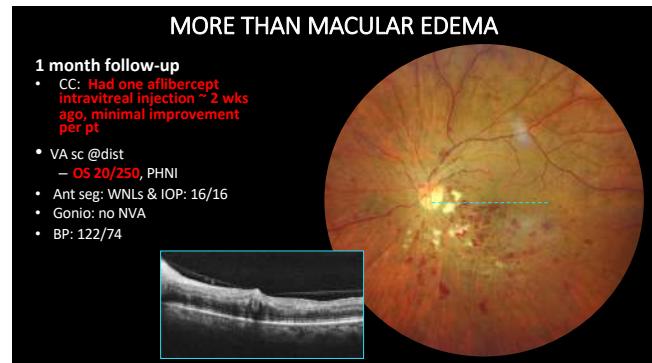
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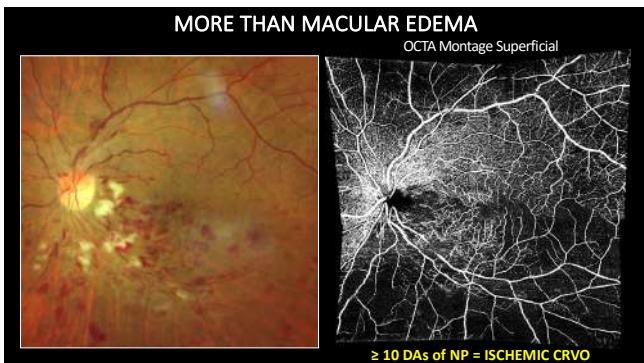
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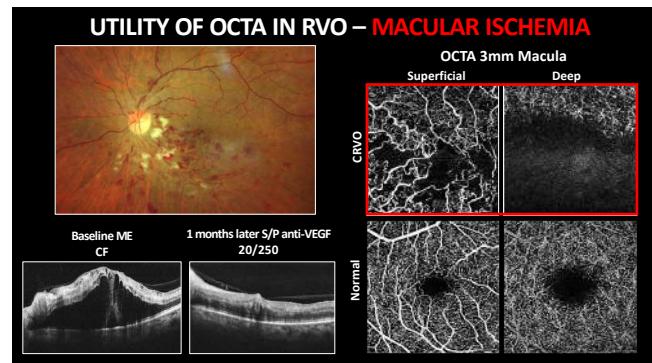
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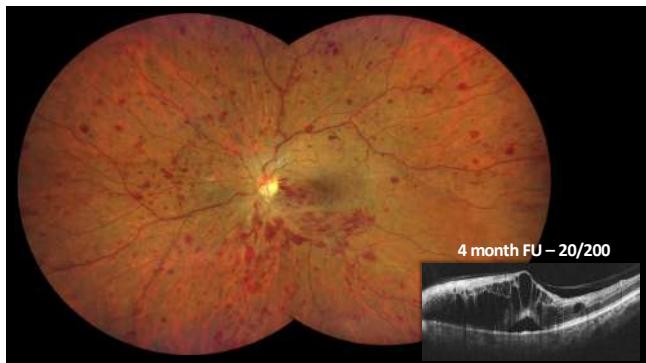
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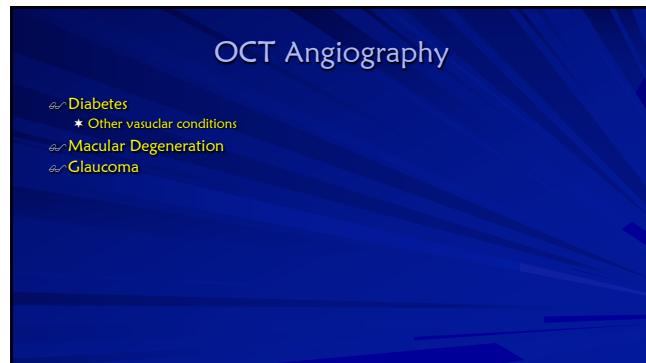
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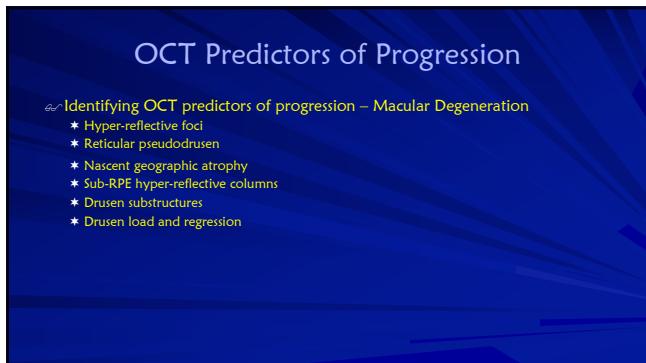
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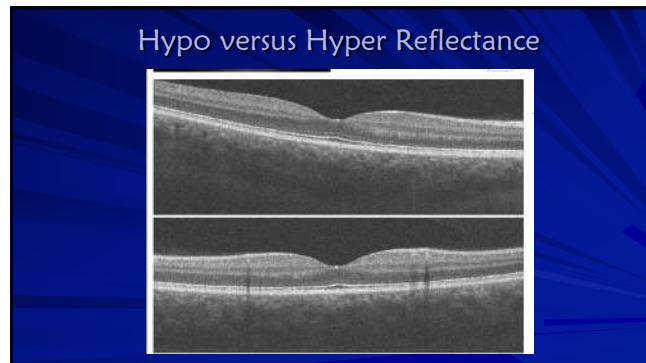
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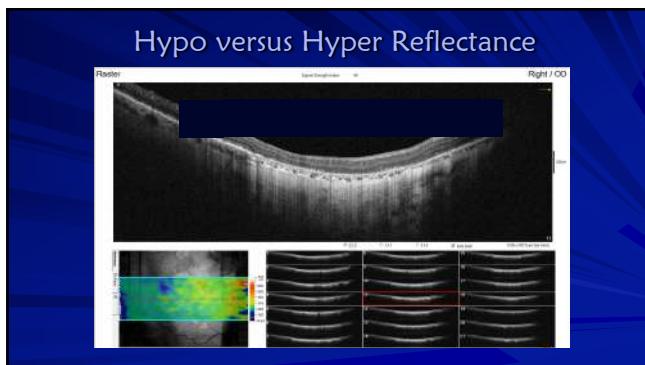
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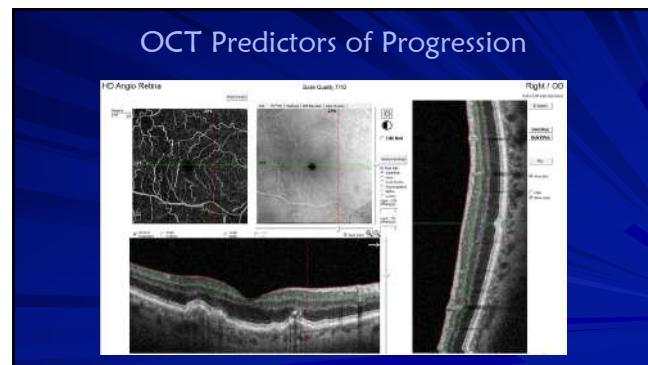
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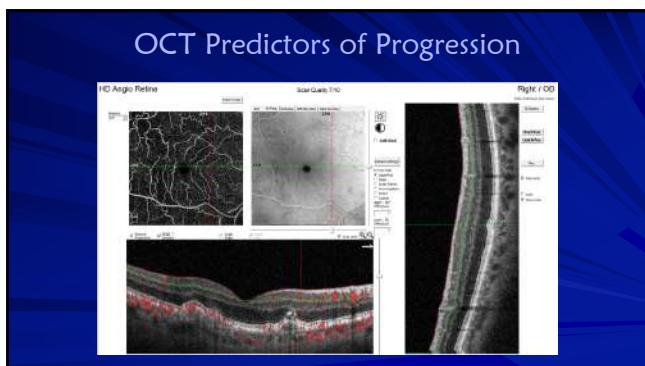
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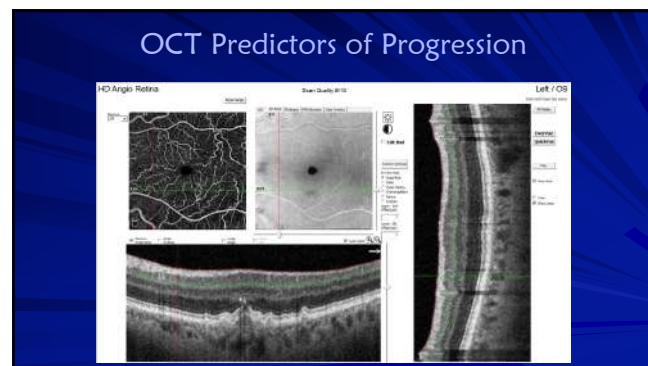
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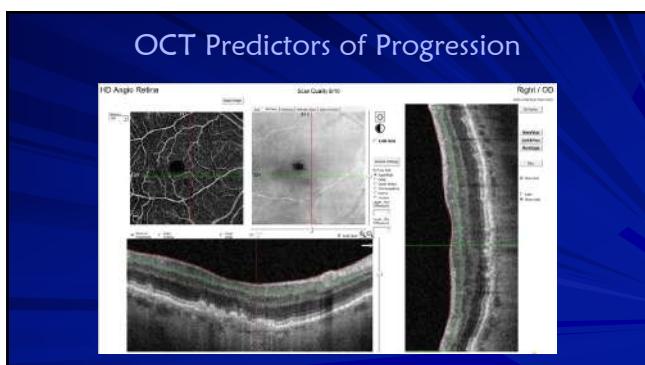
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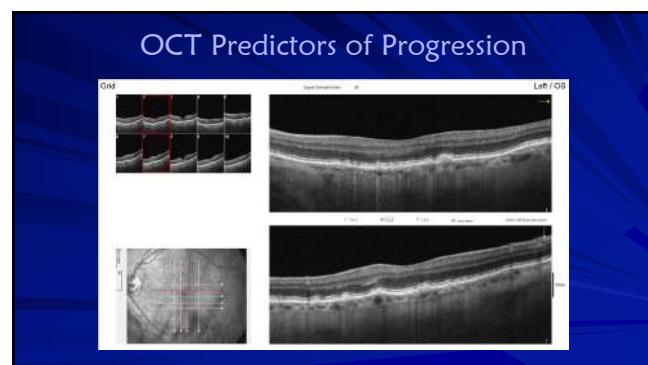
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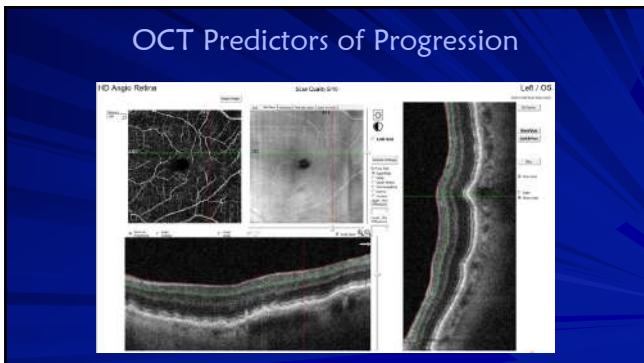
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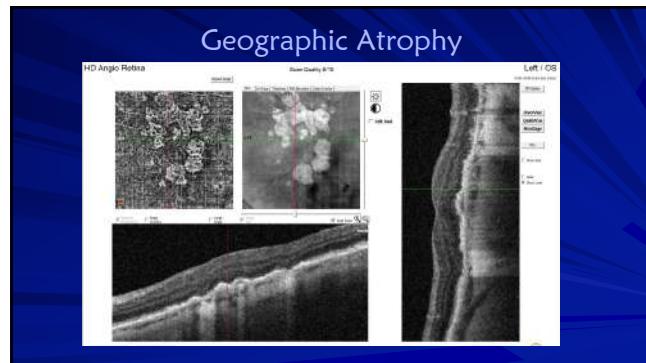
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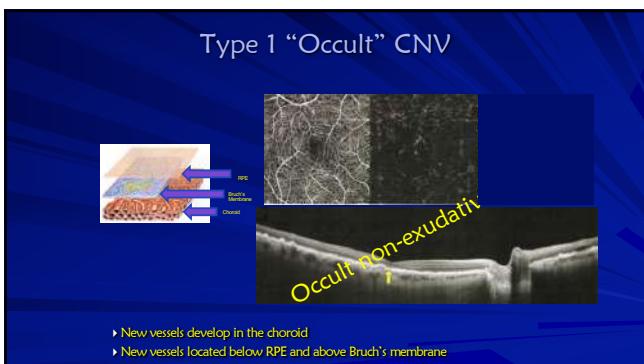
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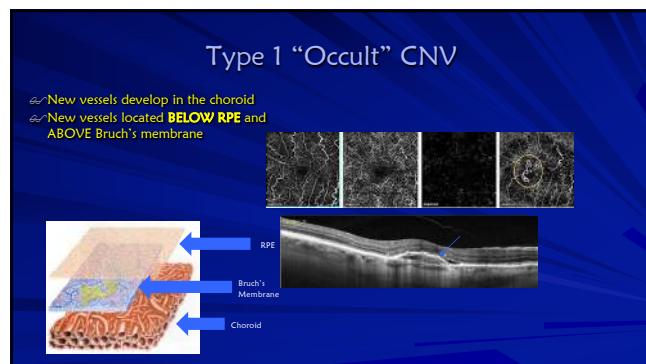
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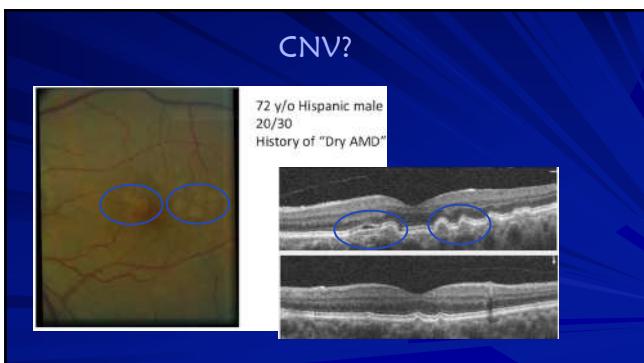
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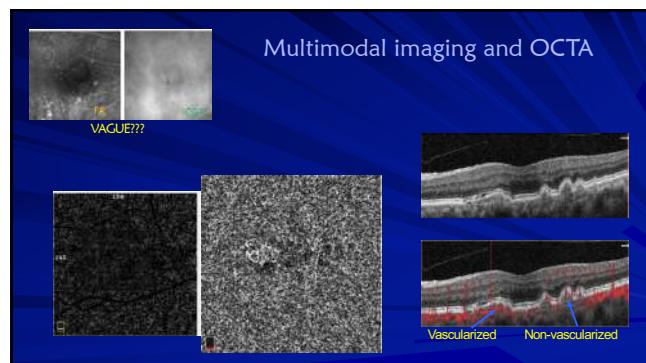
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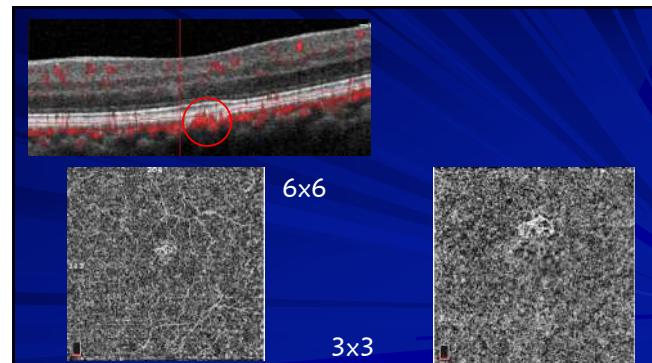
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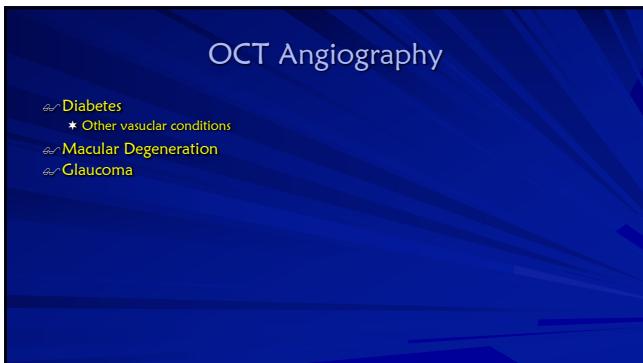
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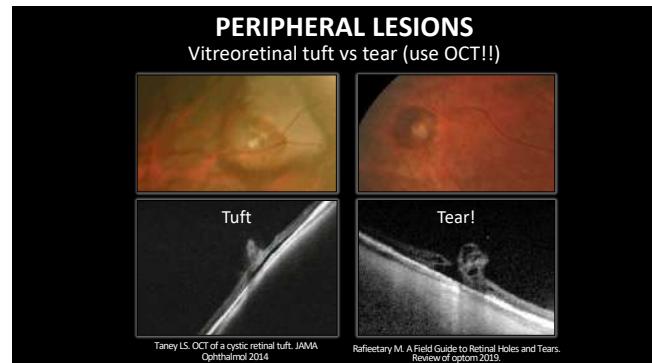
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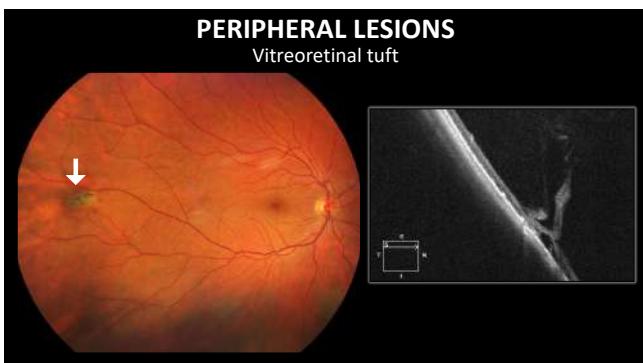
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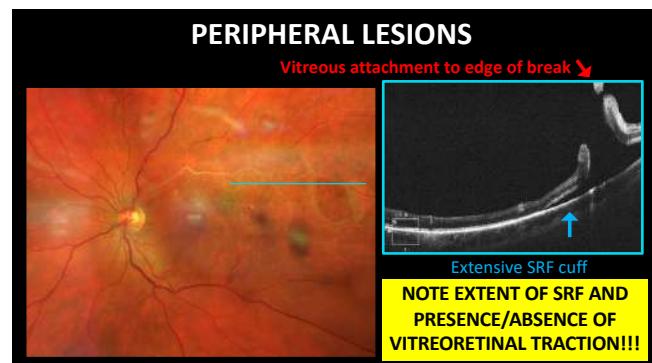
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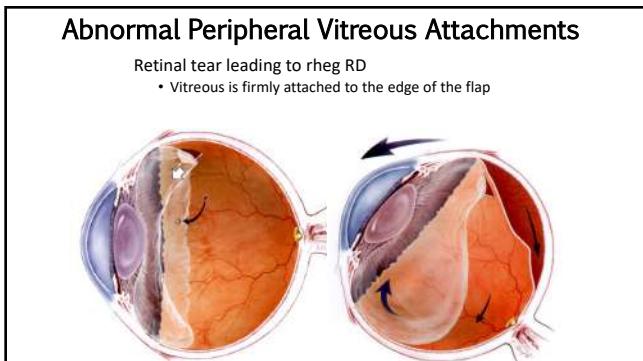
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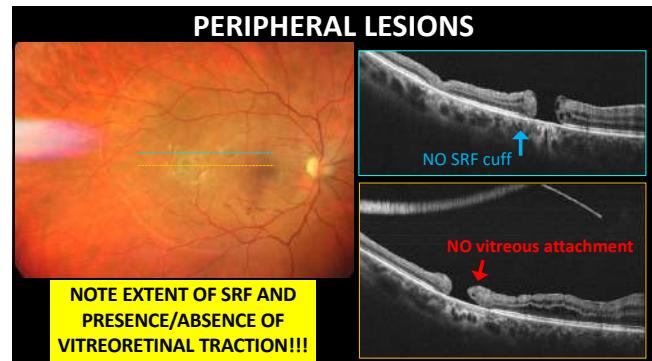
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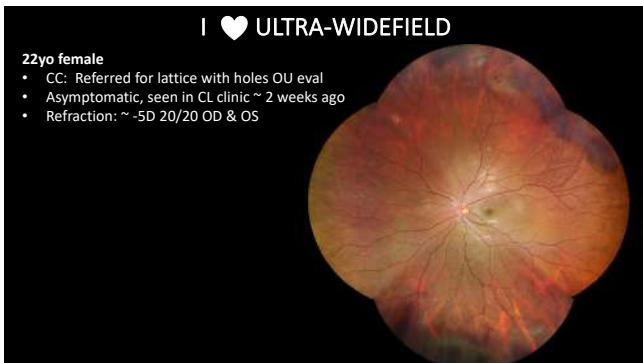
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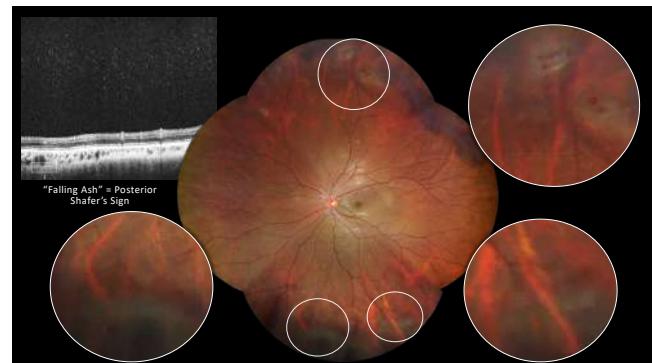
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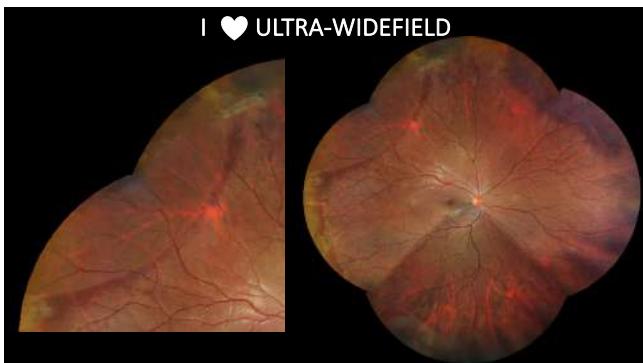
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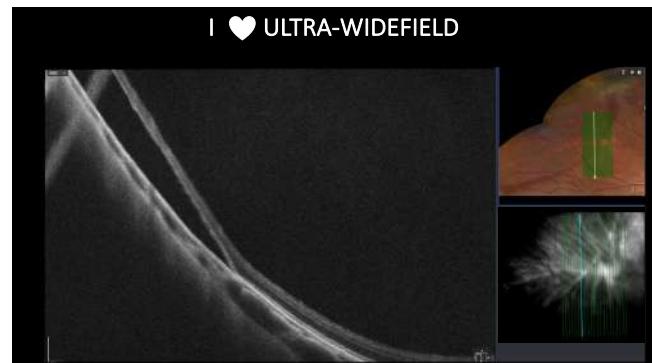
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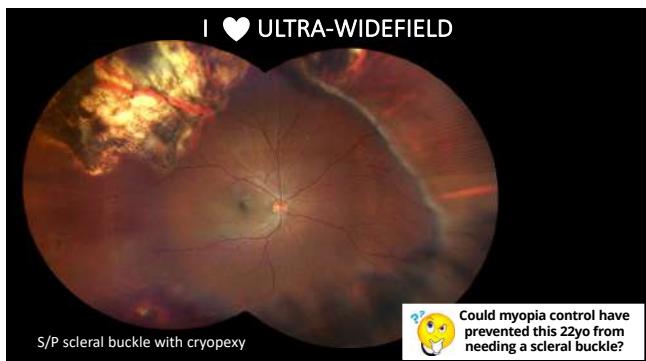
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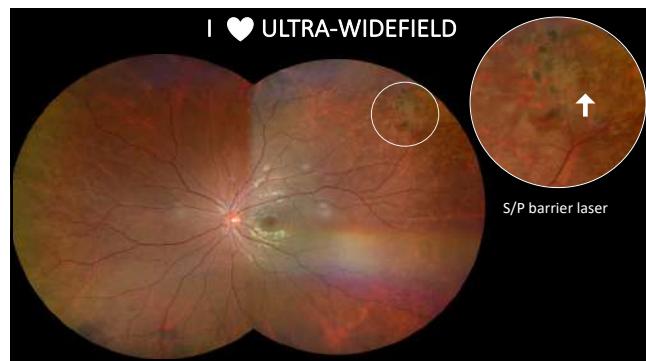
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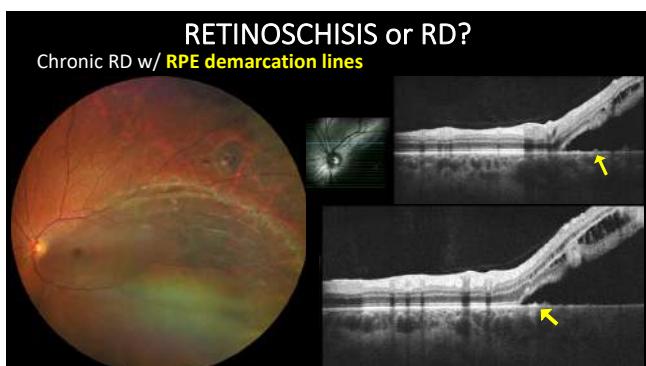
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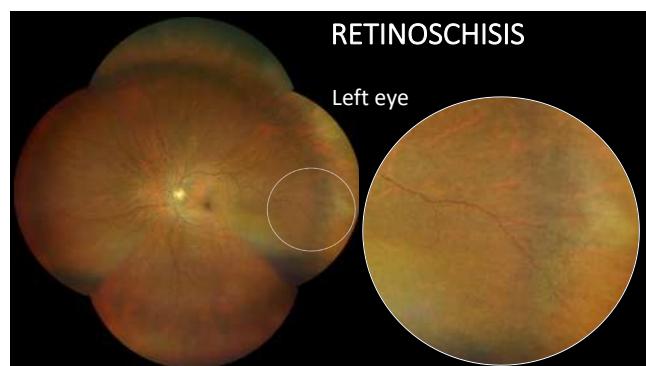
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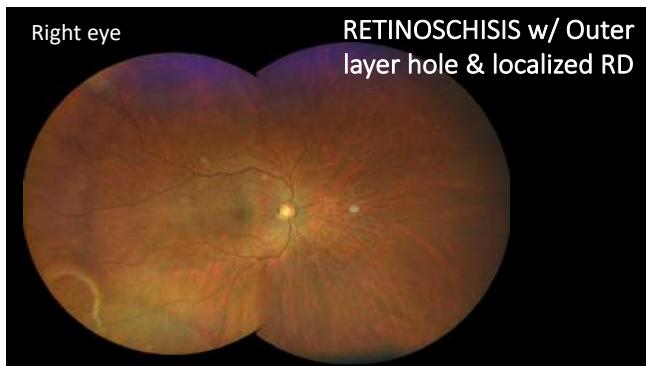
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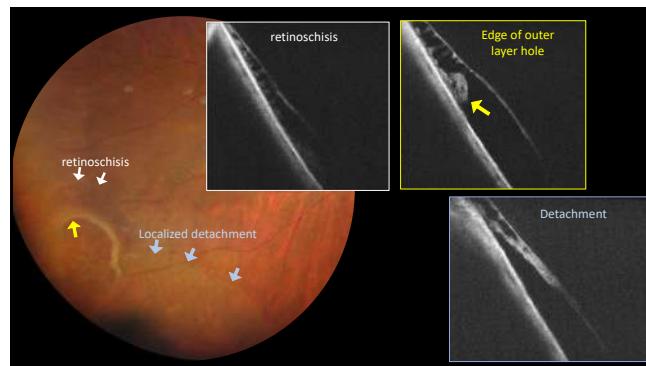
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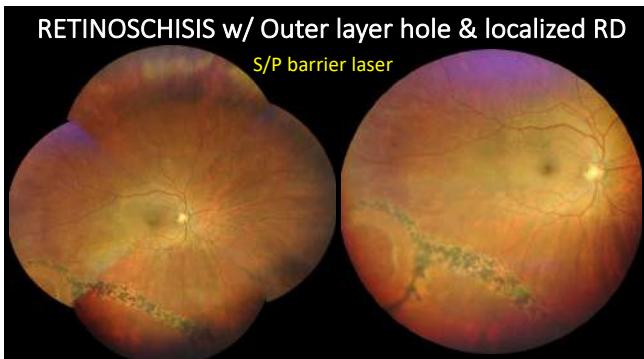
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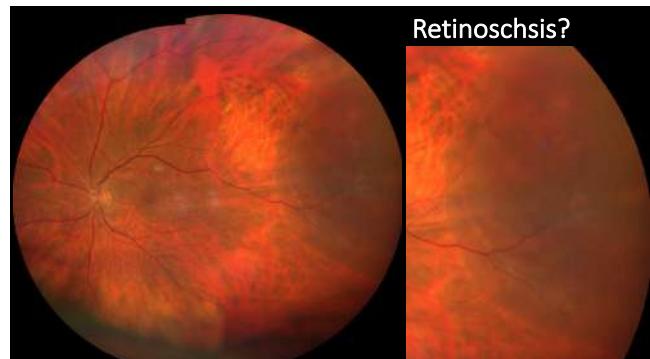
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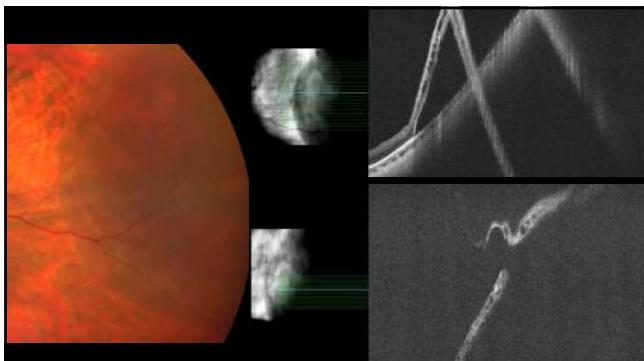
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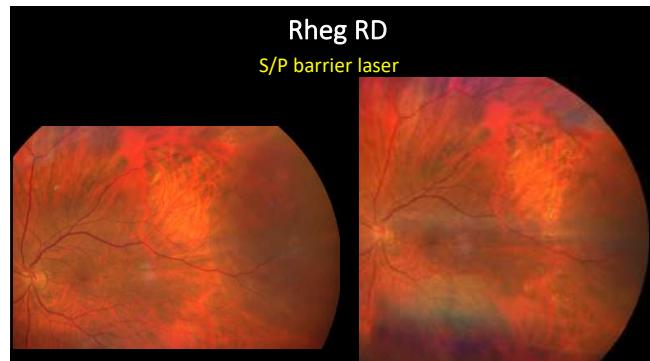
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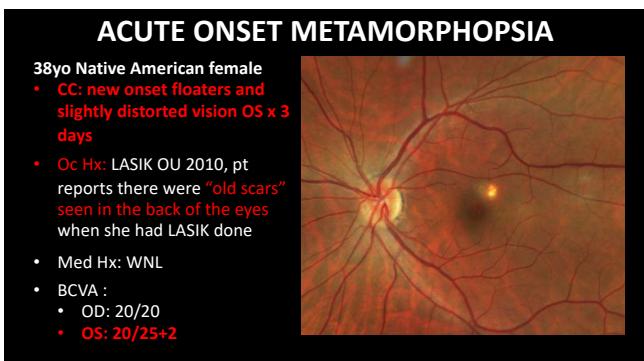
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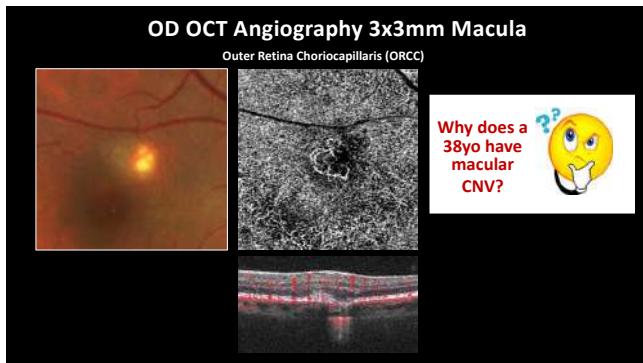
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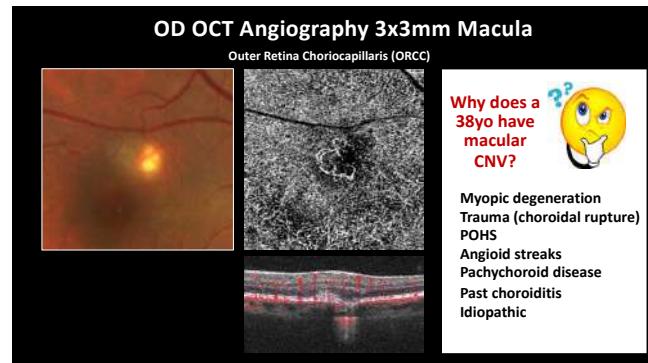
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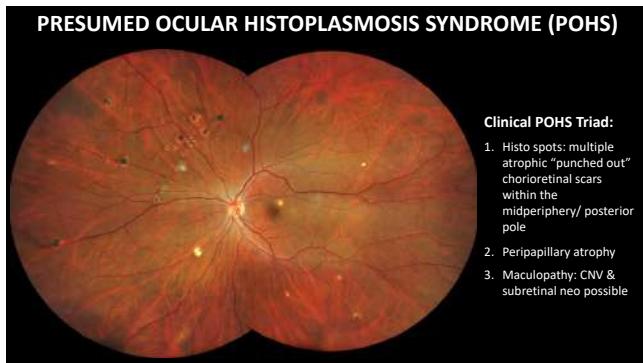
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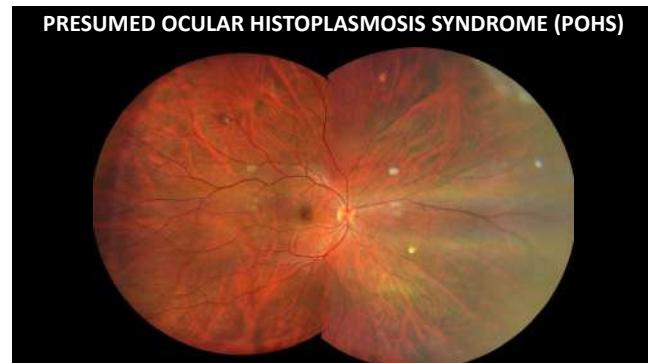
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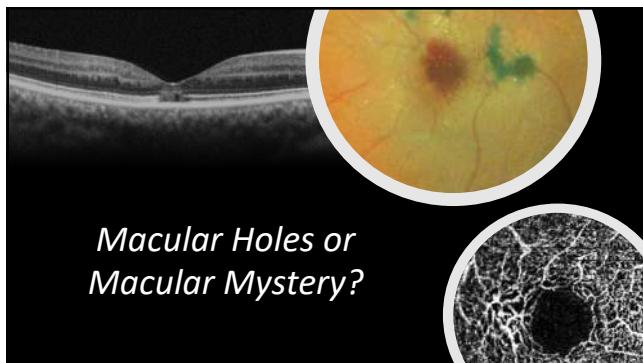
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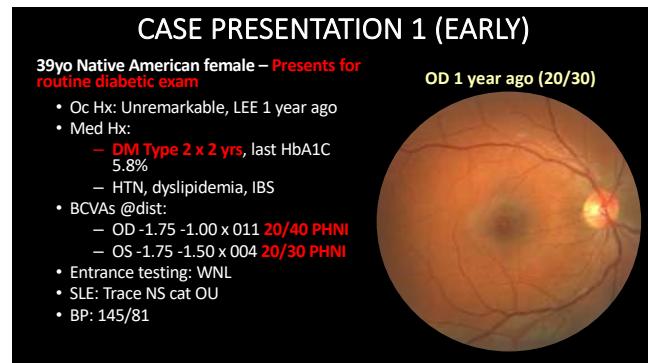
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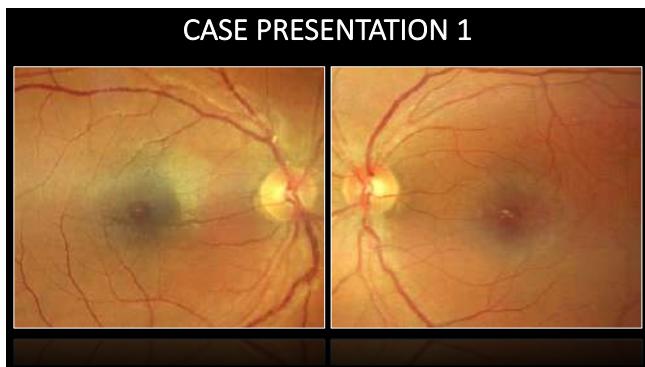
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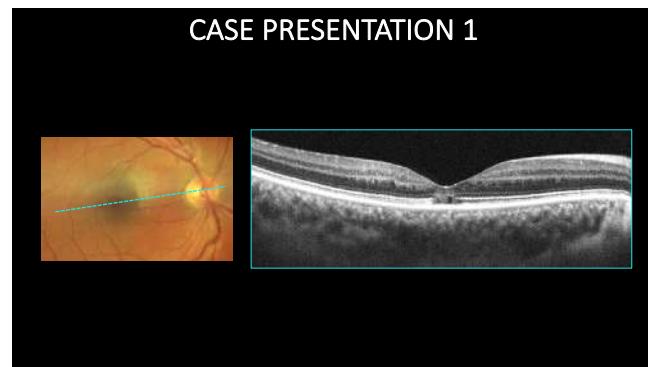
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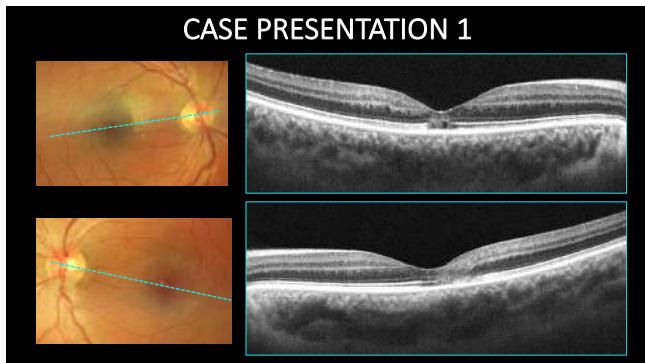
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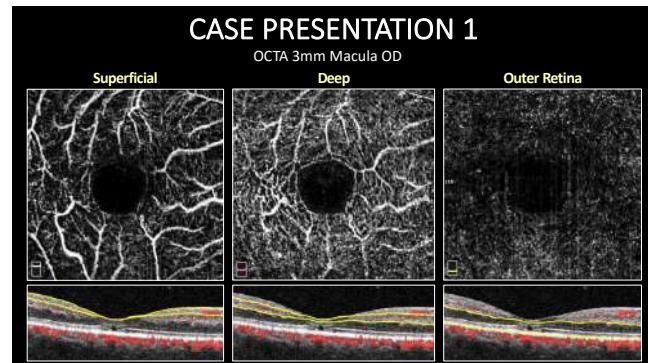
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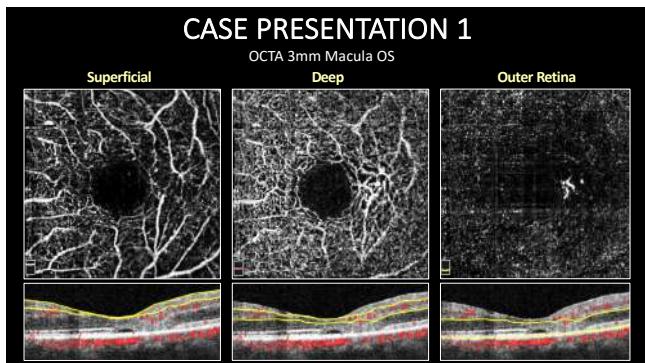
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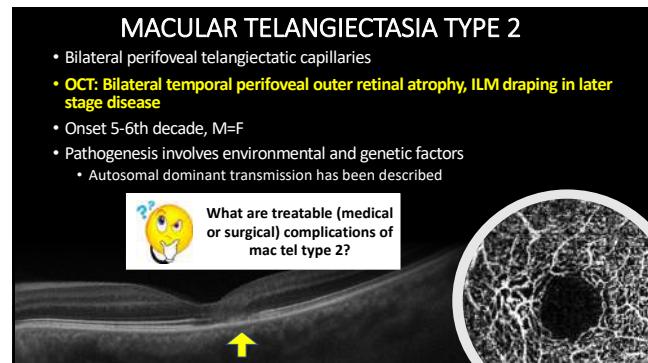
123



124



125



126

MACULAR TELANGIECTASIA TYPE 2

- No effective FDA-approved tx for non-proliferative mac tel type 2
- For eyes with active SRN, intravitreal anti-VEGF therapy is usually instituted although high-quality guiding evidence is lacking
- May eventually be complicated by **full thickness macular hole (FTMH)** formation
- refer FTMHs for consideration of surgical repair!

Kim, Y.H., et al. OCT features of mac tel type 2: Korean Macular Telangiectasia Type 2 Study—Report No. 1. *Sci Rep* 2020

127

Proliferative Mac Tel Type 2

57yo Hispanic female – **Referred from primary care for possible macular dystrophy/macular scarring OU**

- CC: gradually progressive vision loss OU x several years
- Oc Hx: No known illness or fam Hx. No prior surg or trauma.
- Med Hx: Unremarkable
- BCVAs @dist:
 - OD 20/100 PHNI
 - OS 20/200 PHNI
- Entrance testing: WNL
- SLE: 1-2+ NS cat OU

128

Proliferative Mac Tel Type 2

129

Proliferative Mac Tel Type 2

OCTA 3mm Macula OS

Superficial	Deep	Outer Retina (Custom)

130

MACULAR TELANGIECTASIA TYPE 2

The “take home message”

- OCTA allows for earlier detection of perifoveal telangiectasia in early, subclinical mac tel type 2
- OCTA aids in the detection of subretinal neovascularization in mac tel type 2
- Mac tel type 2 eyes with active subretinal neovascularization should be referred for consideration of treatment
 - Better prognosis with earlier treatment and small size neo

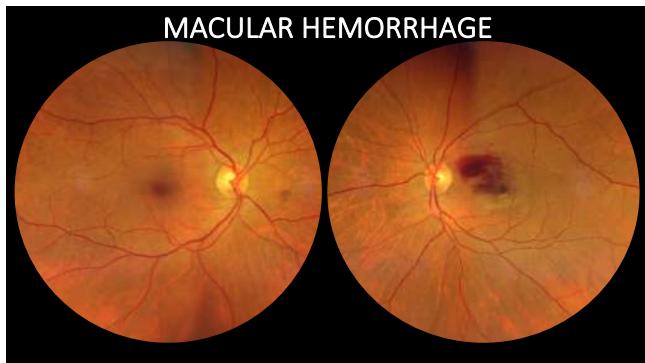
131

MACULAR HEMORRHAGE

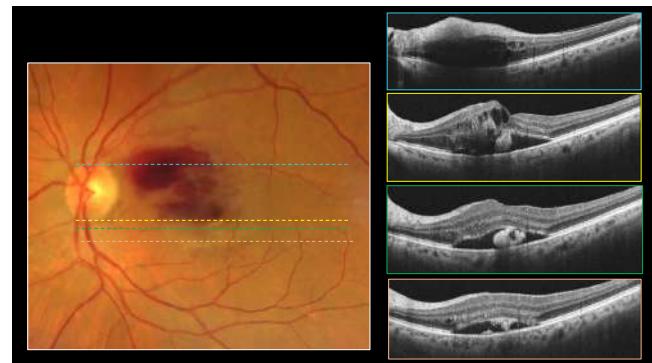
70yo female – **blur and ↓vision OS for about 2-3 months**

- Med Hx:
 - HTN (in office BP 131/83)
 - Type 2 DM x 12 yrs (last A1c 6.5%)
 - OSA on CPAP, ↑ chol, stage 3 CKD
- BCVAs @dist:
 - OD 20/20¹, OS 20/150 PHNI
- Entrance testing: all WNLs other than central scotoma with facial amsler OS
- SLE: NS 1 cat OU
- IOPs: OD 12/ OS 14 mmHg

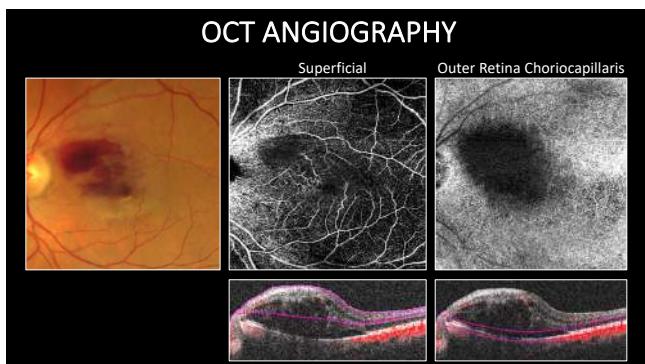
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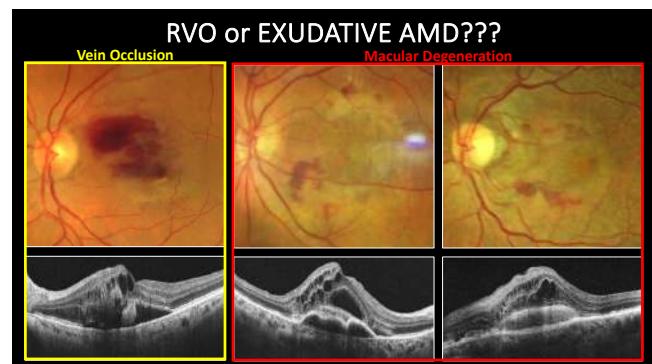
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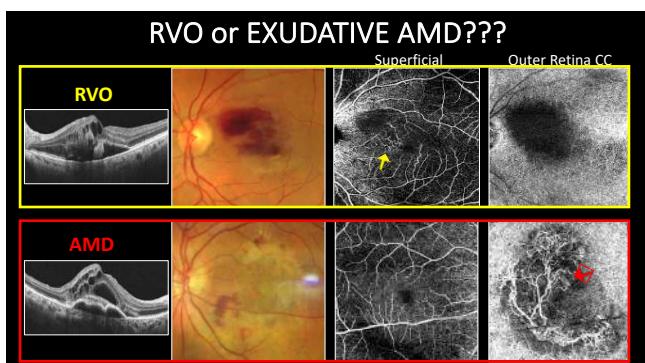
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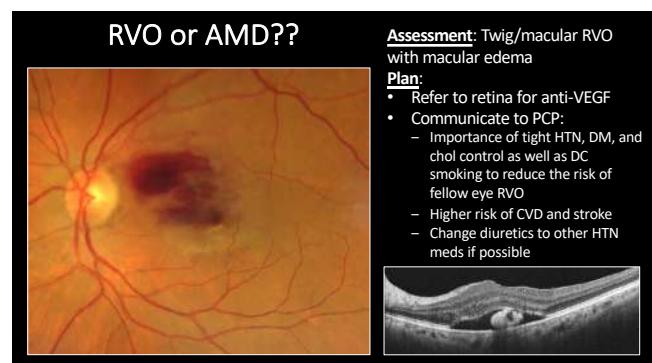
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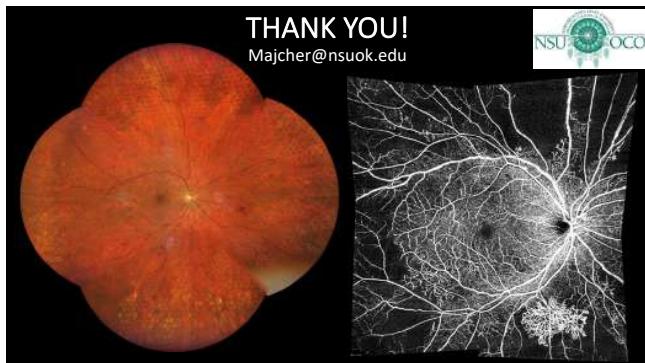
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138



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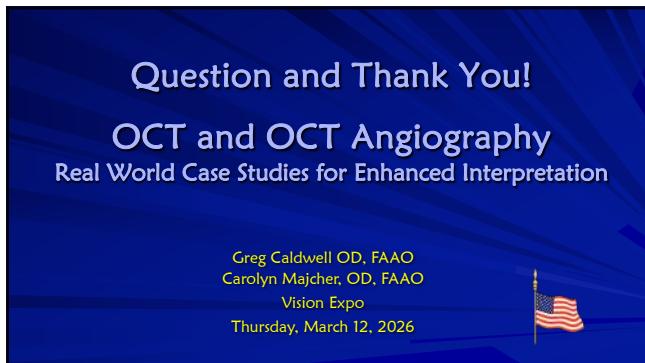
**On behalf of Vision Expo, we sincerely thank you
for being with us this year.**

Reminder to Complete Your Session Evaluations!

Please be sure to complete your digital session evaluations 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.



140



141