

SPECIALTY EYE INSTITUTE

OCT Interpretation
What to Look for and When to Refer

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WHAT WE WILL COVER

- 3 D OCT Tips
- Healthy retina architecture
- Pathology
- Q & A

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PATIENT PREPARATION

- Pupil size
 - Minimum size is 3.7 mm
 - Slightly dilated pupils will improve OCT
- Dry cornea
- Fixation

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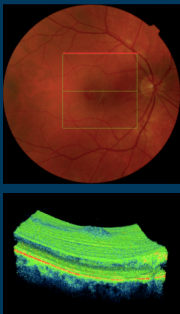
Viewing Techniques

- View in Black and White to provide better contrast
- Use OCT image adjustment bar or press F9 (cirrus)

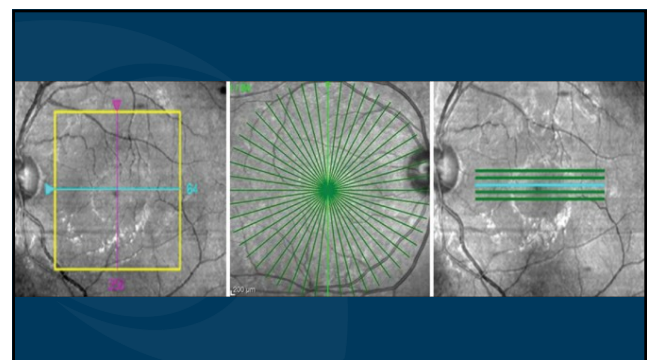
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Scanning Protocol

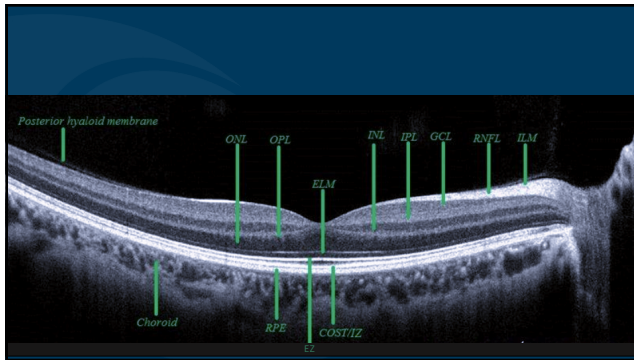
- Trade off scanning area vs. image quality
- Typical Pre-sets
 - 8.2mm x 3mm @ 1,024 x 32 b scans (better image)
 - 6mm x 6mm box @ 512 x 128 b scans (better coverage)



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6



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Hyperreflective bands	Posterior cortical vitreous, NFL, IPL, OPL, ELM, and RPE/Bruch's membrane complex
Hyperreflective zones	Ellipsoid zone, interdigitation zone
Hyporefective bands	GCL, INL, Henle's NFL and ONL, outer segments of photoreceptors
Hyporefective zones	Myoid zone The choroidal layers occupy a zone of hyporefective spaces with hyperreflective outlines of various sizes. The boundaries are ill-defined
Choroidoscleral junction	Zone of variable reflectivity at the outer border of the choroidal vascular profiles

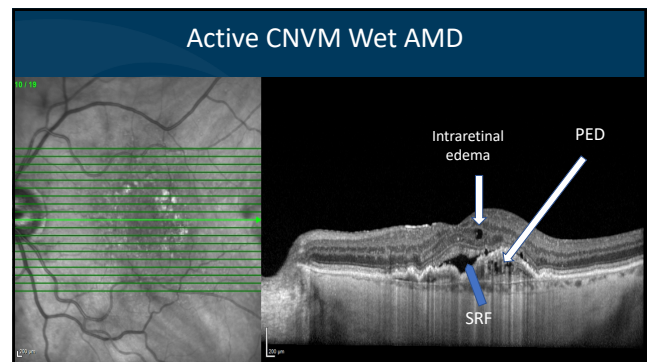
NFL: Nerve fiber layer, IPL: Inner plexiform layer, OPL: Outer plexiform layer, ELM: External limiting membrane, RPE: Retinal pigment epithelium, GCL: Ganglion cell layer, INL: Inner nuclear layer, ONL: Outer nuclear layer

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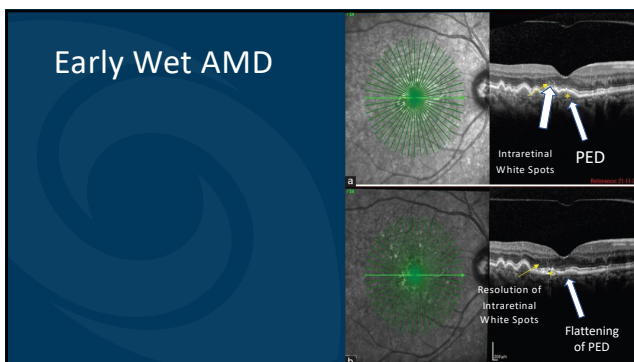
Macular Edema

- Wet age related macular degeneration
 - Branch retinal vein occlusion
 - Central vein occlusion
 - Diabetic macular edema
 - Cystoid macular edema
 - Choroidal nevus with SRF

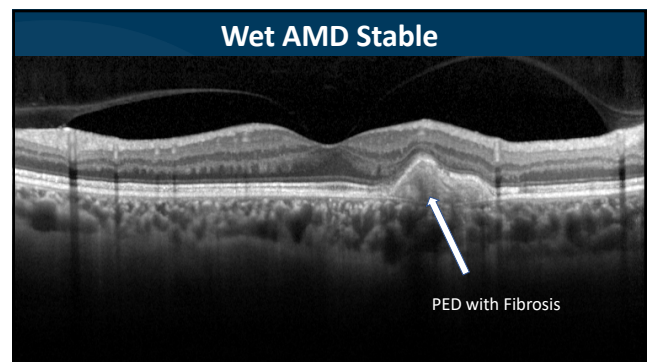
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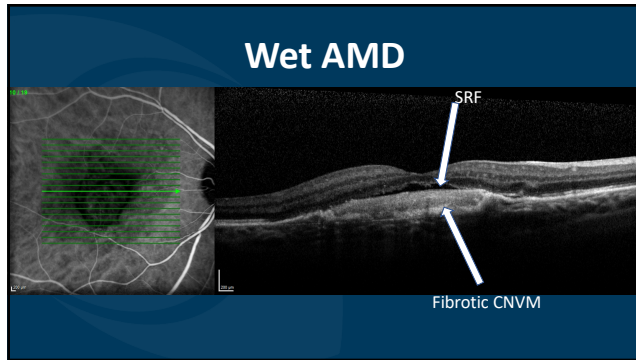
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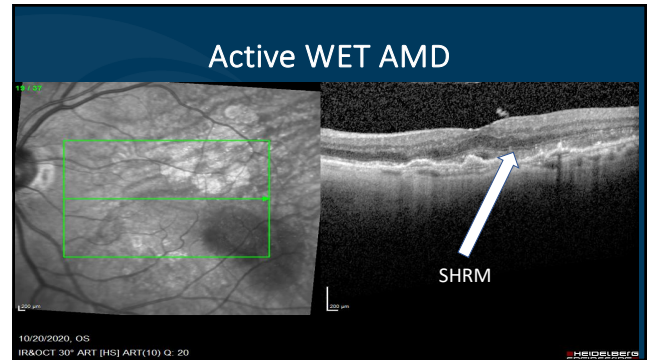
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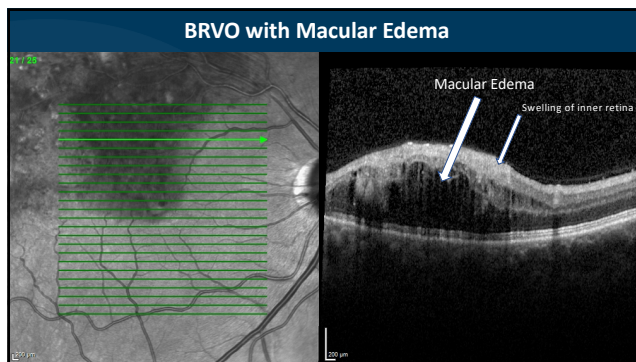
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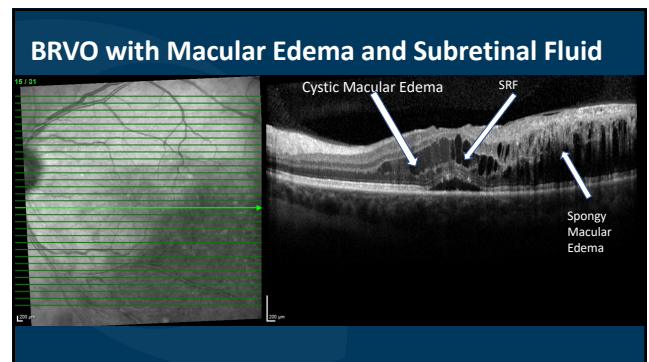
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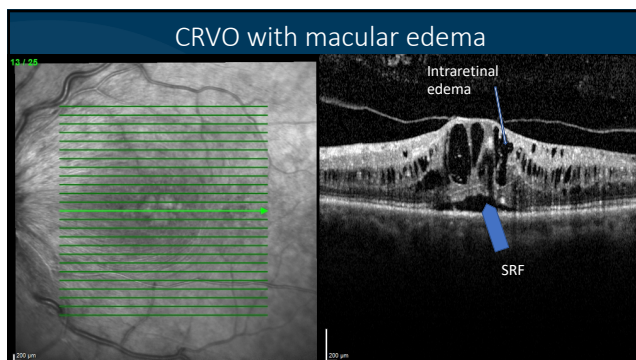
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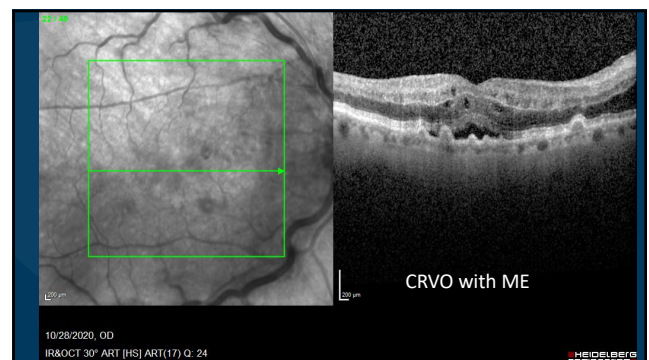
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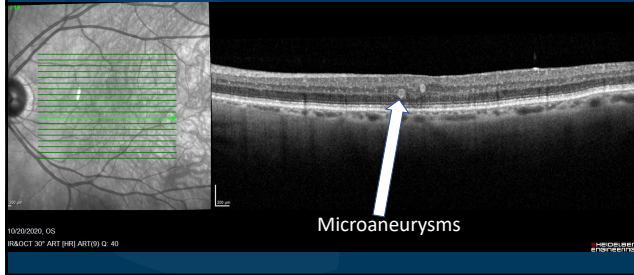


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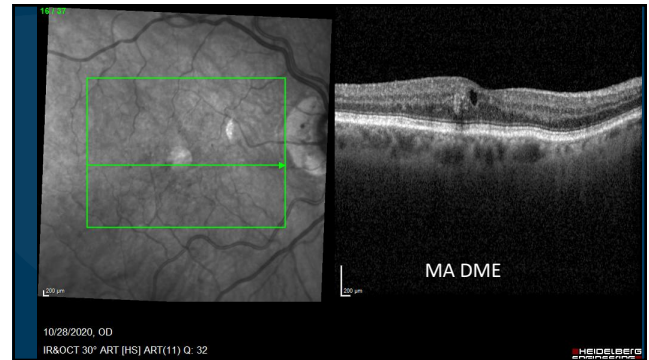


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Non-proliferative Diabetic Retinopathy

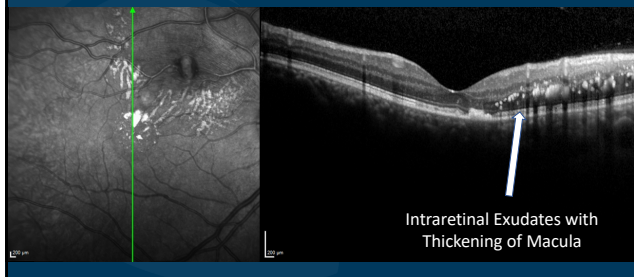


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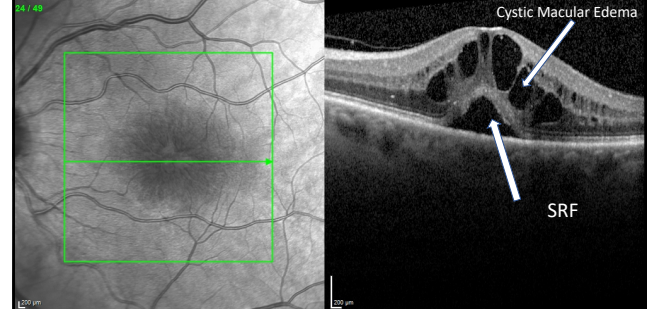
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Hard Exudates



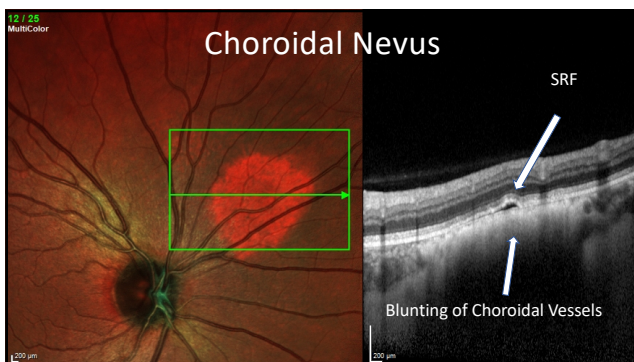
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CME (Cystoid Macular Edema)



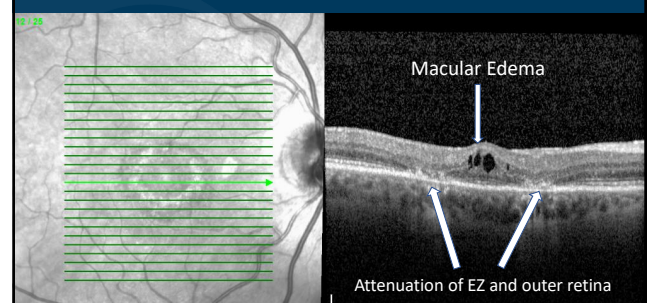
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Choroidal Nevus



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Plaquenil Toxicity with Macular Edema



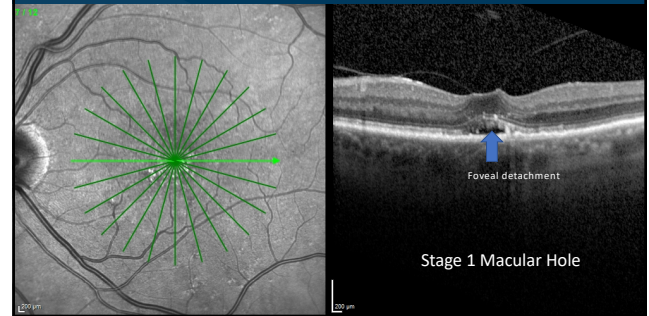
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Disorders of Vitreomacular interface

- Vitreomacular Traction
 - Macular hole
 - Pseudohole
- Lamellar macular hole
- Epiretinal membrane

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VMT with Foveal Detachment

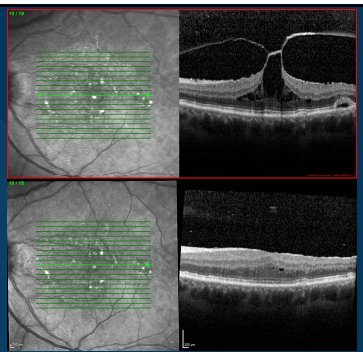


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VMT

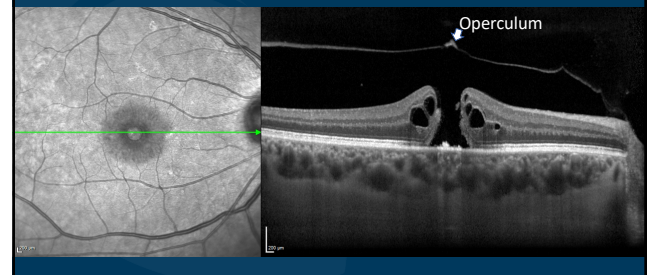
Pre-Op

Post-Op



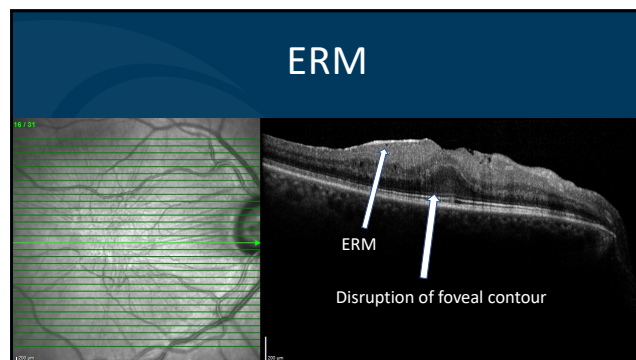
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Macular Hole



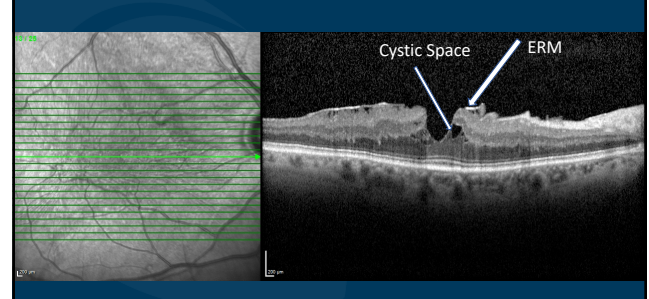
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ERM

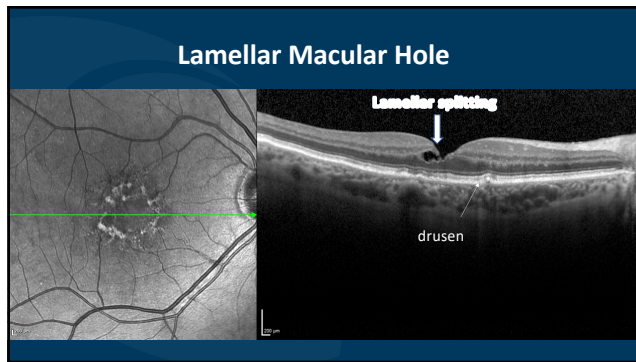


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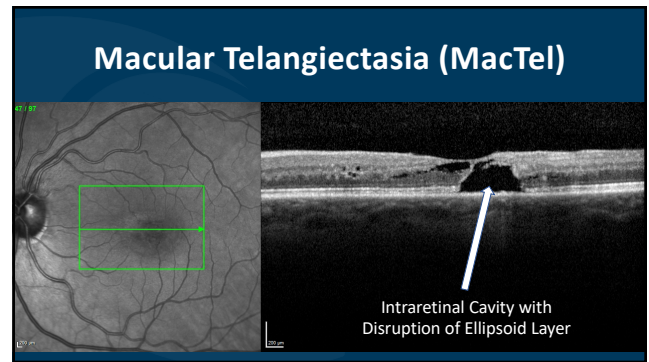
ERM with Pseudohole



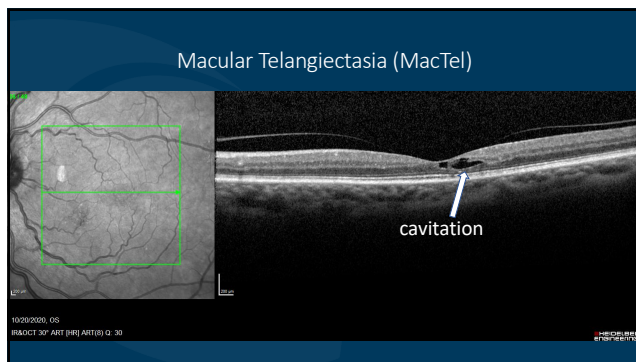
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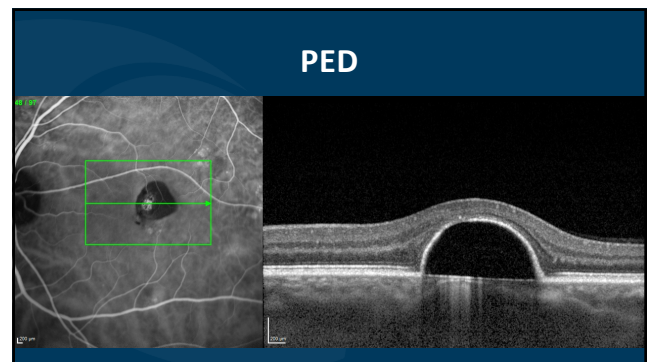
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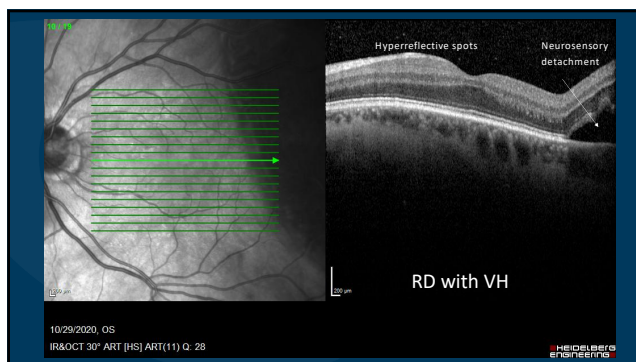
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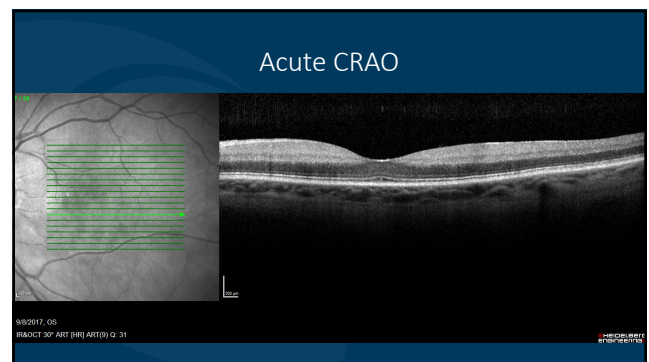
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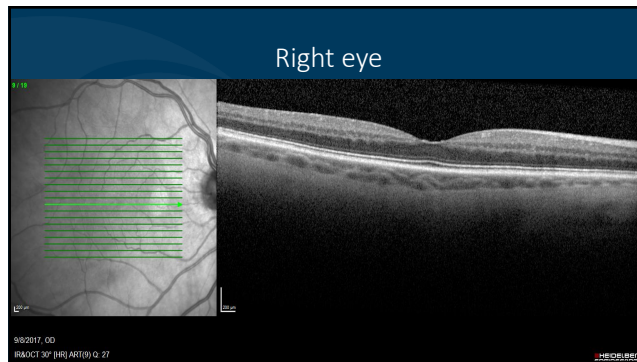
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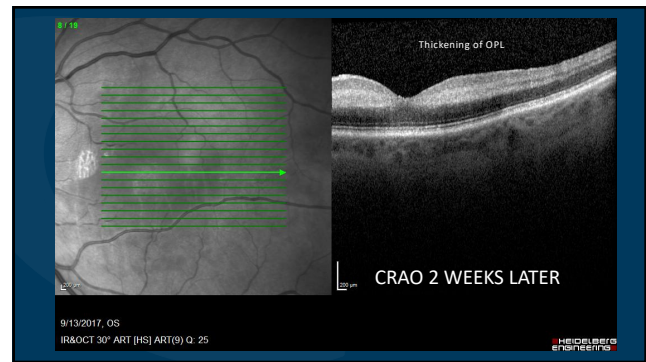
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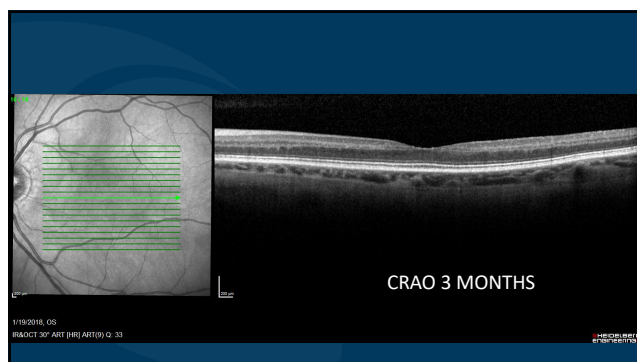
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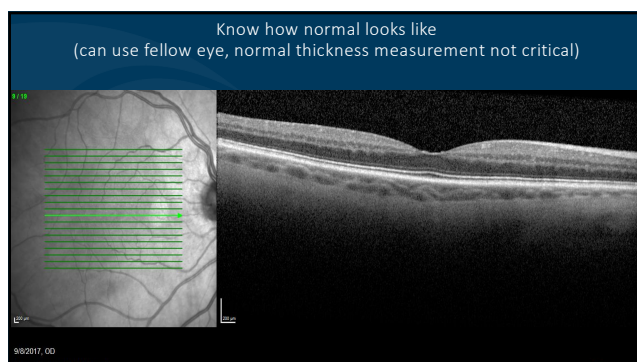


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Tips for success in interpreting OCT

- Identify the patient and the eye
- Get good images (tape the mask, lubricate the cornea, better image with dilated pupils)
- Know how normal looks like (can use fellow eye, normal thickness measurement not critical)

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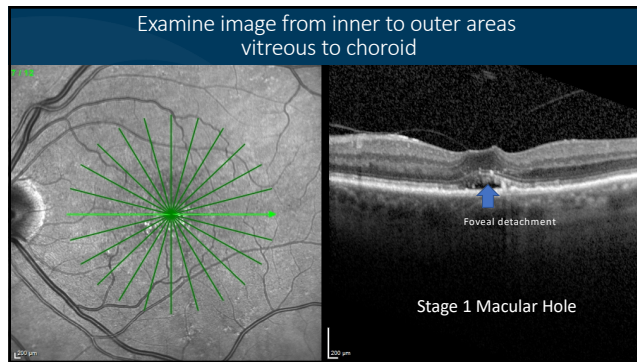


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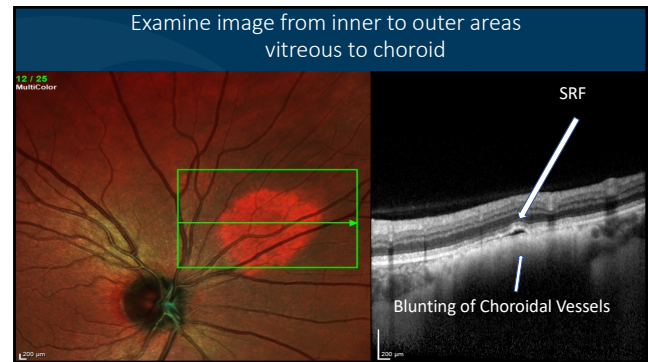
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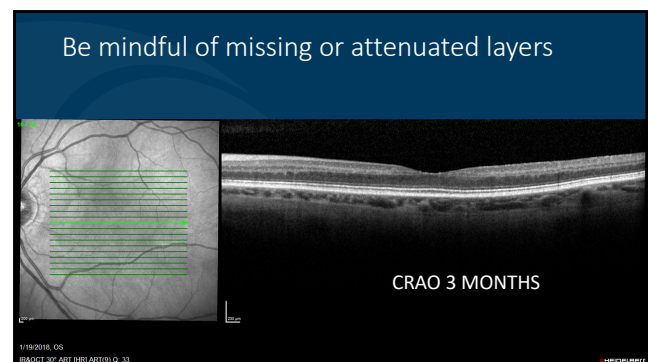


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- Be mindful of missing or attenuated layers

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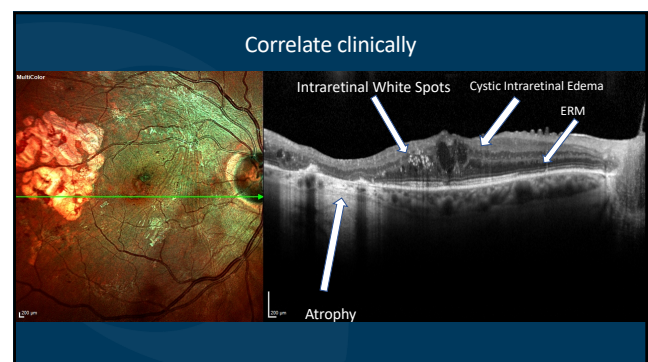


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- Be mindful of missing or attenuated layers
- Correlate clinically

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