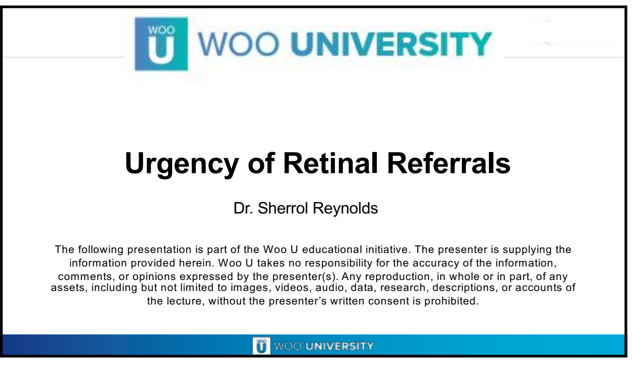

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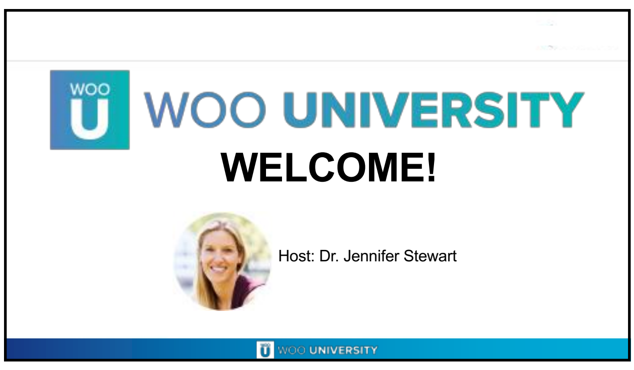

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Thank you to Regeneron for providing an unrestricted educational grant for this event.

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- For each hour of CE units, attendees must be online for a minimum of 50 minutes
- For a COPE certificate, please fill out the survey link in the chat. Also, the survey link will appear when the webinar ends.
- CE certificates will be delivered by email and sent to ARBO with OE tracker numbers
- We will also display a QR code at the end of the event if you have the OE tracker app on your phone.
- **CE certificates will be emailed within 4 weeks**
- Ask questions using the zoom on-screen floating panel

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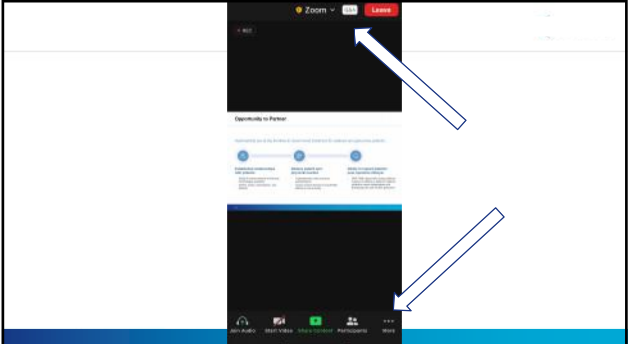

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Speaker Bio –

Dr. Sherrol A. Reynolds is a graduate of the University of Florida and Nova Southeastern University College of Optometry.

She is an Associate Professor of Optometry at Nova Southeastern University College of Optometry and the director of the Retina Clinic. She is a Fellow in the American Academy of Optometry and the Optometric Retina Society.

She served as president of the National Optometric Association (NOA) from 2017-2021 and currently serves as past president. She was awarded the National Optometric Association Optometrist of the Year in 2013. She is the recipient of the 2021 Women in Optometry Leadership award and the American Optometric Association (AOA) 2021 President's Award.

She is a planning group member of the National Eye Institute (NEI) National Eye Health Education Program (NEHEP) and currently co-chair the Eye Health, My Health: Eye Health for African Americans. She participated in numerous events addressing diversity, inclusion, and equity (DEI) in the profession, including the SUNY Race in Optometry panel series. She also served as a member of the Prevent Blindness scientific committee, served as chair of the Florida Optometric Association Healthy Eye Healthy People committee, Women in Optometry Board member, and a monthly columnist for the Optometric Management Journal Retina column.

Dr. Reynolds was the only optometrist who contributed to the 2022 American Diabetes Association (ADA) Compendia that provided health care professionals with up-to-date information and best practices for treating diabetes and related complications.

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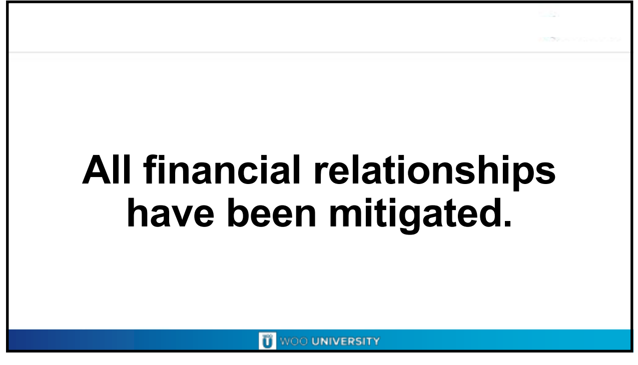

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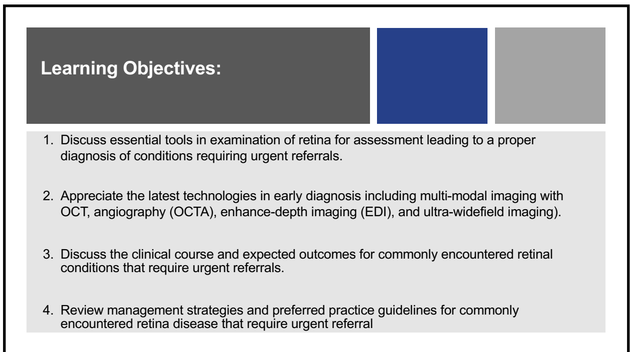

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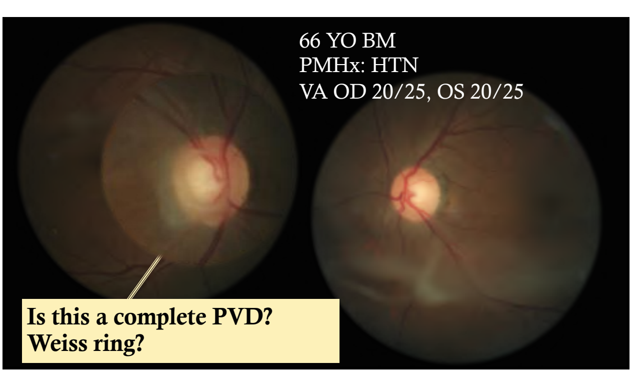

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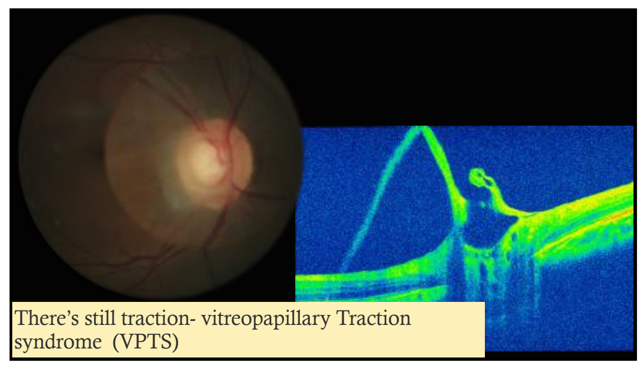

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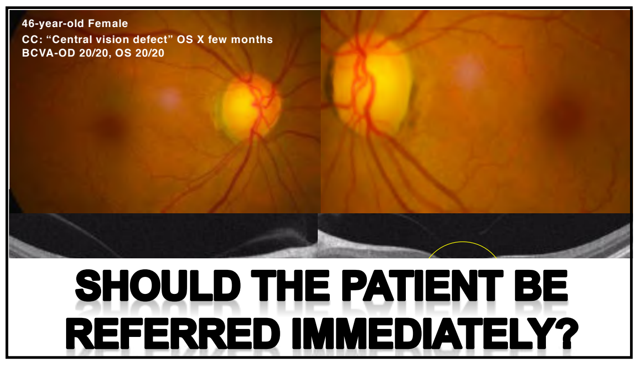

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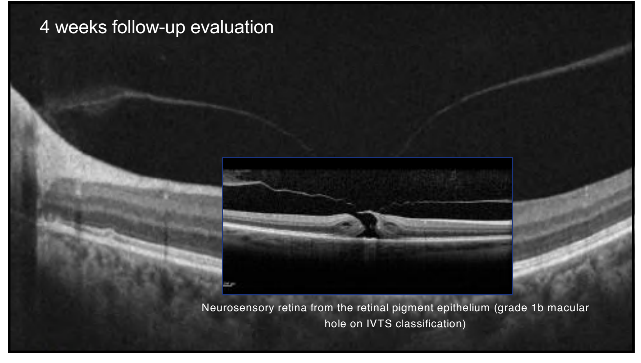

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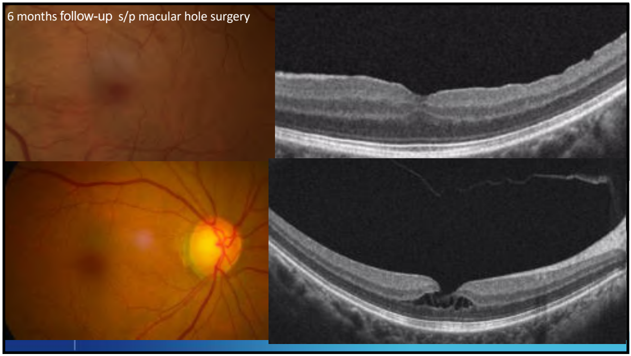

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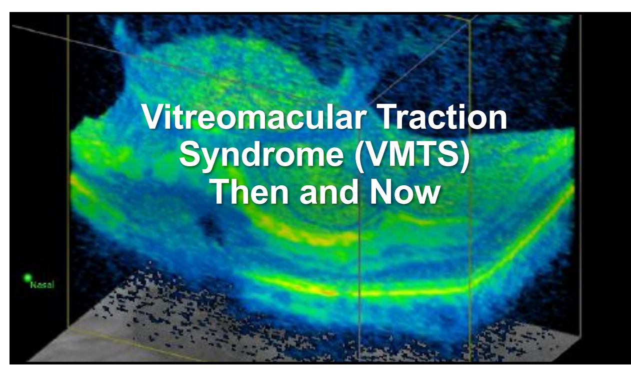

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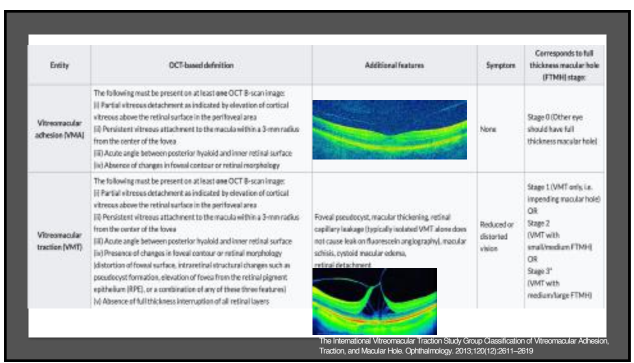

Entity	OCT-based definition	Additional features	Symptom	Corresponds to full thickness macular hole (FTMH) stage
Vitreomacular adhesion (VMA)	The following must be present on at least one OCT B-scan image: (i) Partial vitreous detachment as indicated by elevation of cortical vitreous above the retinal surface in the perifoveal area (ii) Persistent vitreous attachment to the macula within a 3-mm radius from the center of the fovea (iii) Acute angle between posterior hyaloid and inner retinal surface (iv) Absence of changes in foveal contour or retinal morphology		None	Stage 0 (Other eye should have full thickness macular hole)
Vitreomacular traction (VMT)	The following must be present on at least one OCT B-scan image: (i) Partial vitreous detachment as indicated by elevation of cortical vitreous above the retinal surface in the perifoveal area (ii) Persistent vitreous attachment to the macula within a 3-mm radius from the center of the fovea (iii) Acute angle between posterior hyaloid and inner retinal surface (iv) Presence of changes in foveal contour or retinal morphology (distortion of foveal surface, intraretinal structural changes such as pseudocyst formation, elevation of fovea from the retinal pigment epithelium (RPE), or a combination of any of these three features) (v) Absence of full thickness interruption of all retinal layers	Foveal pseudocyst, macular thickening, retinal capillary leakage (typically isolated VMT alone does not cause leak on fluorescein angiography), macular schisis, cystoid macular edema, retinal detachment	Reduced or distorted vision	Stage 1 (VMT only, i.e. impending macular hole) OR Stage 2 (VMT with small/medium FTMH) OR Stage 3* (VMT with medium/large FTMH)

The International Vitreomacular Traction Study Group Classification of Vitreomacular Adhesion, Traction, and Macular Hole. Ophthalmology. 2013;120(12):2611–2619

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Vitreomacular Traction Study (IVTS) Group (Duker, 2013)

Vitreomacular adhesion (VMA)	(i) Focal: Width of attachment ≤1500 μm (ii) Broad: Width of attachment >1500 μm
	(i) Concurrent: Associated with other macular abnormalities (e.g. age-related macular degeneration, retinal vein occlusion, diabetic macular edema) (ii) Isolated: Not associated with other macular abnormalities
Vitreomacular traction (VMT)	(i) Focal: Width of attachment ≤1500 μm (ii) Broad: Width of attachment >1500 μm
	(i) Concurrent: Associated with other macular abnormalities (e.g. age-related macular degeneration, retinal vein occlusion, diabetic macular edema) (ii) Isolated: Not associated with other macular abnormalities

Focal VMT or V shaped

J-shaped VMT

Ophthalmology 2013 Dec; 120(12): 2611-9

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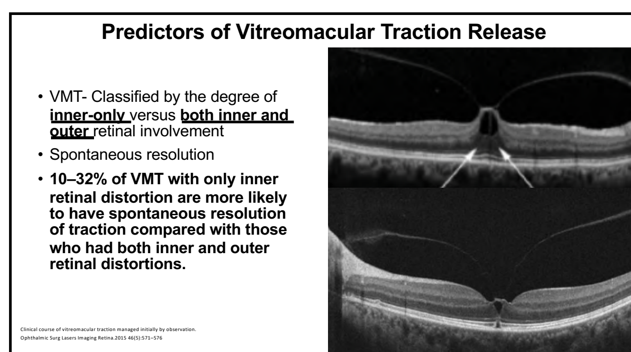

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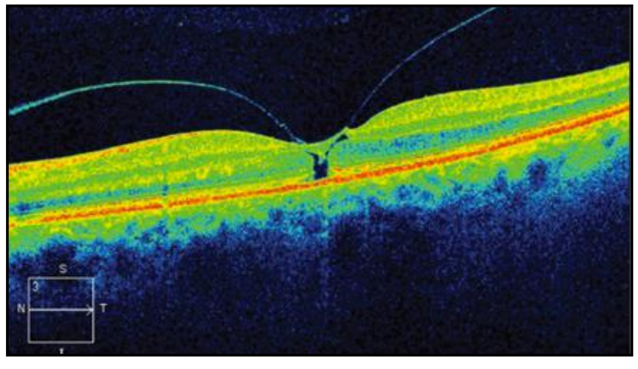

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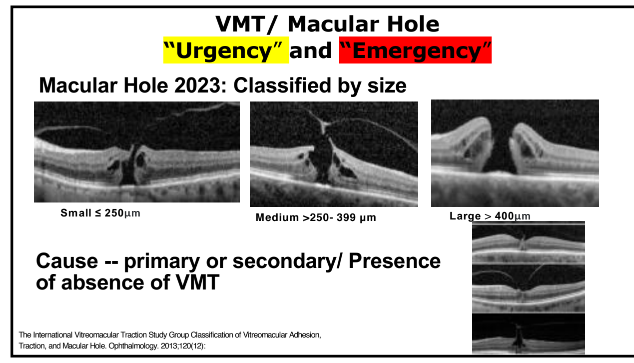

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Macular Hole 2023

Three stages of a macular hole

- Stage 1-Foveal detachments--------------------
- Stage 2- Partial-thickness holes---------------
- Stage 3- Full-thickness holes ------------------

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Table I Classification in Idiopathic Macular Holes

Stage in Common Use for Full-Thickness MH	Gass-Based Classification	IVTS Classification
0	Previous MH with no foveal architecture changes and VMA in the fellow eye	VMA
I	Impending macular hole with foveal architecture change	VMT without MH
2	MH with preexisting VMA	Small-sized or medium-sized MH with VMT
3	≥ 400 µm MH without VMA	Medium-sized or Large-sized MH with VMT
4	MH with complete vitreous separation	Any sized MH without VMT

*** small or medium Macular Hole needs referral within 7**2 hours** to retinal specialist
****Closure rates ~90% in small and medium macular holes, whereas large and chronic macular holes have lower and more variable rates of closure.

The International Vitreomacular Traction Study Group Classification of Vitreomacular Adhesion, Traction, and Macular Hole. Ophthalmology. 2013;120(12):

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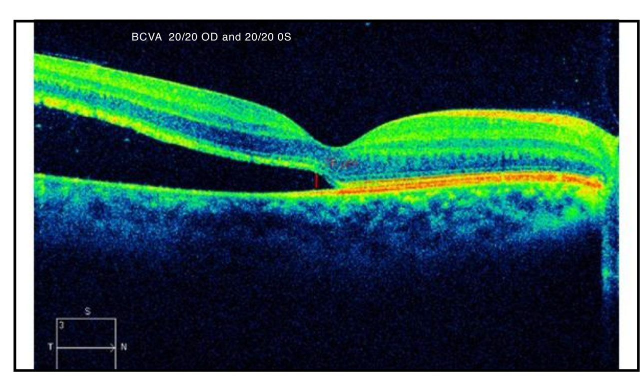

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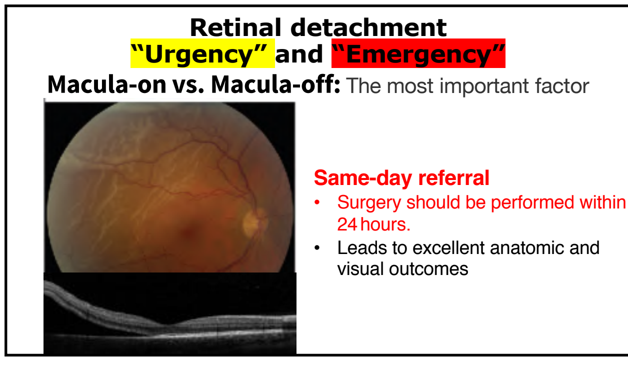

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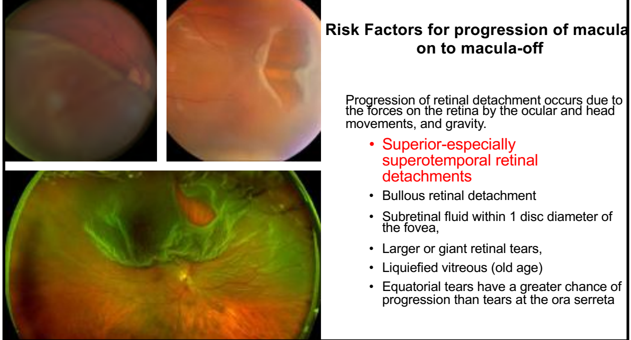

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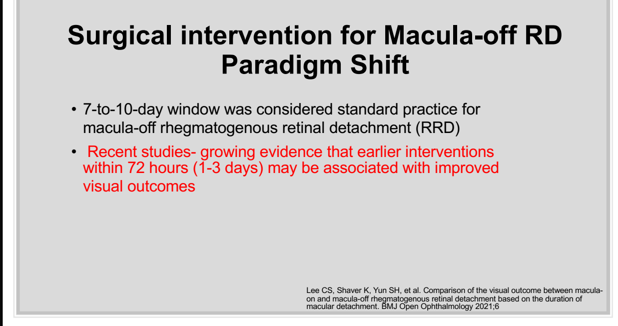

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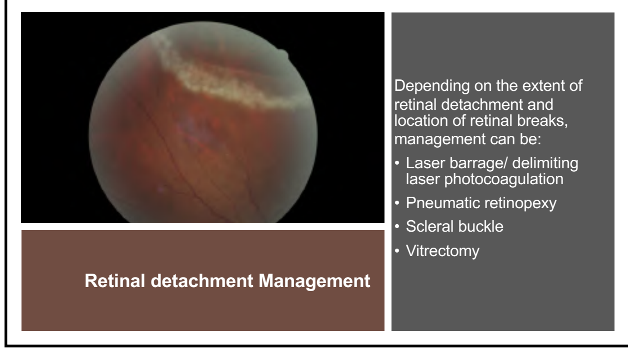

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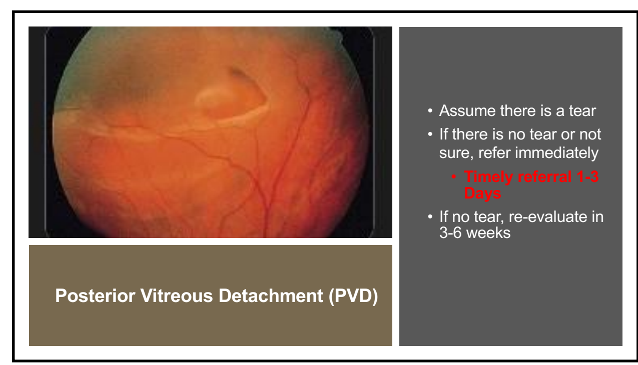

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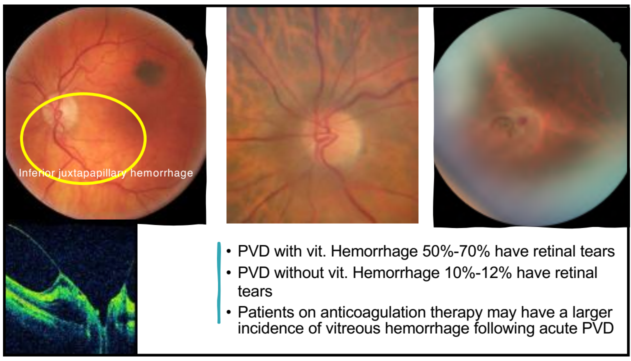

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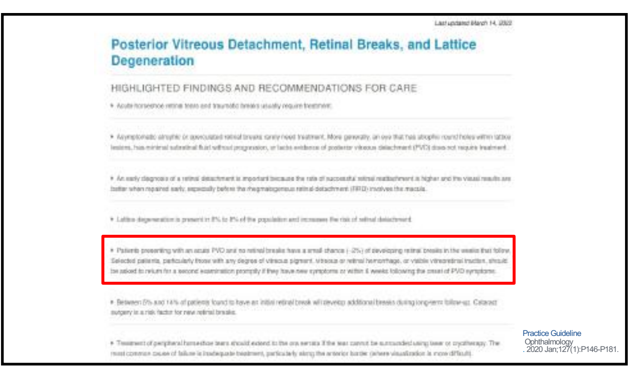

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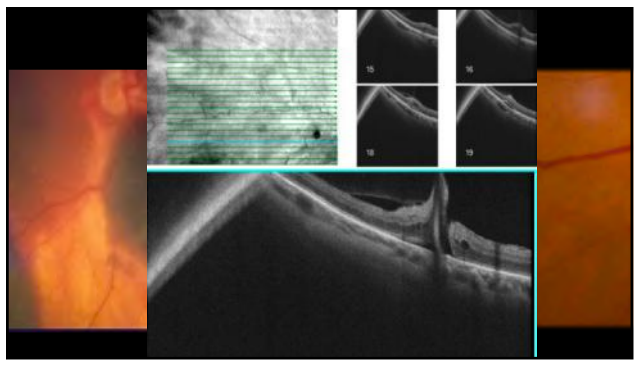

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DOB: 1/2/1935 Exam Time: 1:47 PM
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Doctor: Signal Strength: 7/10

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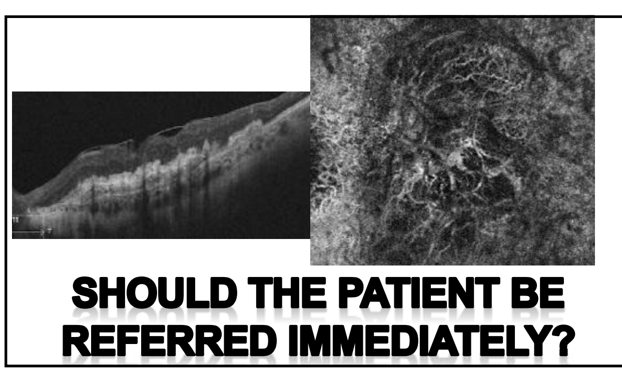

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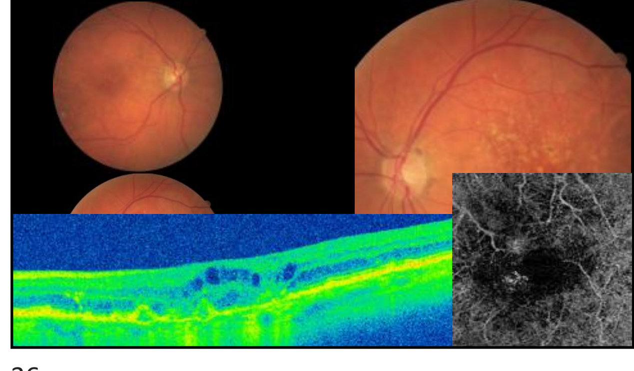

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Comments Doctor's Signature

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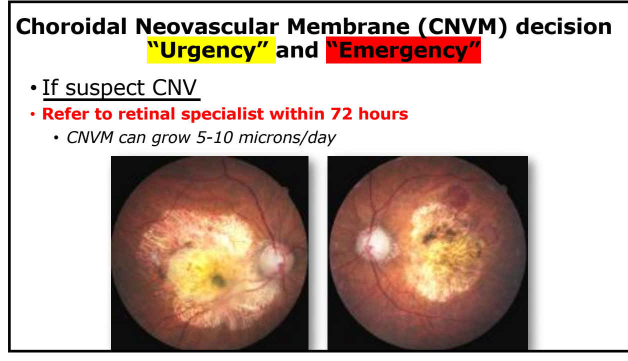

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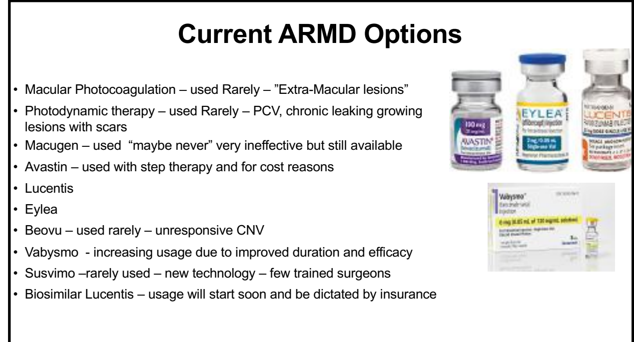

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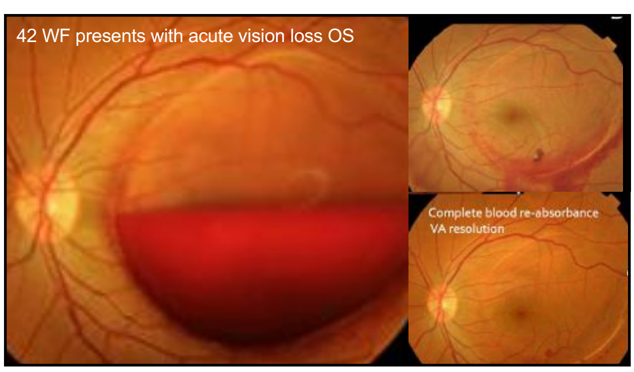

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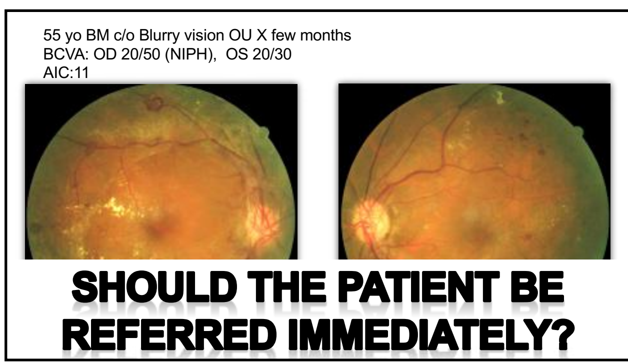

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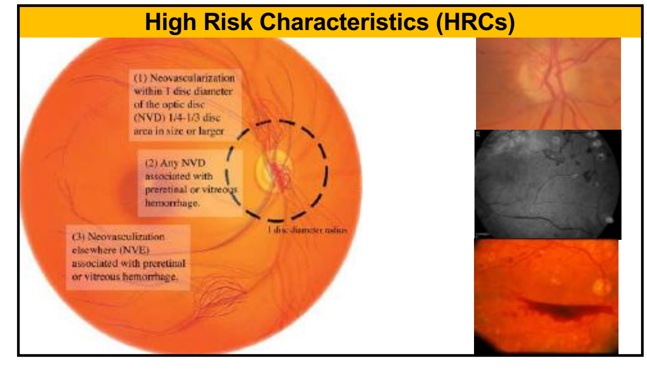

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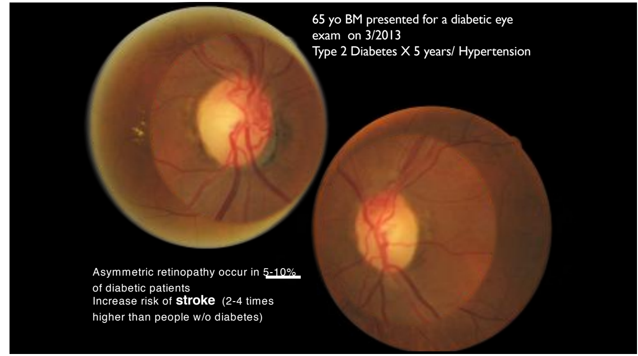

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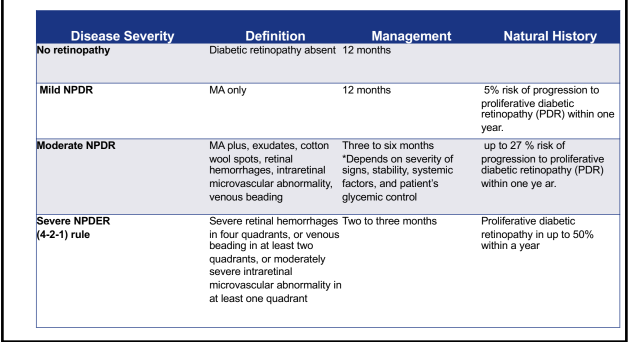

Disease Severity	Definition	Management	Natural History
No retinopathy	Diabetic retinopathy absent	12 months	
Mild NPDR	MA only	12 months	5% risk of progression to proliferative diabetic retinopathy (PDR) within one year.
Moderate NPDR	MA plus, exudates, cotton wool spots, retinal hemorrhages, intraretinal microvascular abnormality, venous beading	Three to six months *Depends on severity of signs, stability, systemic factors, and patient's glycemic control	up to 27 % risk of progression to proliferative diabetic retinopathy (PDR) within one ye ar.
Severe NPDER (4-2-1) rule	Severe retinal hemorrhages in four quadrants, or venous beading in at least two quadrants, or moderately severe intraretinal microvascular abnormality in at least one quadrant	Two to three months	Proliferative diabetic retinopathy in up to 50% within a year

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Proliferative Diabetic Retinopathy "Urgency" and "Emergency"

PDR	Neovascularization Vitreous Hemorrhage		Retina referral within one week
	High Risk: 1. NVD > 1/4 to 1/3 disc area 2. Any NVD associated with vitreous or preretinal hemorrhage 3. Any NVE associated with vitreous or preretinal hemorrhage		**Retina referral within one day to two days**

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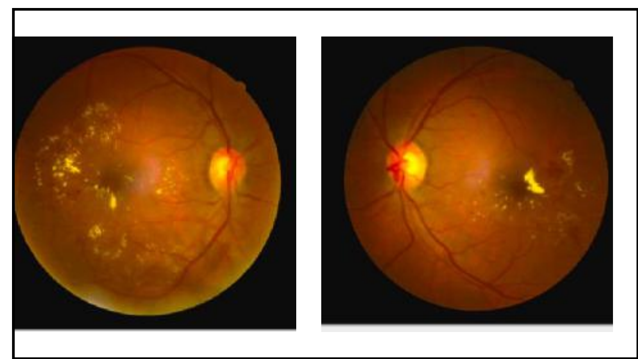

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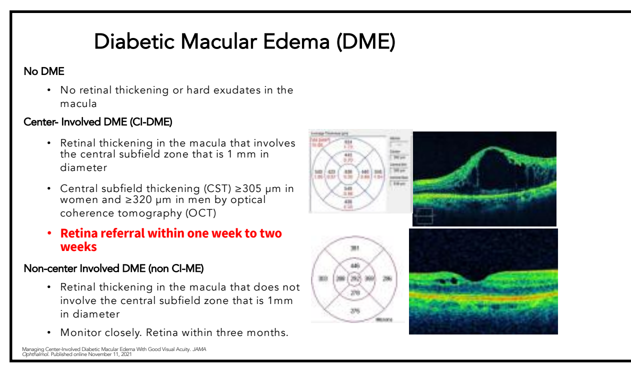

Diabetic Macular Edema (DME)

No DME

- No retinal thickening or hard exudates in the macula

Center- Involved DME (CI-DME)

- Retinal thickening in the macula that involves the central subfield zone that is 1 mm in diameter
- Central subfield thickening (CST) ≥305 μm in women and ≥320 μm in men by optical coherence tomography (OCT)
- **Retina referral within one week to two weeks**

Non-center Involved DME (non CI-ME)

- Retinal thickening in the macula that does not involve the central subfield zone that is 1mm in diameter
- Monitor closely. Retina within three months.

Managing Center-Involved Diabetic Macular Edema With Good Visual Acuity. JAMA Ophthalmol. Published online November 11, 2021

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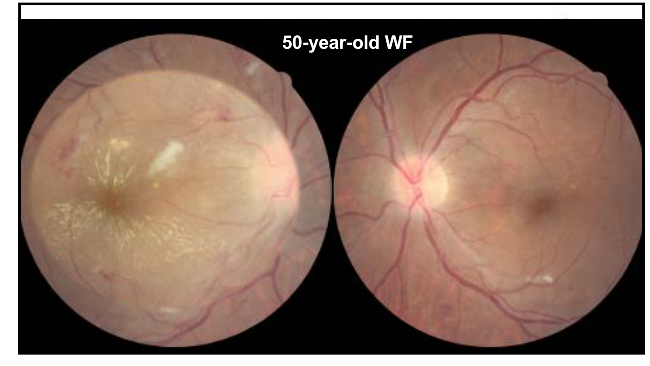

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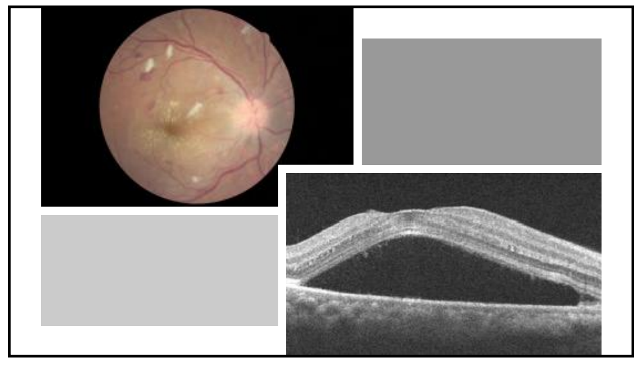

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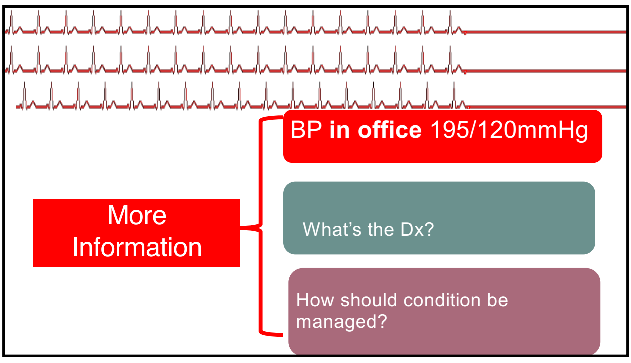

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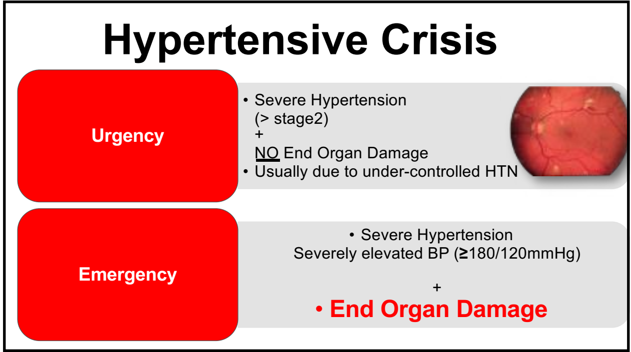

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Hypertensive Urgency

Goal: Reduce BP over several hours to day

- Elderly at high risk of ischemia from rapid reduction of BP, therefore slower reduction in BP in this patient population

Treatment

- Initiate medication
- Increase dose of existing medication or add another medication
- Re-institute medication(s) in non-compliant patients

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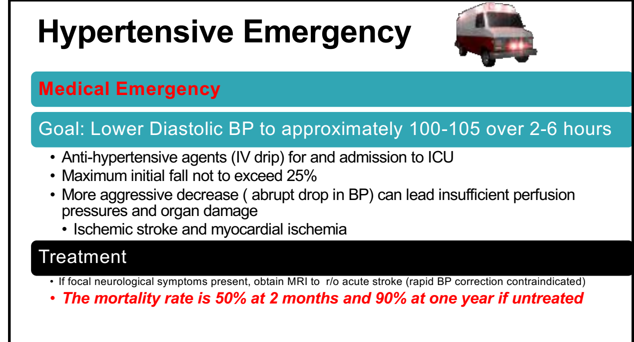

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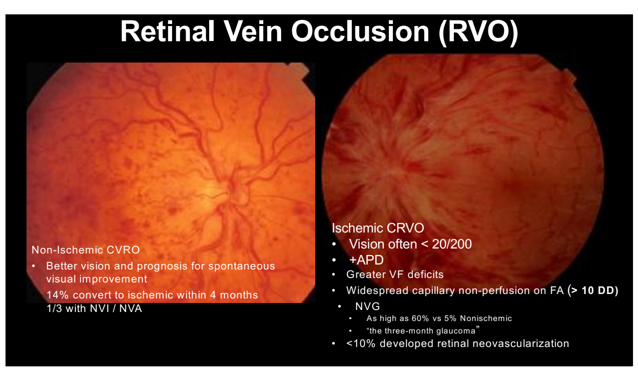

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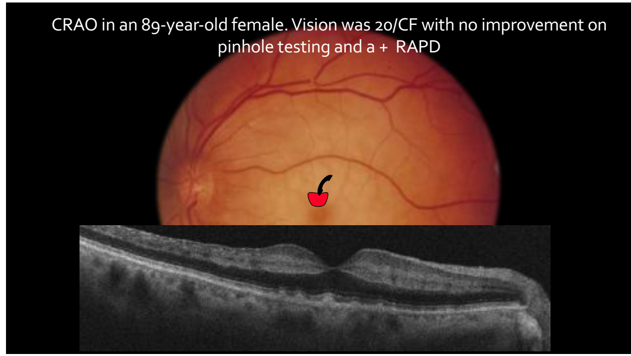

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CRAO MANAGEMENT 2023
EMERGENT STROKE EVALUATION

Acute, symptomatic OAO, CRAO, or BRAO from embolic etiologies should prompt an **immediate referral** to the nearest stroke referral center for prompt assessment for consideration of an acute intervention.

Transient ischemic attack often warning of a stroke

Retinal and Ophthalmic Artery Occlusions Preferred Practice Pattern®. Ophthalmology. 2020 Feb;127(2):P259-P287

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Comments Doctor's Signature

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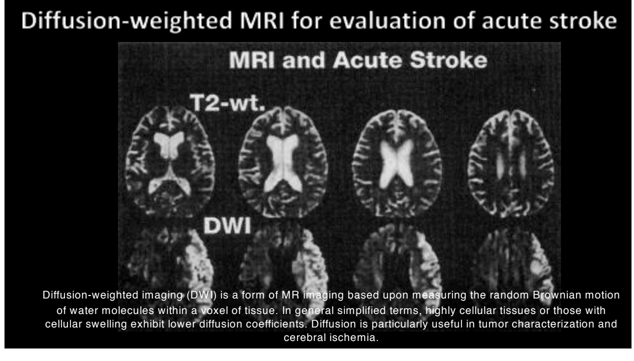

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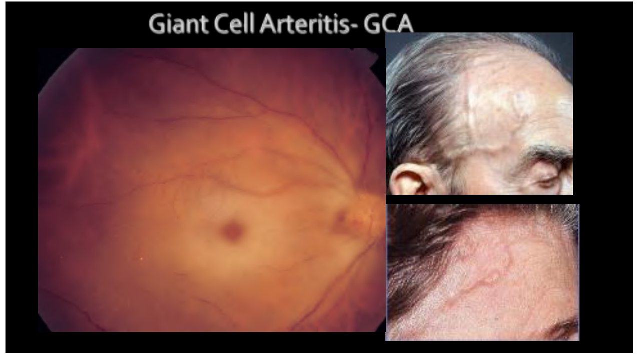

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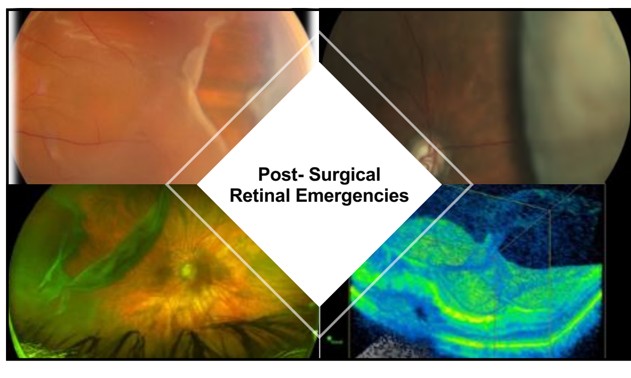

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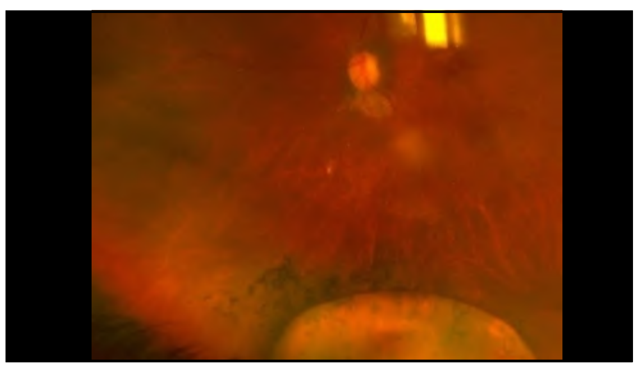

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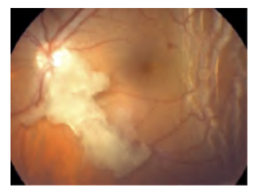
Retained visco-elastic material

Visco-elastic material (Healon)
- Must be COMPLETELY removed before finalizing surgery
- Material can clog the angle and TM causing acute spike in IOP with pain, nausea and vomiting



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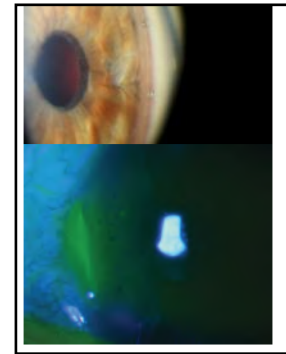

Presence of choroidal effusions

- Wound leak
  - + Seidel test
- Low IOP
- Decreased vision
- Shallow anterior chamber

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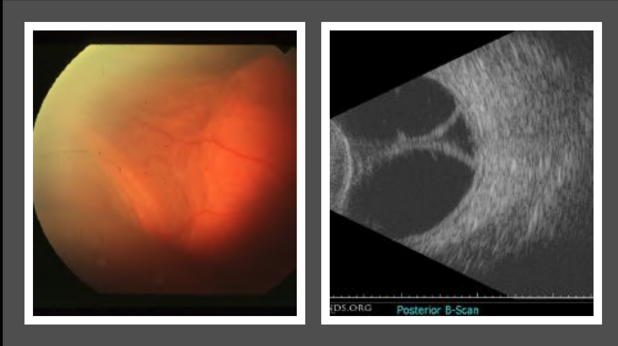

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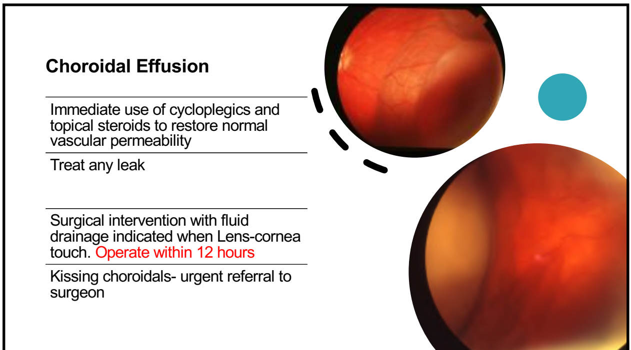
Choroidal Effusion

- Immediate use of cycloplegics and topical steroids to restore normal vascular permeability
- Treat any leak
- Surgical intervention with fluid drainage indicated when Lens-cornea touch. Operate within 12 hours
- Kissing choroidals- urgent referral to surgeon



64

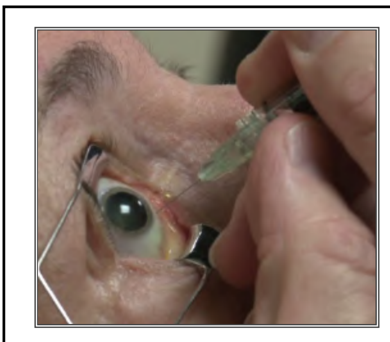
65-year-old with blurred vision after cataract surgery

65

Exogenous or Endogenous Endophthalmitis

- Exogenous-
- Endogenous
  - Bacterial or fungal endogenous chorioretinitis +/- vitritis
- Immediate referral
- Control Inflammation

66



Intravitreal injections

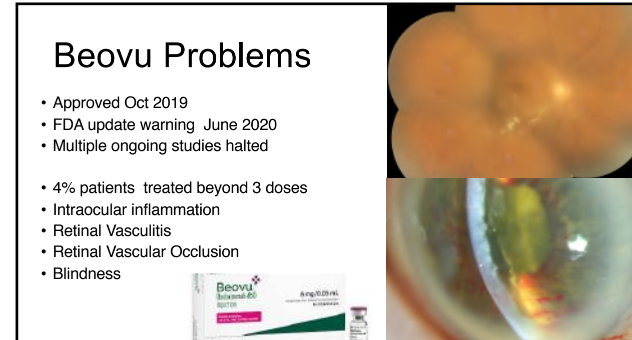
- Vitreous Floaters
- Increase IOP
- Inflammation
- Retinal detachment
- Endophthalmitis

67

Beovu Problems

- Approved Oct 2019
- FDA update warning June 2020
- Multiple ongoing studies halted

- 4% patients treated beyond 3 doses
- Intraocular inflammation
- Retinal Vasculitis
- Retinal Vascular Occlusion
- Blindness



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FDA approval October 2021

- Permanent, refillable intraocular implant
- Customized formulation of ranibizumab
- Implant surgically placed at the pars plana
- Refills performed in office

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10.20.2022

Genentech Voluntarily Recalls Susvimo Ocular Implant for Wet AMD

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Roche and Genentech announced a voluntarily recall of the Susvimo (ranibizumab injection) ocular implant for wet AMD, citing a manufacturing problem with the device. In addition, the companies announced that new implantations, including in ongoing global clinical trials, have been paused.

The voluntary recall, which comes a year after FDA approval, is based on recent testing of its commercial supply in which Susvimo implants were exposed to repeated puncturing with a needle. The results showed that some implants did not perform to the company's standards," according to a Genentech statement.

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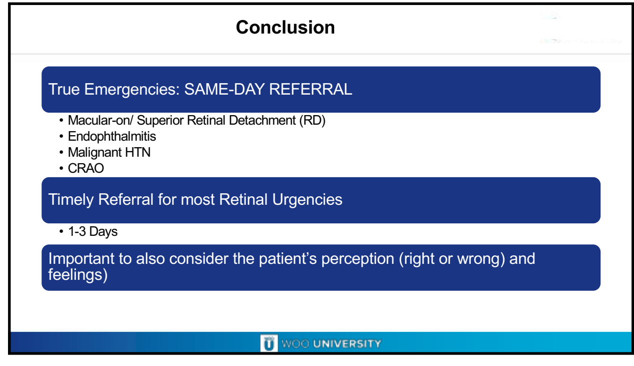

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If you have any questions, you may send an email to:Sherrolrey@gmail.com

Thank You!

Sherrol A. Reynolds OD, FAAO

WOO UNIVERSITY

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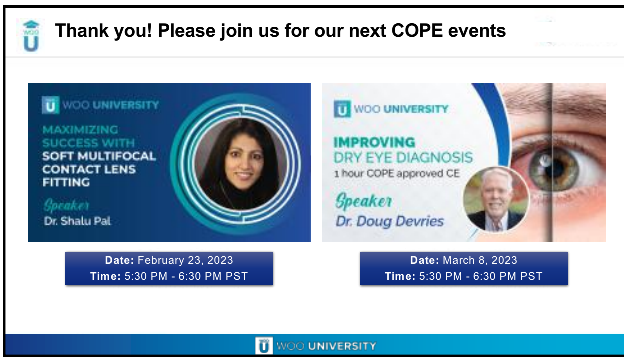

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