

# From Diagnosis to Dialogue: Identifying AMD Mimics to Improve Patient Education & Management

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# No financial disclosures



# Course Objectives

Upon completion of this course, the clinician will be able to:

01

*Identify the diagnostic criteria for Age-Related Macular Degeneration (AMD) including recent updates on detection, clinical features, and treatment and management.*

02

*Differentiate AMD from its clinical mimickers using key history, examination findings, and multimodal imaging to improve diagnostic accuracy.*

03

*Understand the psychological and behavioral impacts of AMD misdiagnosis, including the associated depression, reduced quality of life, and changes in health-related behaviors that can arise when patients are incorrectly told they have AMD.*

04

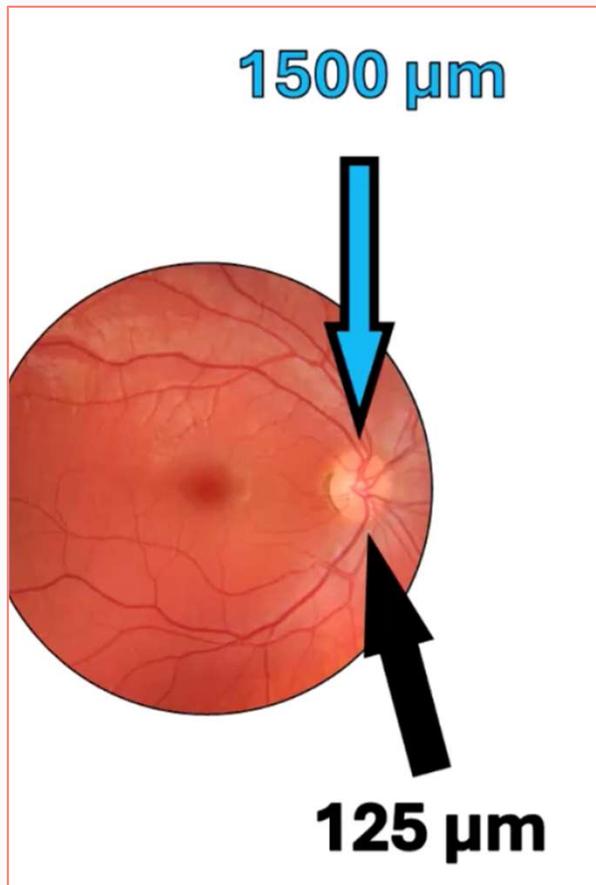
*Communicate diagnoses effectively by providing clear, empathetic patient education—especially when navigating diagnostic uncertainty or clarifying conditions that resemble AMD.*



# First thing's first...

AMD Defined

# American Academy of Ophthalmology Preferred Practice Pattern



A macular disorder characterized by ANY of the following:

**RPE Changes**



**Drusen**



Presence of intermediate-sized drusen ( $>63 \mu\text{m}$ )

**Other Findings**



Presence of GA, CNV, polypoidal choroidal vasculopathy, reticular pseudodrusen, or retinal angiomatous proliferation (RAP)

# AOA Optometric Clinical Practice Guideline

OPTOMETRIC CLINICAL  
PRACTICE GUIDELINE

Care of the Patient with  
**Age-Related  
Macular  
Degeneration**



An acquired retinal disorder characterized by ANY of these findings:

**Pigmentary degeneration (atrophy)**



**Drusen/lipofuscin deposits**



**Exudative elevation of the outer  
retina within the macula**



# AMD: Demographics and Associations

Family History  
(genetics)

Advanced Age

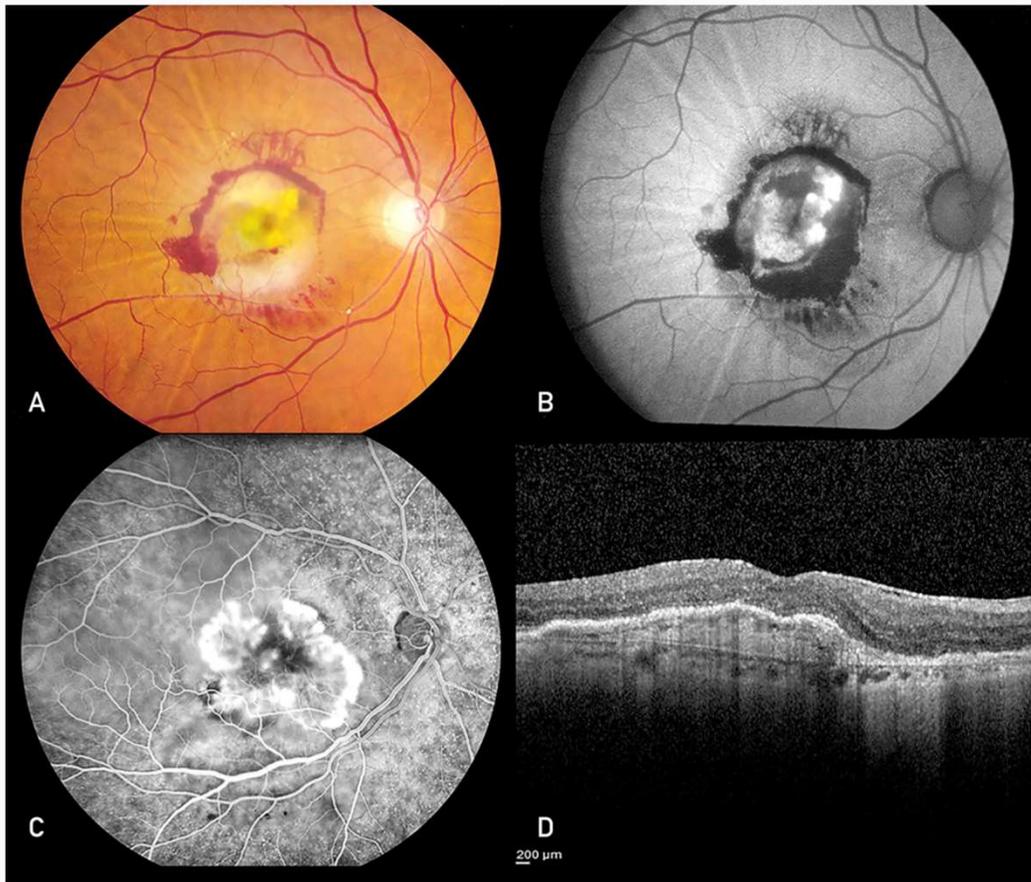
Caucasian Race  
(White)

Blue Iris

Female  
Gender

- Modifiable risk factors: Smoking, systemic arterial hypertension, diet

# AMD: Diagnosis & Management

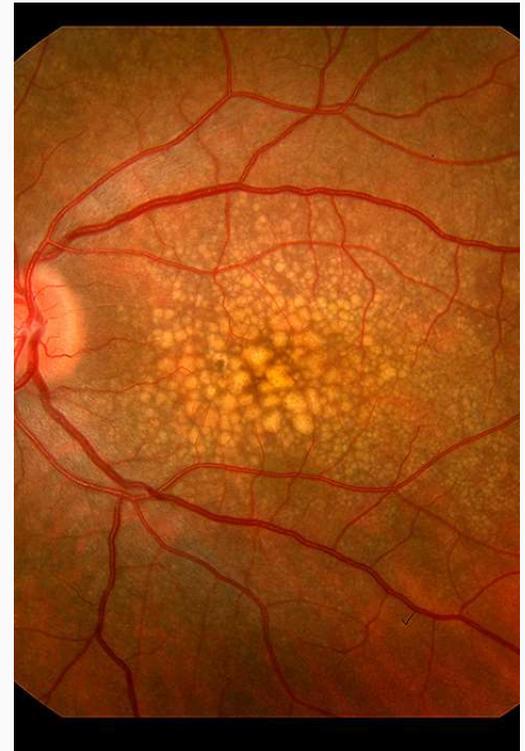


**FIGURE 1.** Multimodal imaging in neovascular age-related macular degeneration. (A) Color fundus photograph of macular neovascularization (MNV) seen as yellow gray lesion with surrounding hemorrhage. (B) Corresponding fundus autofluorescence showing mixed hyperautofluorescence and hypoautofluorescence. (C) Fluorescein angiography showing leakage from the MNV seen as lacy hyperfluorescence. (D) Optical coherence tomography showing subretinal pigment epithelial hyper-reflective lesion suggestive of MNV.

- Gold standard for diagnosis
  - DFE and OCT
- Early/intermediate disease
  - Minimize progression risk
  - Watch for treatable change
- Advanced disease
  - MNV --> anti-VEGF injections
  - GA --> complement cascade inhibitors (?); clinical trials

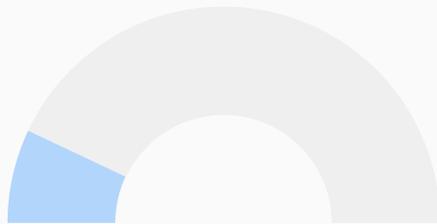
# So...what do we EXPECT to see in AMD?

- AGE 50 and older (with increased prevalence over 75)
- Most common (and most studied) in Caucasian populations
  - Late-stage AMD most common among Whites
- Bilateral disease
- Fundus findings of MACULAR drusen, RPE pigment changes, and/or advanced findings



<https://www.vrmny.com/conditions/age-related-macular-degeneration/>

# AMD Prognosis



**10-15%**

## Neovascularization

About 10-15% of patients with AMD develop MNV



**10%**

## Geographic Atrophy

About 10% of patients with AMD suffer significant vision loss due to GA

# Psychological implications of AMD diagnosis

Will I go blind from macular degeneration?

## ◆ AI Overview

Macular degeneration (AMD) generally does not cause total blindness, but it causes a severe loss of central vision, which may be classified as legal blindness. It affects the central retina, meaning peripheral (side) vision usually remains intact, allowing people to continue to take care of themselves. [🔗](#)

# Fear of blindness

- Ranked third by Americans as biggest fear (A Prevent Blindness American survey)
- Nearly 50% of Americans said **losing sight** would have the most negative impact on their daily life (Alliance for Eye and Vision Research poll)
- 79% of Americans stated blindness as "the worst possible thing that could happen to me" (aside from their own death/death of a loved one; Eye on Eyesight survey)
- Primary concerns
  - Loss of independence
  - Reduced quality of life



# Psychological Implications of AMD: Defining Characteristics

- Leading cause of vision loss and blindness in elderly Americans
  - Fourth leading cause of blindness worldwide
  - Expected to increase from 196 million (2020) to 288 million (2040)
- "Patients with early AMD, therefore, should be educated about the progressive nature of the disease and the likelihood of vision decline."



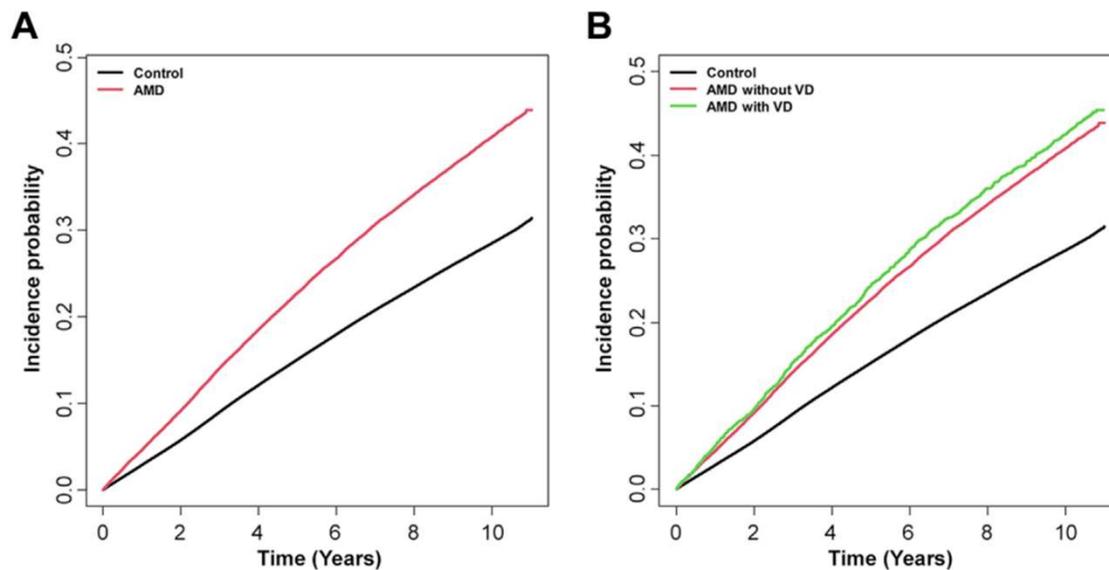
Normal Vision



The same scene affected by  
age-related macular  
degeneration

<https://medivizor.com/blog/2016/02/16/age-related-macular-degeneration-awareness-month/>

# Psychological implications of AMD: Living with a potentially blinding disease



- "Individuals who receive a diagnosis of AMD have been reported to have a greater prevalence of depression." (Hwang 2023)



## Impact of Age-Related Macular Degeneration and Related Visual Disability on the Risk of Depression

*A Nationwide Cohort Study*

Sungsoon Hwang, MD,<sup>1,2</sup> Se Woong Kang, MD, PhD,<sup>1</sup> Sang Jin Kim, MD, PhD,<sup>1</sup> Kyungdo Han, PhD,<sup>3</sup> Bong Sung Kim, MS,<sup>3</sup> Wonyoung Jung, MD,<sup>4</sup> Dong Hui Lim, MD, PhD,<sup>1,2,\*</sup> Dong Wook Shin, MD, PhD<sup>2,4,\*</sup>

# Screening tool: Patient health questionnaire-2

Over the **last 2 weeks**, how often have you been bothered by the following problems?

Not at all

Several days

More than  
half the days

Nearly every  
day

1. Little interest or pleasure in doing things

0

+1

+2

+3

2. Feeling down, depressed or hopeless

0

+1

+2

+3

PHQ-2 score obtained by adding score for each question (total points)

# Psychological implications of AMD: Living with a potentially blinding disease



<https://www.myamdteam.com/resources/wet-amd-and-your-mental-health>

- Study identified psychosocial effects of AMD
  - Associated with high rates of depression, anxiety, emotional distress, and increased mortality (Berman and Brodaty, 2006)
  - Not just the vision loss but *anticipation* of visual impairment
- 2025 study: Depression prevalence 56% (wet), 27% (dry), 20% (controls); Gouliopoulos et al.

# Psychosocial implications of AMD: Anti-VEGF treatment



**FIGURE 3.** In-office intravitreal injection technique.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC11259890/pdf/main.pdf>

- Studies find patient experiences of discomfort and fear common
  - Waiting for injection, fear of losing sight, fear for the unknown
  - Fears strongly tied to the first injection (patient's expectations of treatment)
- General improvement in patient Quality of Life found once treatments are initiated
  - Strong link between VA and QOL/mental health

# Drusen in the retina—is it ever okay?

- Yes!
  - Normal aging change
  - Even found in young adults (in a study of patients <36yo, 22% of patients had small hard drusen)
- Hard drusen: small, round, well-defined
- Number and retinal location
- Absence of pigmentary change

**Conclusions** The frequency of drusen in a younger Caucasian population aged 18–54 years is high, with 91.48% of all gradable eyes having drusen. The most frequent drusen subtype was hard distinct drusen <31.5 μm. No druse greater or equal in size to 125 μm was seen. Pigmentary changes are rare. *Eye* (2012) 26, 1357–1362; doi:10.1038/eye.2012.165; published online 17 August 2012

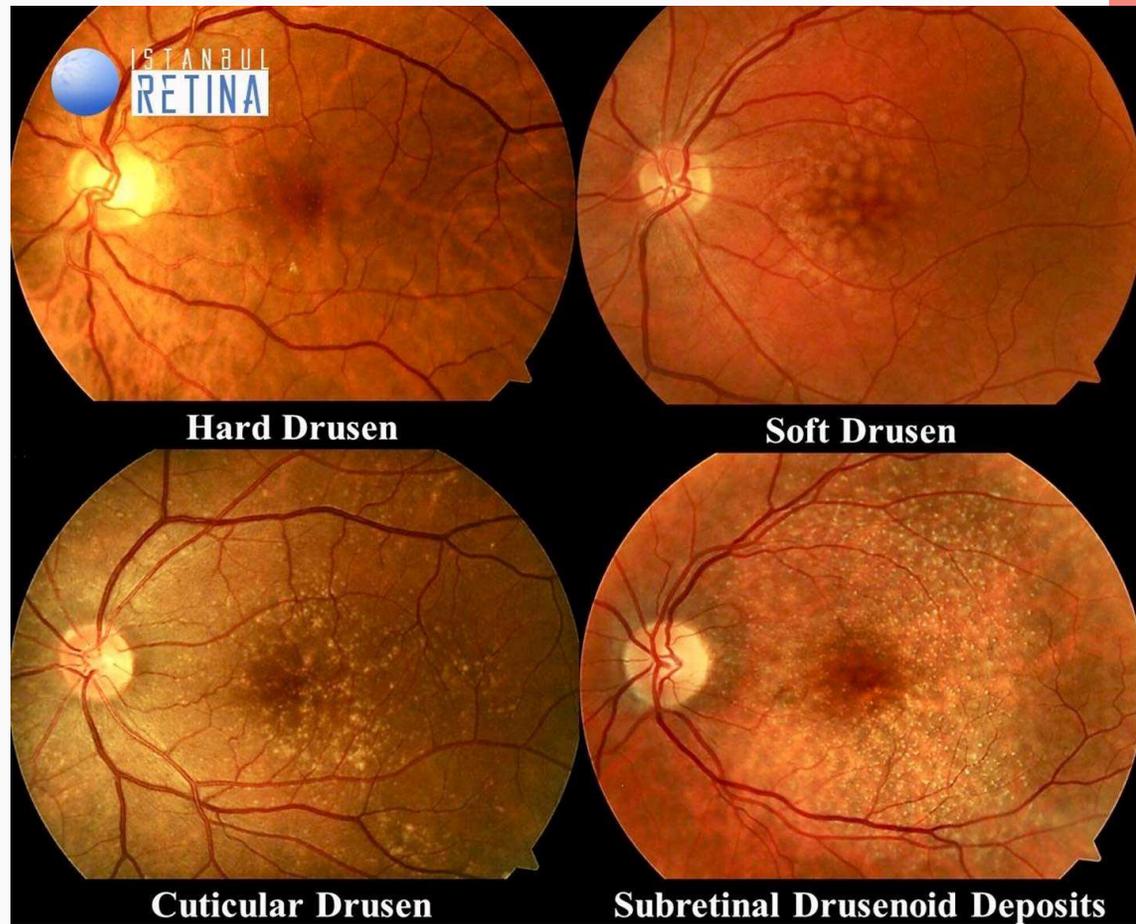
**Table 2** Drusen prevalence by size and age

Age-group	Number in group with gradable images	Any drusen present	Percent with any drusen present	Drusen size (<31.5 μm)	Percent	Drusen size (32 < x < 63 μm)	Percent	Drusen size (63 < x < 125 μm)	Percent
18–24	142	132	92.96	130	91.55	48	36.36	3	2.11
25–31	172	155	90.12	152	88.37	71	45.81	0	0.00
32–38	212	192	90.57	183	86.32	103	53.65	6	2.83
39–45	245	229	93.47	226	92.24	142	62.01	4	1.63
46–52	165	148	89.70	146	88.48	67	45.27	3	1.82
53–59	15	12	80.00	12	80.00	7	58.33	0	0.00

[Drusen prevalence and pigmentary changes in Caucasians aged 18–54 years - PMC](#)

# Differentiating Drusen Types

- Hard
  - Small, yellowish with defined margins
- Soft
  - Larger, yellow/white, indistinct borders and elevated
- Cuticular (basal laminar drusen)
  - Triangular elevations of the RPE/BL --> "clumps" of tiny drusen often sparing macula
- Reticular pseudodrusen (subretinal drusenoid deposits)
  - Yellowish-white netlike pattern



# Drusen and the AMD "Spectrum": How does it all relate?

- Hard drusen
  - Benign (normal/aging change)
  - *May* be associated with AMD
- Soft drusen
  - AMD association
    - Conveys an INCREASED RISK of advanced disease
- Cuticular drusen
  - Relatively benign (early stages/young patient)
  - *Maybe* associated with AMD (large size, macula involvement, patients over 60) --> these patients may develop GA/MNV
- Reticular drusen
  - AMD association
    - Conveys an INCREASED RISK of advanced disease

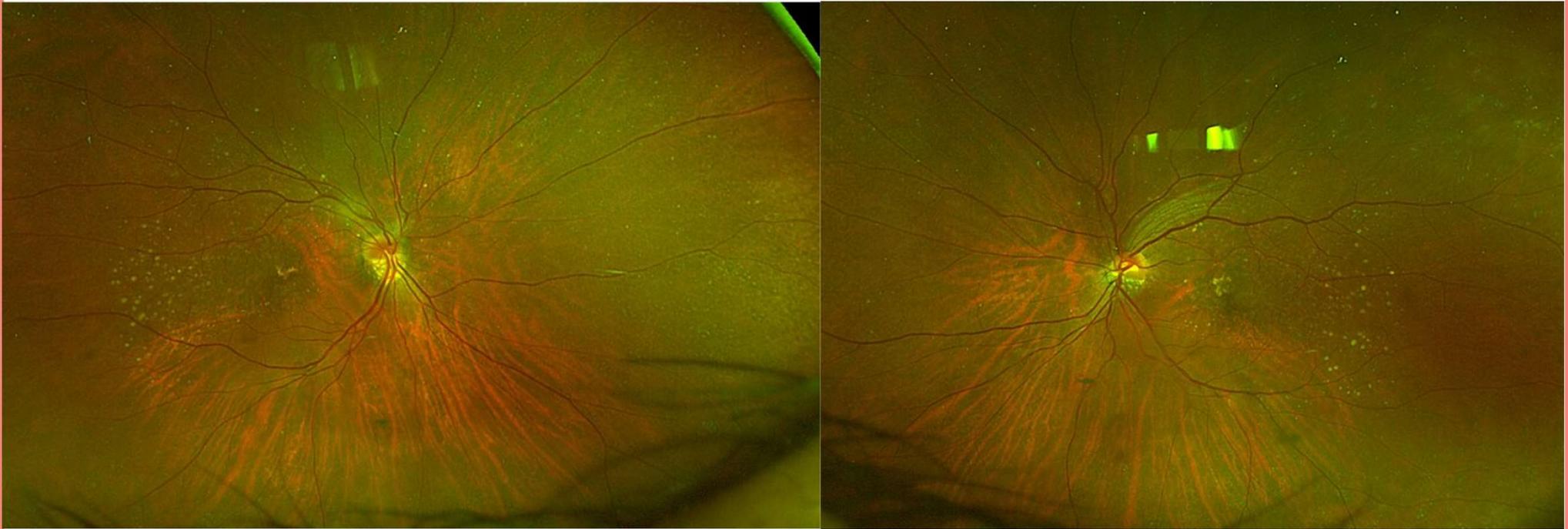
# A Case

- Demographics
  - 67yo Black female
- Chief complaint
  - Blurry vision at night OU
- Entrance testing
  - All normal except distortion noted on Amsler grid
  - BCVA 20/25- OD, 20/25 OS
- IOP 19/19 mmHg OD, OS
- Medical History
  - (+) cataracts since 2023
  - Social drinker; everyday smoker
  - Hypertension (taking unknown htn medication and unknown statin), Sciatica
  - Family history positive for cataracts

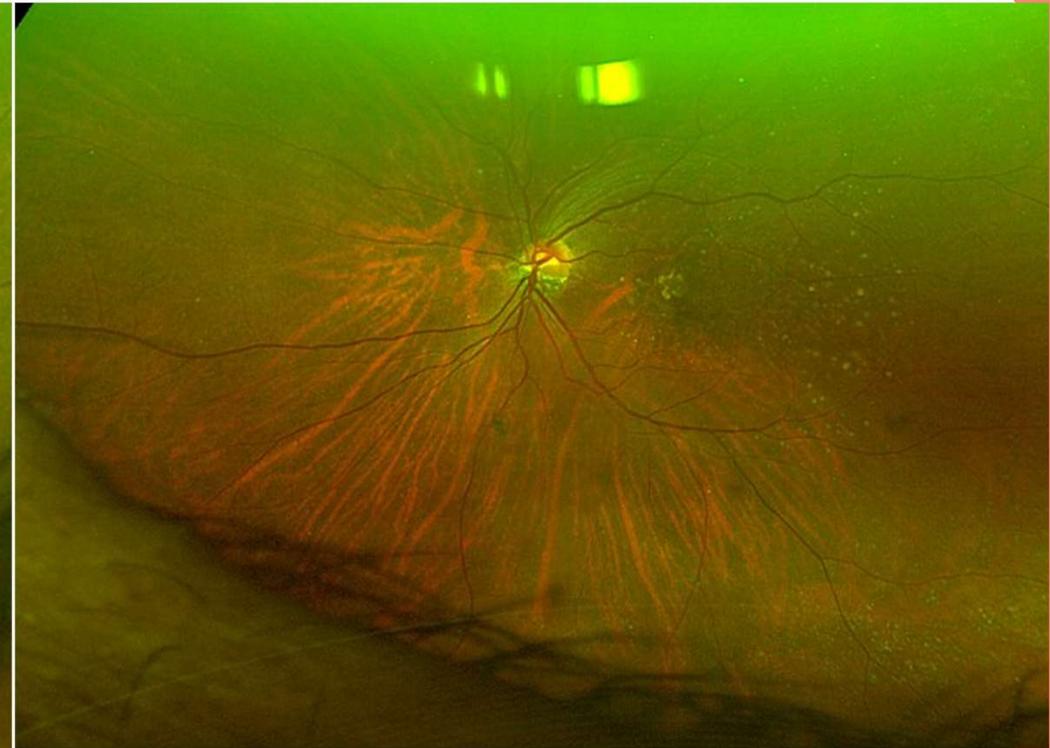
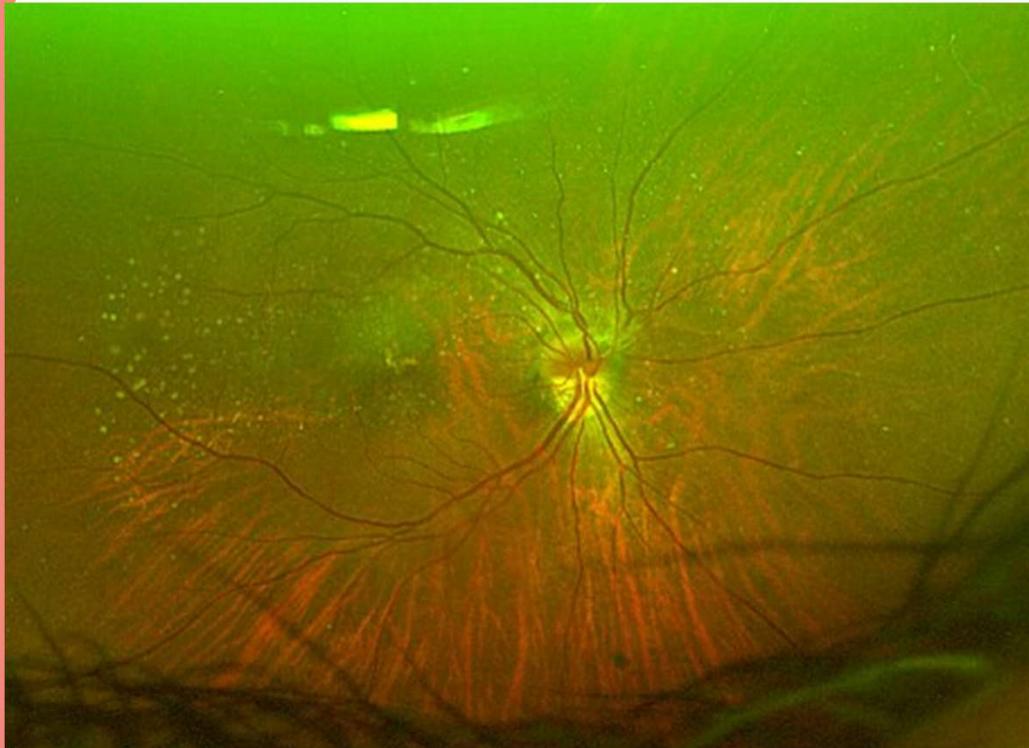
# A Case continued

- Anterior segment: 1+ Nuclear sclerotic cataract OU
- DFE reveals tilted optic nerves OU
  - C/D 0.1 OD, OS
- Drusen throughout posterior pole OU
- Macula
  - Scattered hard drusen with some large coalesced drusen OU
  - Small areas RPE dropout OD
  - (-) CNV OU
- Vessels normal OU
- Peripheral retinal exam reveals cobblestone degeneration inferiorly OU
  - (-) htd 360 OU
  - (+) PVD OU

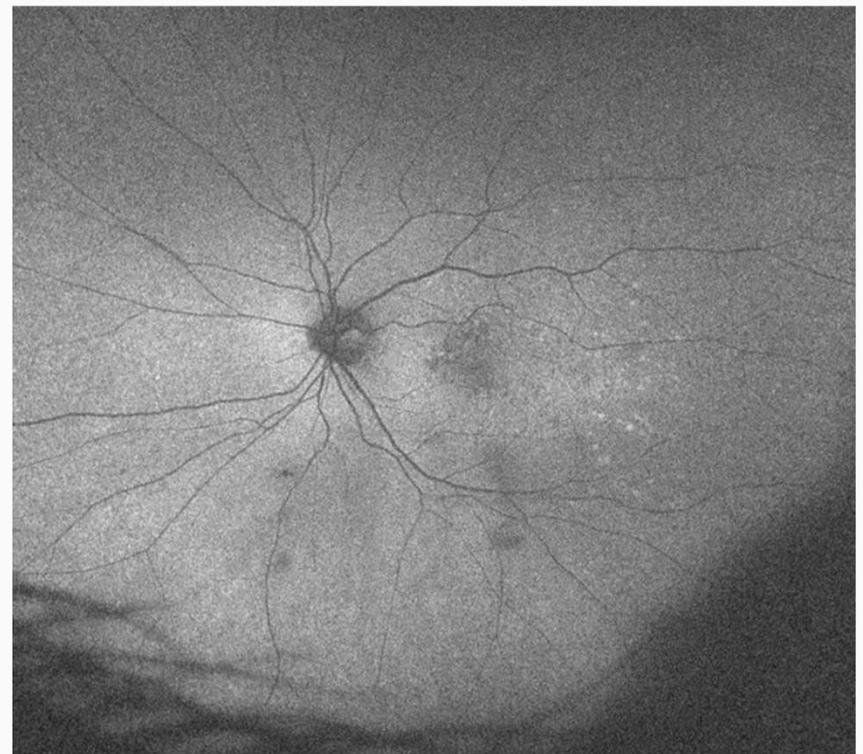
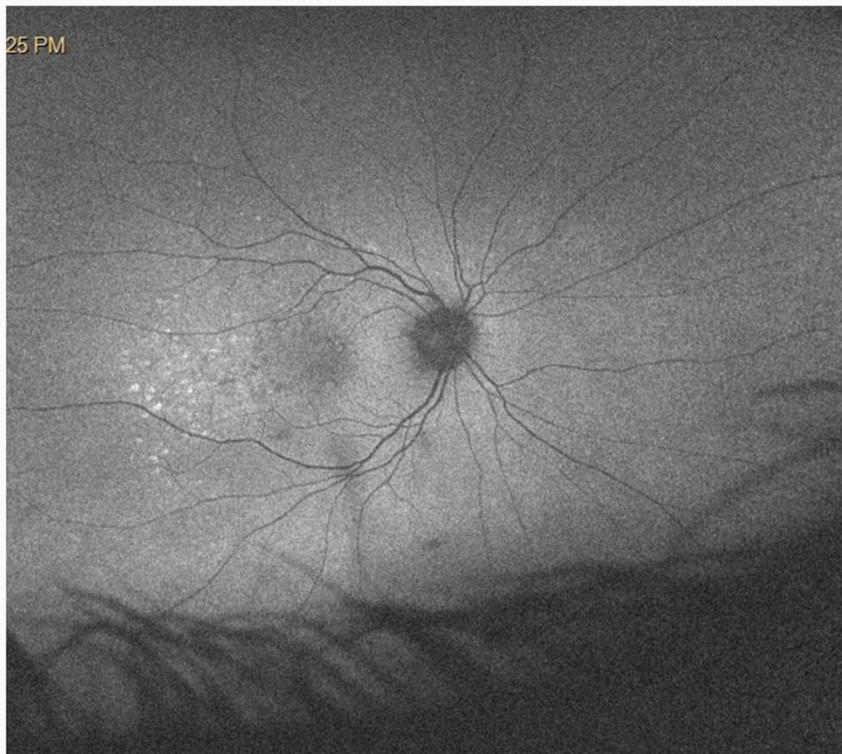
# Optos (UWF) Images



## Optos (UWF) Images 2.5 years prior



# OPTOS FAF Images



# OCT

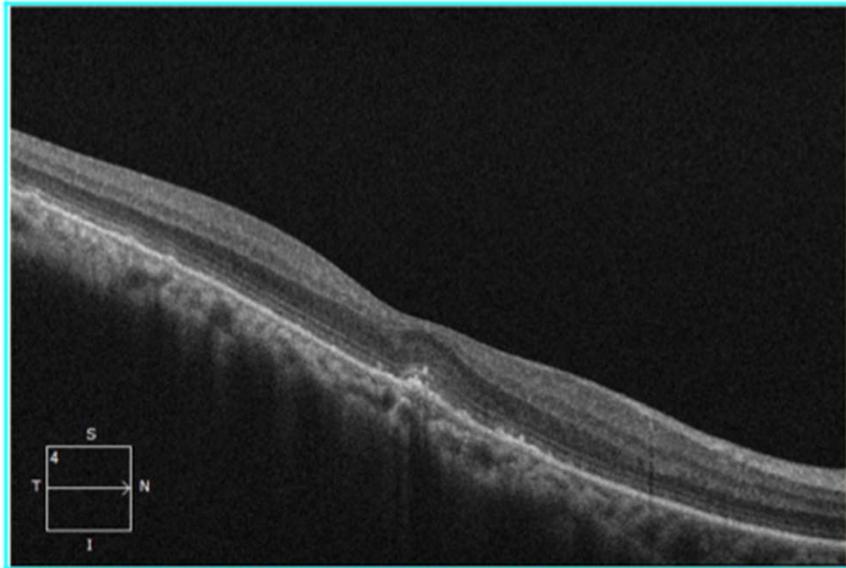
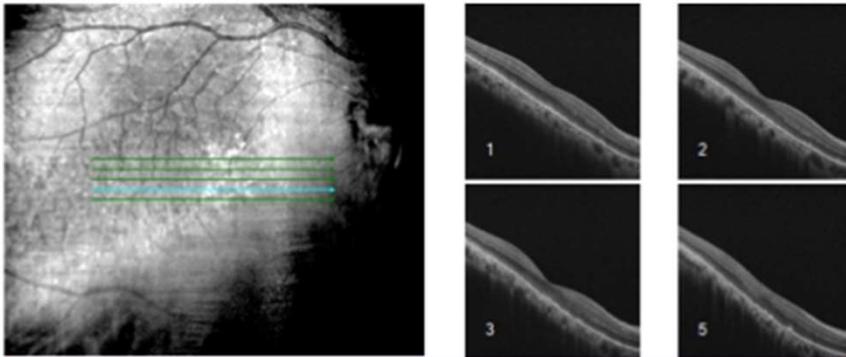
High Definition Images: HD 5 Line Raster

OD   OS

Scan Angle: 0°

Spacing: 0.25 mm

Length: 6 mm



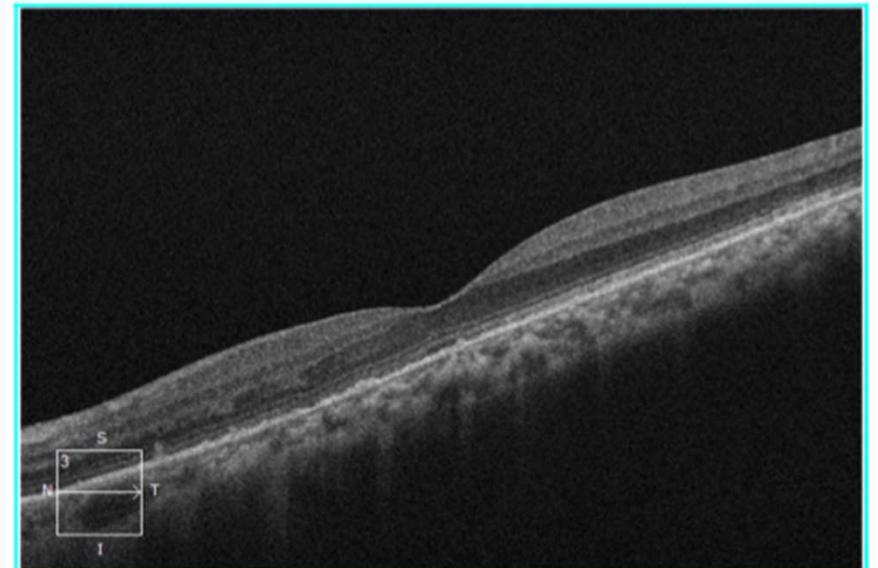
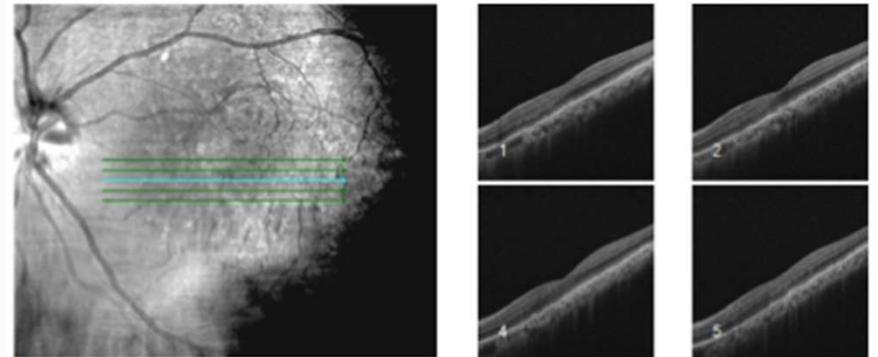
High Definition Images: HD 5 Line Raster

OD   OS

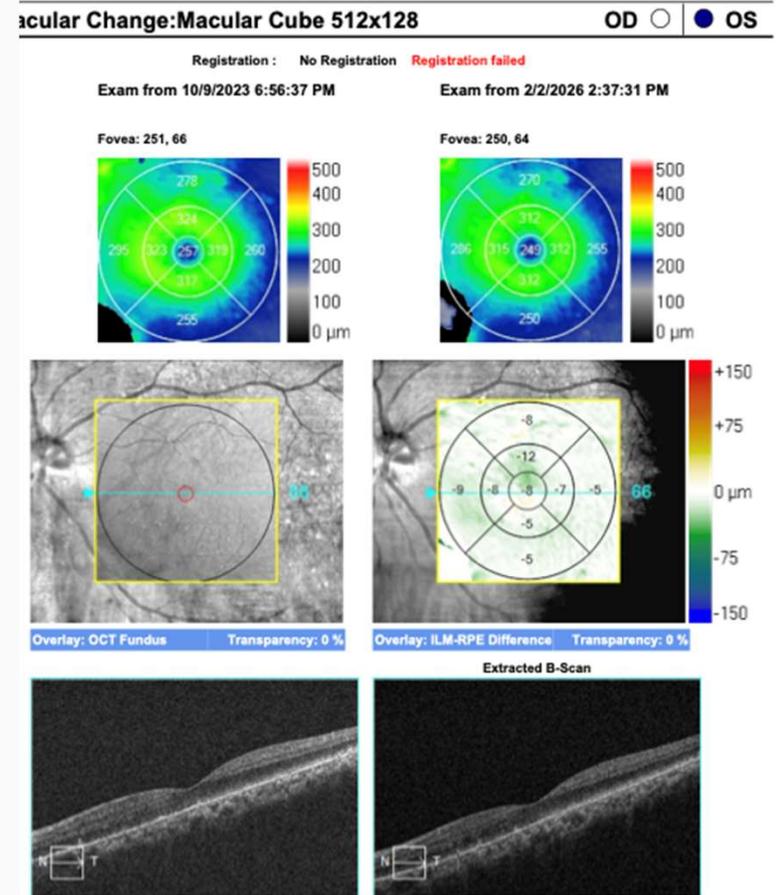
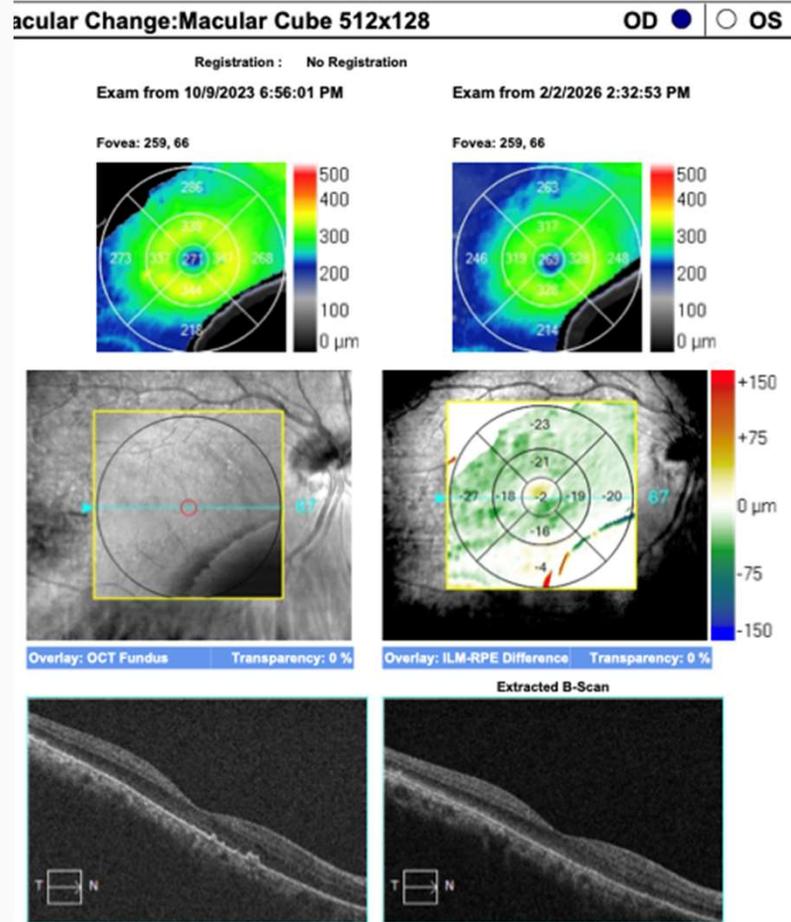
Scan Angle: 0°

Spacing: 0.25 mm

Length: 6 mm



# Macular change analysis



Angiography Analysis : Angiography 3x3 mm

OD  OS

**AngioPlex - Superficial**

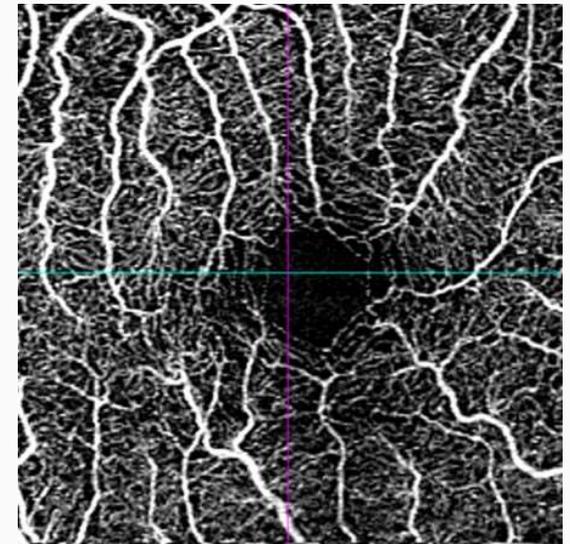
VEI Retina  
Superficial Deep  
Avascular CRCC  
RPE-RPE Fo Sub-RPE  
Choriocapillaris Choroid

Slice: 144 Top: ILM+152 $\mu$  Bottom: IPL+152 $\mu$

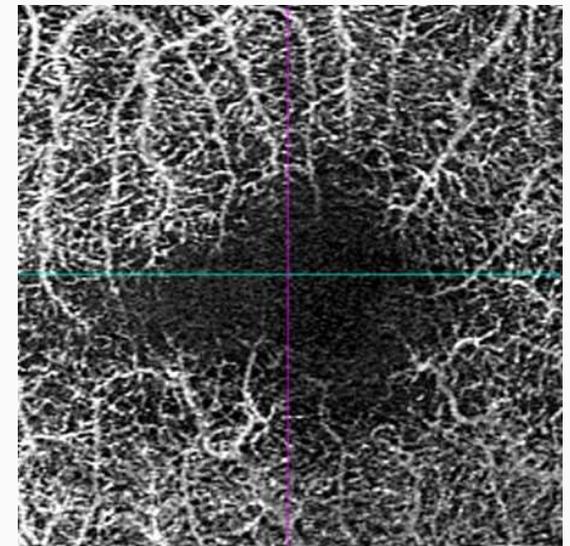
**Structure - Superficial**

Overlays  
Structure - None  
AngioPlex - None

Tracked during scan



AngioPlex Superficial: ILM+0, IPL+0

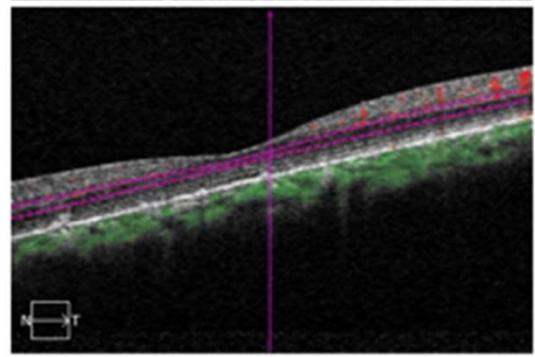
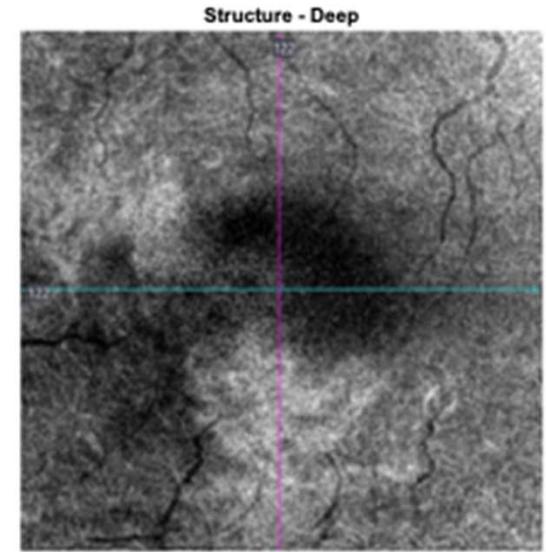
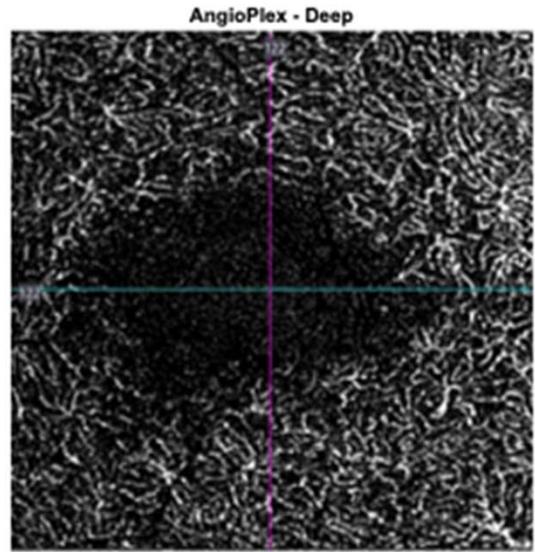
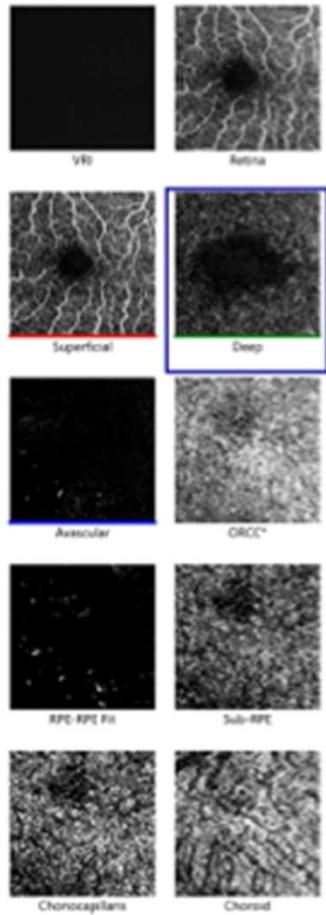


AngioPlex Deep: IPL+0, OPL+0

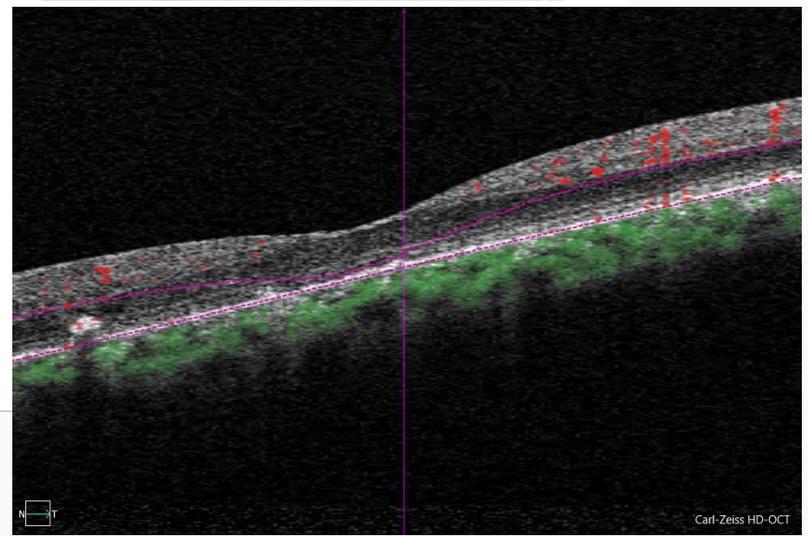
# OCTA (OD)

Angiography Analysis : Angiography 3x3 mm

OD   OS



Slice: 122 Top: IPL Bottom: OPL



Carl-Zeiss HD-OCT

# OCTA (OS)

# Assessment and Plan

- DDx: Polypoidal, ARMD, coalesced familial drusen
- **Diagnosis: Drusen (Degenerative) of macula, bilateral.**
  - Scattered peripheral and central drusen; familial in appearance
- Pt educated that although unlikely "true" AMD, important to monitor for any macular disruption
  - Smoking cessation
  - Option to begin AREDS II vitamins
  - Continue home Amsler grid weekly

# AMD Mimics



## What is it?

- Pathophysiology
- Retinal findings



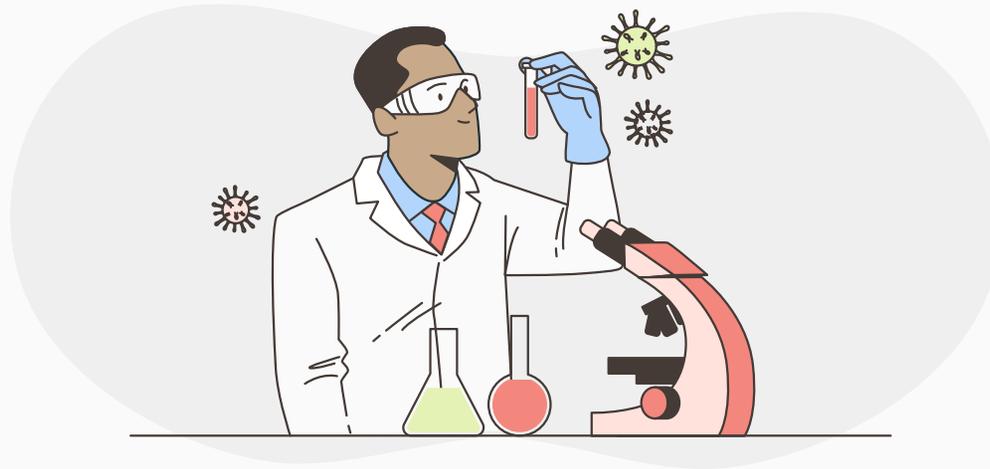
## Who gets it?

- Patient demographics



## Can we treat it?

- Educating the patient



# Retinal Dystrophies

PATIENT POPULATION

Refers to AMD

Patients are typically aged 50 years or older, with or without visual symptoms. Clinicians should consider the possibility of hereditary macular dystrophies in patients under 50 years of age who have clinical features that resemble AMD.

# Retinal Dystrophies



## Drusen

- Doyne Honeycomb Retinal Dystrophy
- Autosomal Dominant Drusen
- Malattia Leventinese



## Pattern Dystrophies

Adult-Onset  
Foveomacular  
Vitelliform Dystrophy

Fundus  
Pulverulentus

Multifocal Pattern  
Dystrophy Simulating  
Stargardt Disease

Reticular  
Dystrophy

Butterfly-shaped  
pattern dystrophy

# What is it?

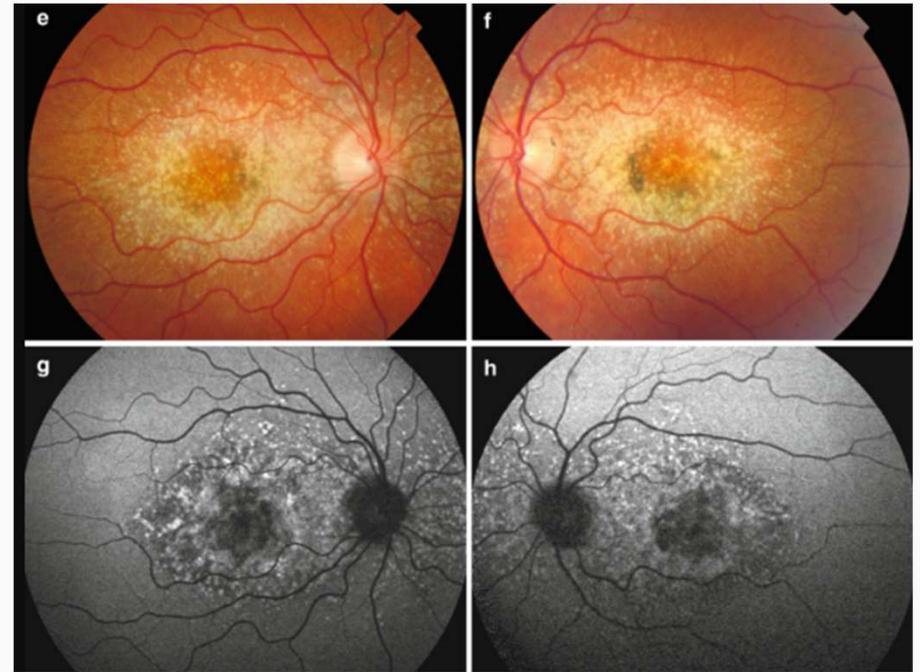
- Malattia Leventinese aka Doyme Honeycomb Retinal Dystrophy aka Autosomal Dominant Drusen
  - Pathophysiology: Autosomal dominant mutation in the EFEMP1 gene

## Fundus Findings

- Large central and peripapillary drusen with smaller radially-oriented drusen temporal to the macula
- Notably found with drusen \*nasal to the ONH
- Can have associated macular atrophy and CNVM

## OCT Findings

- Hyperreflective thickening of the retinal pigment epithelium–Bruch membrane complex
- Dome-shaped or saw-toothed hyperreflective elevations at the level of RPE/Bruch's



Hereditary Chorioretinal Disorders

# Who gets it?

- Autosomal Dominant Drusen: Symptomatic at age 30-50

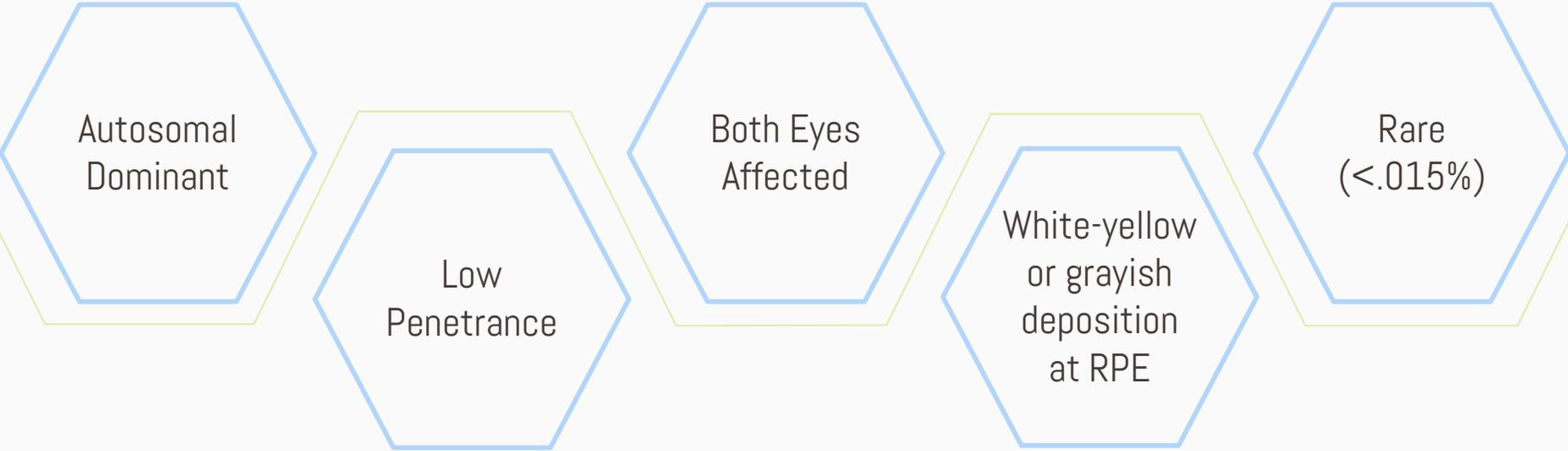
Numbers and Sex Distributions for Inherited Macular Dystrophies With Results of Two-tailed Binomial Testing

Genetic Subgroup	No. of Patients			Female % (95% CI)	P Value for Imbalance
	Total	Males	Females		
<i>BEST1</i>					
Dominant	115	71	44	38.3 (29.4–47.8)	0.015
Recessive	37	20	17	46.0 (29.5–63.1)	0.743
<i>EFEMP1</i>	35	8	27	77.1 (59.9–89.6)	0.0019*
<i>PROM1</i> (Dominant)	30	16	14	46.7 (28.3–65.7)	0.467
<i>PRPH2</i> (172 142)	50	25	25	50.0 (35.5–64.5)	1
<i>RP1L1</i> (Dominant)	14	7	7	50.0 (23.0–77.0)	1
<i>TIMP3</i>	44	17	27	61.4 (45.5–76.5)	0.174

Sex Distributions in Non-ABCA4  
Autosomal Macular Dystrophies -  
PMC

# What is it?

- **Pattern dystrophies:** Likely result from mutations in the PRPH2 or BEST1 gene
  - Many different phenotypes, each with its own retinal presentation



Autosomal  
Dominant

Low  
Penetrance

Both Eyes  
Affected

White-yellow  
or grayish  
deposition  
at RPE

Rare  
(<.015%)

# Who gets it?

- Pattern dystrophies

Most common



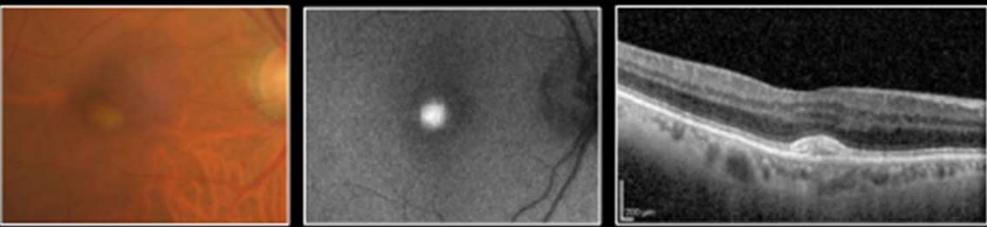
Least common

- Adult-onset foveomacular vitelliform dystrophy: onset age 30-50
- Butterfly-shaped pattern dystrophy: late 20s – early 30s
- Multifocal Pattern Dystrophy Simulating Stargardt Disease: presentation 30s-50s
- Reticular dystrophy: symptomatic in 40s
- Fundus Pulverulentus: age 30-50

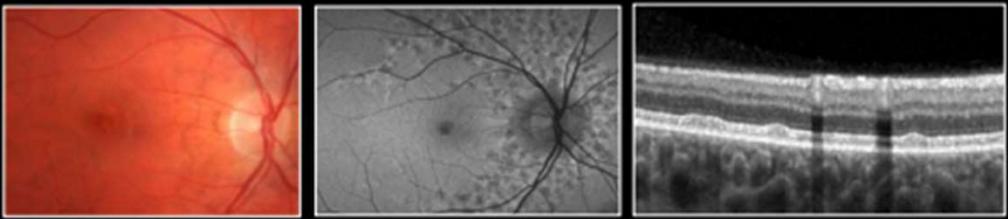
Dystrophy	Typical Age of Onset	Typical VA
Adult-Onset Vitelliform Dystrophy	4th-6th decades	20/30-
Butterfly-Shaped Pigment Dystrophy	2nd-5th decades	20/20-
Reticular Dystrophy	5th decade	20/30- 20/70
Multifocal Pattern Dystrophy	4th-6th decades	20/20- 20/40
Fundus Pulverulentus	4th-5th decades	20/20- 20/40

Genetic Subgroup	No. of Patients			Female % (95% CI)
	Total	Males	Females	
PRPH2 (172 142)	50	25	25	50.0 (35.5–64.5)

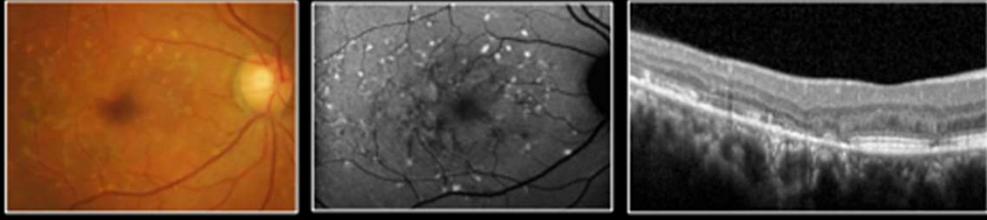
**Adult-Onset Foveomacular Vitelliform Dystrophy**



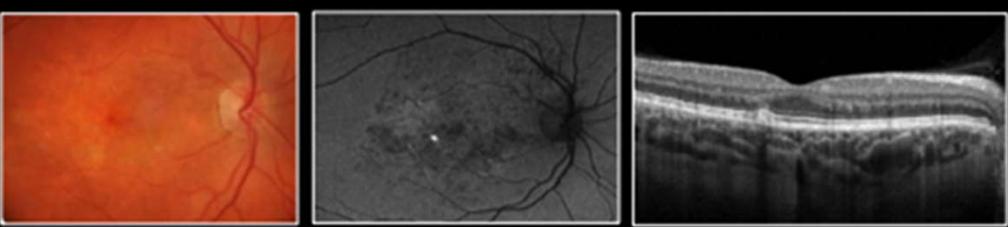
**Reticular Dystrophy of the RPE**



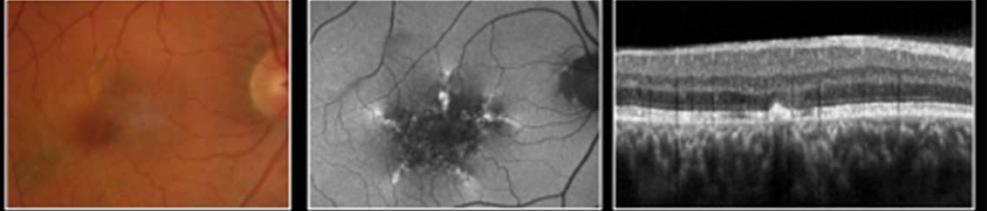
**Multifocal Pattern Dystrophy simulating Stargardt**



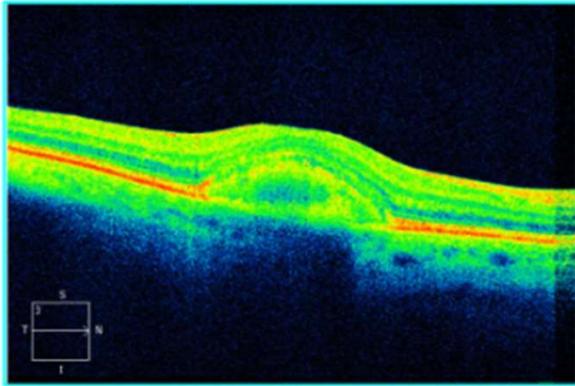
**Fundus Pulverulentus**



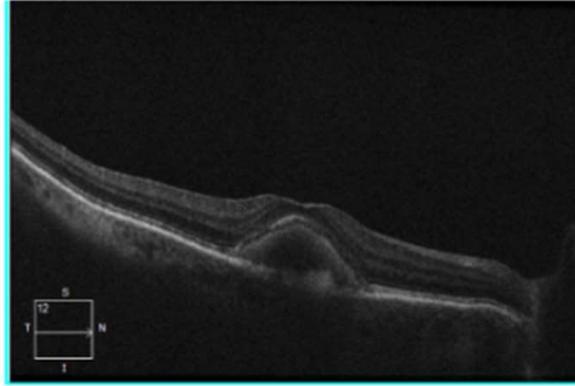
**Butterfly Pattern Dystrophy**



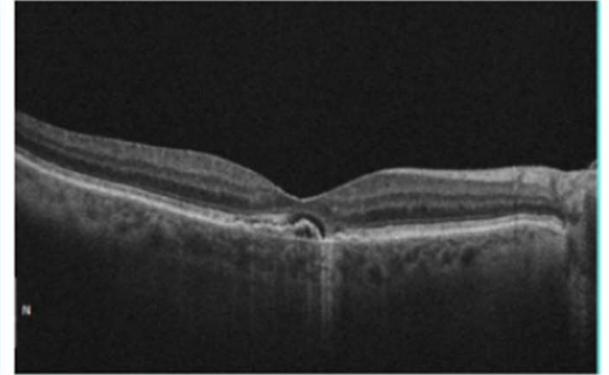
	<b>Adult-onset Foveomacular Vitelliform Dystrophy</b>	<b>Butterfly-shaped Retinal Dystrophy</b>	<b>Multifocal Pattern Dystrophy Simulating Stargardt Disease</b>	<b>Reticular Dystrophy</b>	<b>Fundus Pulverulentus</b>
<b>Fundus Findings</b>	<ul style="list-style-type: none"> <li>• “egg yolk” appearance</li> <li>• Pigment clump with hyperpigmented haloes</li> </ul>	<ul style="list-style-type: none"> <li>• “butterfly shaped” yellow deposits central macula with spokes</li> <li>• Yellow flecks in posterior pole</li> </ul>	<ul style="list-style-type: none"> <li>• scattered yellow/white macular deposits (resembling flecks)</li> </ul>	<ul style="list-style-type: none"> <li>• “network of hyperpigmentation resembling a fishing net”</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple irregular pigment clumps</li> <li>• Granular macular appearance</li> <li>• No drusen</li> </ul>
<b>OCT Findings</b>	<ul style="list-style-type: none"> <li>• dome-shaped subretinal hyperreflective material</li> </ul>	<ul style="list-style-type: none"> <li>• Subfoveal hyperreflective deposits at the level of the RPE</li> <li>• Retinal thickness remains intact</li> </ul>	<ul style="list-style-type: none"> <li>• Disruption of EZ and RPE</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple small hyperreflective areas at the RPE</li> <li>• EZ loss or disruption</li> </ul>	<ul style="list-style-type: none"> <li>• Hyperreflective lesions at the RPE (associated with pigment clumping)</li> </ul>
<b>FAF Findings</b>	<ul style="list-style-type: none"> <li>• Lesion is hyper-autofluorescent</li> </ul>	<ul style="list-style-type: none"> <li>• Pigmentation shows increased autofluorescence, surrounded by hypoautofluorescence</li> </ul>	<ul style="list-style-type: none"> <li>• Deposits are hyper-autofluorescent with surrounding hypo-autofluorescence</li> </ul>	<ul style="list-style-type: none"> <li>• ?mixture of hyper and hypo-autofluorescence in the reticular pattern</li> </ul>	<ul style="list-style-type: none"> <li>• Mottled appearance with hyper- and hypo-autofluorescence</li> </ul>



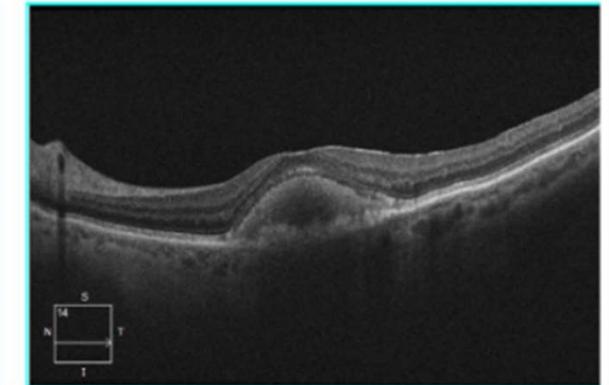
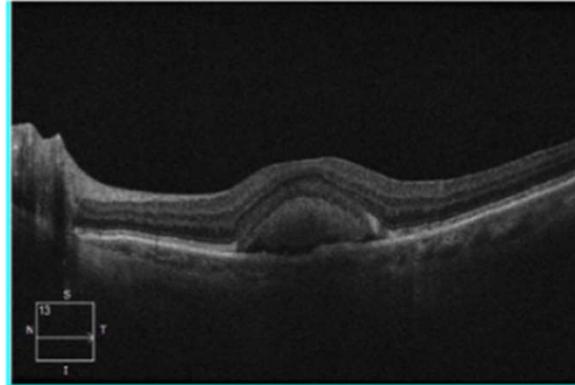
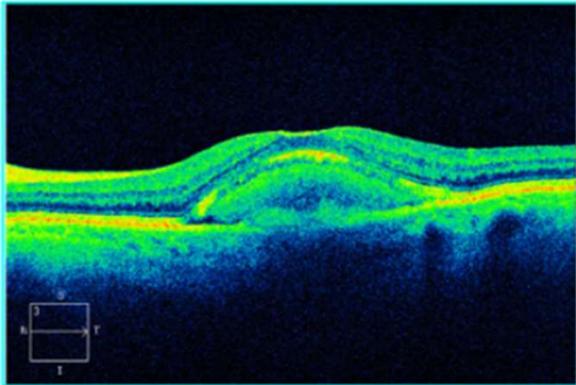
2/21/2017



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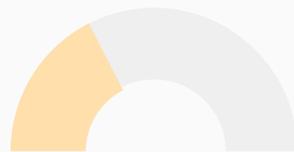
# What is the visual prognosis?

## Autosomal Dominant Drusen

Visual prognosis is *variable*



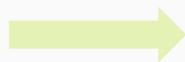
14/44  
asymptomatic



15/44  
with CNVM

Visual acuity progression (over 8 years):

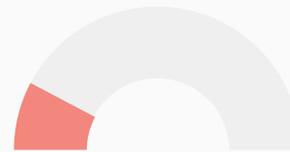
~20/30 –  
20/40



~20/60 –  
20/80

## Pattern Dystrophies

Visual prognosis generally good  
Dystrophy-dependent



18%  
CNVM



26%  
GA

# Can we treat it?



## CNVM

- Autosomal Dominant Drusen
- Any Pattern Dystrophy
- Treated with anti-VEGF

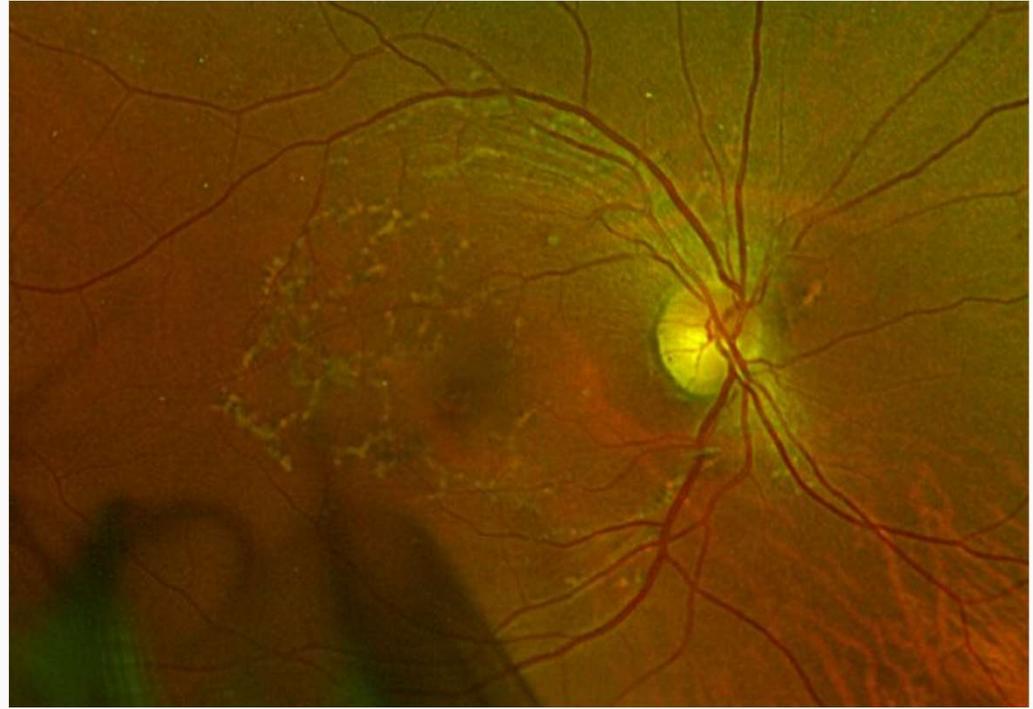
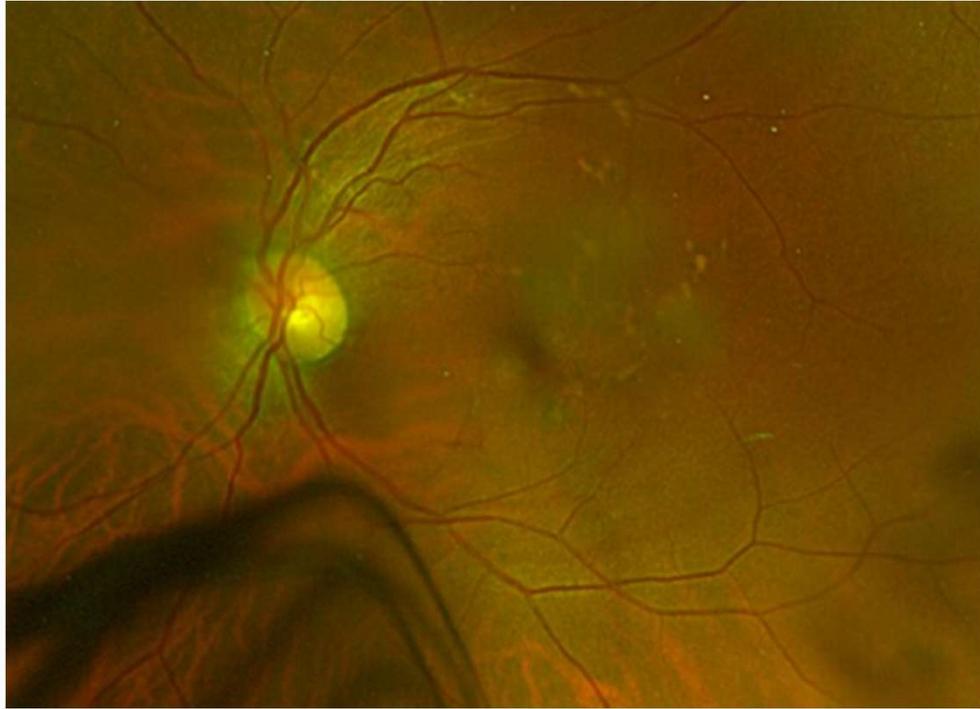


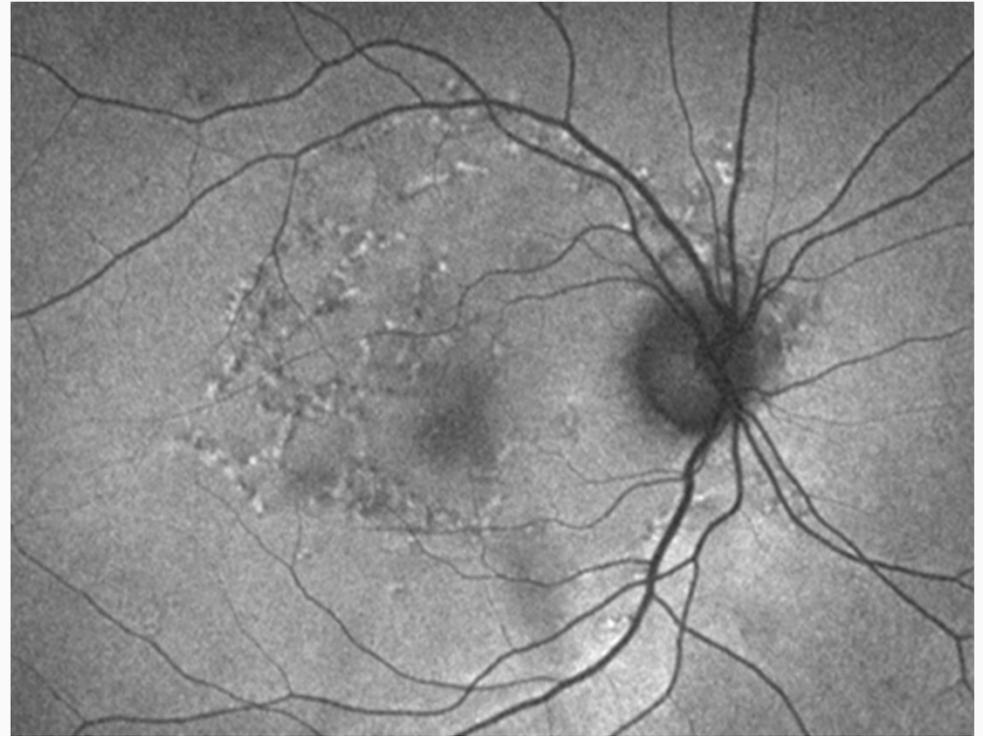
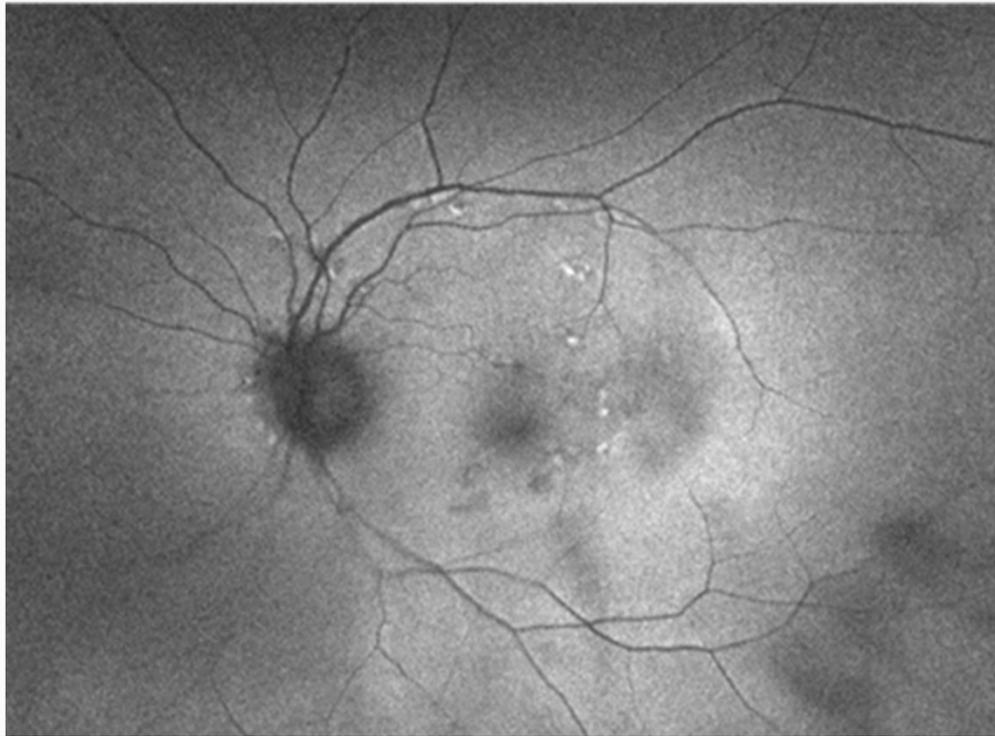
## Macular Holes

- Can occur in AOFVD
- Limited response to surgical intervention

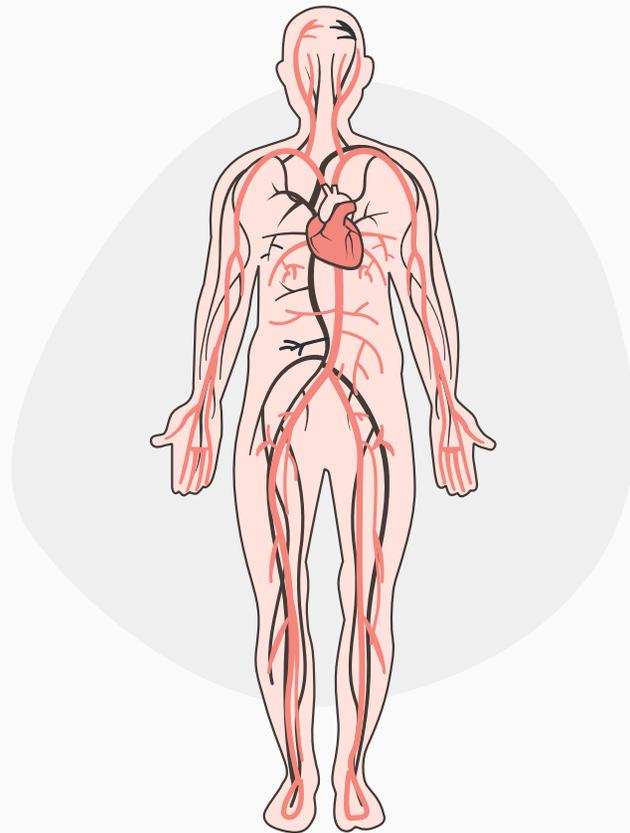
- 70-year-old Black female
- CC: "Noticing a break in pictures and images appear distorted"; OD>OS; other symptoms: floaters, wavy lines in vision
- BCVA: 20/25+ OD, 20/20-3 OS
- IOP: 9/9
- Anterior segment: mild NS and cortical cataracts OU
- Posterior segment....

## Another case





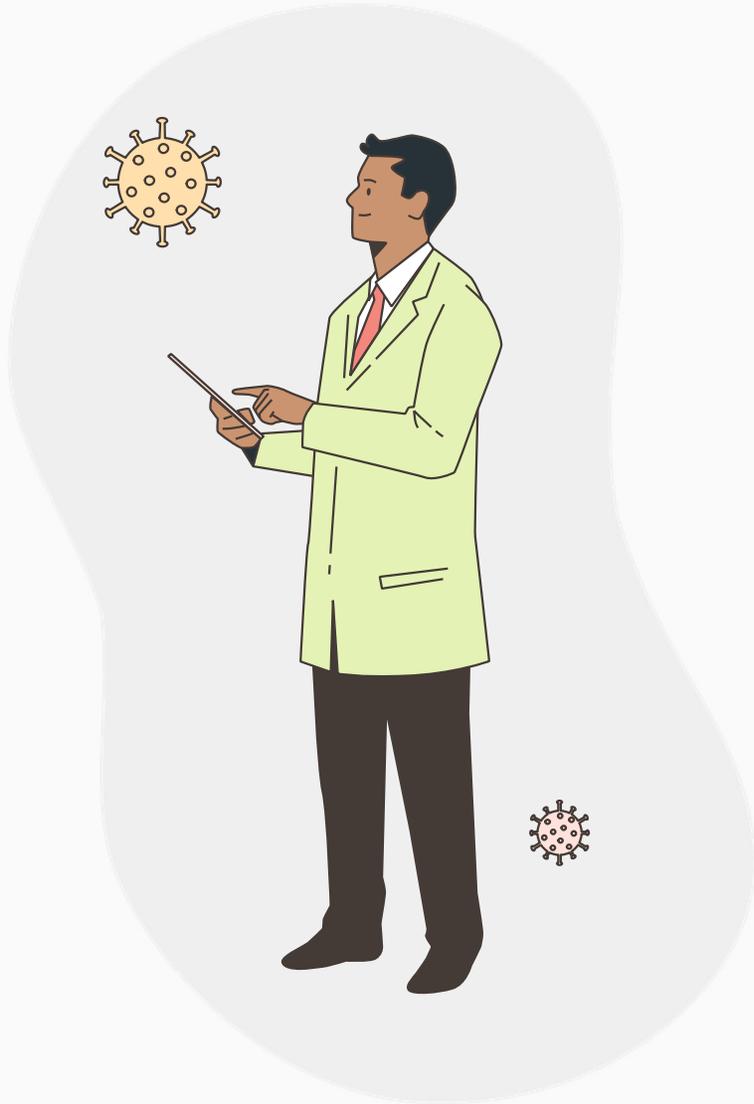
# Vascular Anomalies



## Pachychoroid Spectrum

- Pachychoroid Pigment Epitheliopathy
- Polypoidal Choroidal Vasculopathy
- Pachychoroid Neovascuopathy

## Macular Telangiectasia Type II



# Pachychoroid Spectrum

# What is it?

- Pachychoroid Spectrum: “thickened choroid”
  - Thickened Haller layer, thinned Sattler layer and choriocapillaris
  - Pachychoroid pigment epitheliopathy
    - RPE changes + pachychoroid, *no soft drusen* or subretinal fluid
    - Usually asymptomatic
  - Pachychoroid neovascularopathy
    - Type 1 neovascularization + pachychoroid; *minimal to no drusen*
  - Polypoidal choroidal vasculopathy
    - Type 1 neovascularization + polypoidal lesions + pachychoroid



# Who gets it?



## Pachychoroid pigment epitheliopathy

- Age: average 55yo



## Pachychoroid neovascuopathy

- Age: mid 50s–mid 60s
- Males > Females

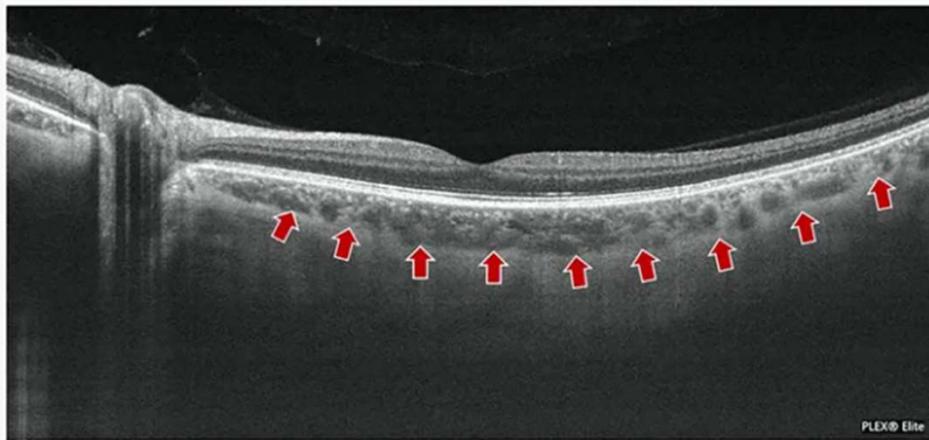


## Polypoidal choroidal vasculopathy

- Age: average 69yo
- Males > females
- Higher prevalence in patients of Asian and African ethnicity

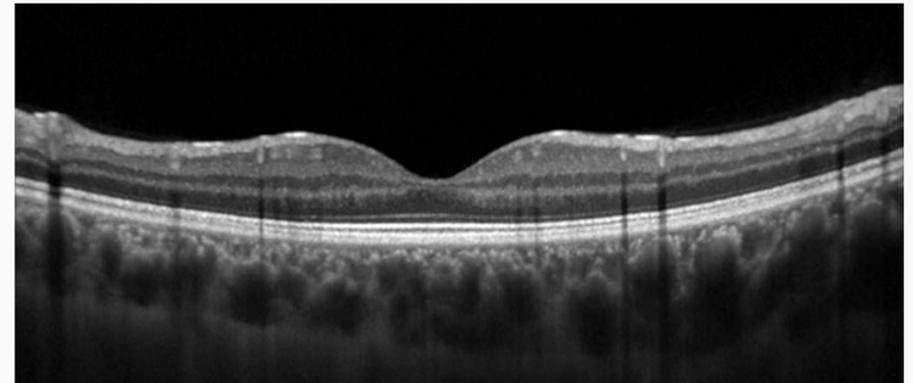


# How do we diagnose it?

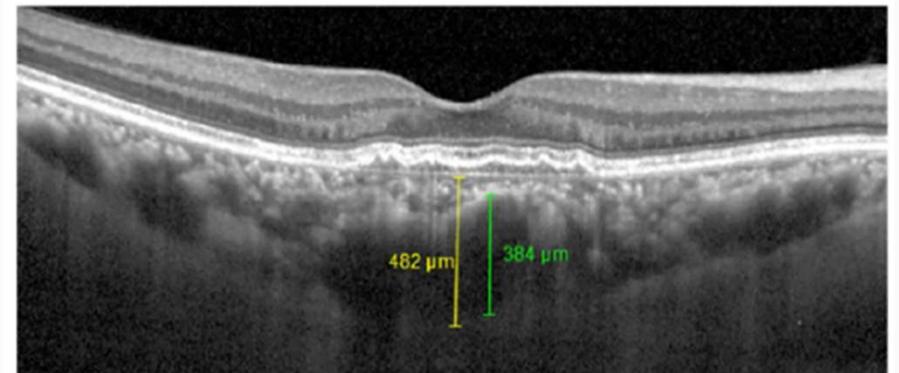


Frontiers | Evaluation of Choroidal Thickness Using Optical Coherent Tomography: A Review

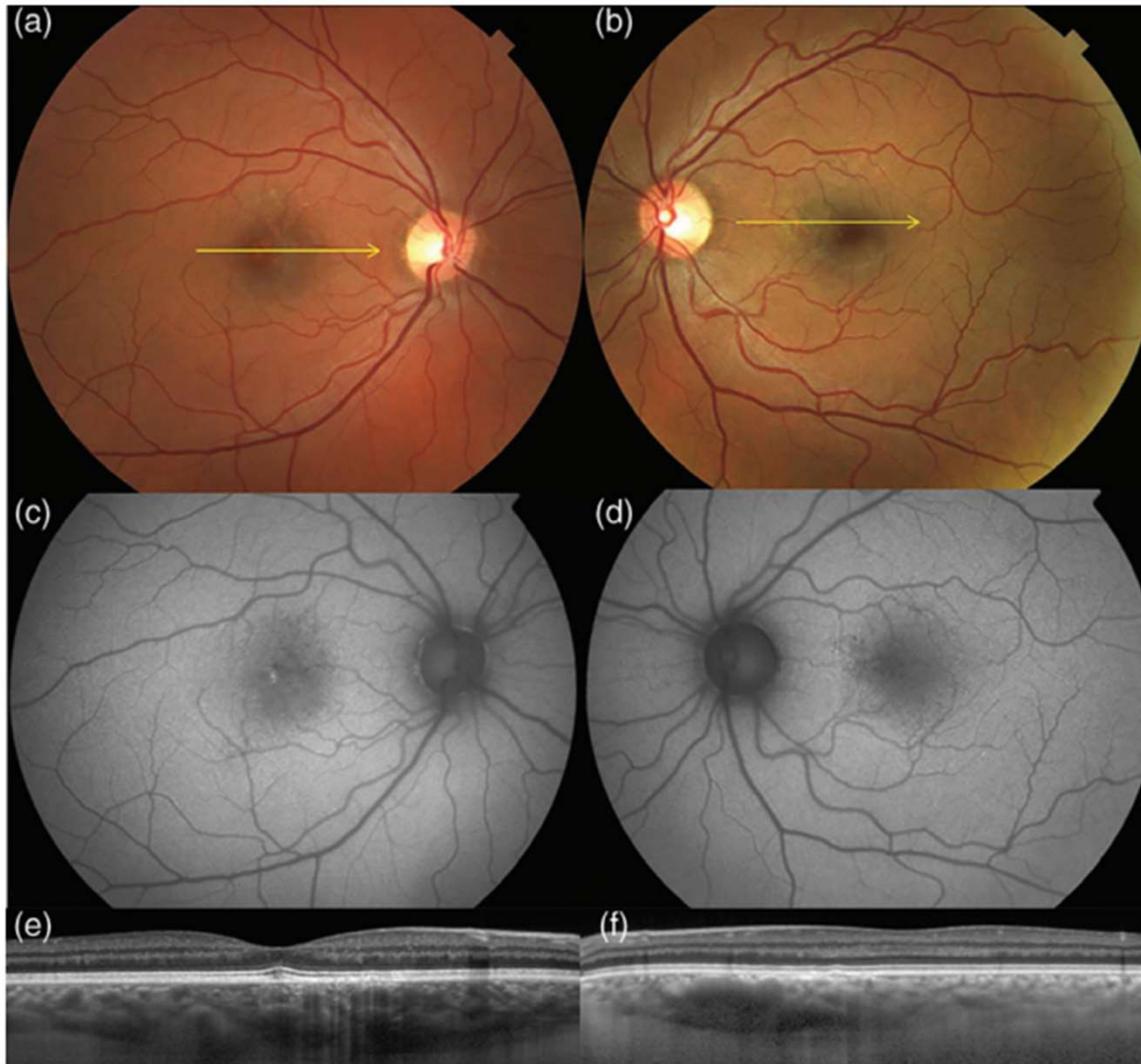
Enhanced Depth Imaging (EDI)



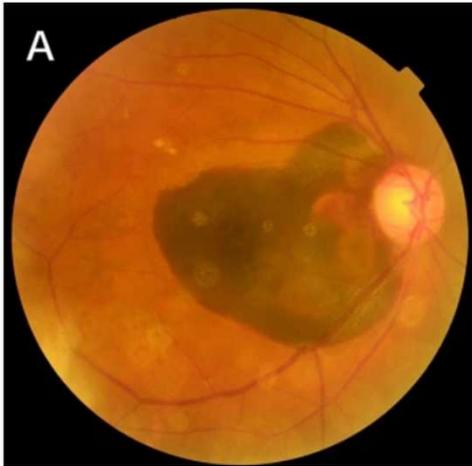
Pachychoroid Spectrum Diseases | OCT Club



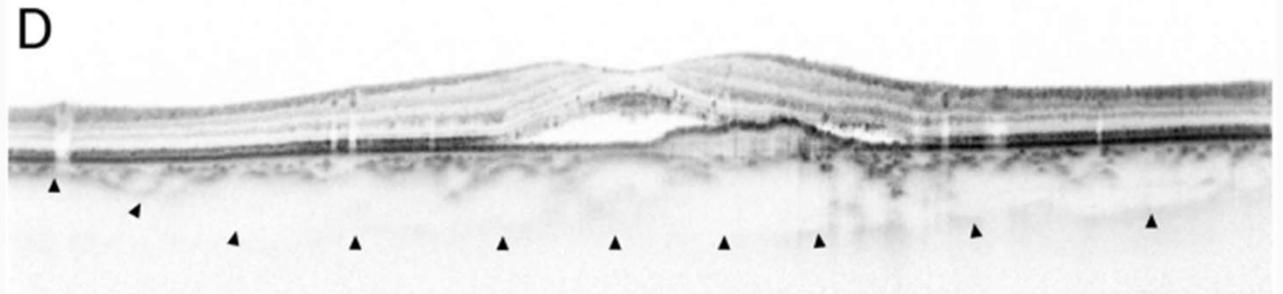
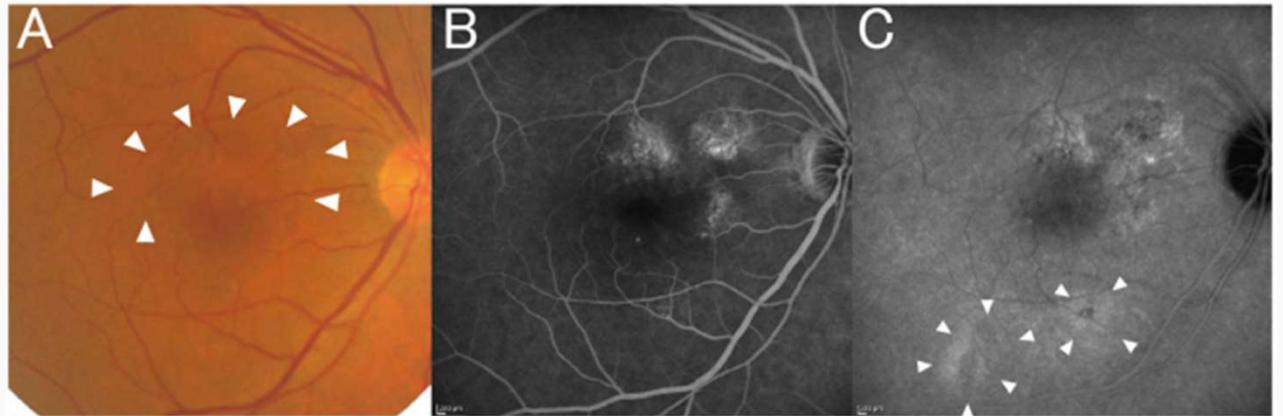
(PDF) Short-term effect of anti-VEGF for chronic central serous chorioretinopathy according to the presence of choroidal neovascularization using optical coherence tomography angiography



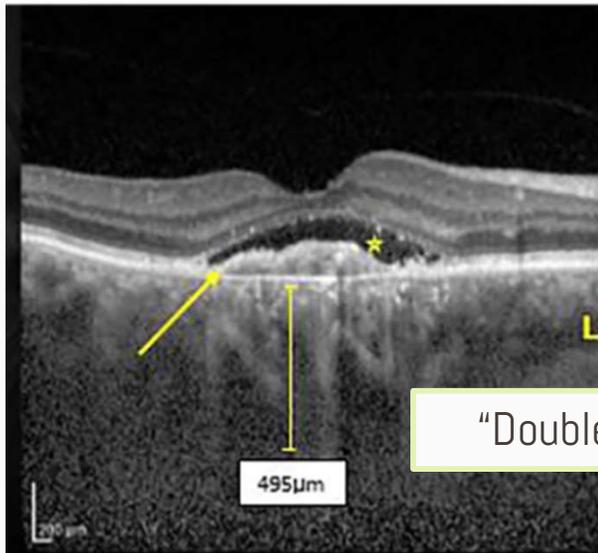
**Figure 5.** Pachychoroid pigment epitheliopathy in a 37-year-old white male. Colour photographs of the right (a) and left (b) eyes show absent drusen and reduced fundus tessellation. Fundus autofluorescence of the right (c) and left (d) eyes show non-specific pigment epithelial changes, including a small focus of hyperautofluorescence at the right fovea (c). Spectral domain optical coherence tomography of the right (e) and left (f) eyes shows thick choroids in both eyes. In the left eye (f), a region of extrafoveal maximal choroidal thickness is attributable to Haller's layer vessel dilatation, anterior to which the inner choroid is attenuated.



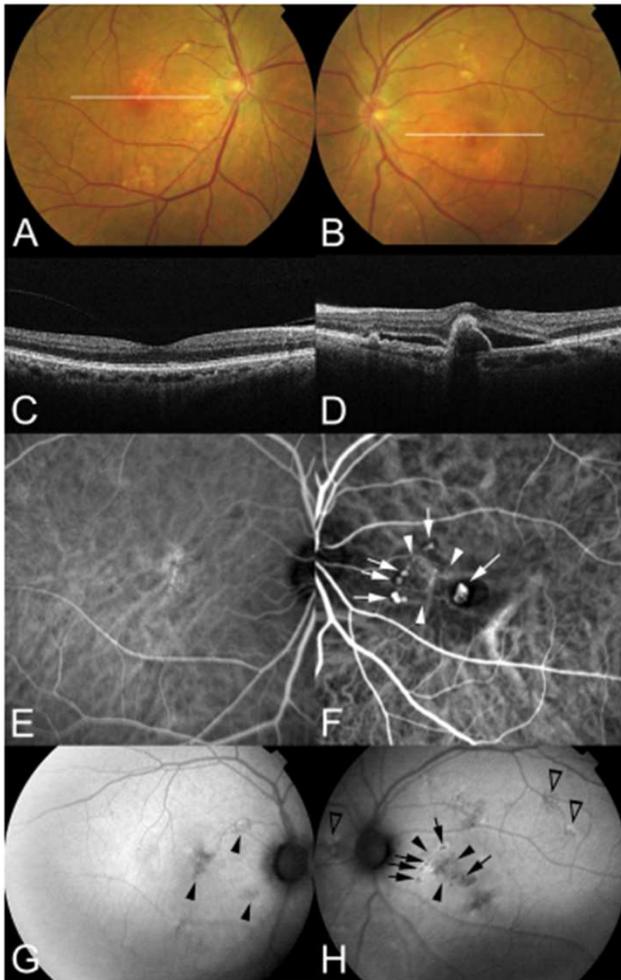
(PDF) Pachychoroid neovascularopathy can mimic wet type age-related macular degeneration



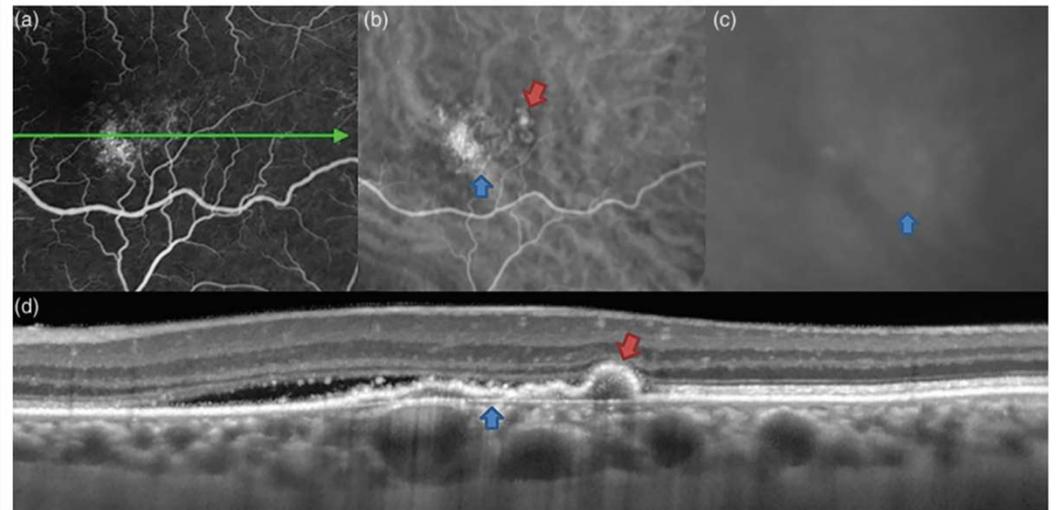
Pachychoroid neovascularopathy and age-related macular degeneration - PMC



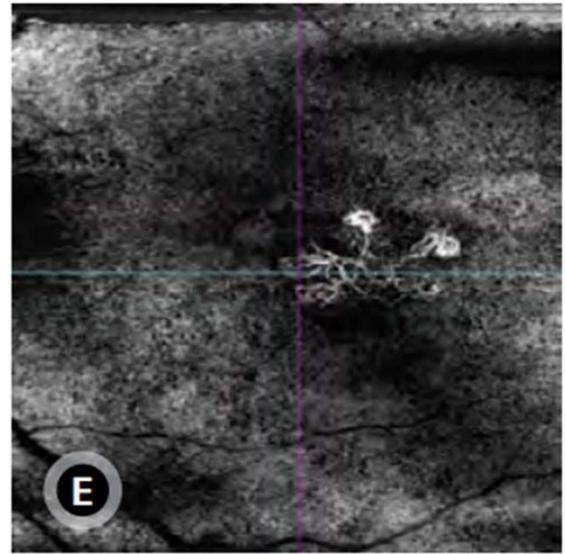
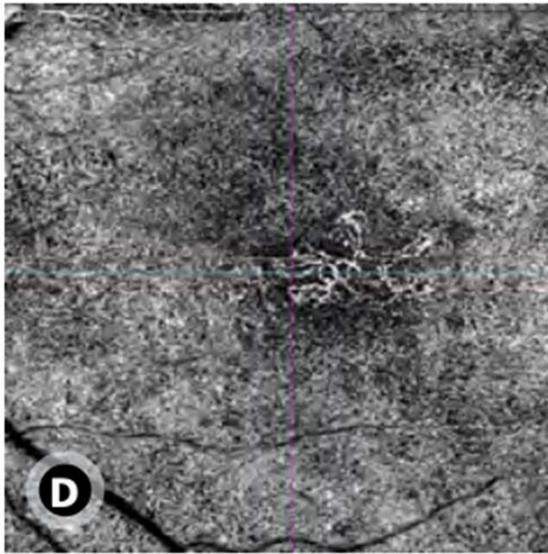
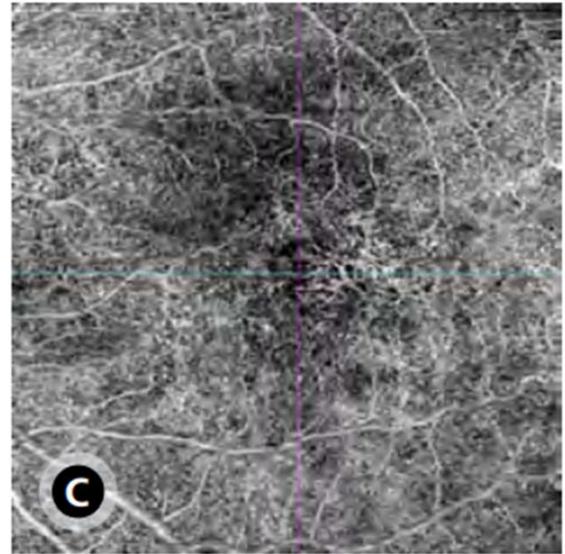
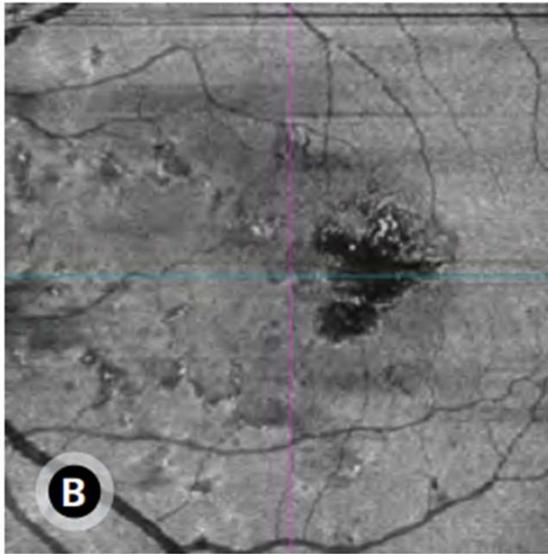
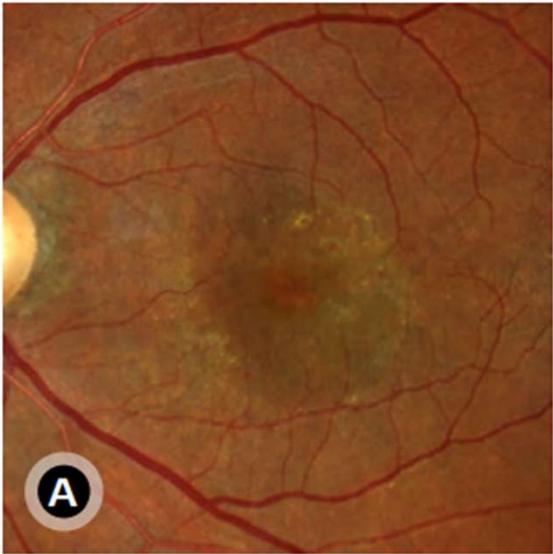
"Double-Layer Sign"



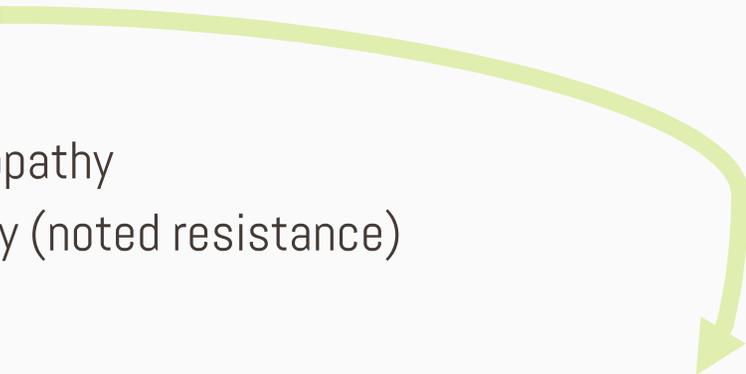
Fundus Autofluorescence in Polypoidal Choroidal Vasculopathy - Ophthalmology



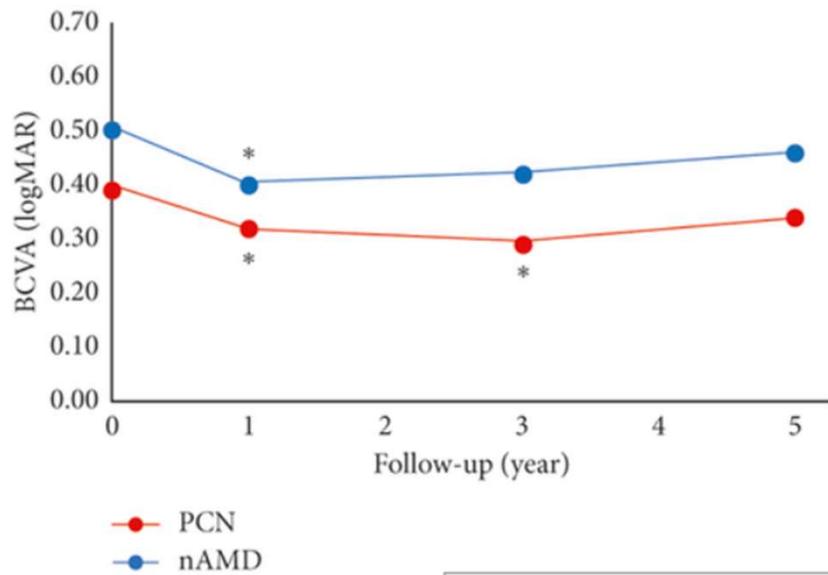
**Figure 2.** Aneurysmal type 1 neovascularization (polypoidal choroidal vasculopathy) in a 60-year-old white female. Mid-phase fluorescein angiography (a) shows non-specific hyperfluorescence inferotemporal to the fovea, consistent with 'occult' choroidal neovascularization. Mid- and late-phase indocyanine green angiography findings (b, c) show a hyperfluorescent plaque (blue arrow) at this focus. In the transit phase, an aneurysmal (polypoidal) lesion is also noted (red arrow). Spectral domain optical coherence tomography (d) shows subretinal fluid adjacent to pigment epithelial detachment (PED). The PED has a shallow irregular component (blue arrow), corresponding to type 1 neovascularization, and a peaked component (red arrow) at the site of the aneurysmal (polypoidal) lesion. The choroid is relatively thick due to dilated Haller's layer vessels, anterior to which the inner choroid is attenuated.



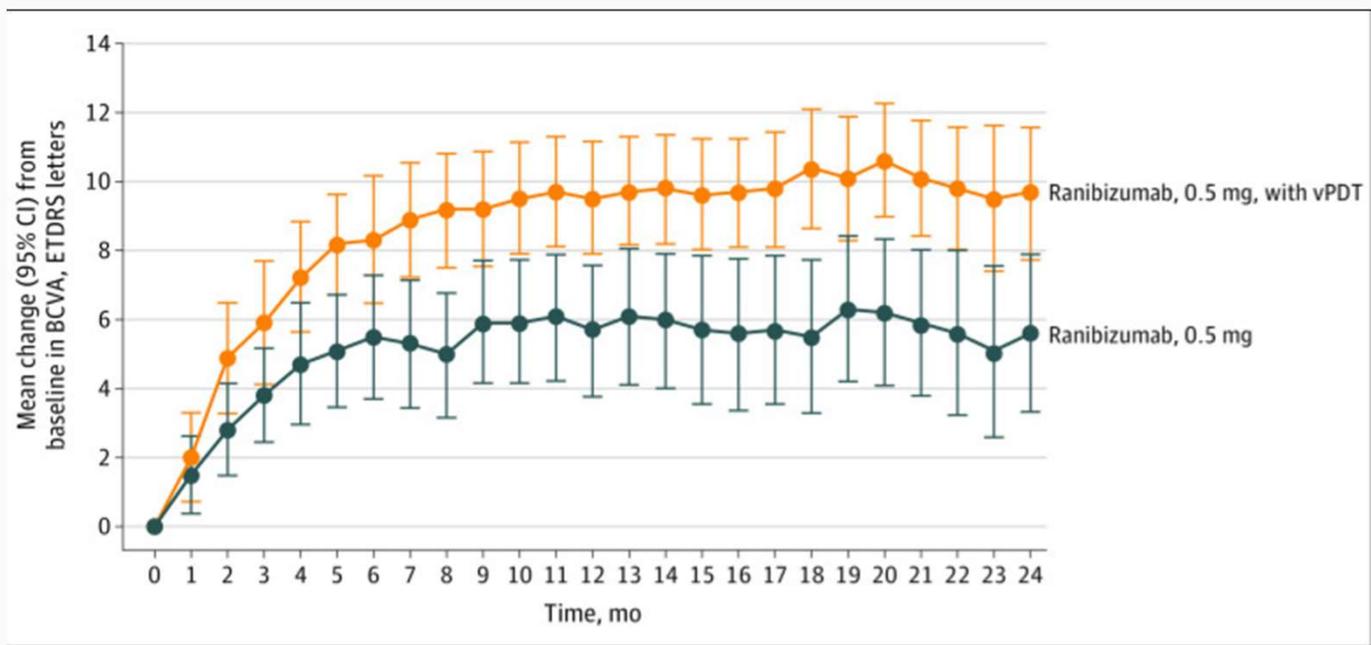
# Can we treat it?

- Pachychoroid pigment epitheliopathy
    - Prognosis is good!
    - 95% of patients kept 20/30 or better acuity at 7 years after diagnosis
  - Pachychoroid neovascularopathy
    - Anti-VEGF (effective)
    - PDT (+/- anti-VEGF)
  - Polypoidal choroidal vasculopathy
    - Anti-VEGF monotherapy (noted resistance)
    - Anti-VEGF + PDT
- 

If we treat this the same as neovascular AMD, why does the diagnosis matter?



Category	PCN group	nAMD group	<i>p</i> value
Number of intravitreal injection for 1 year <sup>†</sup>	4.1 ± 0.9	4.7 ± 1.1	0.545
Number of intravitreal injection for 3 years <sup>†</sup>	6.0 ± 1.1	7.1 ± 1.3	0.081
Number of intravitreal injection for 5 years <sup>†</sup>	7.2 ± 1.2	9.5 ± 1.3	0.028*
Treatment of PDT <sup>‡</sup> (eyes, (%))	15 (50%)	20 (33.3%)	0.114



# Macular Telangiectasia Type II

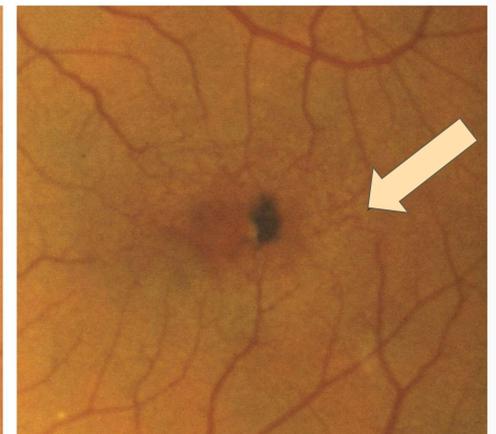
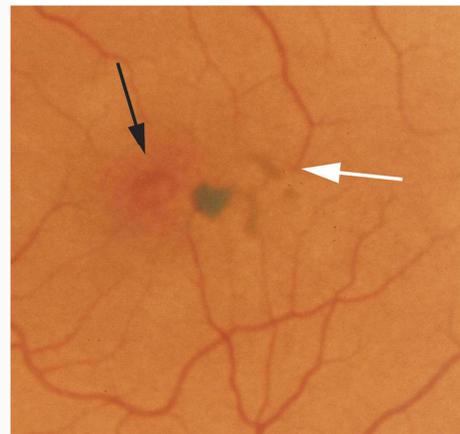
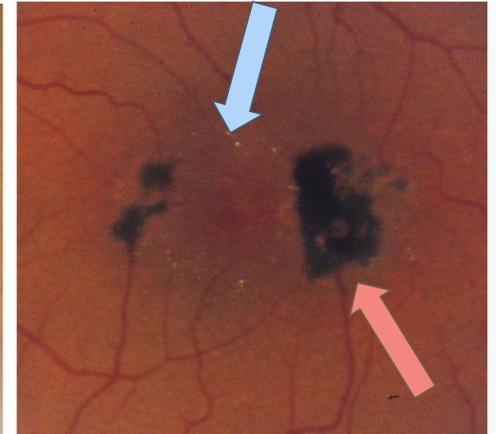
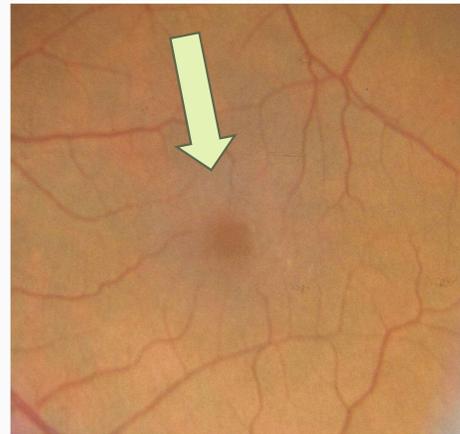


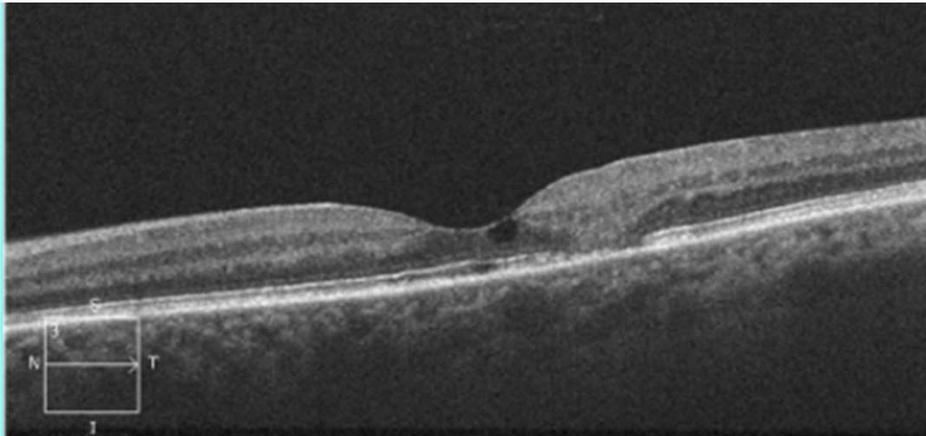
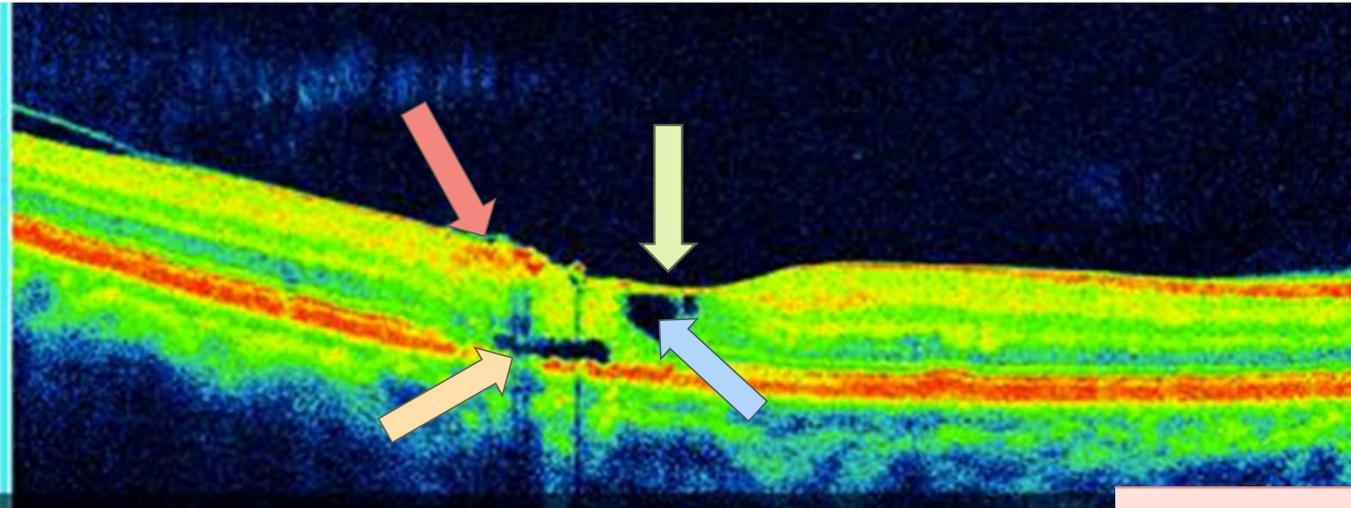
# What is it?

- Macular Telangiectasia Type II (aka MacTel)
  - Pathophysiology:
    - vascular vs neurodegenerative

## Fundus Findings

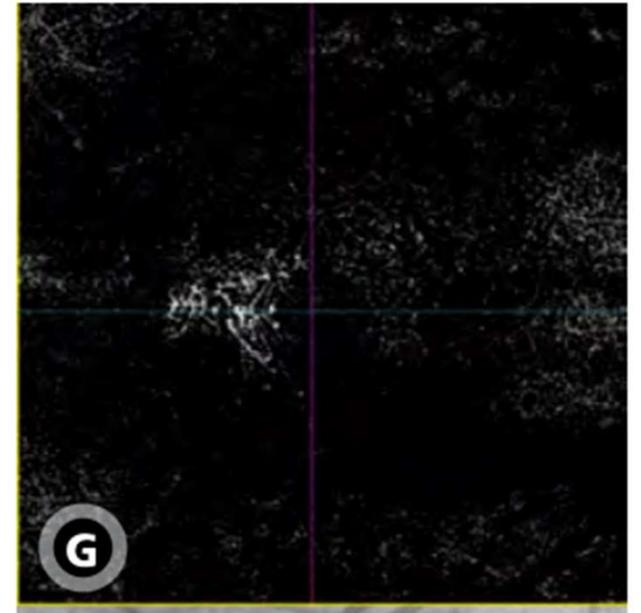
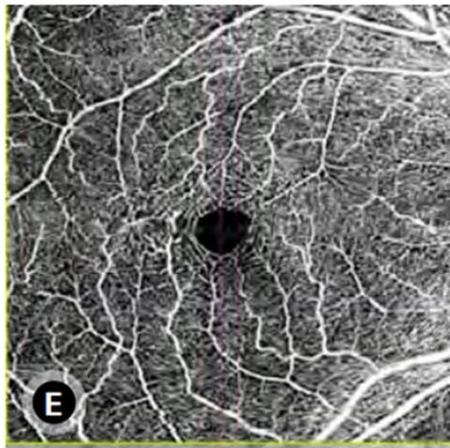
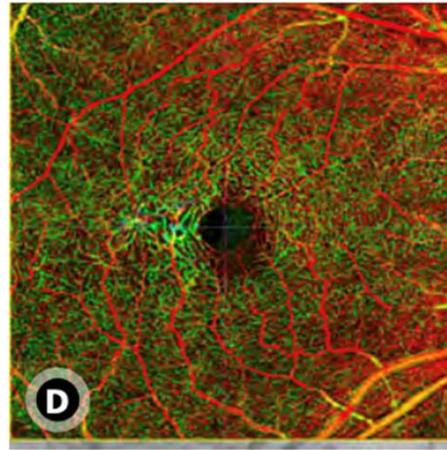
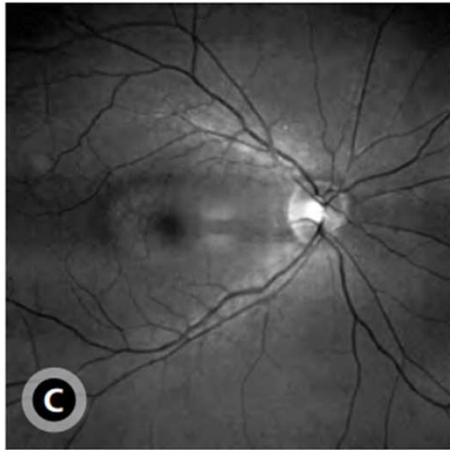
- Right-angle venules
- Tiny yellow crystalline deposits ← blue arrow
- Loss of retinal transparency ← green arrow
- Telangiectatic vessels ← yellow arrow
- Hyperpigmentation ← red arrow





### OCT Findings

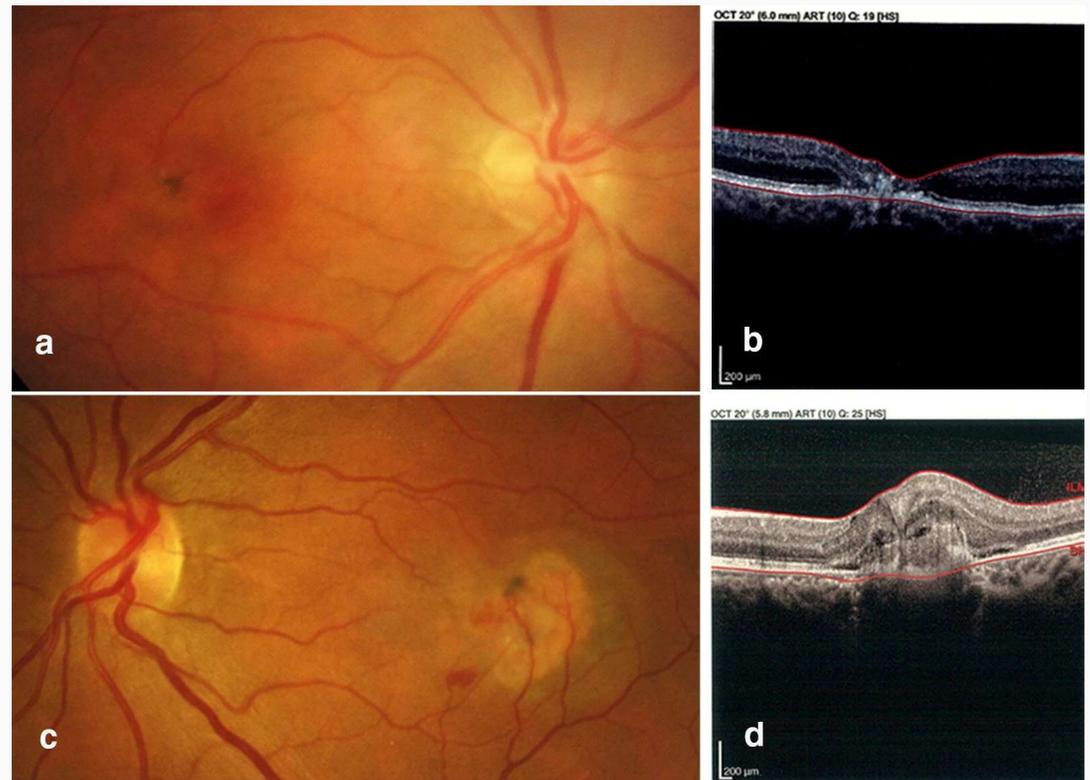
- Widening of the foveal pit
- ILM drape ←
- Hyporeflective cavities ←
- ELM/EZ disruption ←
- Hyperreflective spots on the ILM ←
- Subretinal neovascular membrane



OCT-A

# Who gets it?

- Macular telangiectasia type 2
  - Onset age 40-50
  - Female predilection
  - Often misdiagnosed



# Can we treat it?

- Macular telangiectasia type 2
  - Encelto: first treatment for MacTel
    - Approved in March 2025
    - Intravitreal implant
    - Slows ellipsoid zone loss
- Prognosis
  - Approximately 10% of patients develop CNV
  - Rare finding: Full thickness macular holes

Table 4. Best Corrected Visual Acuity of Patients with non-proliferative MacTel.

Non proliferative MacTel	BCVA mean log MAR (median,IQR)
BCVA at baseline	0.25 ± 0.25 (median: 0.2, IQR : 0-0.4)
BCVA at 1 year	0.25 ± 0.19 (median: 0.2, IQR : 0.1-0.3)
BCVA at 2 year	0.34 ± 0.37 (median: 0.2, IQR : 0.1-0.4)
BCVA at 3 year	0.41 ± 0.26 (median: 0.3, IQR : 0.2-0.62)
BCVA at 4 year	0.46 ± 0.42 (median: 0.35, IQR : 0.2-0.6)

20/30



20/50

# Summary

## Recommendations

- Consider your patient's demographics
- Evaluate ancillary testing thoroughly
- Understand the psychological implications of the diagnosis

## Goals of Proper Diagnosis

- Minimize unnecessary treatments (vitamins, injections)
- Realign patients' expectations for visual prognosis
- Reduce unnecessary patient stress

**Sight Gags** by Scott Lee, O.D.

**Retina Scan complete. Identification confirmed. Also, detecting macular drusen. Go see your eye doctor.**

Books on Amazon



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LEE

# Questions?