Rapid Fire Retina Round

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SPEAKER DISCLOSURE

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- **Advisory Board Member for**
  - **Apellis**
  - **Heidelberg**
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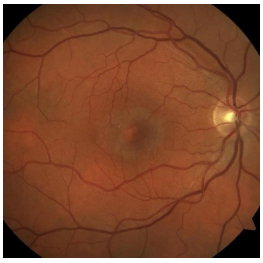
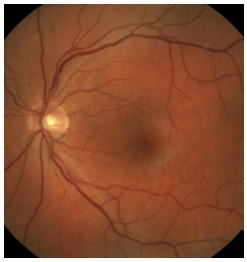
All relevant relationships have been mitigated

IS THIS WET AMD?

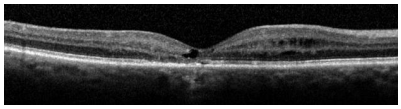
- 67 Y/O White C/O difficulty and getting tired reading and some near tasks (e.g., making fishing flies)
  - Phaco and yag 4-5 years ago has been seeing well until last year
  - Thinks his glasses' prescriptions are wrong
  - VAs D-BCVA 20/20 N-BCVA 20/25 OD/OS
  - All other findings unremarkable

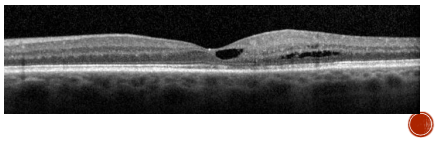
Describe the Fundus(Macula)



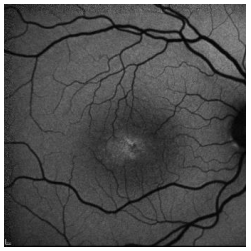


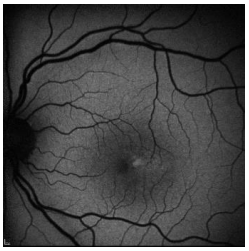
Describe the OCT



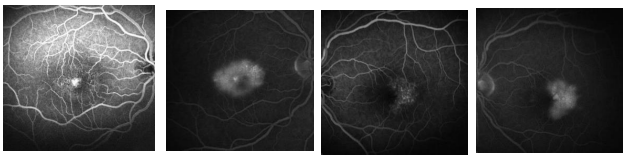


Describe the FAF





Describe the FA

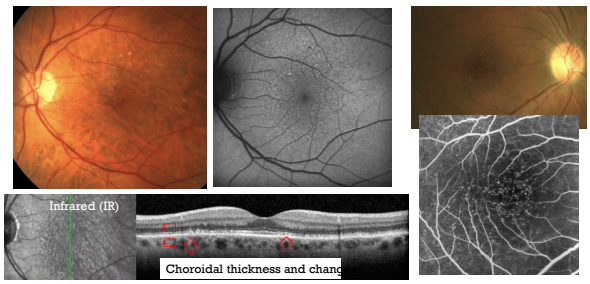


Differential Diagnosis

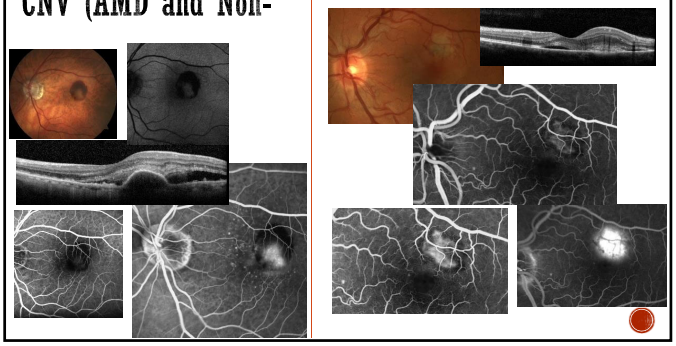
- AMD
- CNV (nAMD)
- Other macular degenerative disease (Macular Dystrophy)
- Solar Maculopathy
- Central Serous Chorioretinopathy
- Inflammatory Disease including Pseudophakic MCE (Irvine-Gass)
- Vitreomacular Disease
- Mechanical, Toxic (Plaquenil) , Iatrogenic

Typical AMD Findings

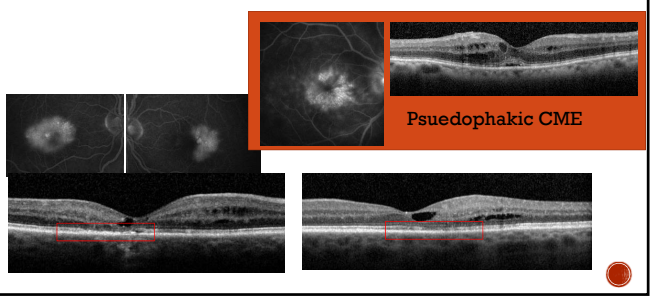
AMD-



CNV (AMD and Non-

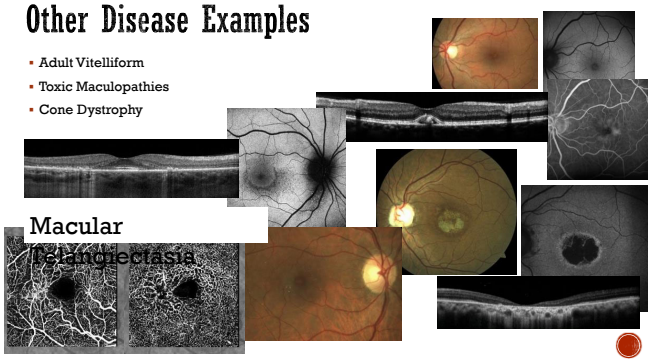


DDX (CME)



Other Disease Examples

- Adult Vitelliform
- Toxic Maculopathies
- Cone Dystrophy



Macular Telangiectasia

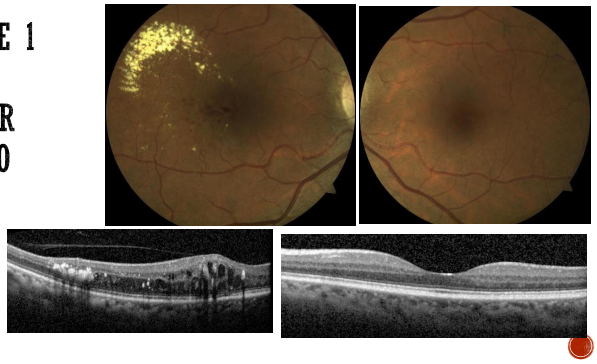
MACULAR TELANGIECTASIA

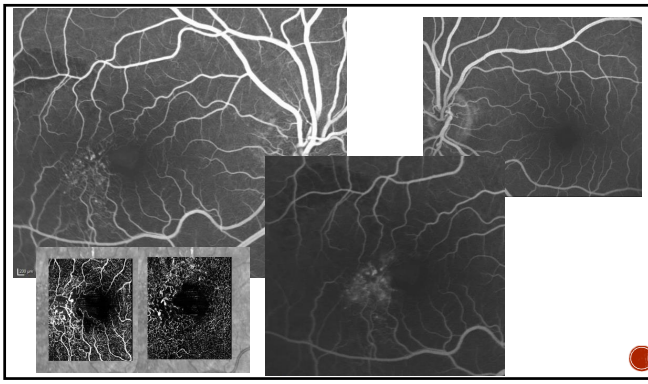
- Poorly Understood Degenerative Retinal Disorder
- Chronic, usually Slowly Progressive Neurodegeneration
  - Perifoveal Capillary Abnormalities
    - Vascular inflammation and capillary alteration
  - Loss of outer nuclear and ellipsoid zone
  - Cystic cavitation-like changes resulting in macular thinning and macular hole formation
    - Atrophic Changes start in the outer retina leading to intraretinal loss formation of partial or full thickness macular hole differ from VM interface
  - May result in choroidal neovascular formation
- Risk Factors
  - Genetic
  - Association with Diabetes, HTN, Obesity

MACULAR TELANGIECTASIA

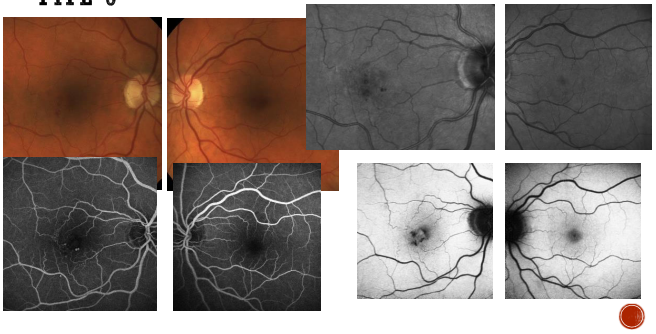
- Subtypes
  - Type 1
    - Congenital, Unilateral, maybe a variant of Coat's Disease (Developmental Anomaly)
  - Type 2 (AKA Mac Tel type 2)
    - Most common, bilateral
    - Genetic- Reported cases in families including identical twins
    - Age: 30-60
  - Type 3
    - Rare and poorly understood retinal vascular disorder
- DDX: RVO, DR, Radiation Retinopathy, Dry AMD and nAMD

TYPE 1 DDX NPDR BRVO

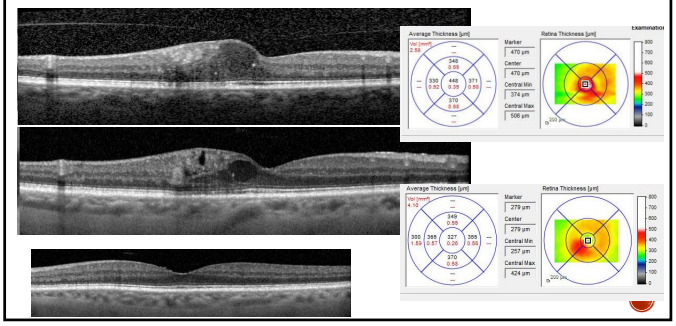




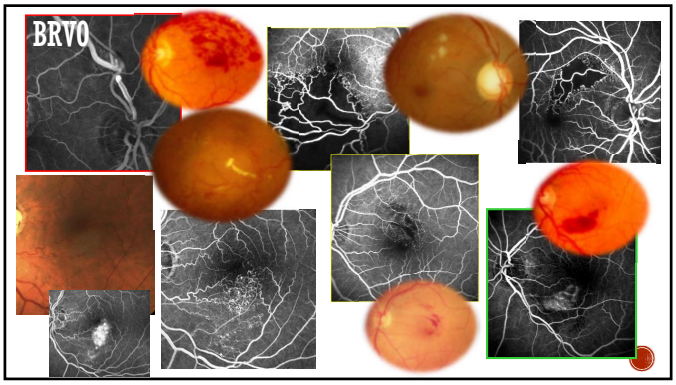
TYPE 3



OD 3 Years apart



BRVO

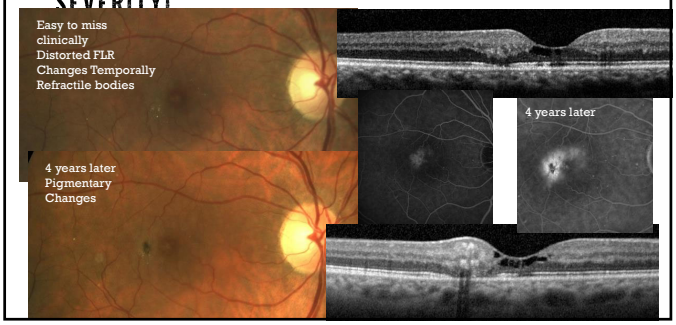


MAC TEL 2- PRESENTATION (DEPENDS ON SEVERITY)

Easy to miss clinically
Distorted FLR
Changes Temporally
Refractile bodies

4 years later

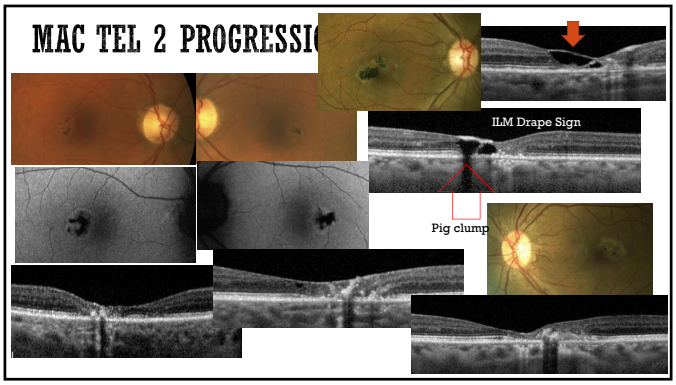
4 years later
Pigmentary
Changes



MAC TEL 2 PROGRESSI

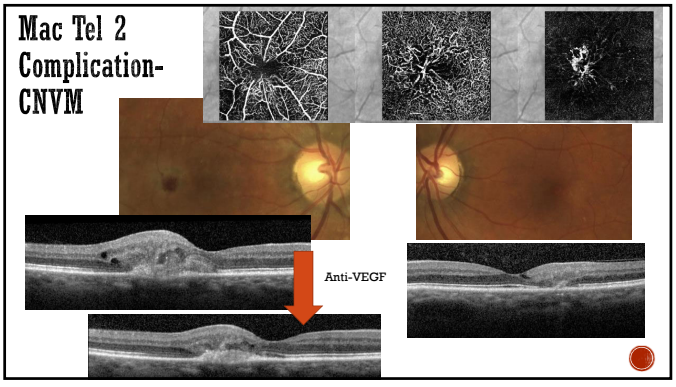
ILM Drape Sign

Pig clump



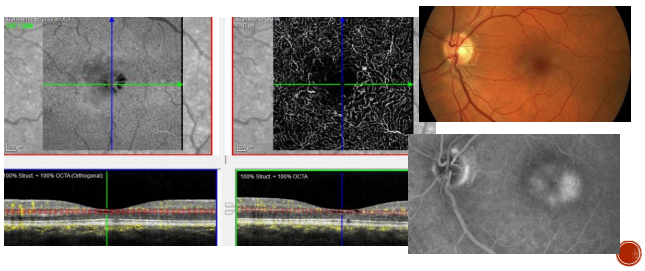
Mac Tel 2 Complication- CNVM

Anti-VEGF

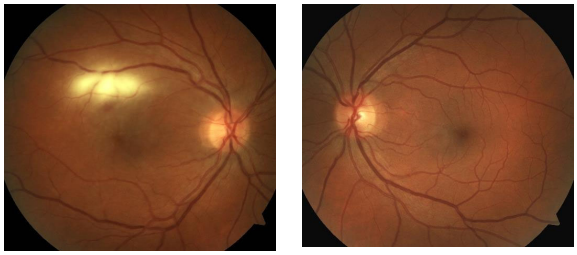


CONCLUSION

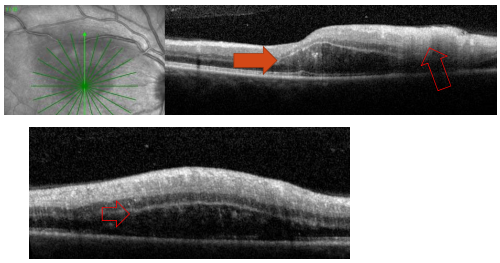
- Consider Mac Tel in DDX next time faced with abnormal maculae!



Describe the fundus



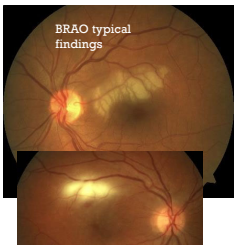
Describe the OCT

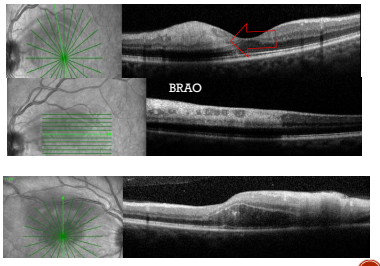


DDX

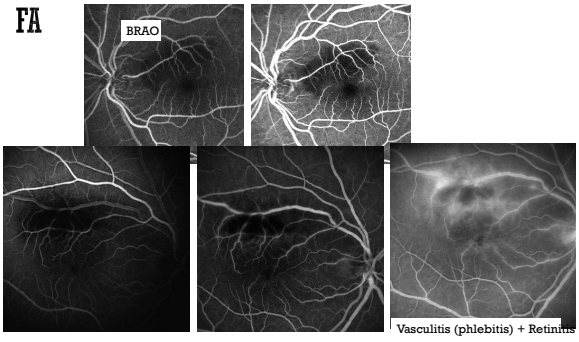
- Retinal Artery Occlusion
- Cotton Wool Spot
- Retinitis
  - Infections
    - Toxoplasmosis
    - CMV
    - Herpes
    - Fungal

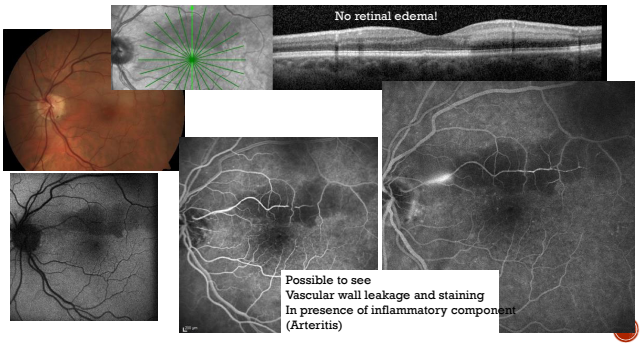
BRAO VS THE PATIENT



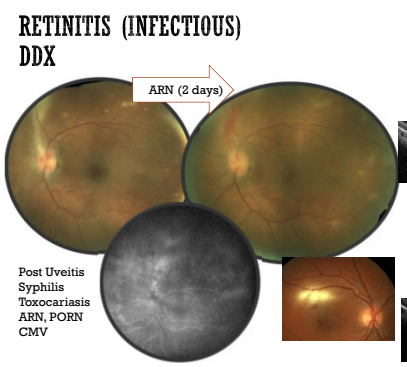


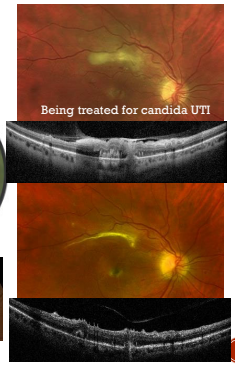
FA





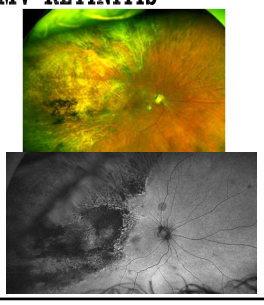
RETINITIS (INFECTIOUS) DDX

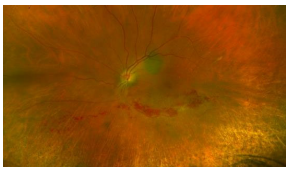


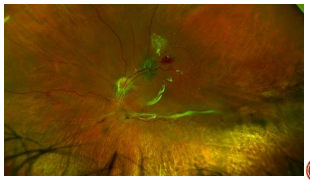


Post Uveitis
Syphilis
Toxocariasis
ARN, PORN
CMV

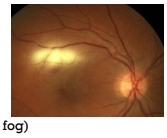
INFECTIOUS RETINITIS CMV RETINITIS



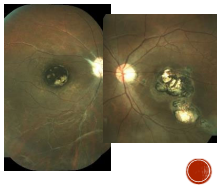




TOXOPLASMOSIS



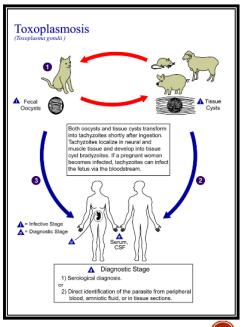
- Retinochoroiditis (vs chorioretinitis)
- Most Common Infectious Retinitis
- Unilateral Decrease VA and Fuggy Vision (headlights in a fog)
- DDX
  - Clinical Exam
  - Seropositivity (Serum anti-*Toxoplasmosis* antibody titers)
    - IgM Acute Disease 2 wks-6 months, IgG after 2 weeks and remains positive for life, IgA helpful for congenital cases



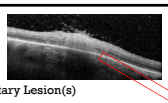
TOXOPLASMA GONDII

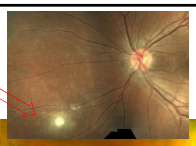
an infectious and inflammatory syndrome, is one of the most important foodborne diseases causing hospitalization and death in USA and worldwide!

- Intracellular protozoan parasite
- Common infection in human (1 billion worldwide)
- Transmission
  - Feline definitive host
    - Un- or undercooked meet (Pork)
    - Soiled vegetables
    - Direct exposure (hand to mouth)
- Risk Factors
  - Usually otherwise healthy individual
  - Increased in immunosuppressed

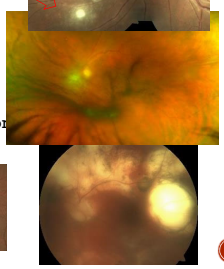


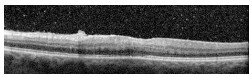
CLINICAL FINDINGS

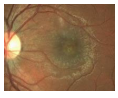




- Active Disease
  - Focal Retinits White Color Retinal Solitary Lesion(s)
    - ± Satellite pigmented lesions
  - Varying Degree of Overlying Vitritis "Headlights in the fog"
- Late Findings
  - Atrophic retinochoroidal (chorioretinal) scars
- Secondary nongranulomatous iridocyclitis
- Elevated IOP
- Retinal vasculitis (Phlebitis) and Arterial Occlusion
- Papillitis, Retrobulbar ON, Neuroretinitis

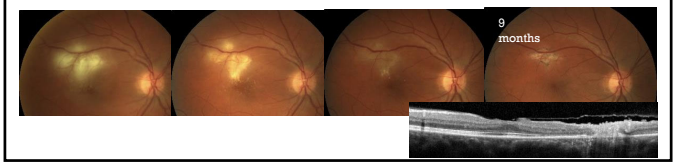




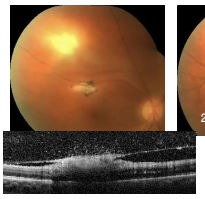


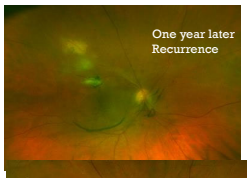
MANAGEMENT

- Classic triple therapy
  - Pyrimethamine (Daraprim®), sulfadiazine, folinic acid,and corticosteroids
- Practical Therapies
  - Trimethoprim/Sulfamethoxazole (Bactrim® DS) BID (Rxed in this case)
  - Clindamycin oral or intravitreal
  - Azithromycin (Immunocompetent patient)
-



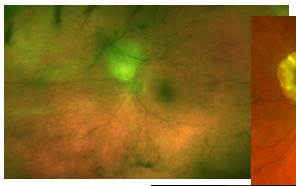
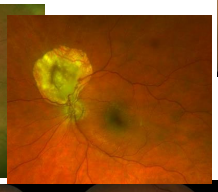
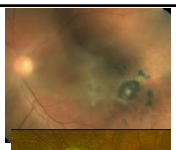
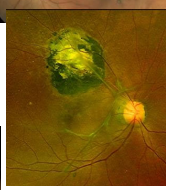
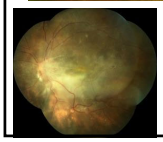
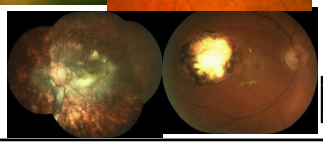
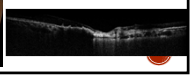
PATIENT RETURNS 7 YEARS LATER SEEING A FOG!



Responded with oral Bactrim
Later developed intolerance (oral thrush)
IVI Clindamycin x3
Bothered by floaters for a longtime

VISUAL PROGNOSIS – FACTORS

CONCLUSION TOXOPLASMOSIS

- Early Detection
- Timely Management
- Improves Outcome and Prognosis

Differential Diagnosis of Pigmented Lesions

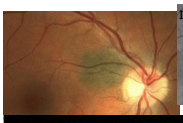
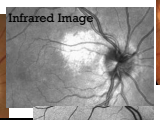
Presentation

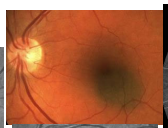
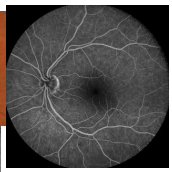
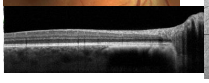
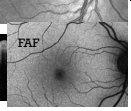
- History, and Symptoms
- Color
- Shape
- Location
- Presence and Absence of Hemorrhage

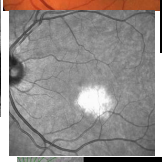
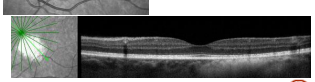
Morphology

- Hypertrophy
- Hyperplasia
- Pigment Migration
- Metaplasia
- RPE Atrophy

Describe

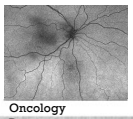
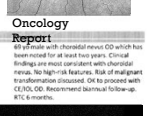



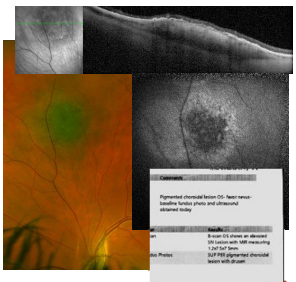
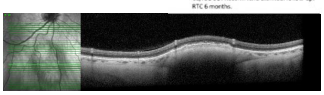





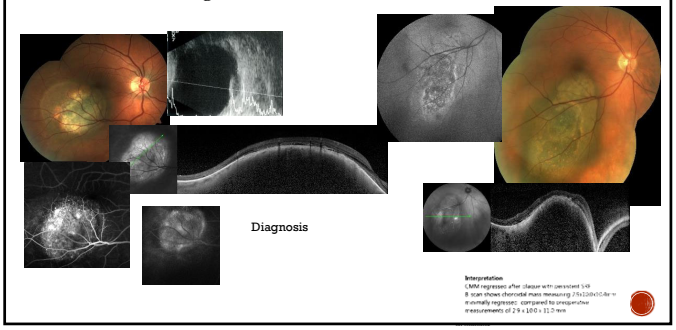
DDX
Diagnosis
Choroidal Nevus

Suspicious Elevated Choroidal Nevus

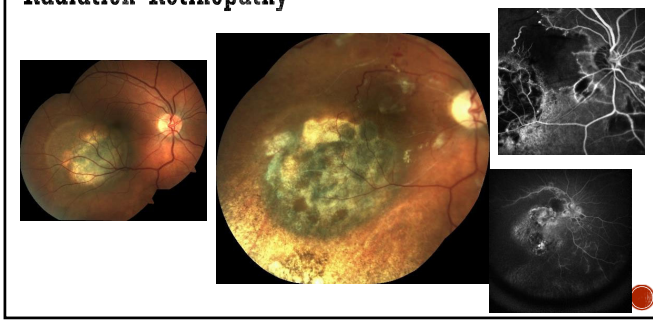



Describe Findings

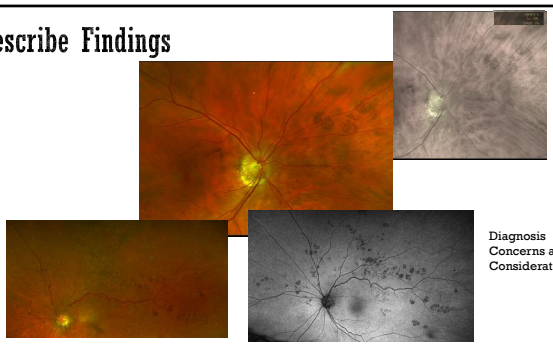


Diagnosis

Radiation Retinopathy

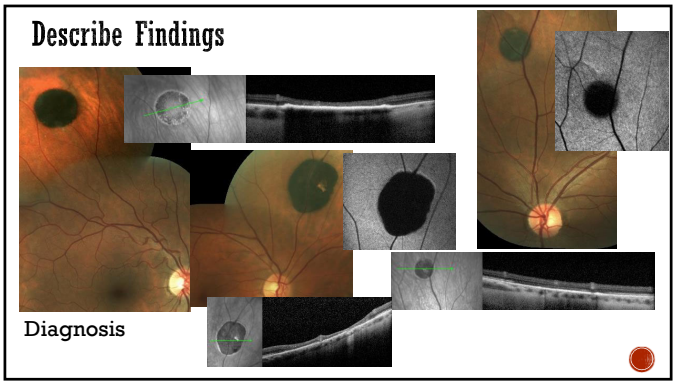


Describe Findings



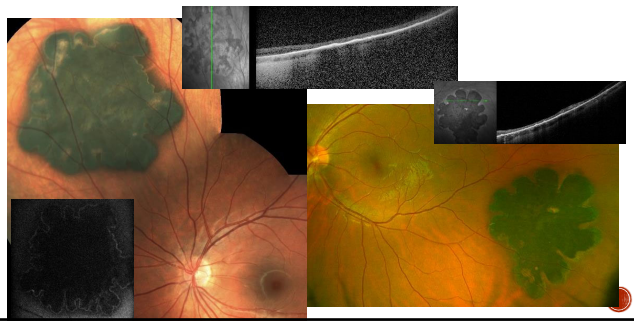
Diagnosis
Concerns and
Consideration

Describe Findings

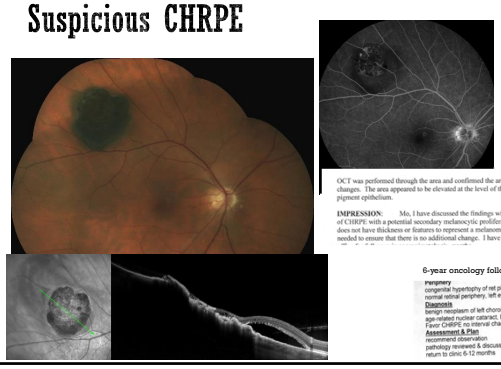


Diagnosis

CHRPE



Suspicious CHRPE



OCT was performed through the area and confirmed the area of elevation with minor cystic changes. The area appeared to be elevated at the level of the choroid rather than at the retinal pigment epithelium.

IMPRESSION: Ms, I have discussed the findings with [redacted]. My impression is that of CHRPE with a potential secondary melanocytic proliferation. At this point in time, the lesion does not have thickness or features to represent a melanoma. However, I believe followup is needed to ensure that there is no additional change. I have asked [redacted] to return to my

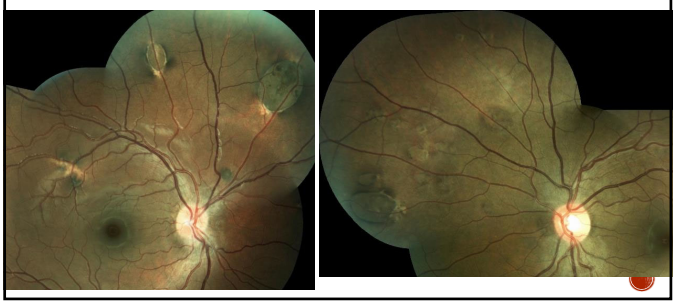
6-year oncology follow-up

Periphery
congenital hypertrophy of ret pigm epith, flat, superior temp
normal retinal periphery, left eye

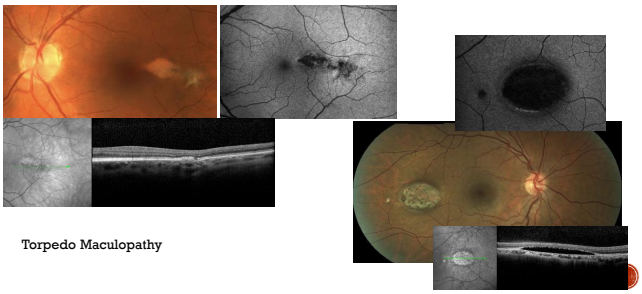
Diagnosis
benign neoplasm of left choroid
age-related nuclear cataract, bilateral
Favor CHRPE no interval change

Assessment & Plan
recommend observation
pathology reviewed & discussed w/patient
return to clinic 6-12 months

What should be suspected?

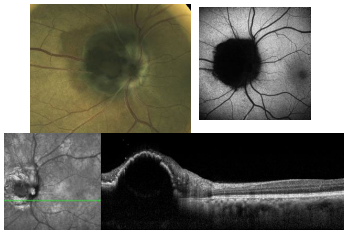


Describe Findings and Condition



Torpedo Maculopathy

Describe the Findings



Melanocytoma

CONCLUSION

- Timely and accurate diagnosis of posterior segment disease results in timely and appropriate management
  - Saving Lives
  - Saving Sight

Thank you!