

OCTs in AMD

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Dr Aude Ambresin

The editor for this module is:

Dr Aude Ambresin

RetinElysée Center & Jules-Gonin University Eye Hospital,

Lausanne,

Switzerland.



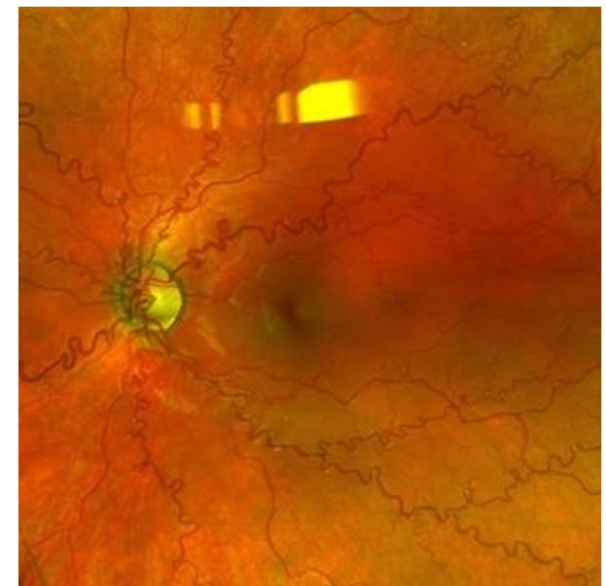
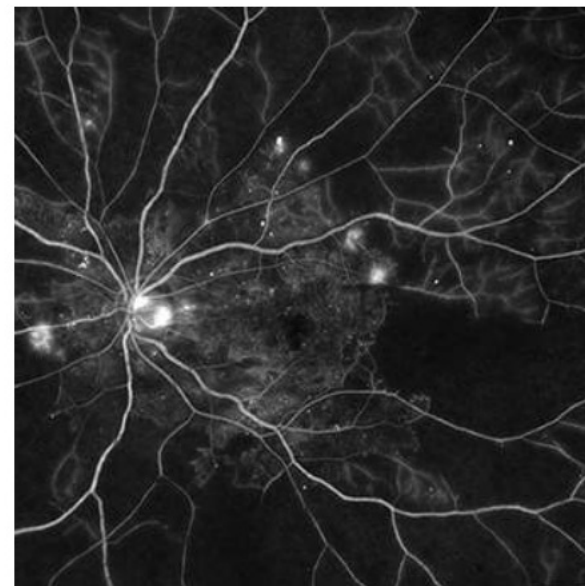
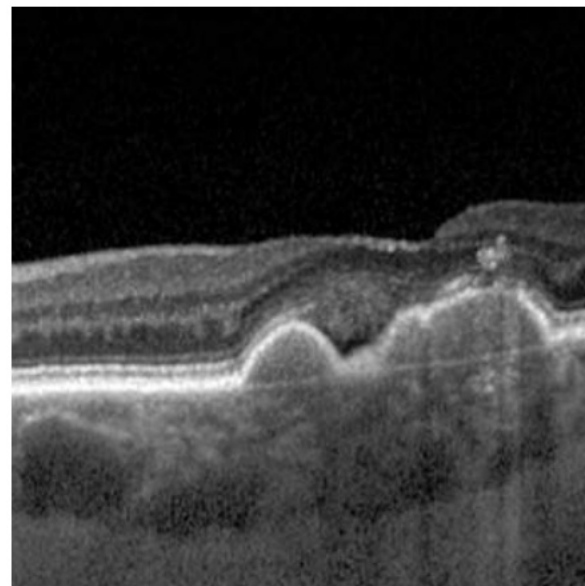
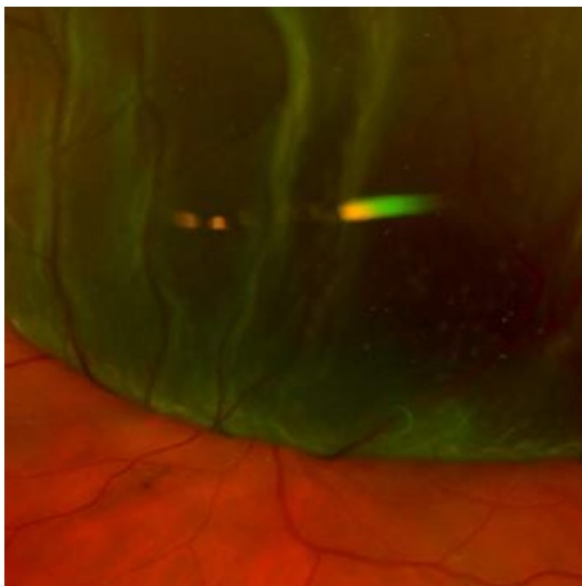
Objectives

Having completed this module, you will be able to:

- Identify the SD-OCT features of various early AMD signs, and describe the 4 stages of reticular pseudodrusen.
- List 3 typical SD-OCT features seen in cases with atrophic AMD, and identify characteristics of degenerative cysts.
- Describe the SD-OCT features of various new AMD signs including the plateau and the onion sign.
- Describe the typical features of neovascular AMD types 1, 2, 3 & 4 CNV on SD-OCT and OCT-A.
- Identify biomarkers for active and quiescent CNV as seen on OCT-A.

Introduction

This module examines some **key signs** that may be seen on OCT imaging (SD-OCT and OCT-A) in early, atrophic and neovascular **age-related macular degeneration (AMD)**.



Introduction to early AMD

Early AMD

This section of the module examines some important SD-OCT signs to recognise in early AMD, including:

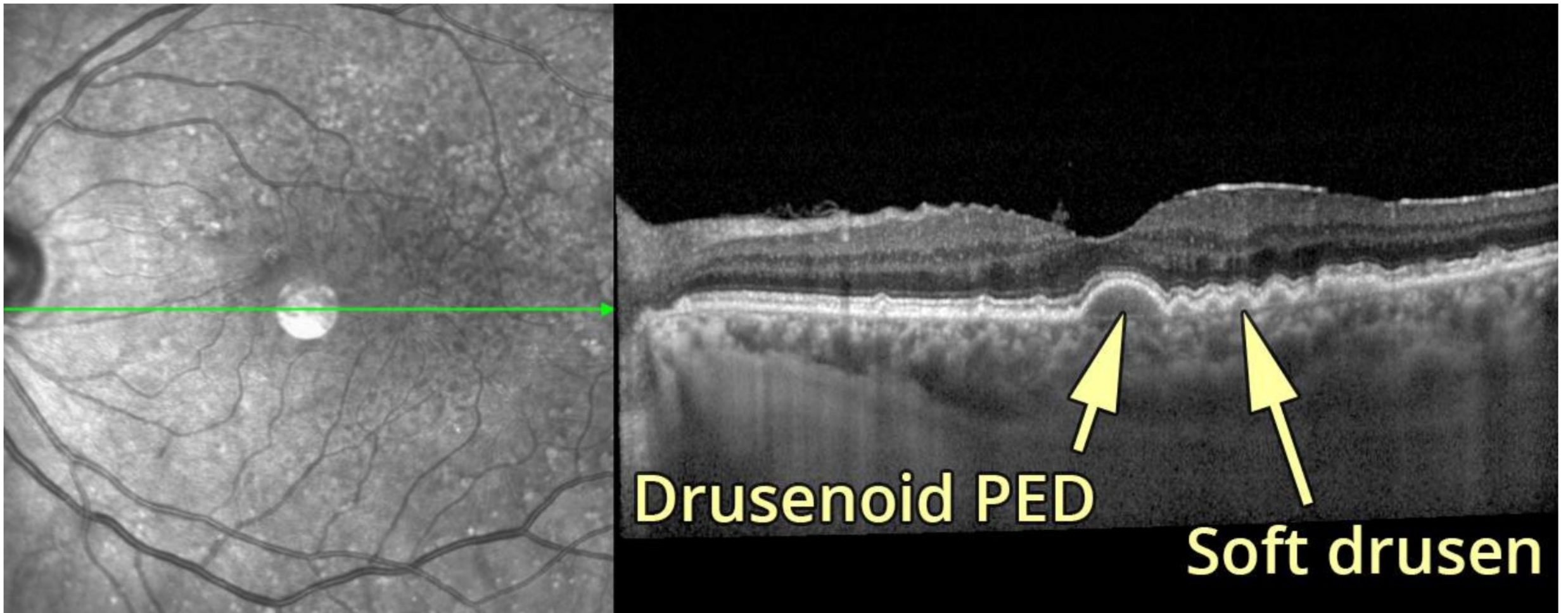
- Soft drusen
- Drusenoid PED with vitelliform AMD
- Reticular pseudodrusen
- Cuticular drusen (under the RPE)

Soft Drusen

Confluent soft drusen are often seen on SD-OCT imaging in early age-related macular degeneration (AMD).

Features of soft drusen on SD-OCT:

- Look like mound-shaped hyperreflective RPE elevations
- Located between Bruch's membrane and RPE



SD-OCT clearly shows soft drusen as mound-shaped hyperreflective RPE elevations, located between Bruch's membrane and RPE



Colour Fundus Photograph

What percentage of eyes will experience vision loss at 5 years when high-risk soft confluent drusen are present?

12%

46%

87%

Research Findings

A study by Yu et al. (2018) had the following findings in cases where **high-risk soft confluent drusen were present**:

- The progression risk to late AMD was increased with hazard ratio [HR] of **2.36** (95% confidence interval [CI] = 1.98–22.82, $p < 0.001$)
- **46%** of eyes experienced vision loss at five years



Yu JJ, Agrón E, Clemons TE, et al. Natural History of Drusenoid Pigment Epithelial Detachment Associated with Age-Related Macular Degeneration: Age-Related Eye Disease Study 2 Report No. 17. *Ophthalmology*. 2019; 126(2): 261-271.

**Soft drusen are a prognostic
factor typically seen on SD-
OCT imaging**

Drusenoid PED with vitelliform AMD

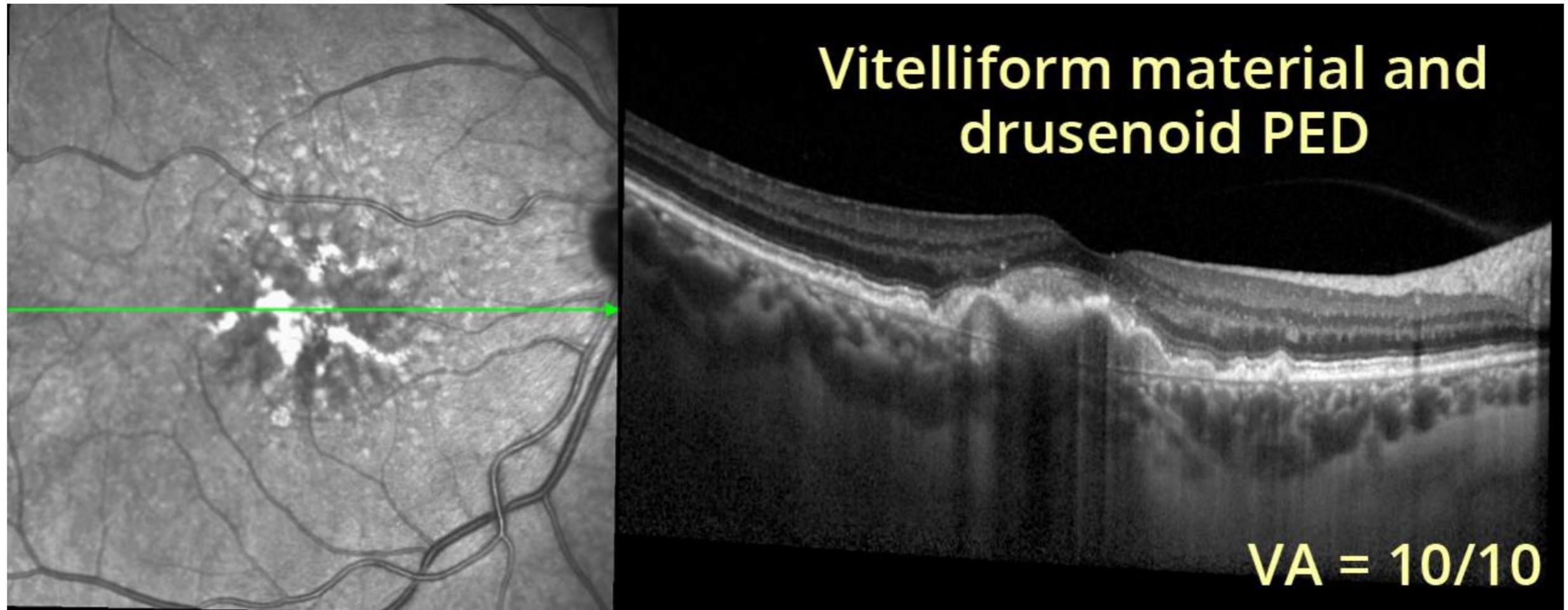
Confluent soft drusen can **evolve** to drusenoid PED (pigment epithelium detachment) and vitelliform AMD, as seen in the fundus autofluorescence (FAF) image below.



FAF: Drusenoid PED and vitelliform AMD

Features of drusenoid PED on SD-OCT:

- Mound-shaped hyperreflective large-sized RPE elevations with subretinal hyperreflective material
- Located between Bruch's membrane and RPE



SD-OCT showing mound-shaped hyperreflective large-sized RPE elevations with subretinal hyperreflective material, located between Bruch's membrane and RPE

The SD-OCT image above shows where the soft drusen have become confluent. The vitelliform hyperreflective material under the retina shows the complete evolution (over time) of the soft drusen into a drusenoid PED. It is important to recognise this evolution.

Vision is still very good in this case.

AMD: From RPE detachment to atrophy

Identify the correct statement.

- Drusenoid PED show a life cycle of **slow growth** and **rapid collapse** preceded by RPE layer disruption and anterior migration
- Drusenoid PED show a life cycle of **rapid growth** and **slow collapse** preceded by RPE layer disruption and anterior migration

Identify the correct statement.

- Collapse of large drusen and drusenoid PED precede **RPE degeneration and death**
- Collapse of large drusen and drusenoid PED precede **RPE growth**

A study by Curcio et al. (2017) identified pathways of RPE fate and showed how the RPE fades as it evolves to atrophy.

3 main pathways of RPE fate:

Pathway 1

Click to flip 

Pathway 2



Pathway 3



3 main pathways of RPE fate:

Basolateral shedding
of intracellular
organelles (apoptosis
in situ)



Activation with
anterior migration



**Acquired vitelliform
lesions**



Features of acquired vitelliform lesions on SD-OCT:

- Hyperreflective migrated cells packed with RPE organelles
- RPE layer thickening (due to thick basal laminar deposit)

Curcio et al. (2017) identified nine phenotypes (although likely more) on SD-OCT imaging. The images show the evolution towards atrophy over time (although life-cycle of RPE serous detachment can be quite long).

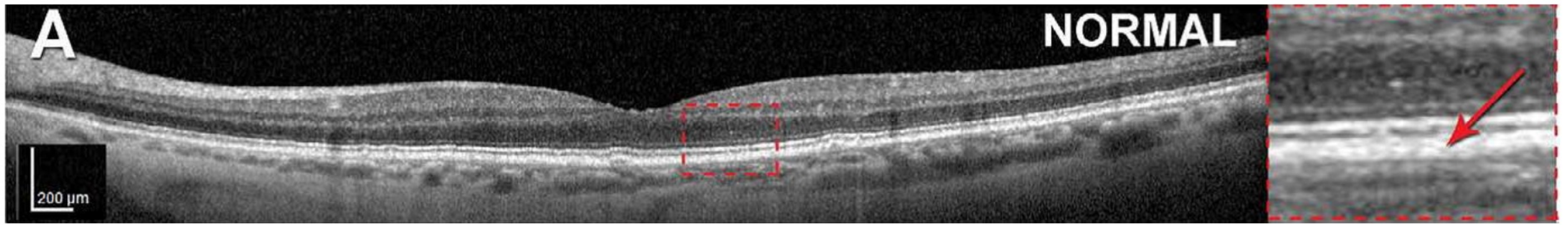


Image A

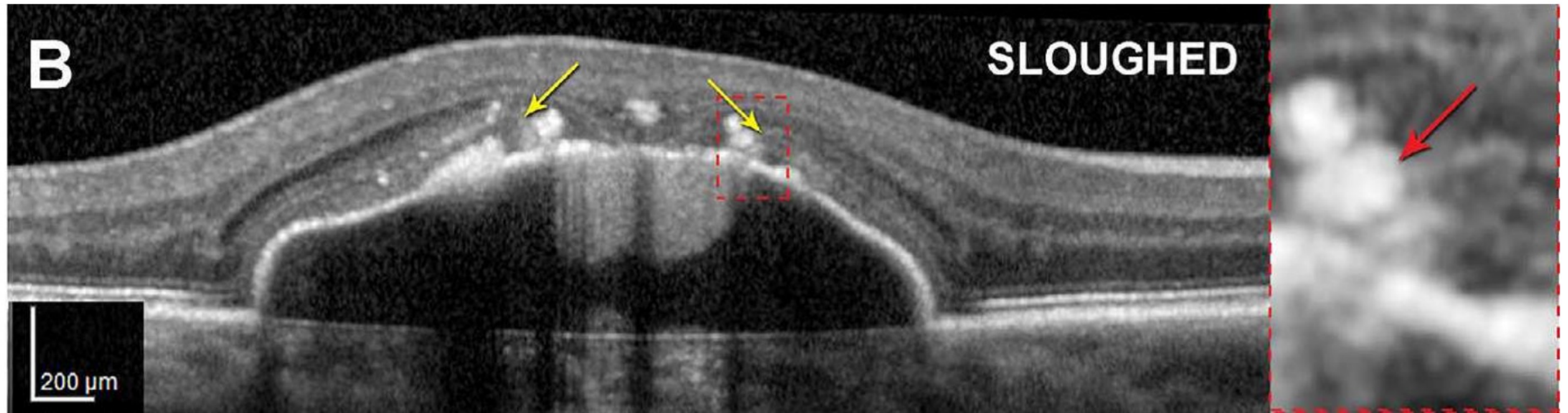


Image B: Serous PED

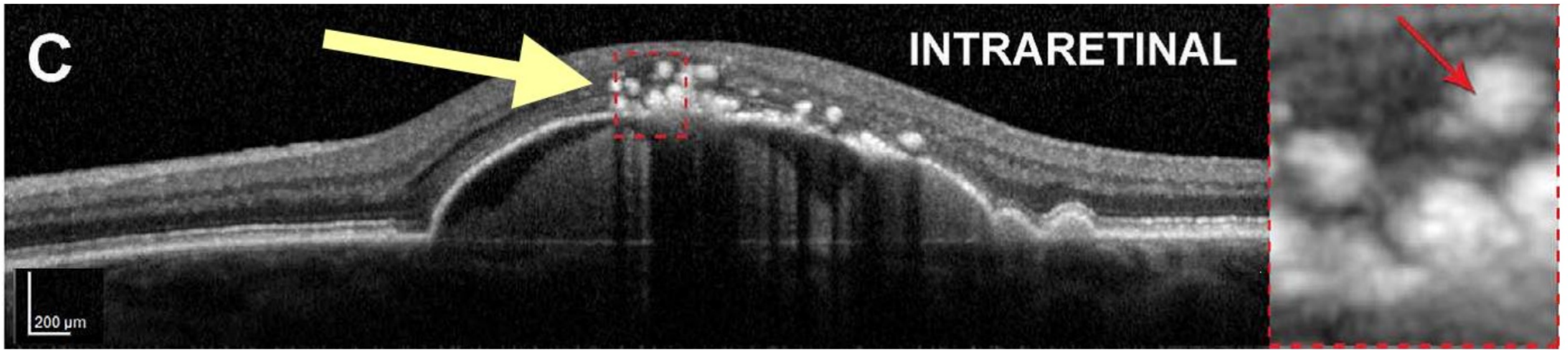


Image C: Hyperreflective migrated cells packed with RPE organelles (ARROW), and RPE layer thickening (due to the thick basal laminar deposit)

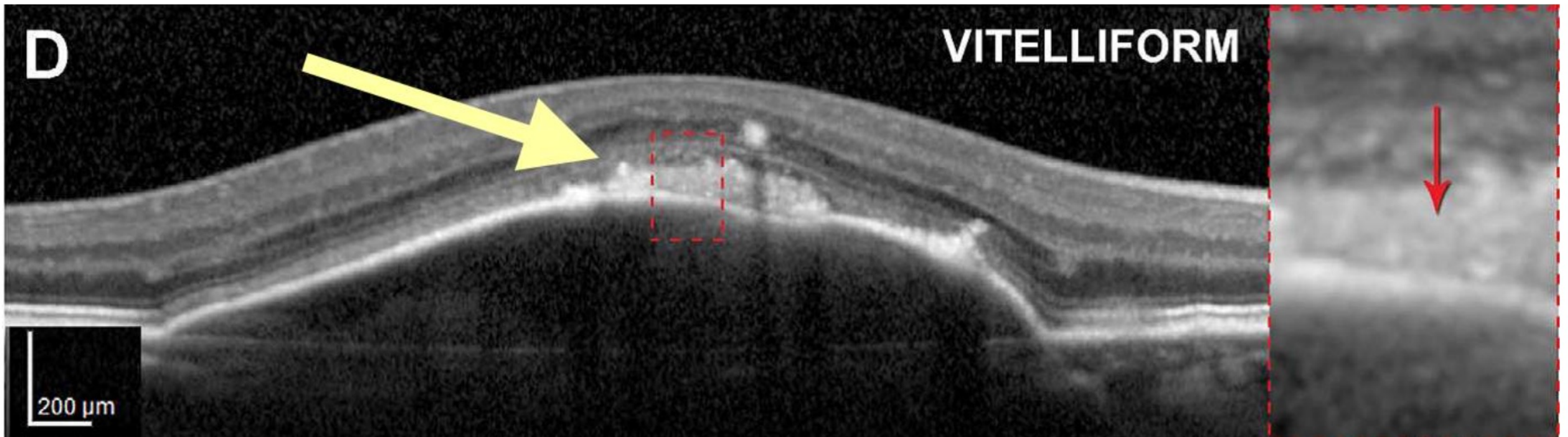


Image D

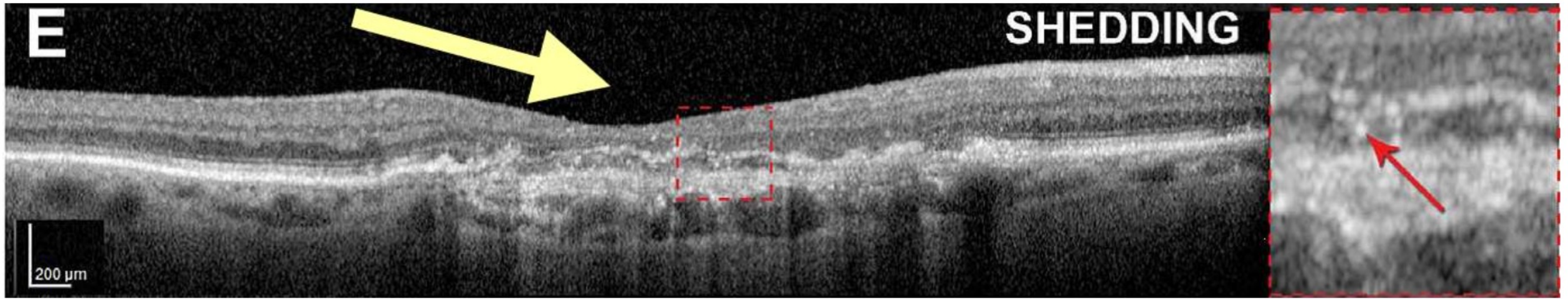


Image E

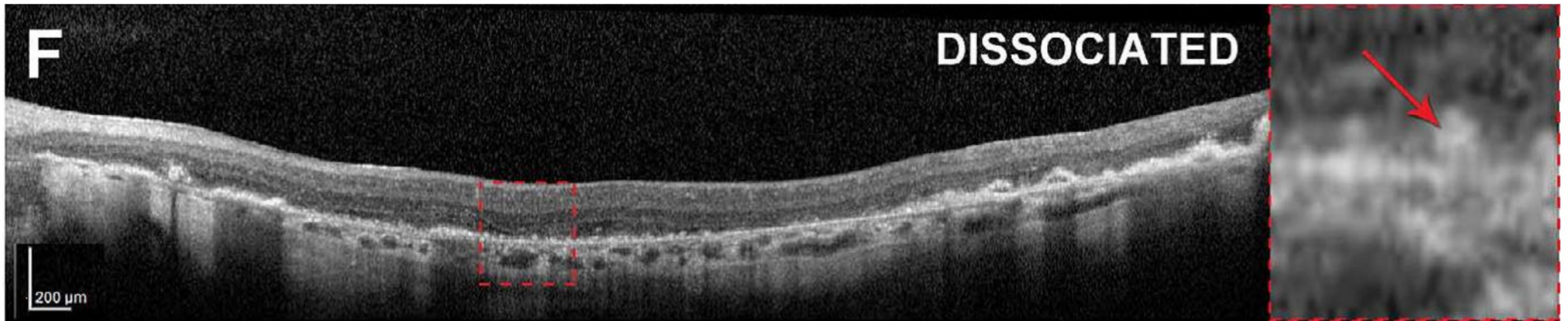


Image F

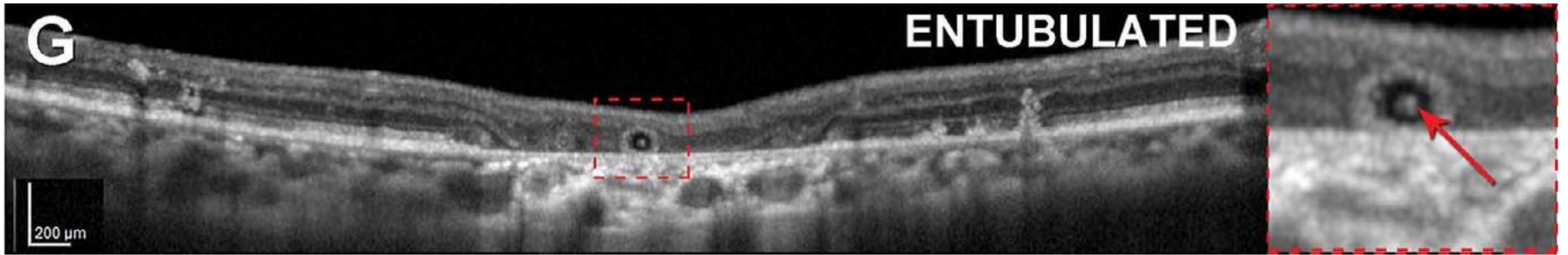


Image G

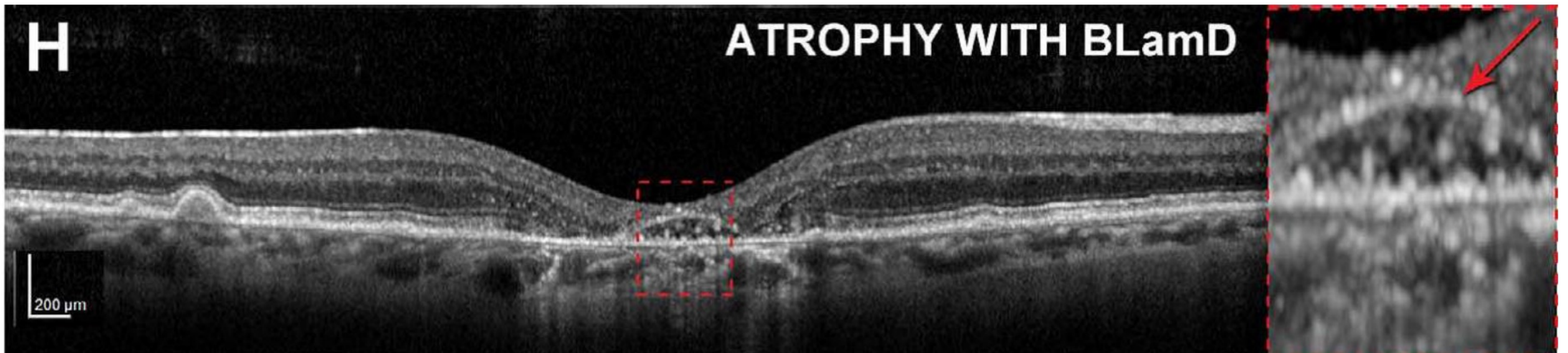


Image H

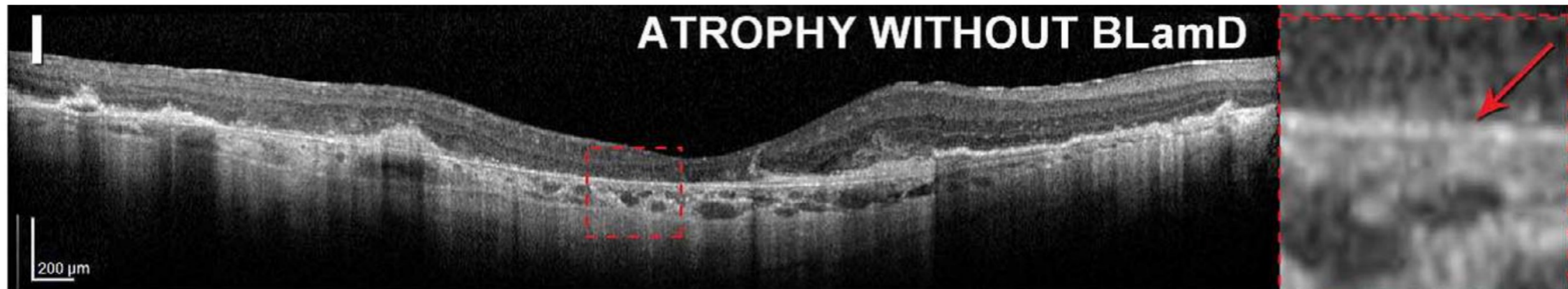


Image I

And so, the migrating RPE cells are a sign of the evolution towards atrophy.



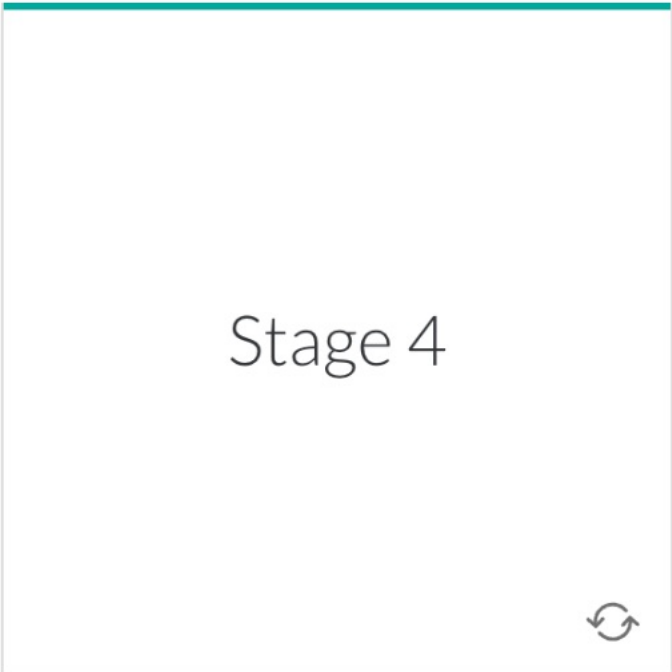
Curcio CA, Zanzottera EC, Ach T, Balaratnasingam C, Freund KB. **Activated Retinal Pigment Epithelium, an Optical Coherence Tomography Biomarker for Progression in Age-Related Macular Degeneration.** *Invest Ophthalmol Vis Sci.* 2017; 58(6): BIO211-BIO226.

**RPE activation and migration
comprise an important
precursor to atrophy**

Reticular pseudodrusen

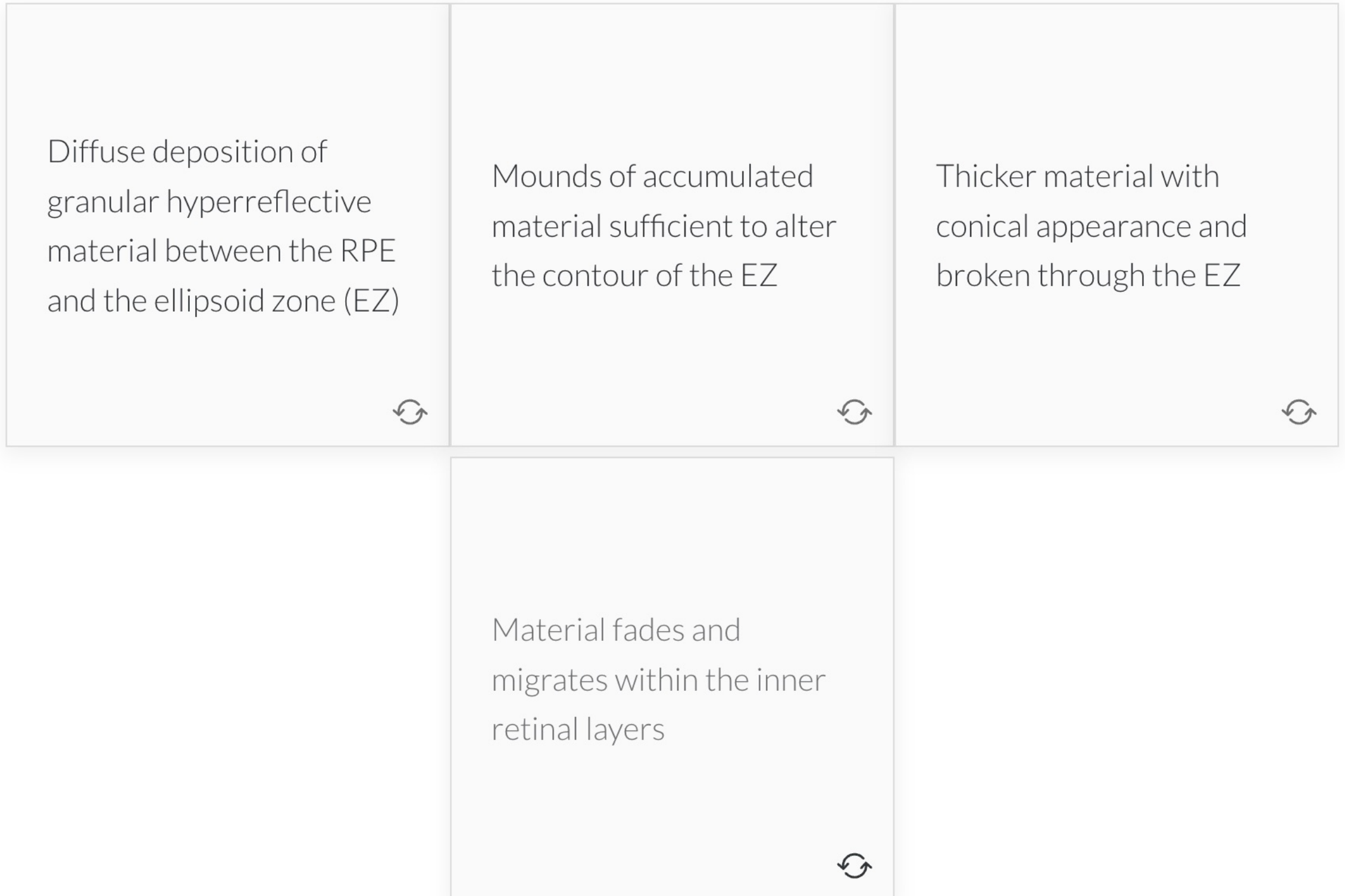
Reticular pseudodrusen are another type of drusen that may be found in AMD.

4 stages of reticular pseudodrusen:



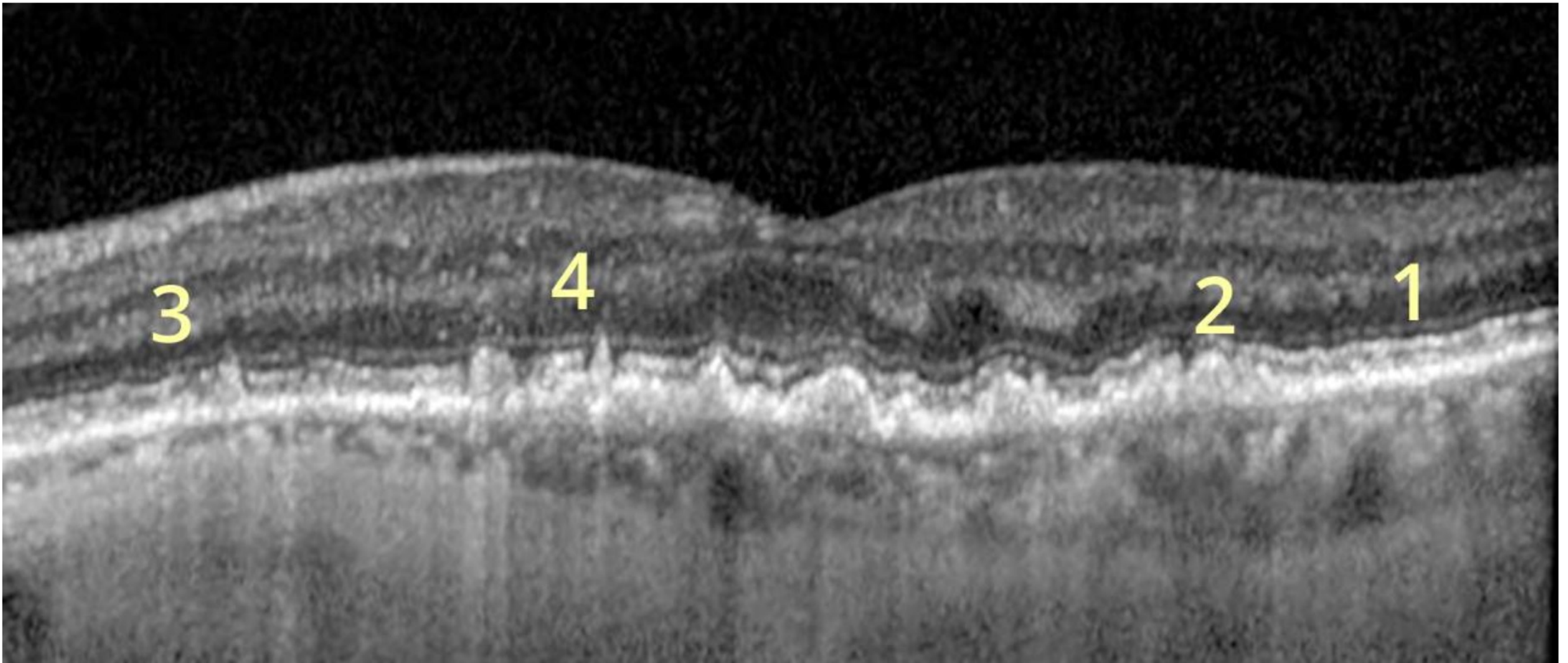
Reticular pseudodrusen are another type of drusen that may be found in AMD.

4 stages of reticular pseudodrusen:

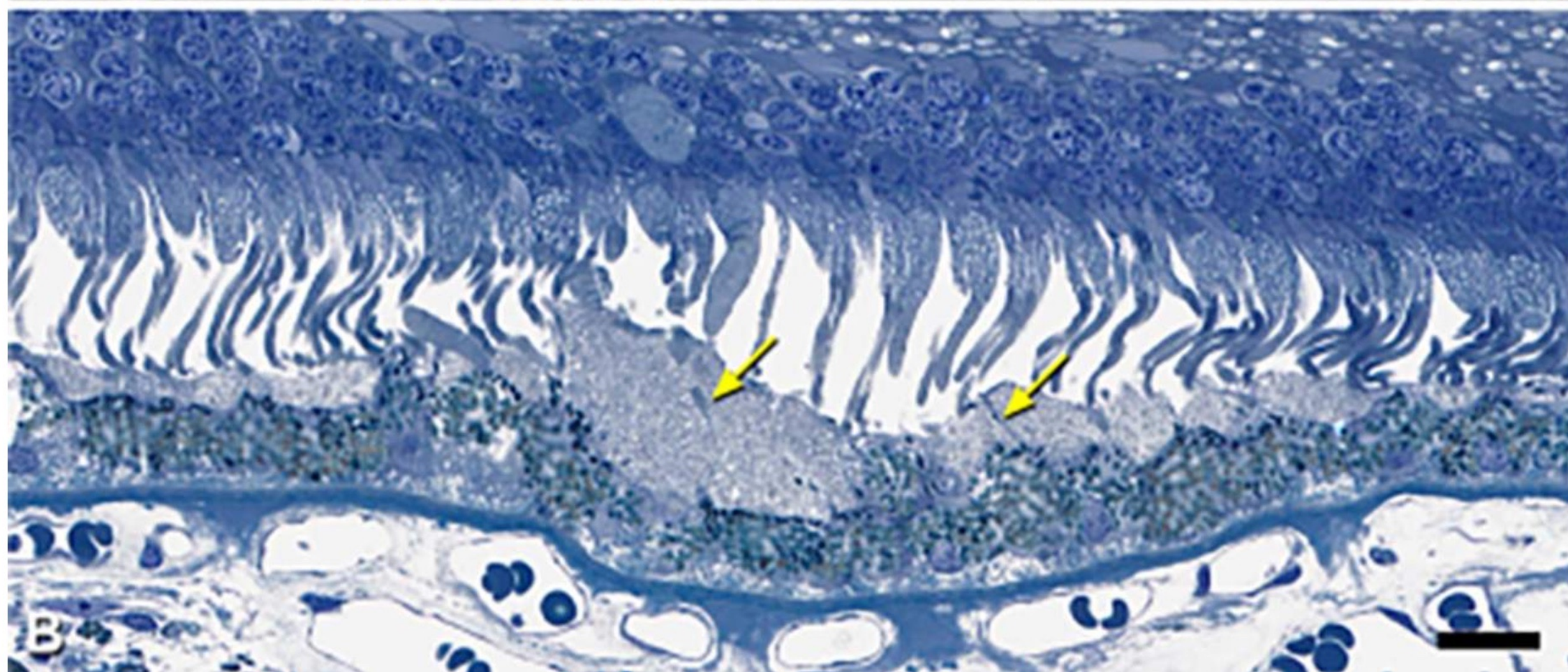
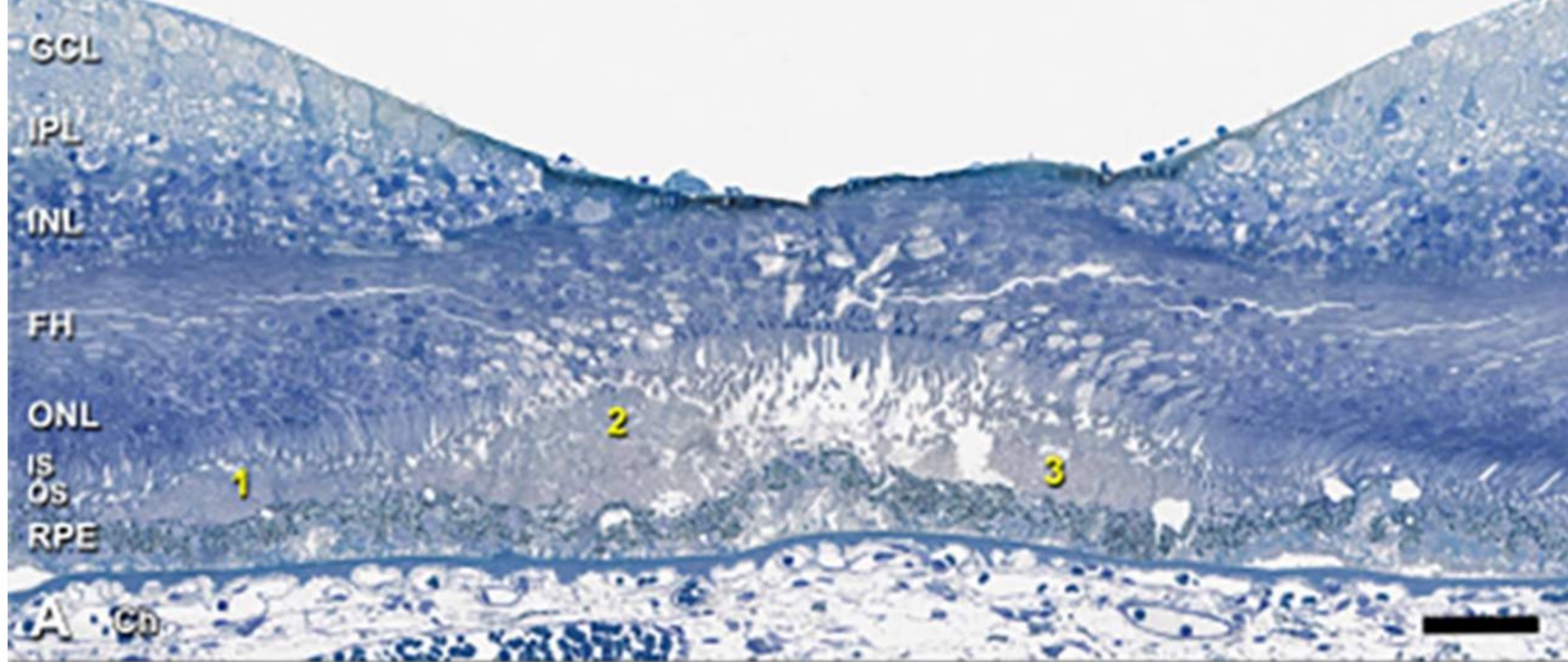


Stage 3 and 4 are the more severe forms.

There is a break through the ellipsoid zone (EZ) in stage 3, and then migration of the hyperreflective dots towards the outer and the inner retina in stage 4.



Reticular pseudodrusen stages on OCT: Migration of the hyperreflective dots inside the retina can be seen at stage 4



Reticular pseudodrusen seen histologically as subretinal drusenoid deposit (Alten & Eter, 2015 and courtesy of CA Curcio)

Identify the percentage of eyes with reticular pseudodrusen where late AMD will have occurred within 3 years?

- 4.2%
- 15.6%
- 46.4%

From Research

A study by Kong et al. (2018) looked at reticular pseudodrusen for 3 years and showed that during the 3 years:

- Late AMD occurred in 30 eyes (**15.6%**)
 - Geographic atrophy occurred in 24 eyes (**12.5%**)
 - Neovascular AMD occurred in 6 eyes (**3.1%**)

And so, reticular pseudodrusen is a prognostic factor.



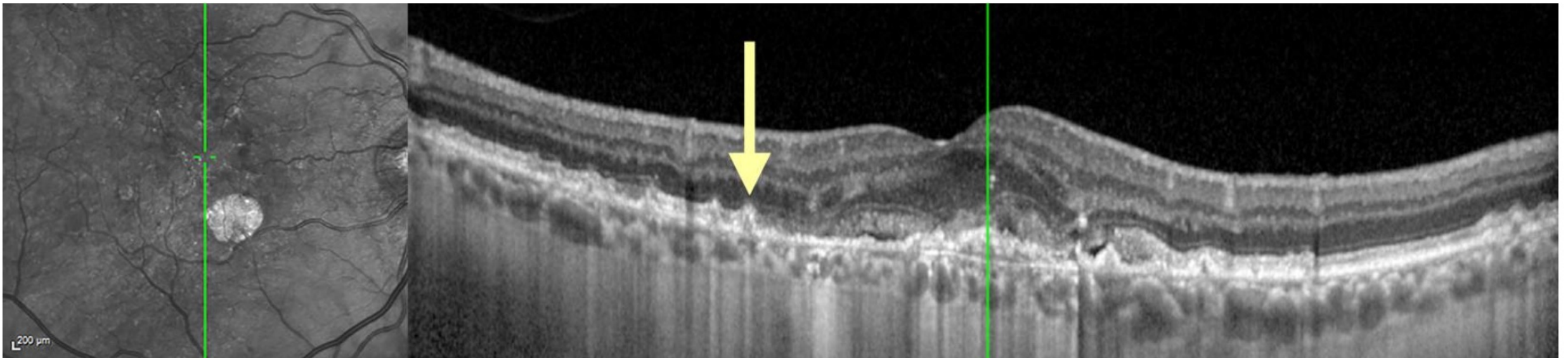
Kong M, Kim S, Ham DI. **INCIDENCE OF LATE AGE-RELATED MACULAR DEGENERATION IN EYES WITH RETICULAR PSEUDODRUSEN.** *Retina*. 2018. [Epub ahead of print]

Cuticular drusen (under the RPE)

Cuticular drusen are often seen in early AMD.

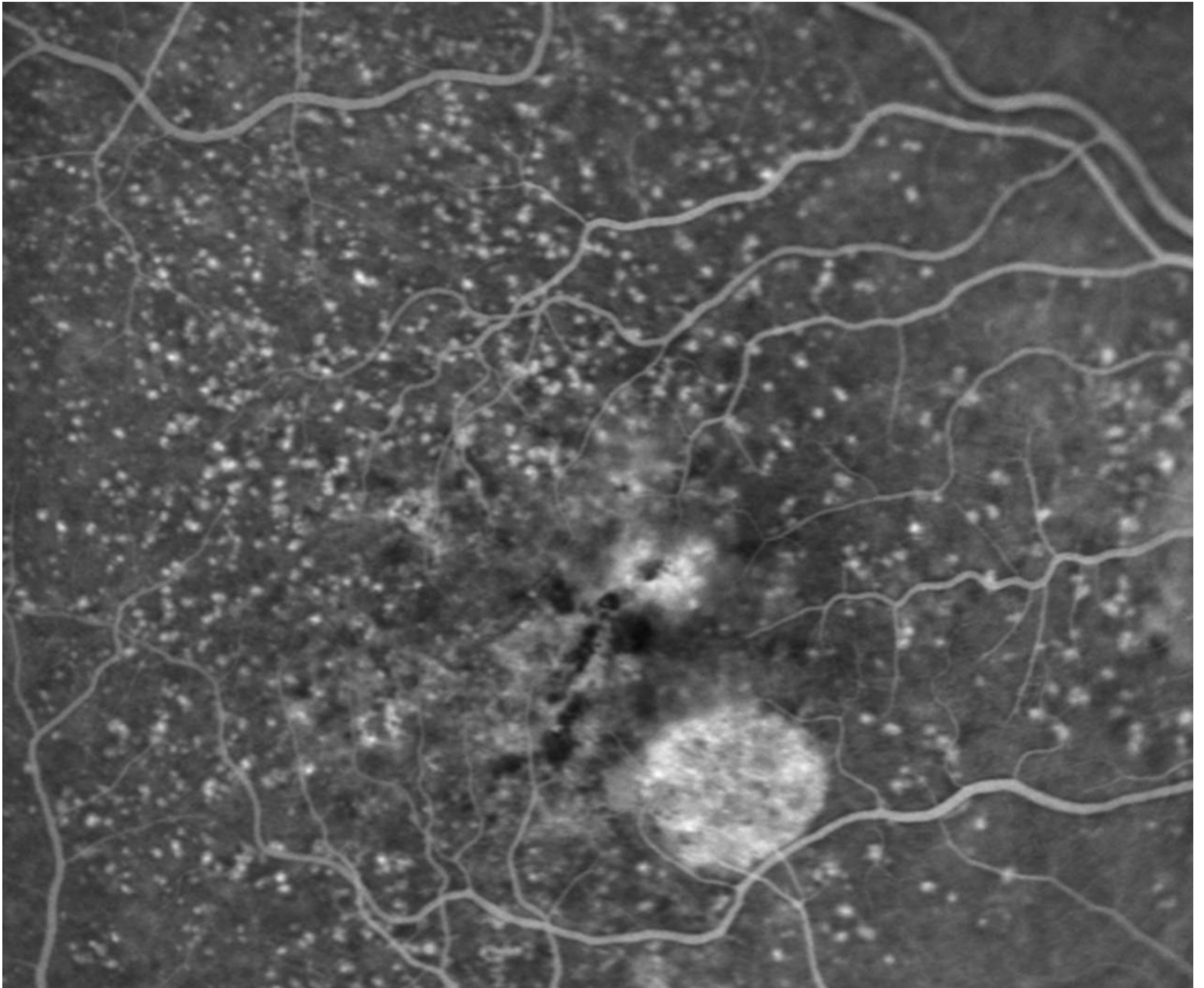
Features of cuticular drusen on SD-OCT:

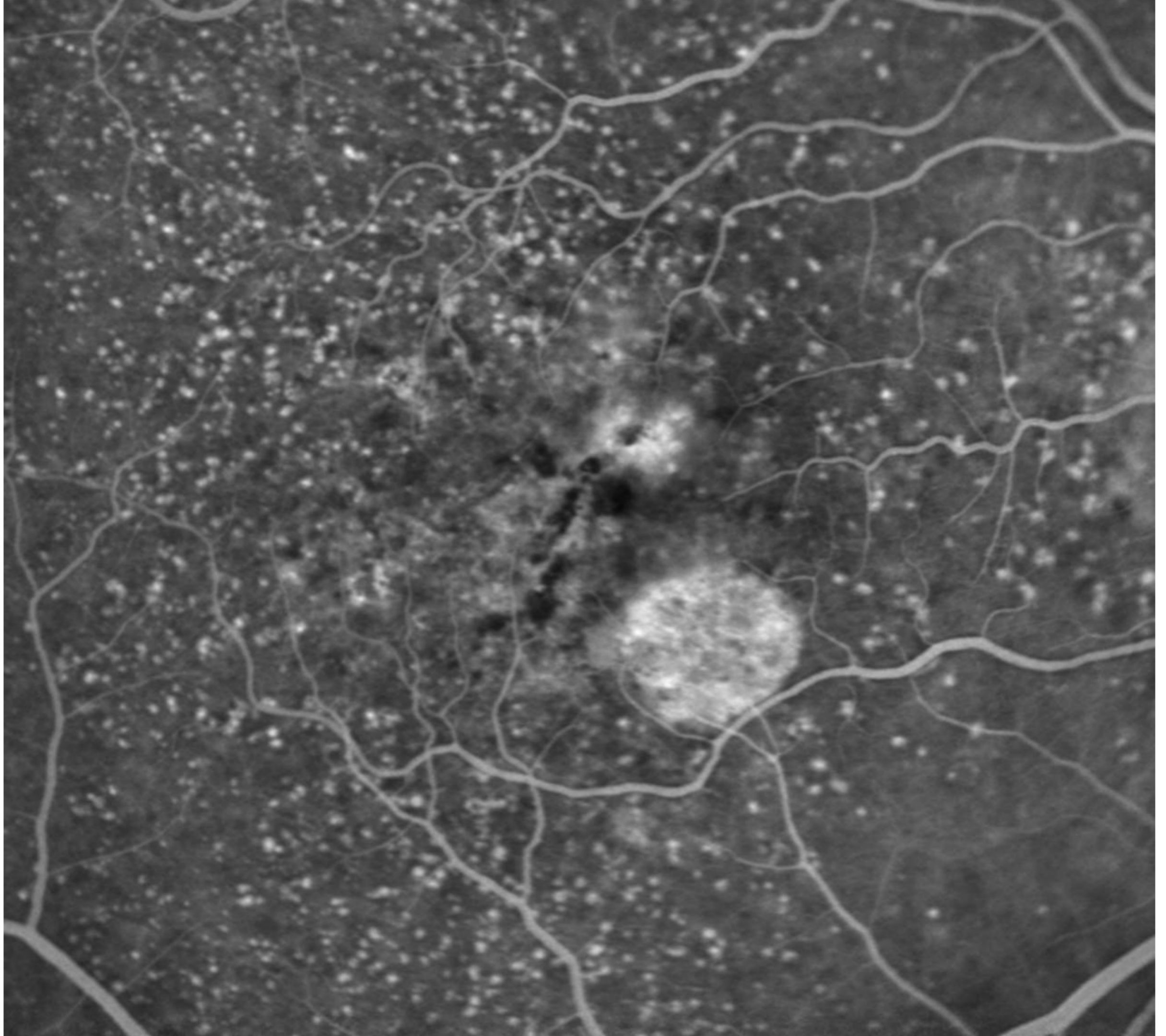
- Prolate-shaped with moderate hyperreflectivity, not too dense, with a sawtooth pattern.
- Located between inner Bruch's membrane and basal lamina of RPE.



Cuticular drusen (yellow arrow) on SD-OCT have a prolate shape with moderate reflectivity, not too dense, sawtooth pattern, and are located between inner Bruch's membrane and basal lamina of RPE

Cuticular drusen have a typical **starry sky appearance** on fluorescein angiography (FA).





Cuticular drusen have a starry sky appearance on fluorescein angiography

What may cuticular drusen evolve towards?

- Retinal pigment epithelium abnormalities
- Acquired vitelliform lesions
- Neovascularisation
- Geographic atrophy
- All of the above

A study by Balaratnasingam et al. (2018) showed that cuticular drusen evolve towards:

- Retinal pigment epithelium abnormalities in 47.5% of cases
- Acquired vitelliform lesions in 24% of cases
- **Neovascularisation in 12% of cases**
- **Geographic atrophy (GA) in 25% of cases**

Occurrence of geographic atrophy (GA) and neovascularisation were important determinants of final visual acuity in eyes with the cuticular drusen phenotype.

Identify the correct statement.

- Cuticular drusen are more common in patients **younger** than 60 years of age
- Cuticular drusen are more common in patients **older** than 60 years of age
- Age has no relevance

A study by Balaratnasingam et al. (2018) showed that cuticular drusen are more common in patients older than 60 years of age (all $P < 0.015$).

Section 9 of 27

Introduction to atrophic AMD

Atrophic AMD

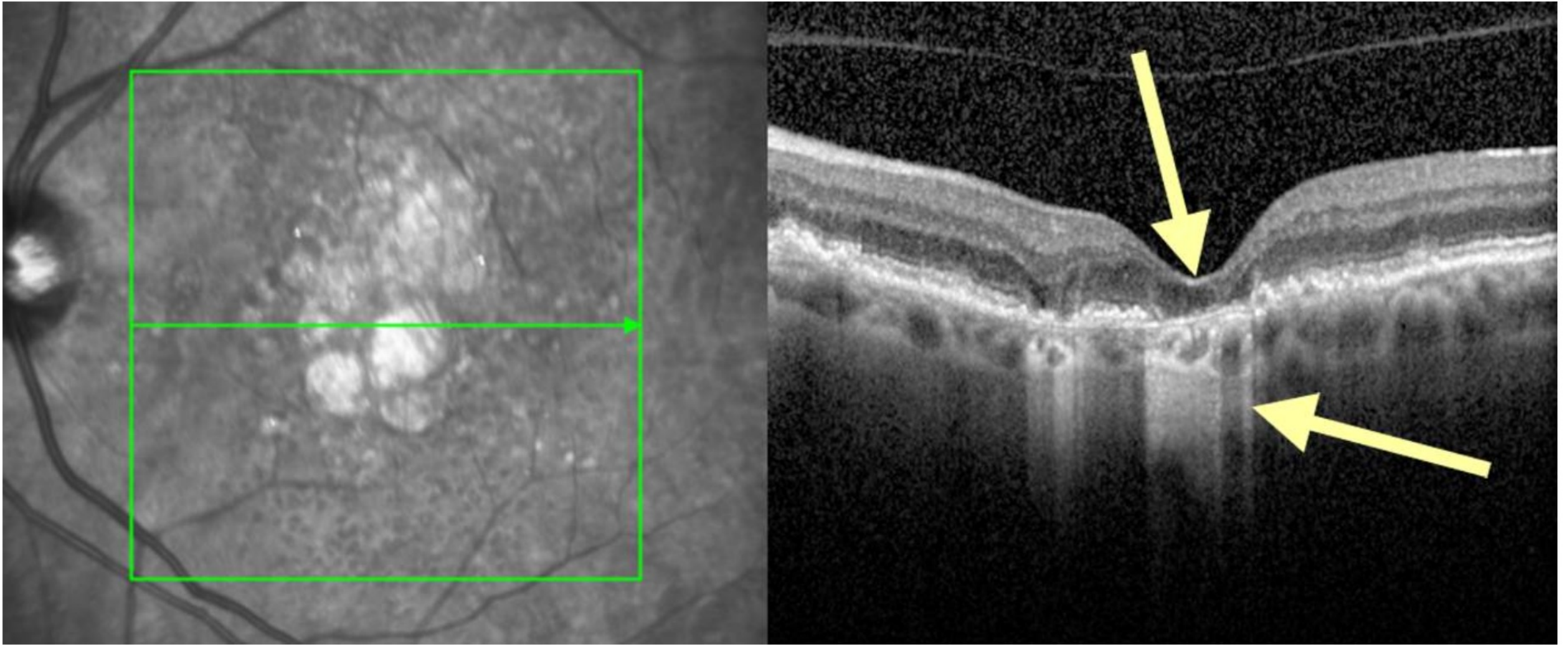
This section of the module examines some important SD-OCT signs to recognise in atrophic AMD, including:

- Degenerative cysts
- Plateau sign

Typical SD-OCT findings

Typical SD-OCT features in atrophic AMD:

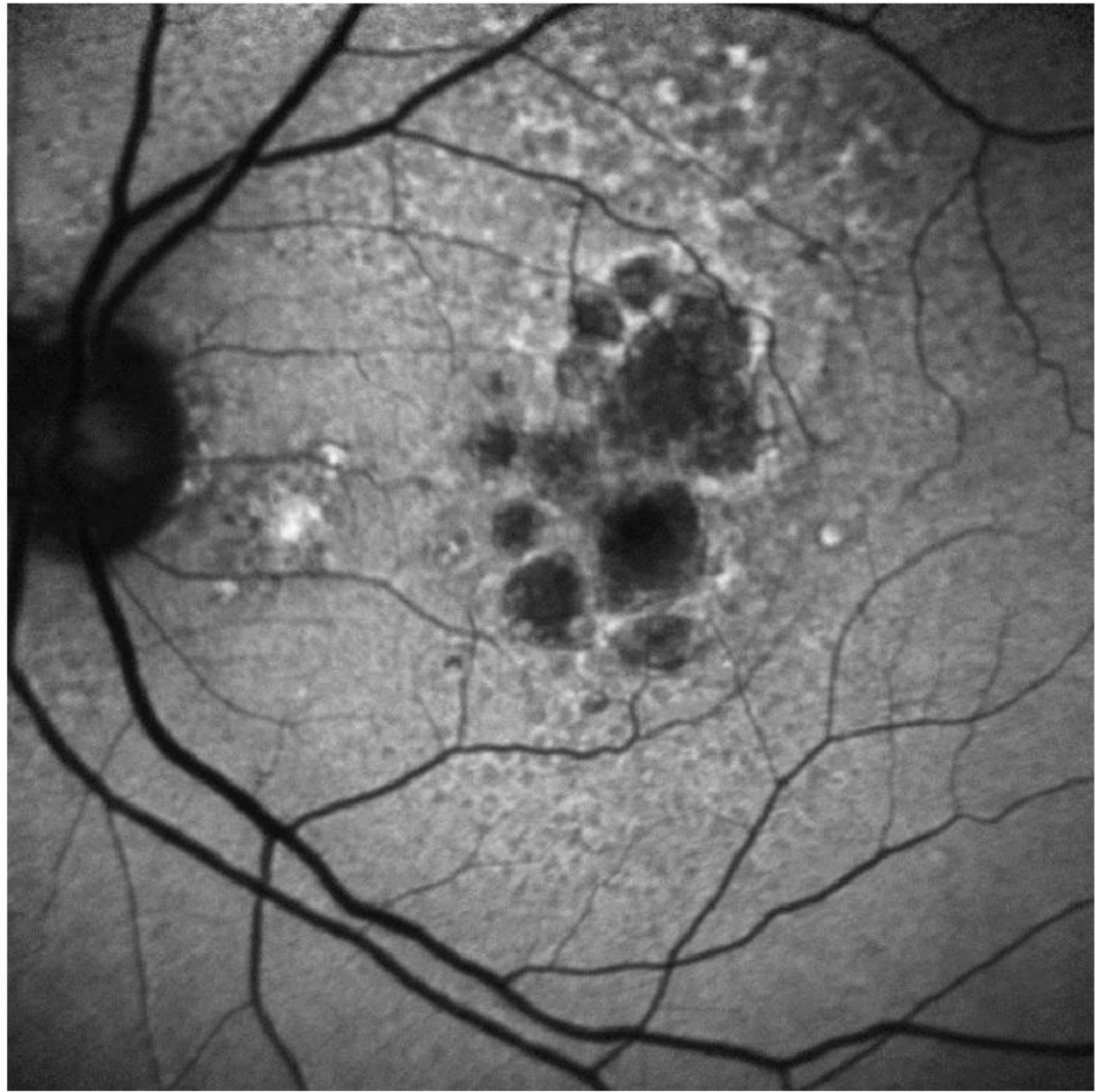
- Neuroretina thinning
- Dedifferentiation of retinal layers
- Hyper-transmission signal through RPE



SD-OCT showing typical findings in cases with atrophic AMD including neuroretina thinning, dedifferentiation of retinal layers, and hyper-transmission signal through RPE



Colour fundus photograph



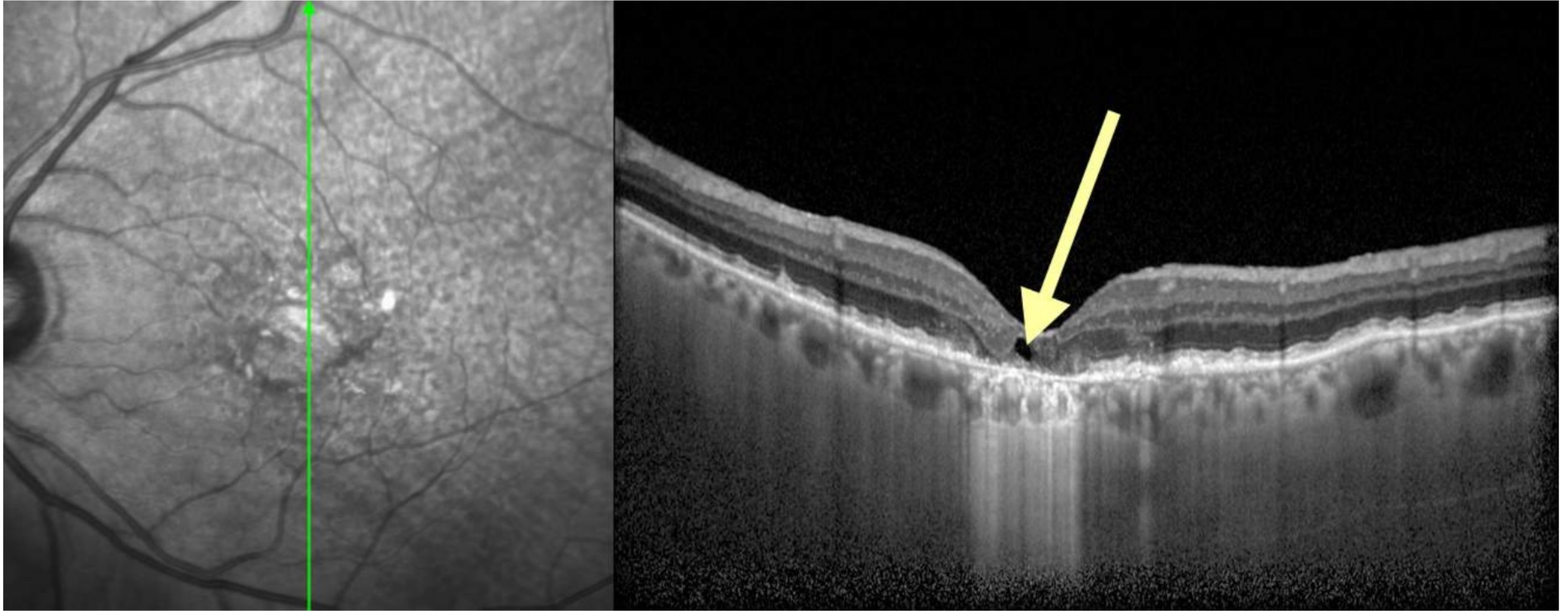
Fundus autofluorescence

Degenerative cysts

Degenerative cysts may be seen in atrophic AMD.

Features of degenerative cysts on SD-OCT:

- Located on top of hyper-transmission signal
- Mostly square-shaped
- Do not disappear with intravitreal treatment



Degenerative cyst (yellow arrow) seen on SD-OCT that is not very round (mostly square-shaped) and located on the top of the atrophy (hyper-transmission signal)



Fundus autofluorescence

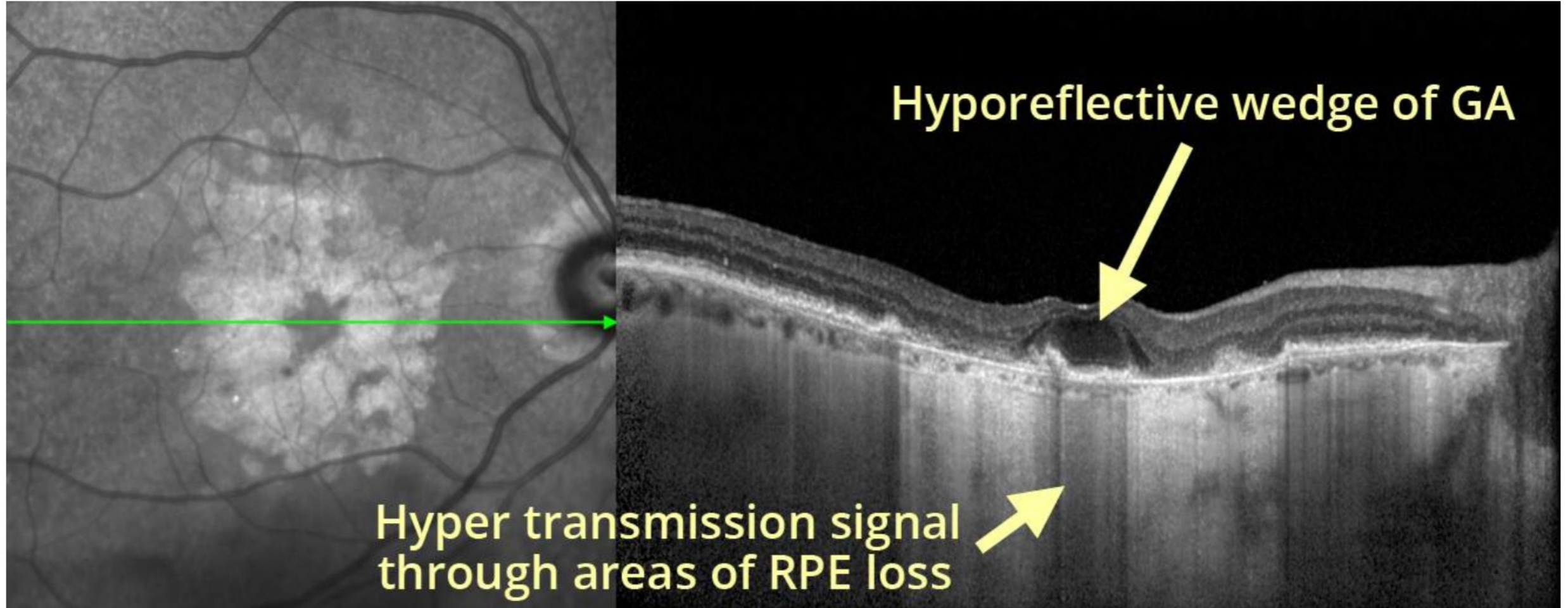
Plateau sign

Identify what the **plateau sign** is often referred to as?

- Hyporeflective** wedge of the geographic atrophy (GA)
- Hyperreflective** wedge of the geographic atrophy (GA)

The **plateau sign** is a new sign seen in atrophic diseases and is often called the **hyporeflective wedge of the GA**.

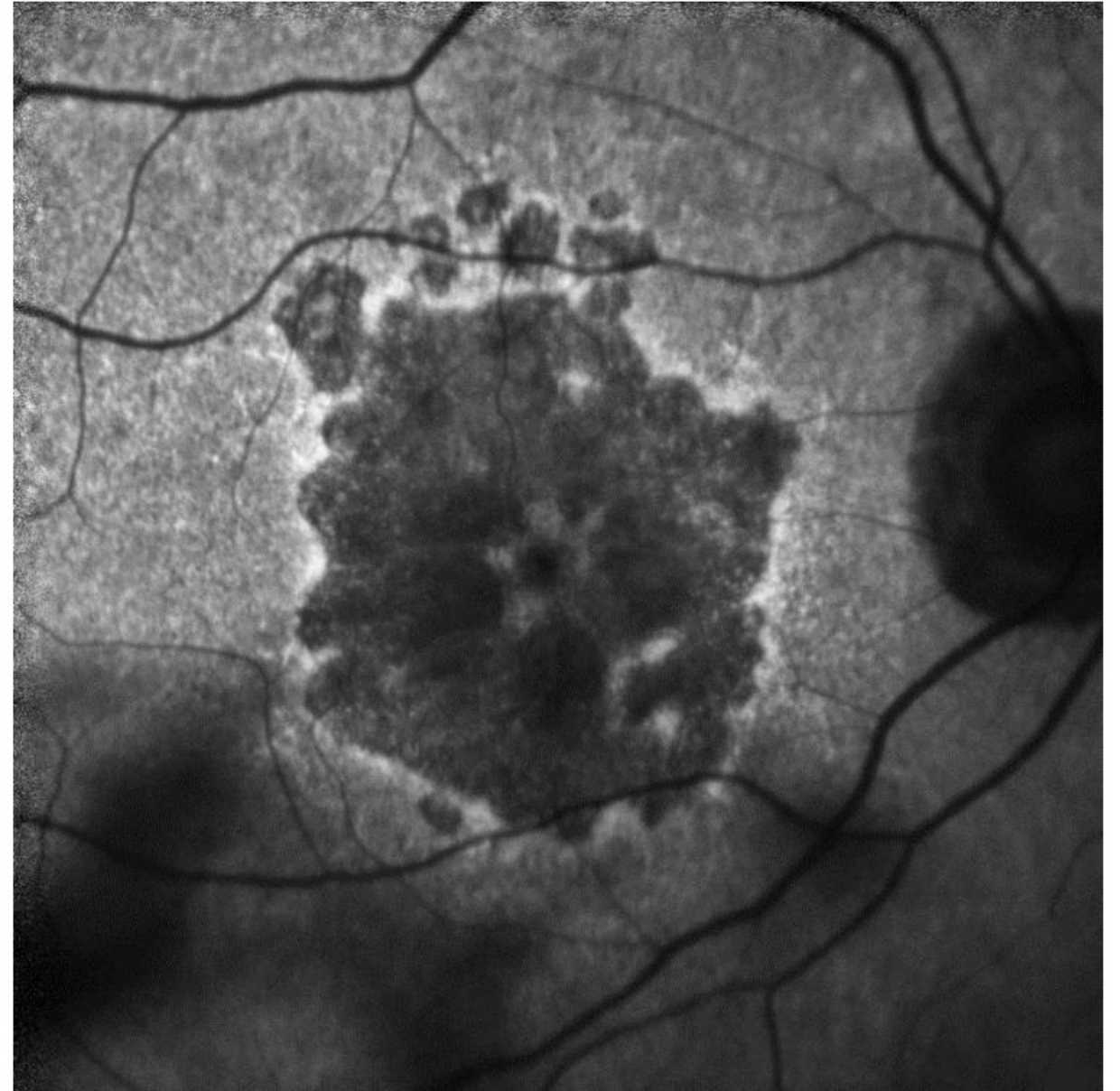
OCT imaging shows the plateau sign (hyporeflective wedge of GA) with a **hyper transmission signal through areas of RPE loss**.



OCT imaging shows a plateau on GA (hyporeflective wedge of GA)



Colour fundus photograph



Fundus autofluorescence

Introduction to neovascular AMD

Neovascular AMD

This section of the module examines some important OCT signs (SD-OCT and OCT-A) to recognise in neovascular AMD, including:

- Vascularised drusen
- Type 1, 2, 3 & 4 CNV
- The onion sign
- RPE tear
- Outer retinal tubulation (ORT)
- OCT biomarkers of active & quiescent CNV

OCT-A in AMD: Vascularised drusen

A new concept involves vascularised drusen. Certain cases of non-exudative AMD may present vascularised drusen under the retina.

So, be aware that some cases may not appear to be neovascular when in fact they are.

In what percentage of non-exudative AMD cases are vascularised drusen seen?



10%



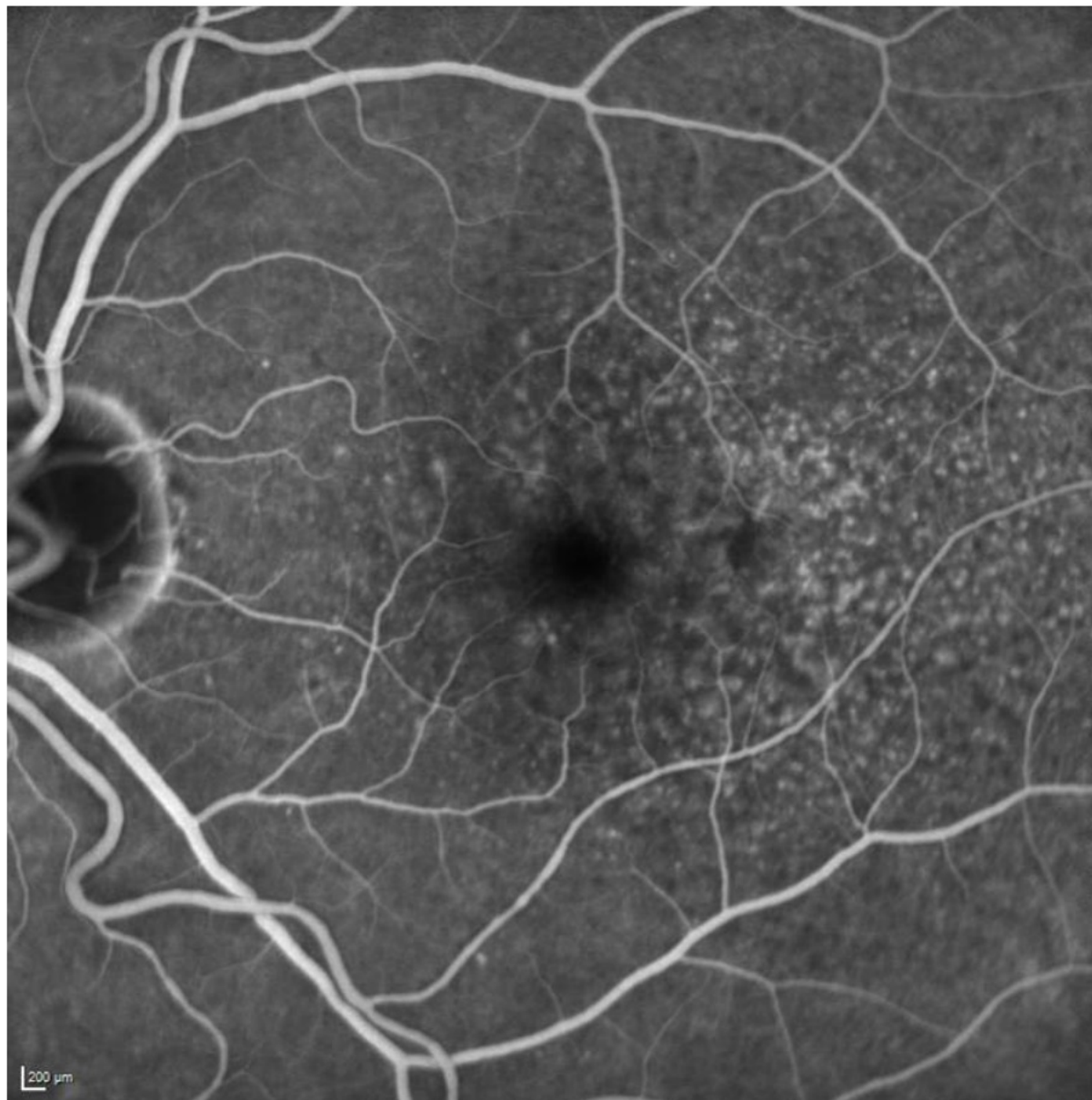
25%



45%

Vascularised drusen are seen in 10% of non-exudative AMD cases:

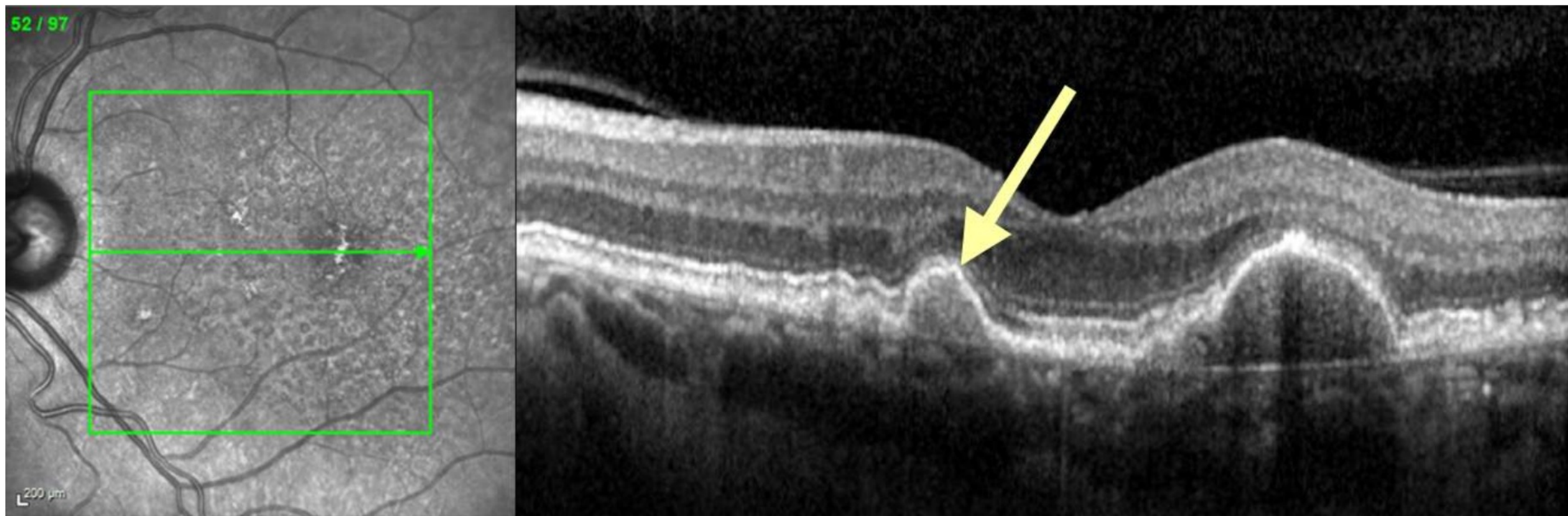
- Soft drusen without exudative lesions
- Flow on sectional OCT-A



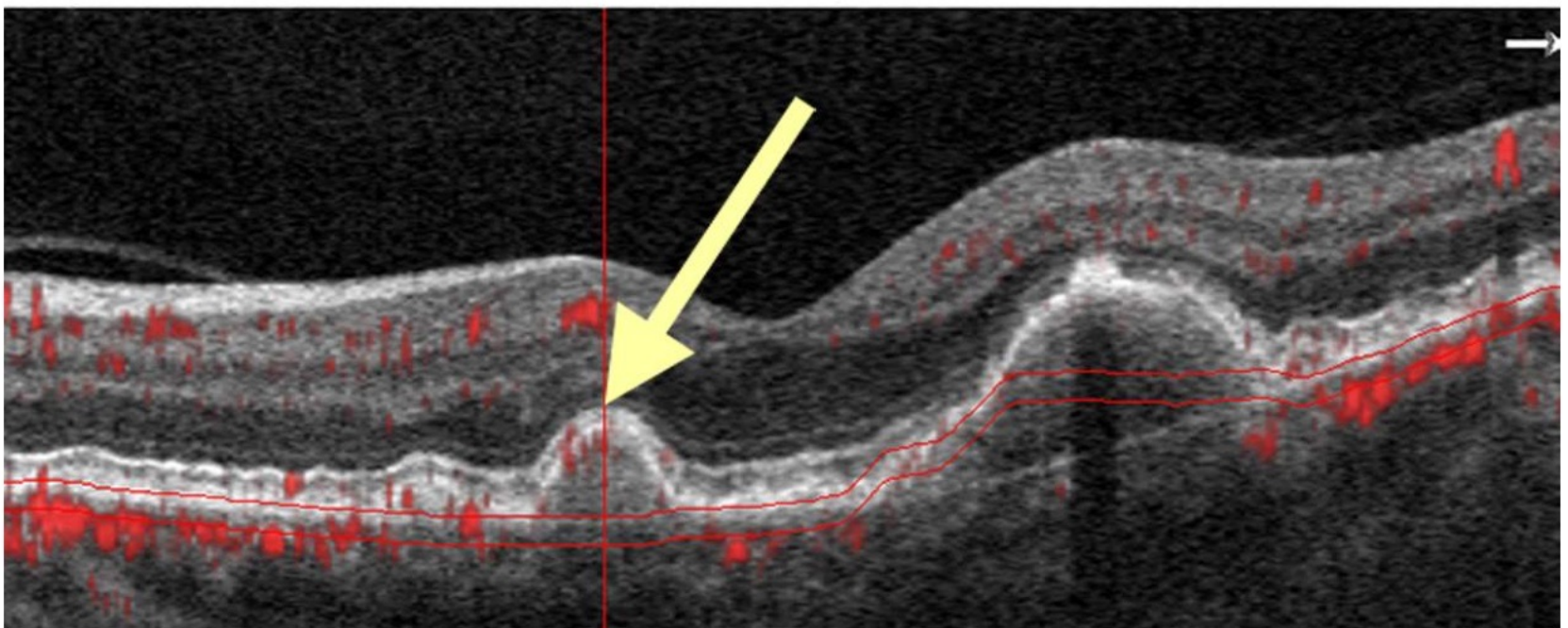
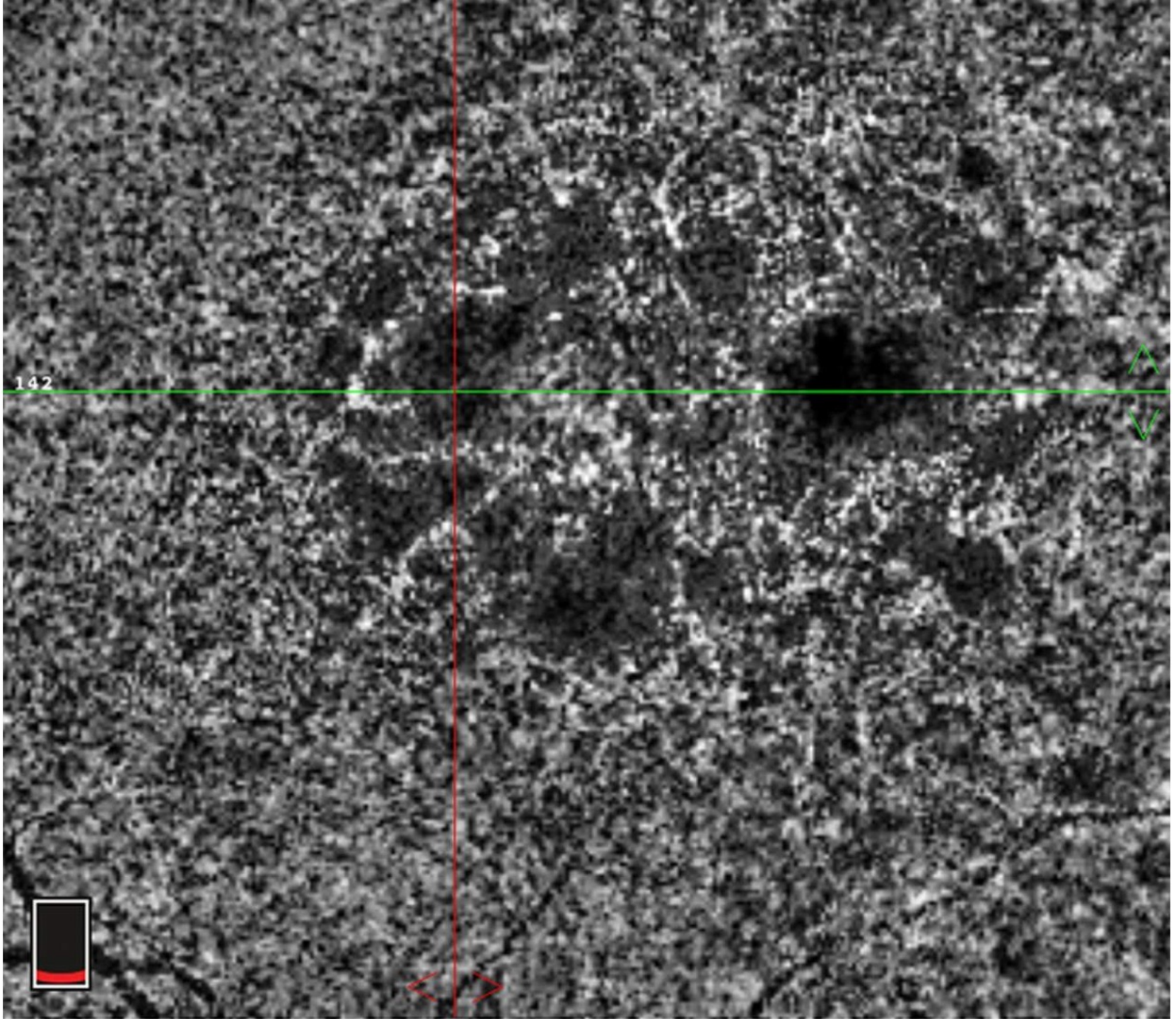
Fluorescein angiography



Fluorescein angiography



Drusen on SD-OCT (Is it vascularised?)

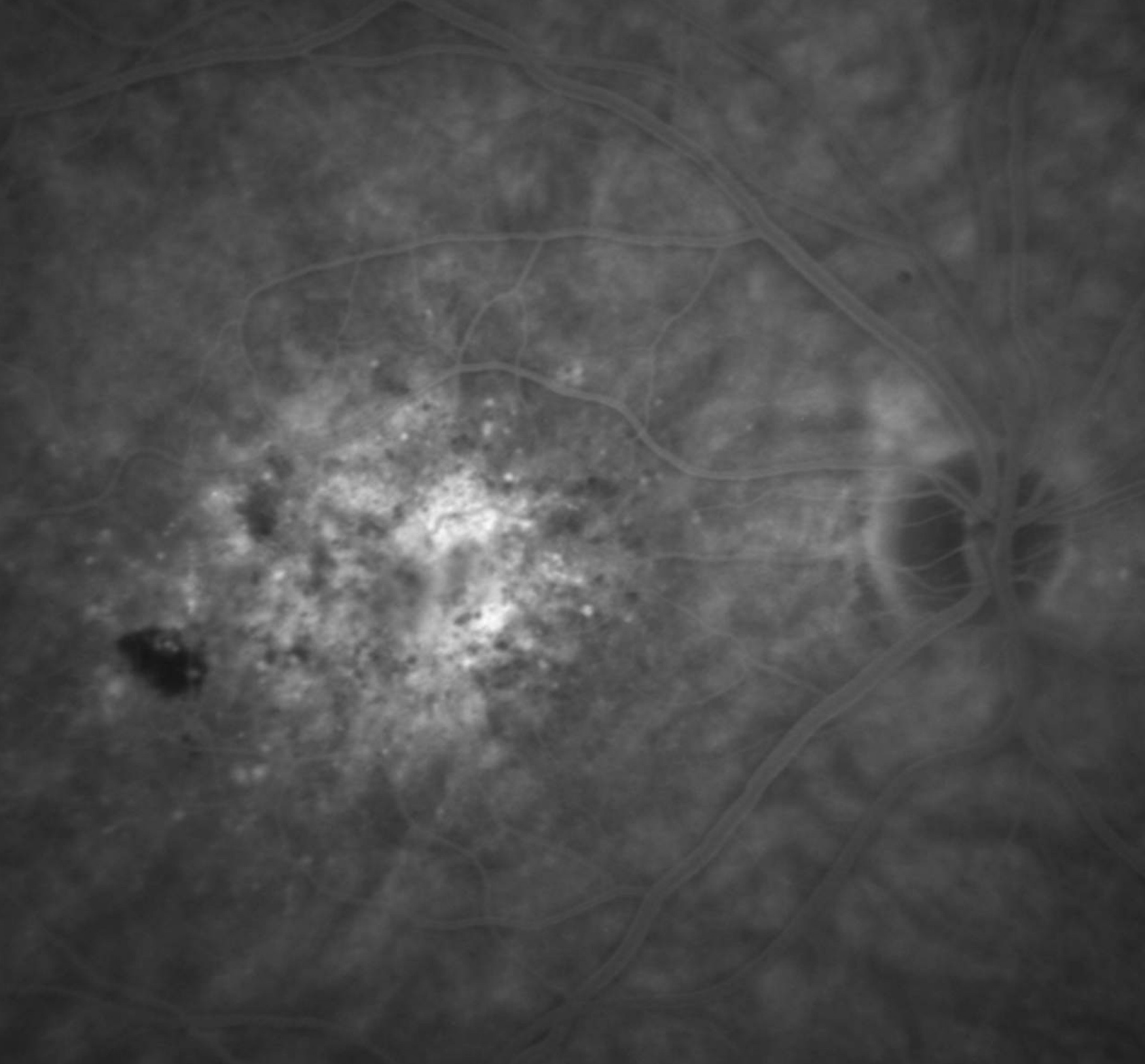


Vascularised drusen on OCT-A

Type 1 CNV

Features of type 1 CNV (occult CNV) on SD-OCT:

- Hypo reflective subretinal space with fluid (SRF)
- Often has a double line sign between Bruch's membrane and RPE

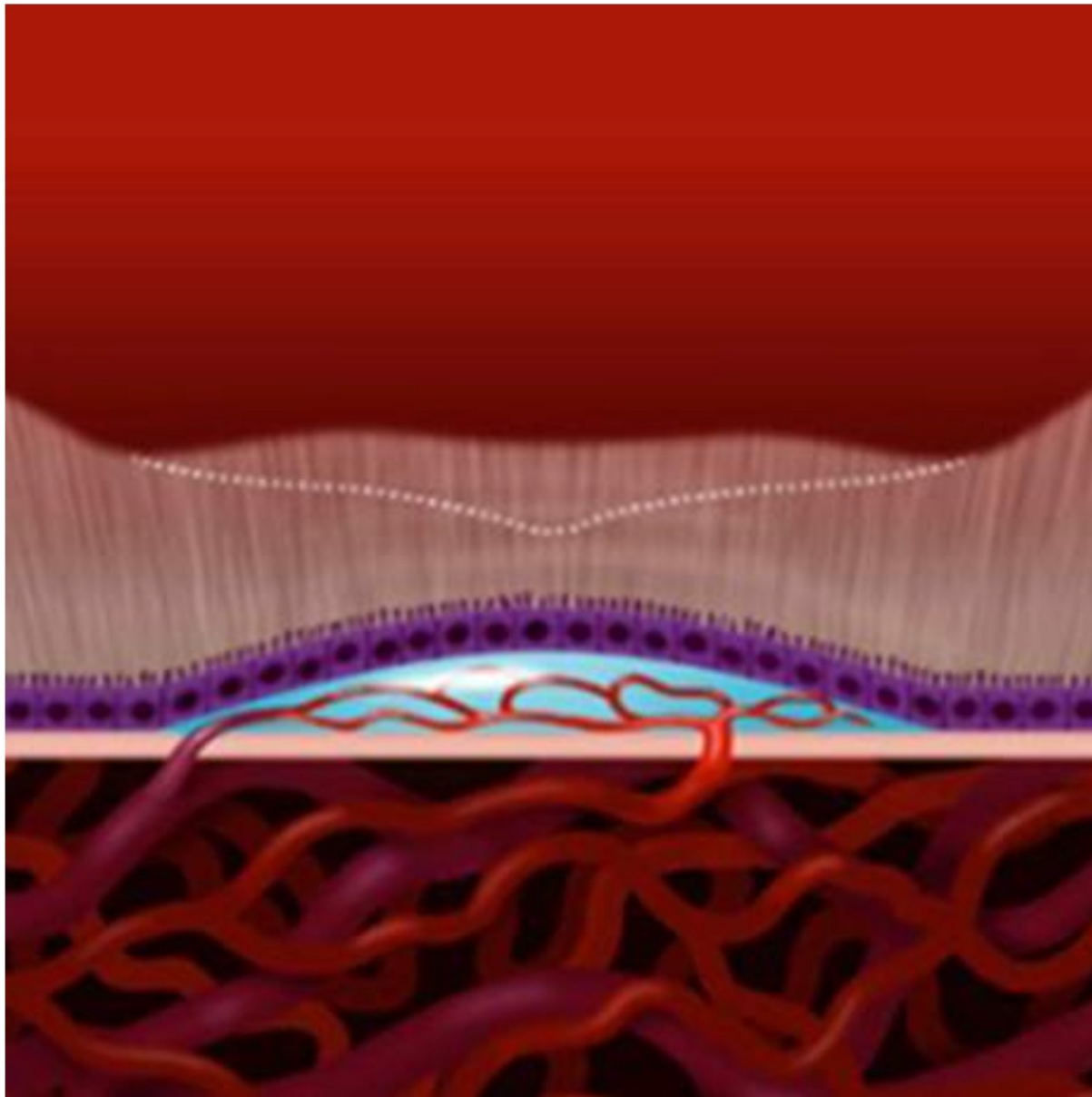




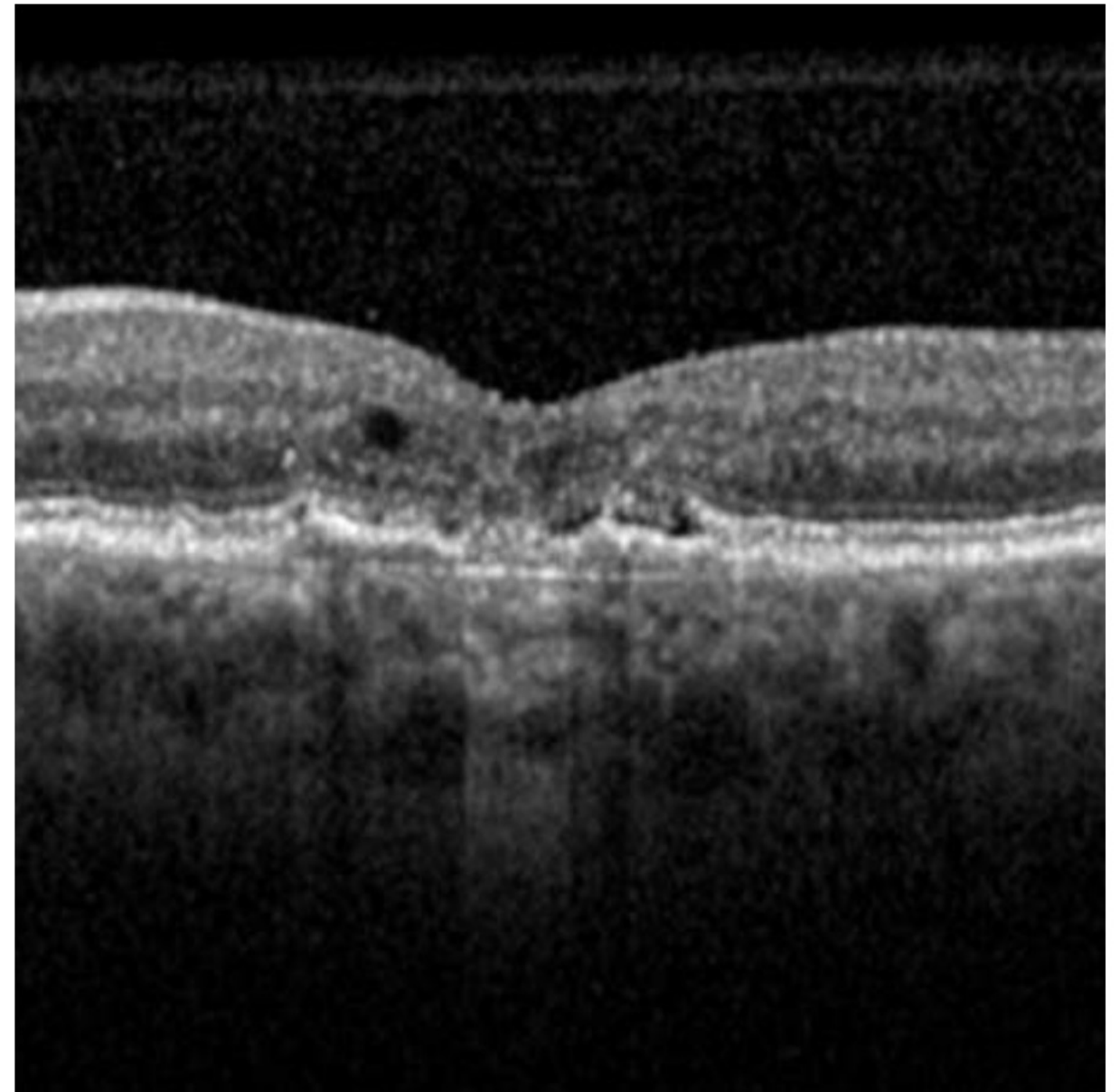
SD-OCT showing hyporeflexive subretinal spaces with fluid and a double line between Bruch's membrane and RPE

OCT-A and Wet AMD: Morphology

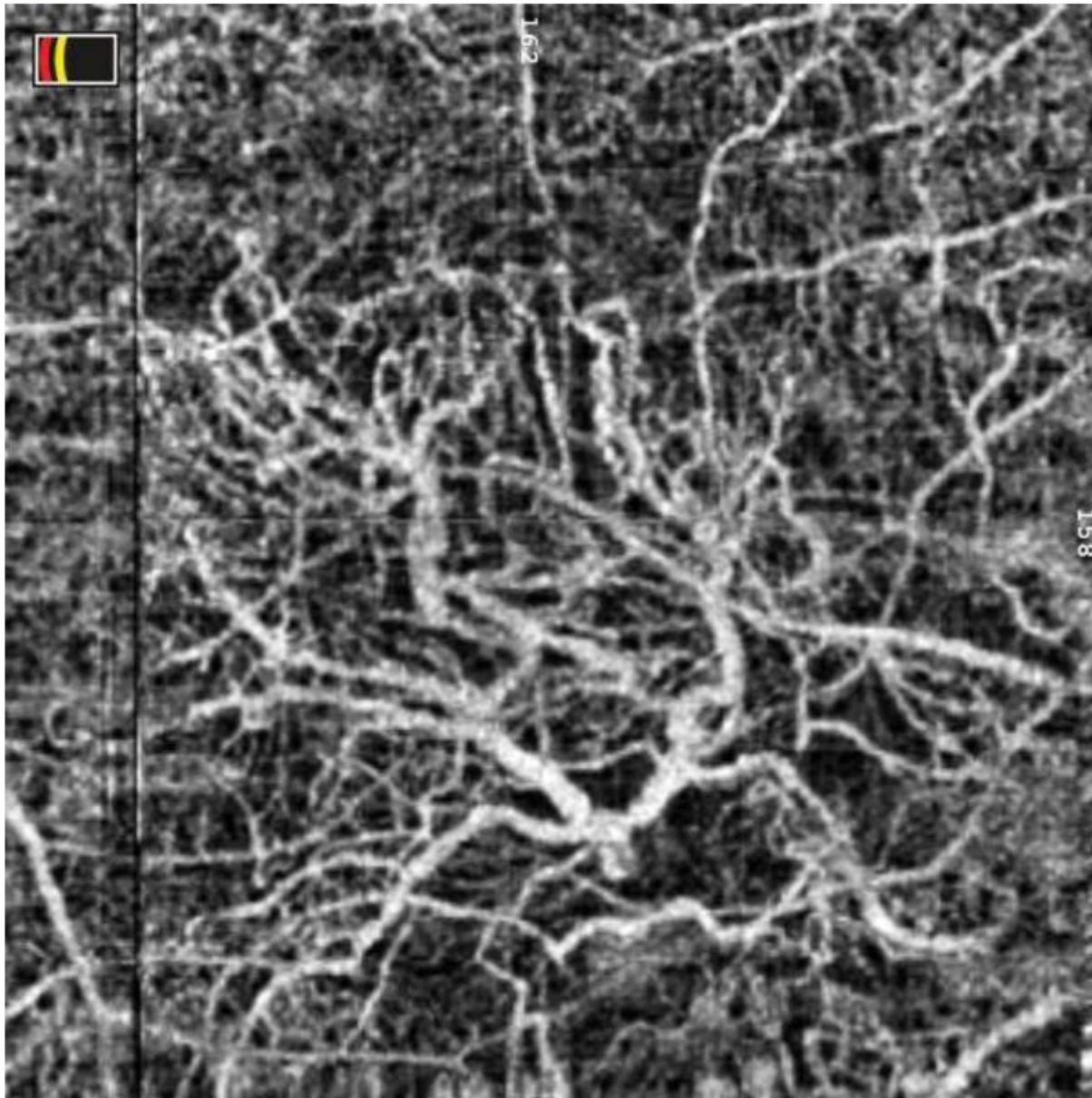
The morphology on OCT angiography (OCT-A) will also show quite typical signs of type 1 CNV (occult CNV).



Illustration



OCT



OCT-A shows hyperdense, mature, large and resistant neovessels. Large mature vessels are seen in the centre with smaller vessels radiating from them.



Sea fan

Features of type 1 CNV (occult CNV) on OCT-A:

- Hyperdense, mature, large and treatment-resistant neovessels
- Looks like a **sea fan**

Further reading:

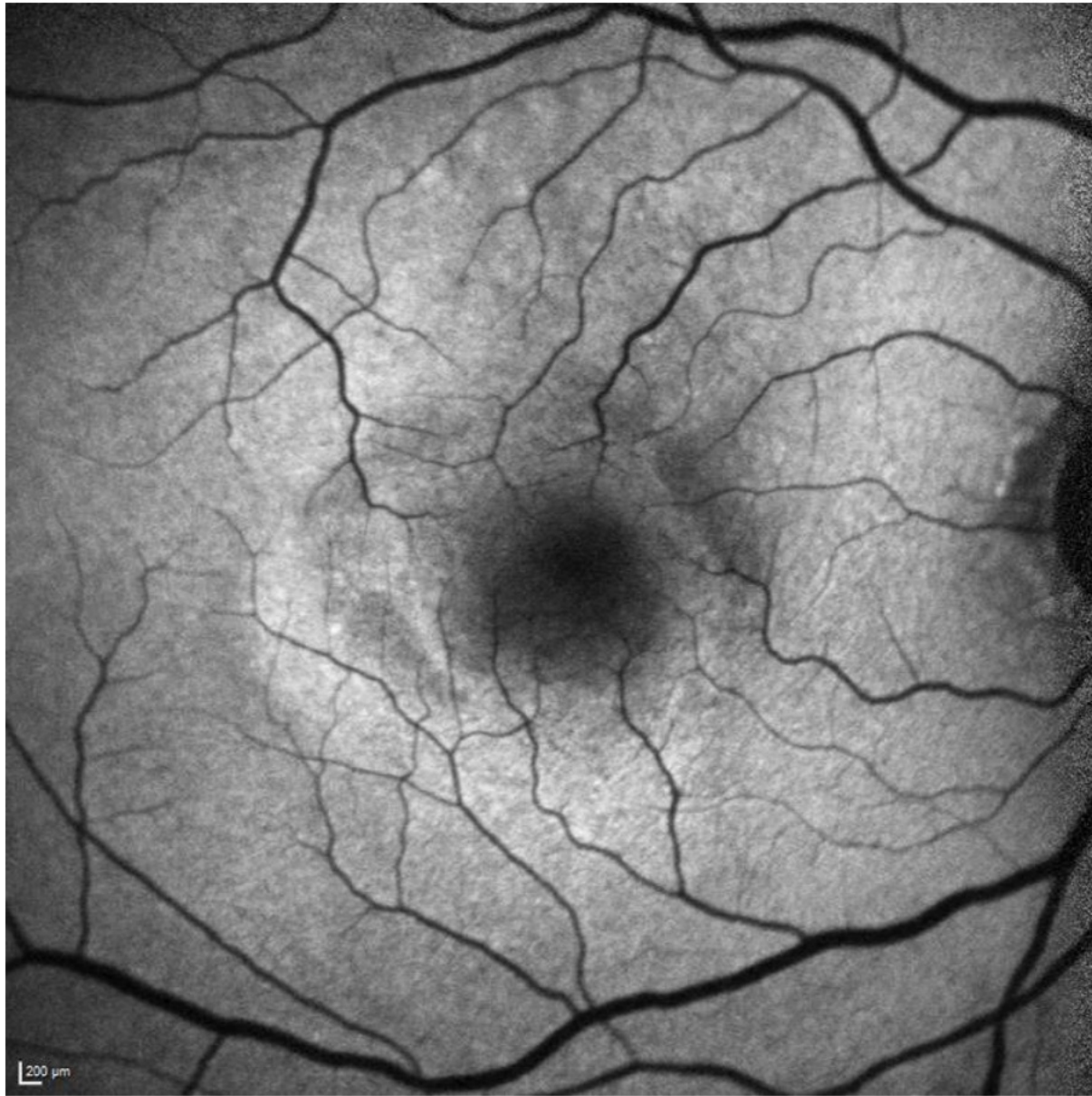


Cole ED, Ferrara D, Novais EA, Louzada RN, Waheed NK. **CLINICAL TRIAL ENDPOINTS FOR OPTICAL COHERENCE TOMOGRAPHY ANGIOGRAPHY IN NEOVASCULAR AGE-RELATED MACULAR DEGENERATION.** *Retina.* 2016; 36 Suppl 1: S83-S92.

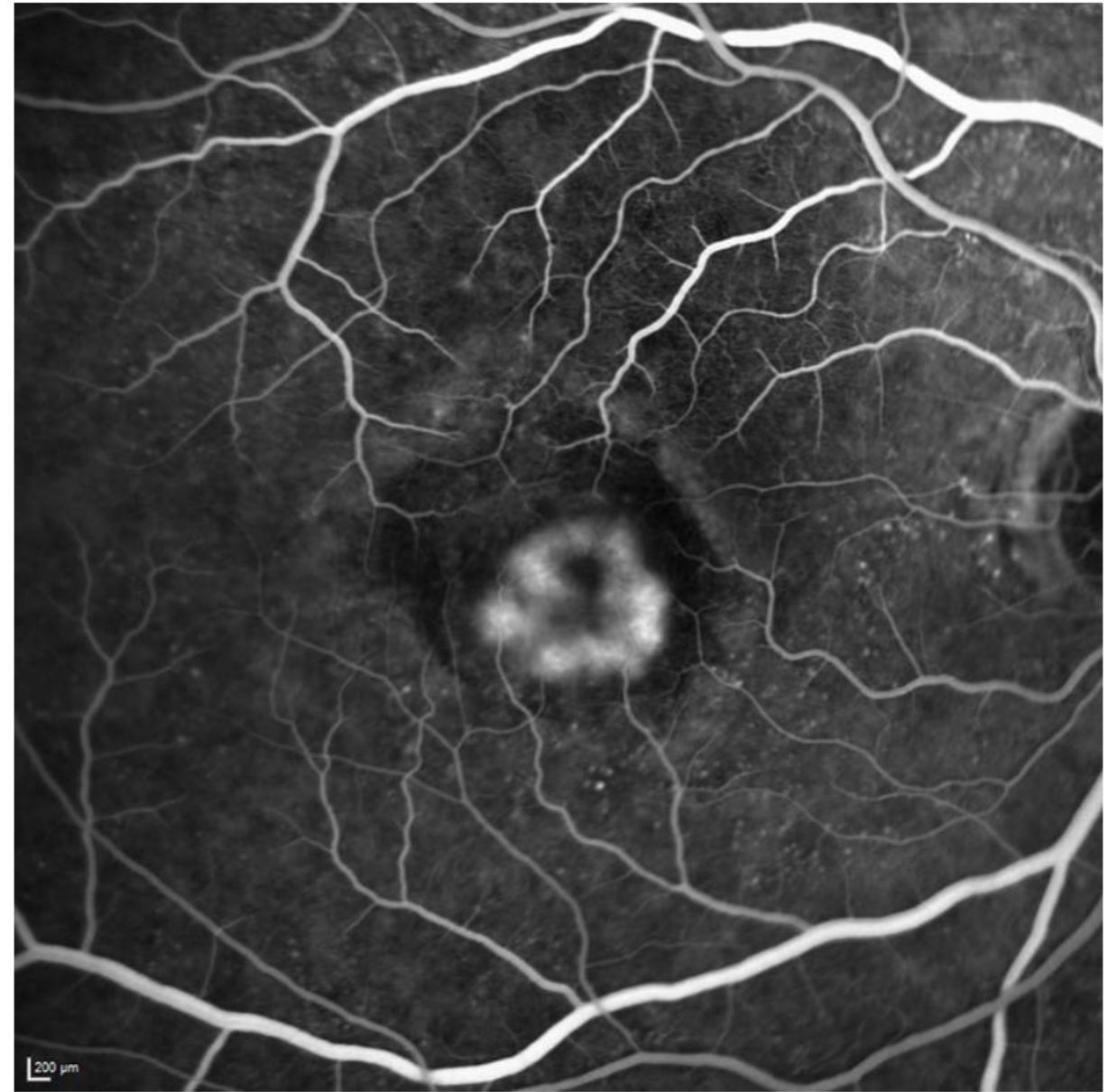
Type 2 CNV

Features of type 2 CNV (classic CNV) on SD-OCT:

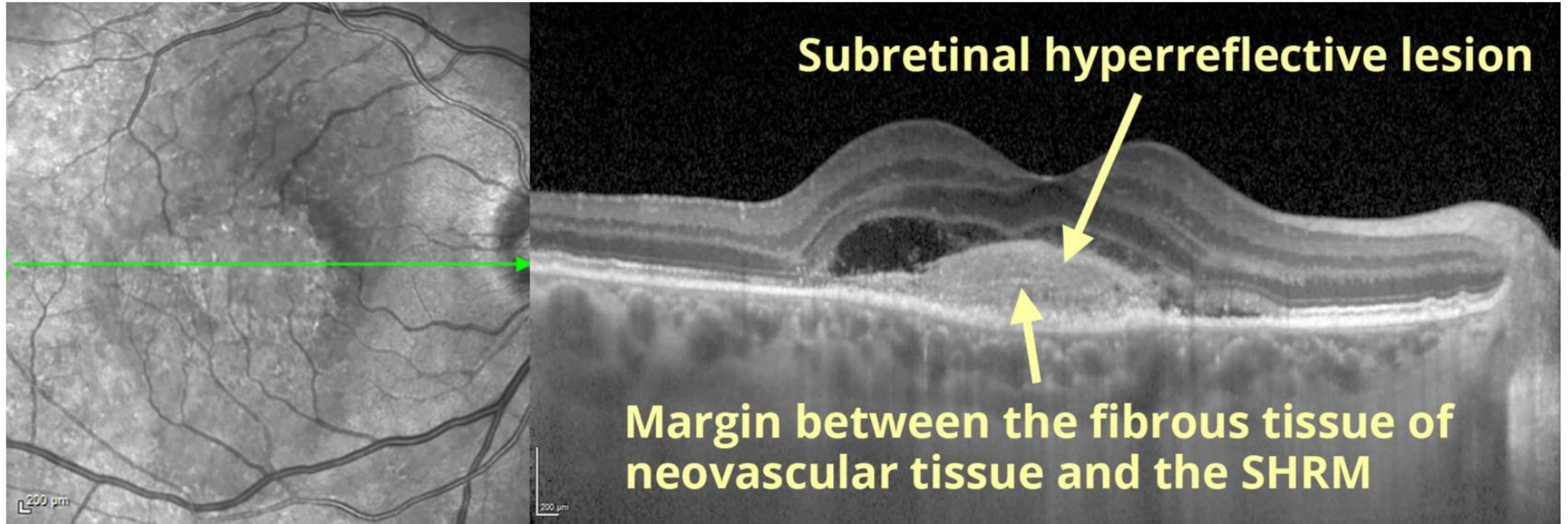
- Subretinal hyperreflective lesion (composed of both tissue of vascular membrane and subretinal hyperreflective material [SHRM])
- Subretinal fluid (SRF)



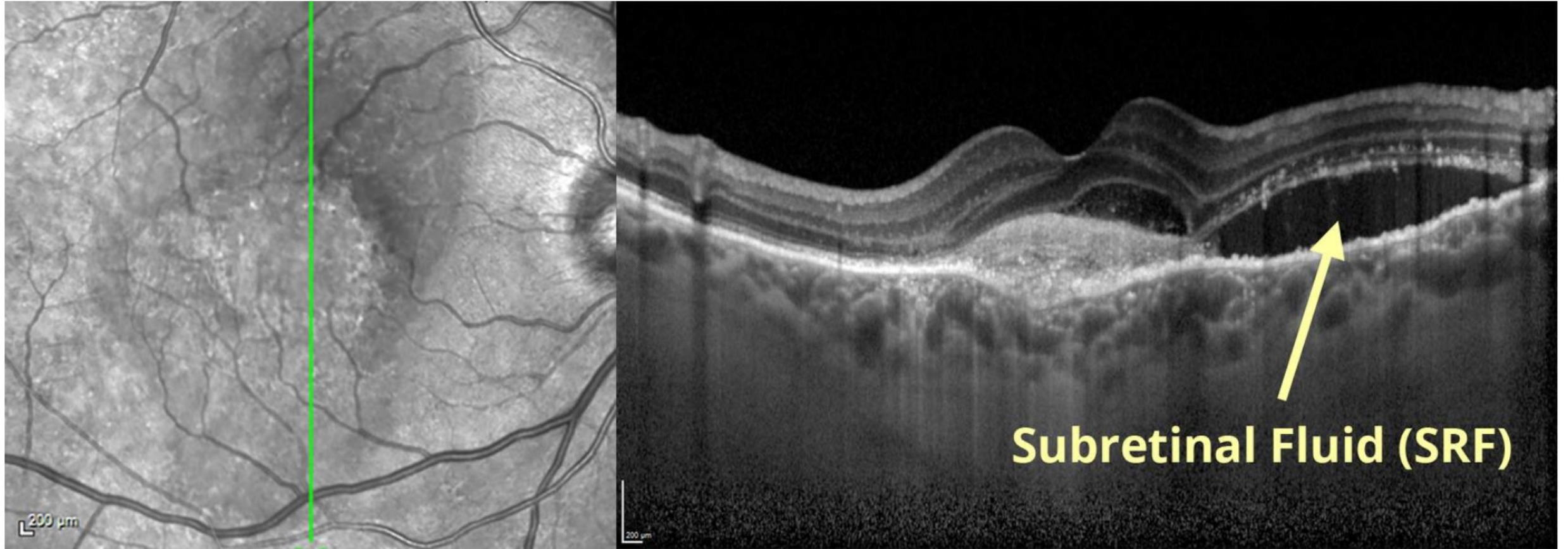
Fundus autofluorescence



Fluorescein angiography



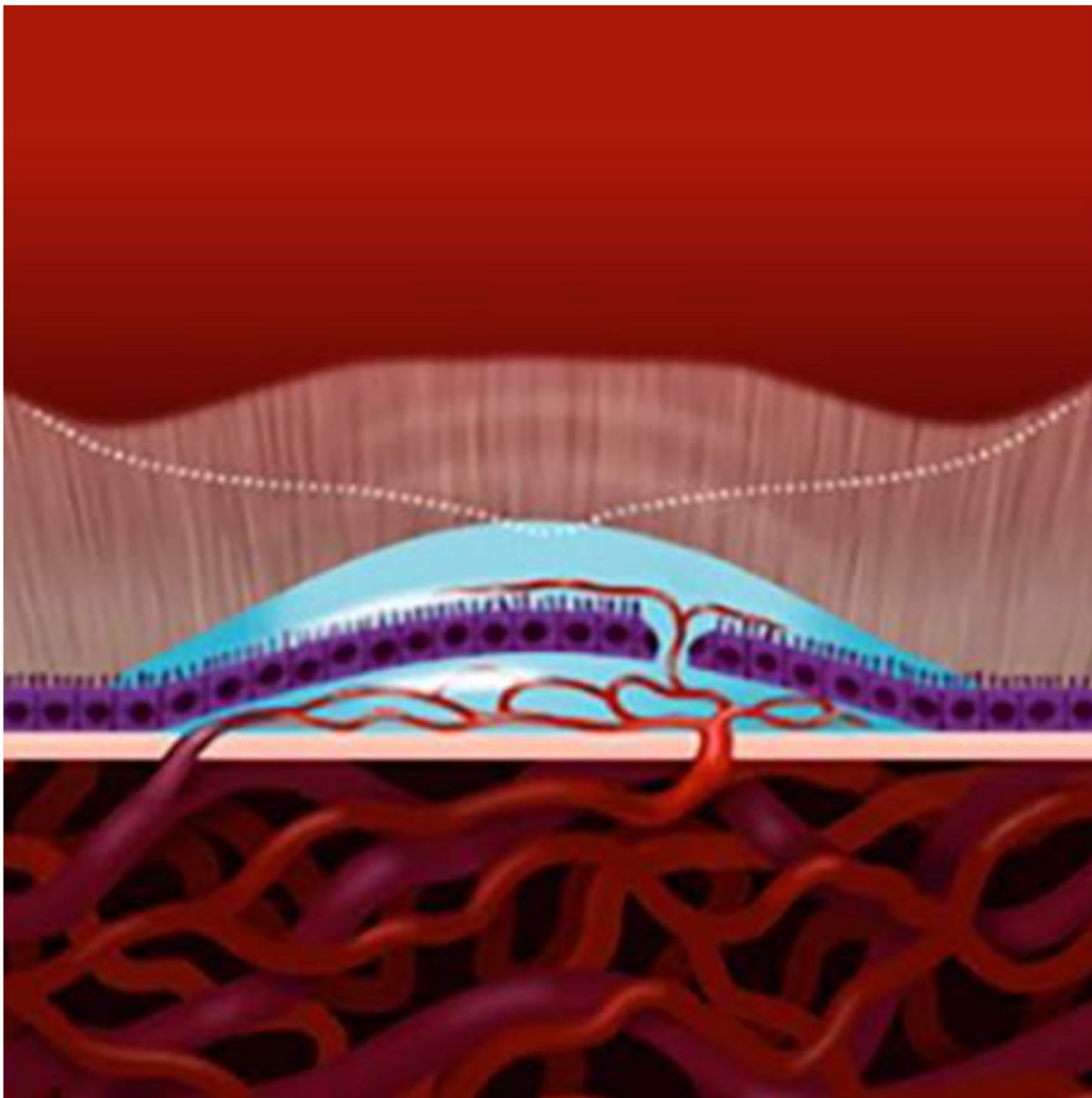
SD-OCT showing subretinal hyperreflective lesion. In this case, SD-OCT also shows the margin between the fibrous tissue of neovascular tissue and the subretinal hyperreflective material (SHRM) likely composed of inflammatory cells.



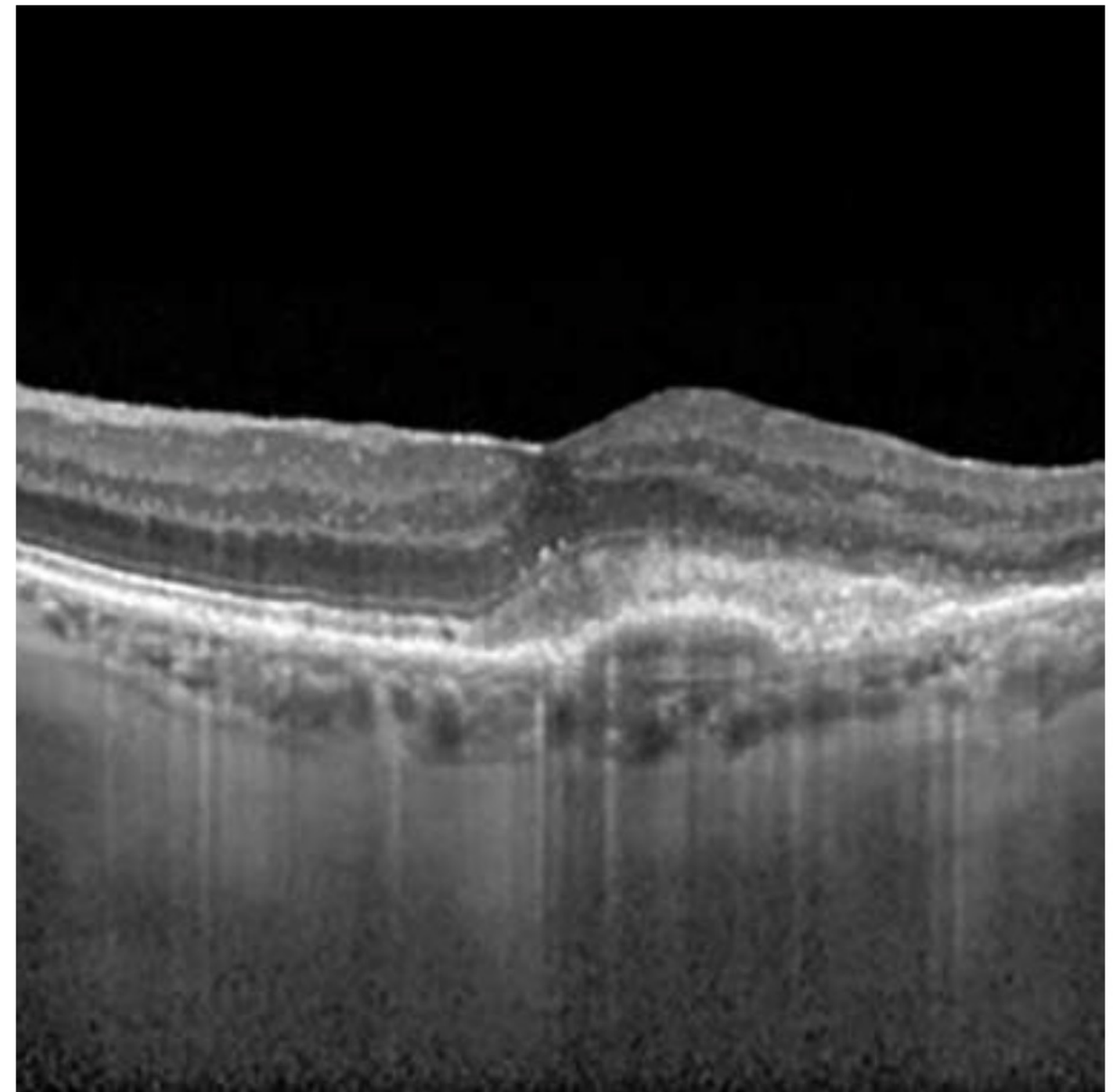
SD-OCT showing subretinal fluid (SRF)

OCT-A and Wet AMD: Morphology

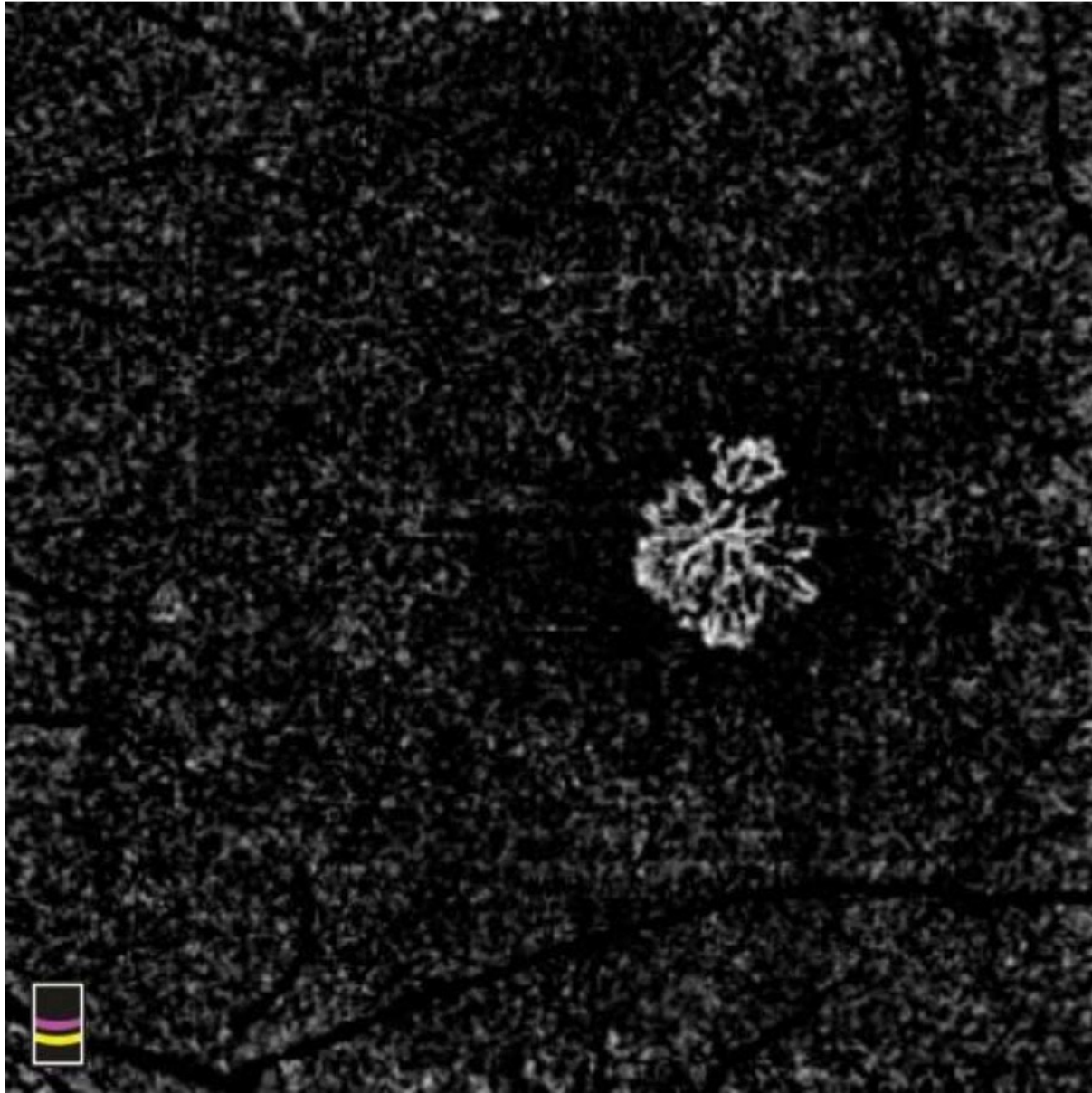
The morphology on OCT angiography (OCT-A) will also show quite typical signs of type 2 CNV such as quite dense high-flow vessels that are well imaged because they sit on top of the RPE (and so no masking effect by the RPE).



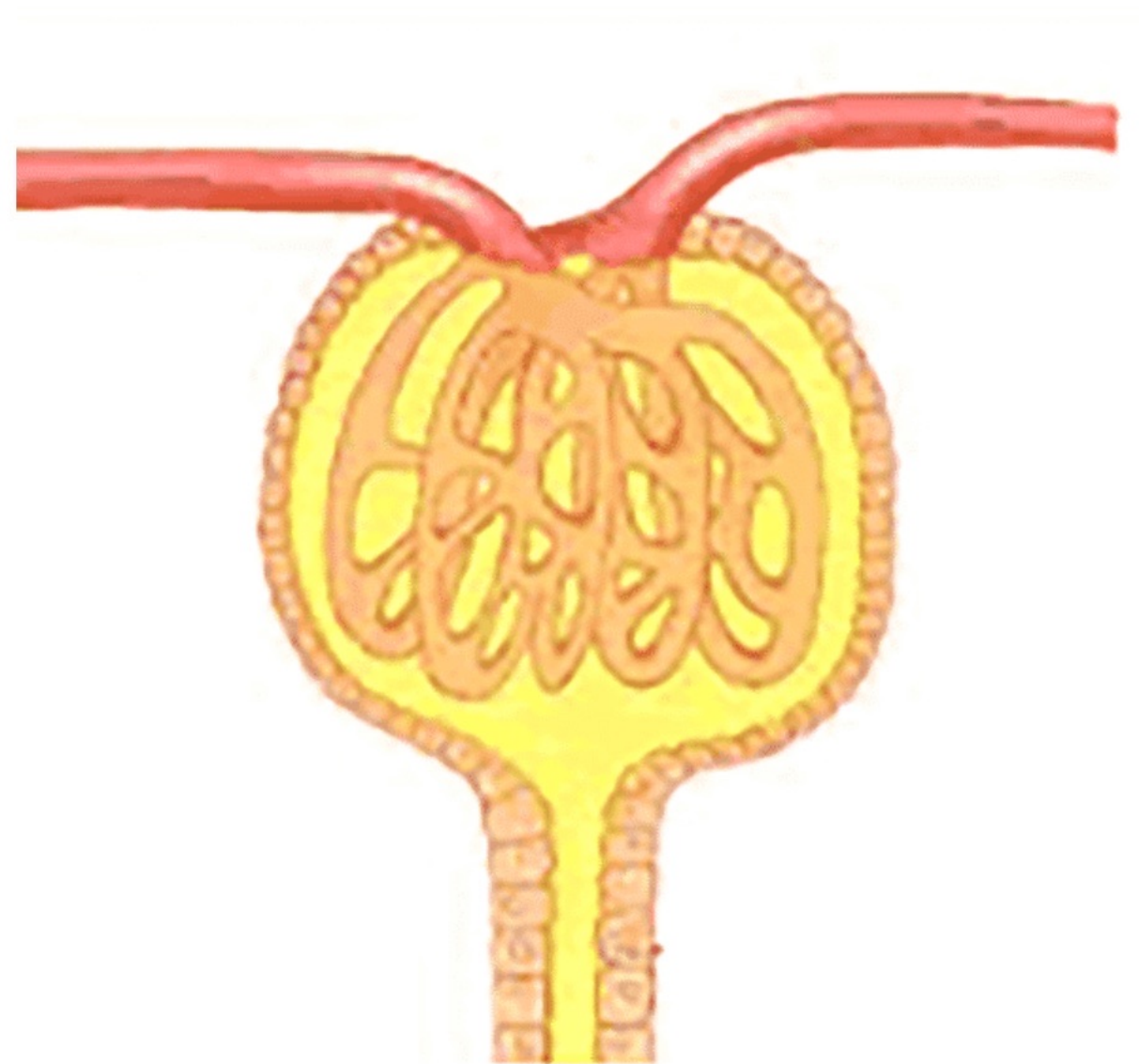
Illustration



OCT



Outer retina slab



Illustration

Features of type 2 CNV (classic CNV) on OCT-A:

- High-flow vessels
- Well imaged on OCT-A (no masking by RPE)

Identify the 2 shape types often used to describe type 2 CNV (classic CNV) in neovascular AMD on OCT-A.

Curly

Spiral

Glomerular

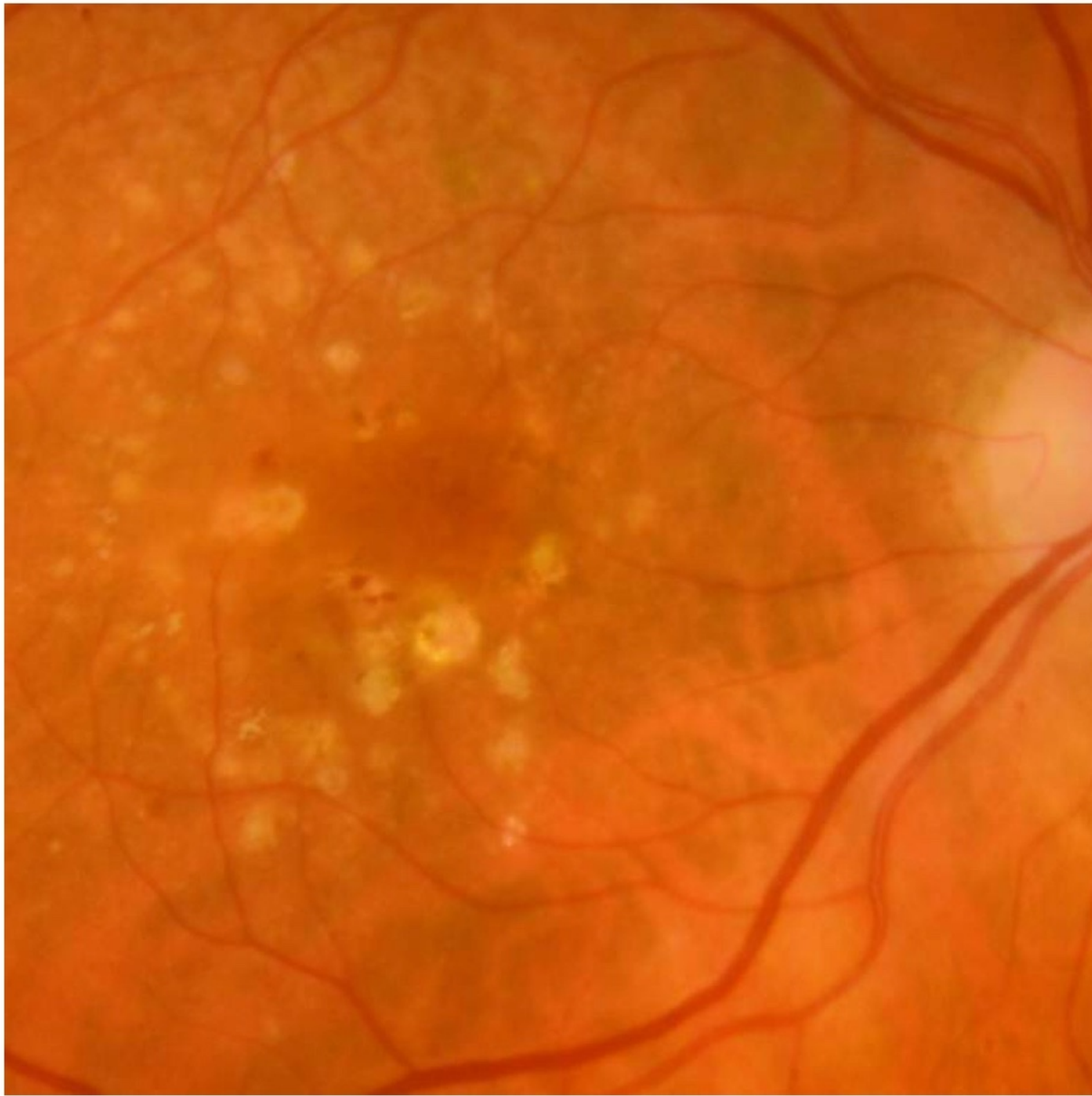
Medusa

On OCT-A, type 2 CNV (classic CNV) is often described as being **glomerulus-shaped** or **medusa-shaped**.

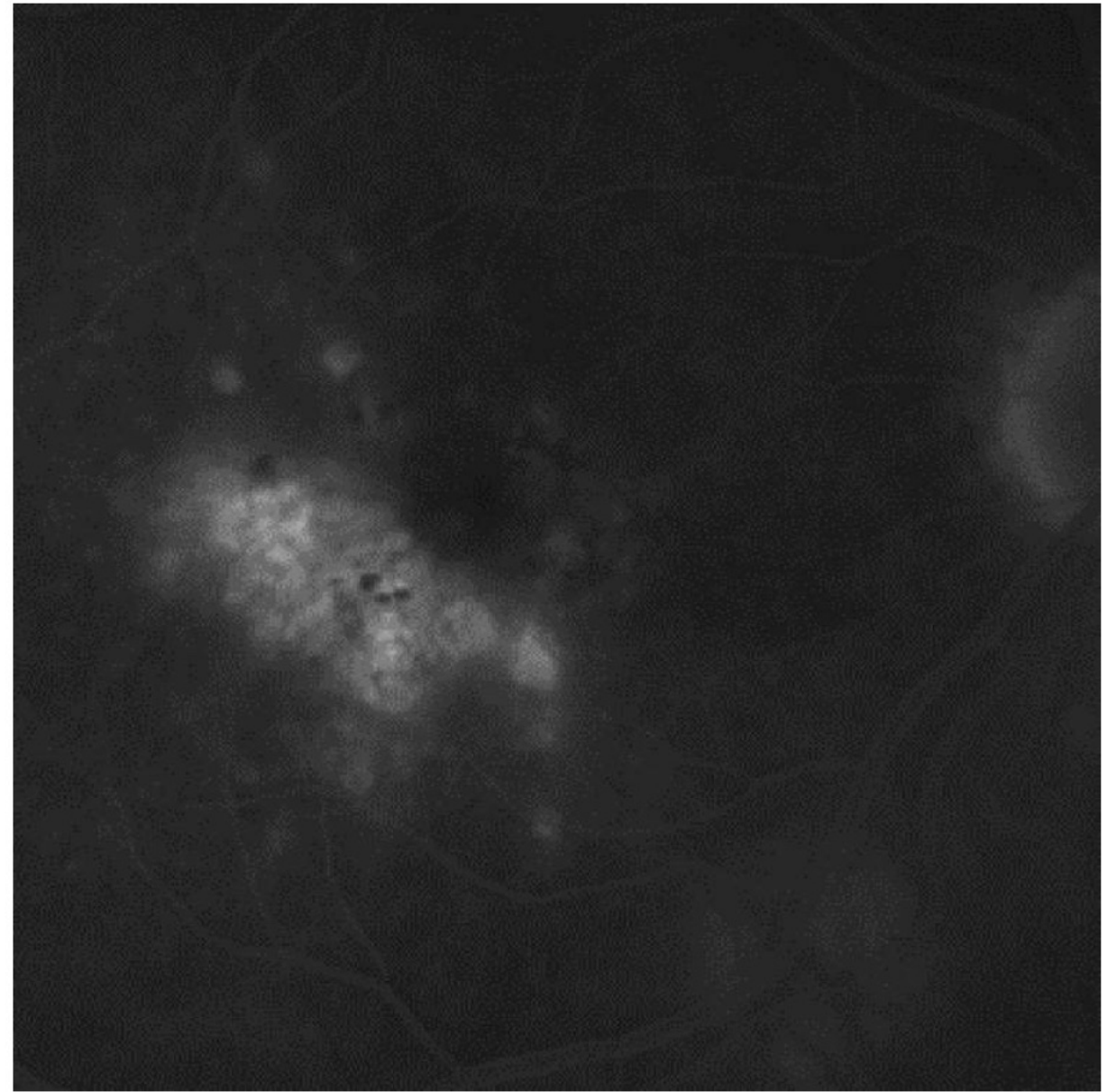
Type 3 CNV

Features of type 3 CNV (RAP, retinal angiomatous proliferation) on SD-OCT:

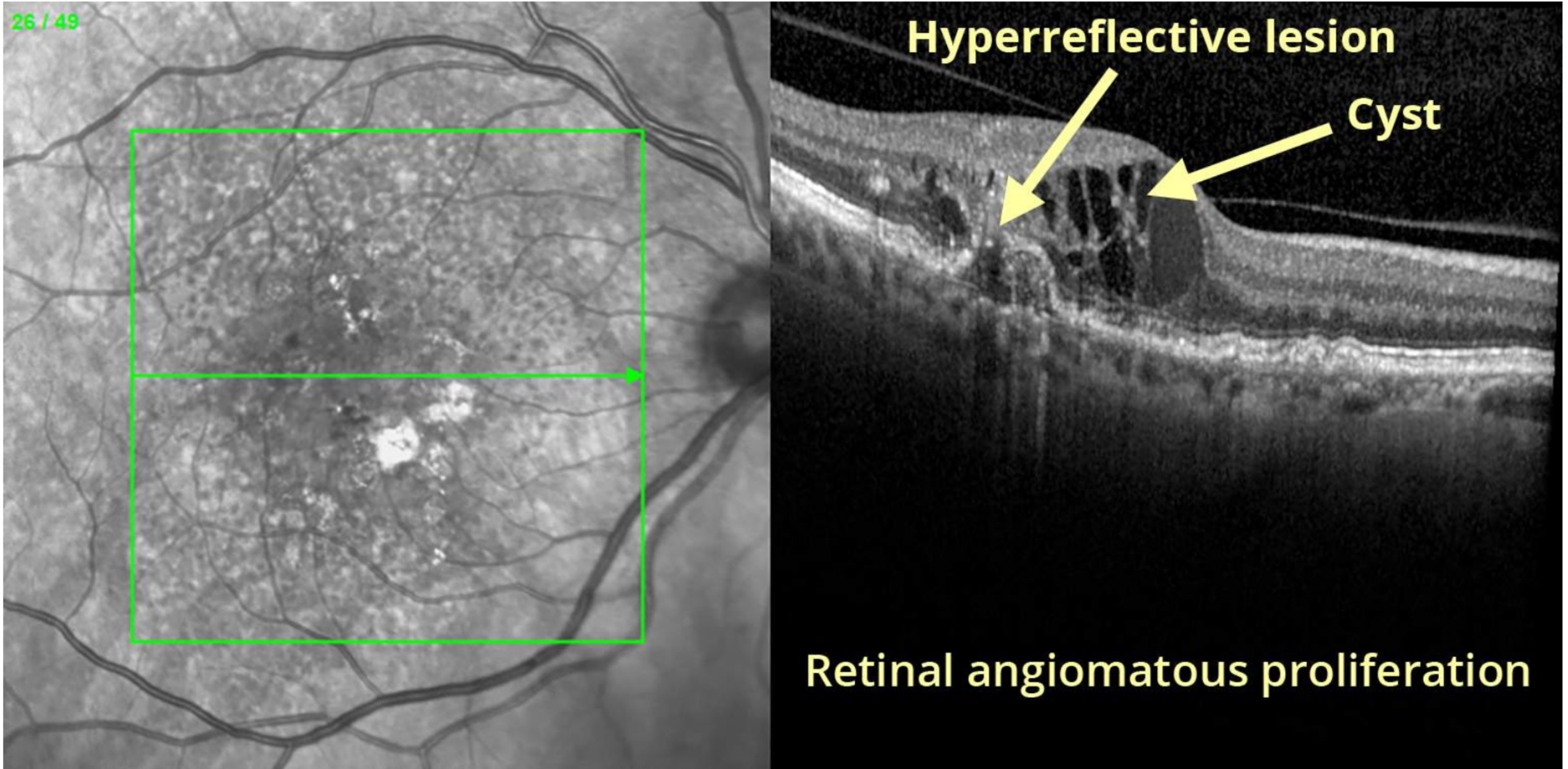
- Intraretinal cysts
- Hyperreflective lesion through the neuroretina



Colour photograph



Fluorescein angiography

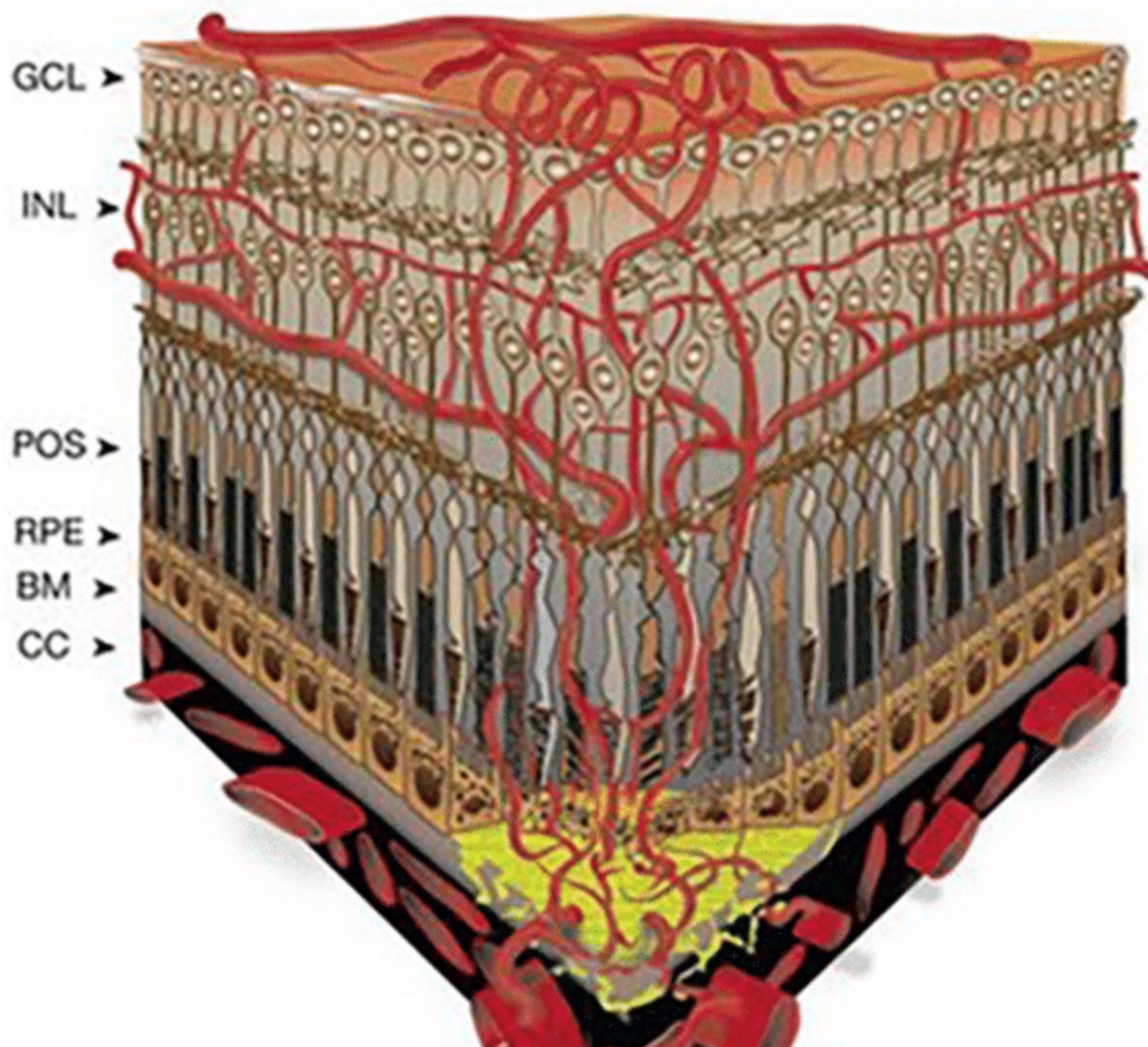


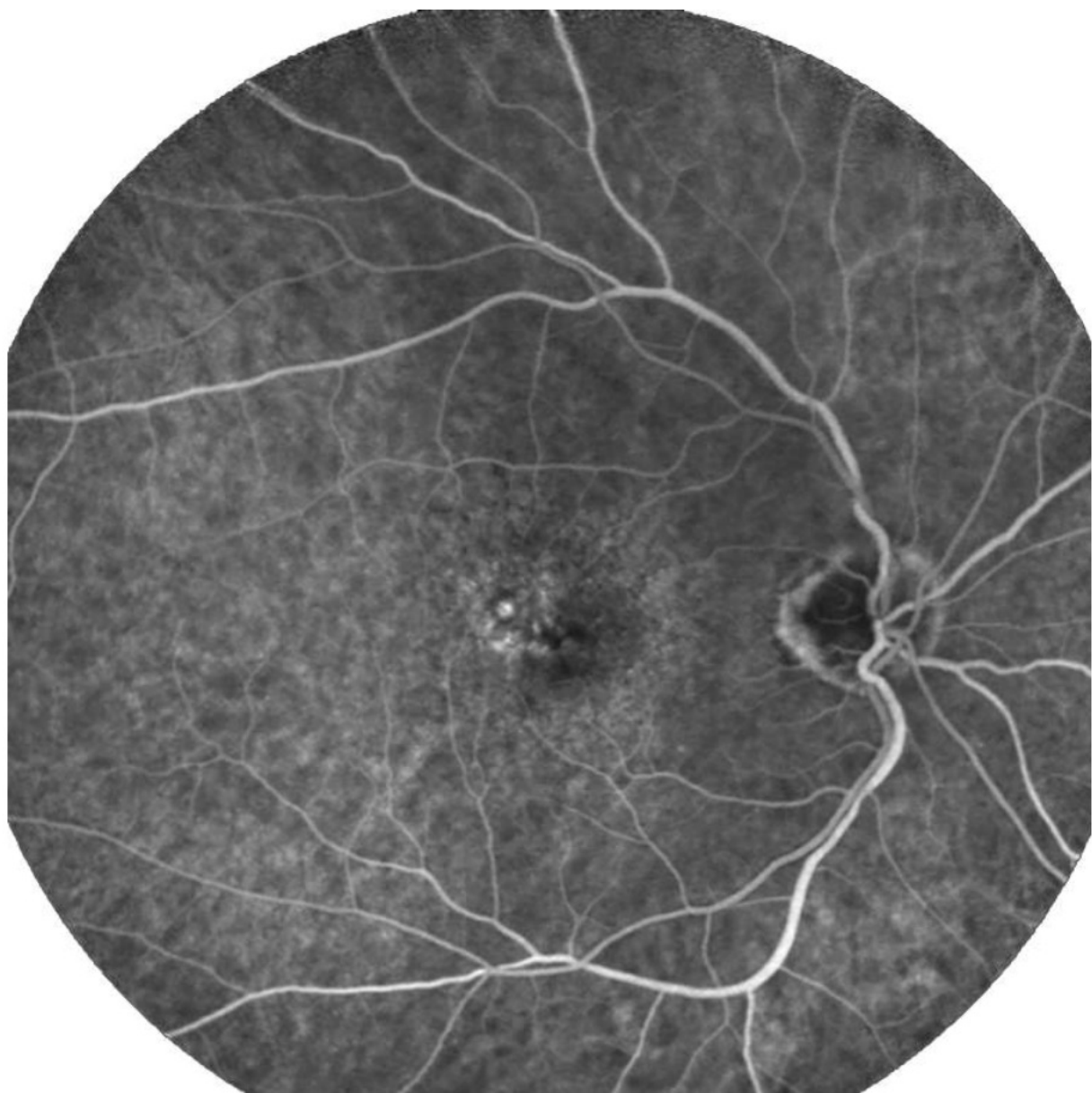
SD-OCT shows cysts throughout the retina and a hyperreflective lesion that goes through the retina (it is actually the anastomosis that looks hyperreflective)

OCT-A and Wet AMD: Semiology

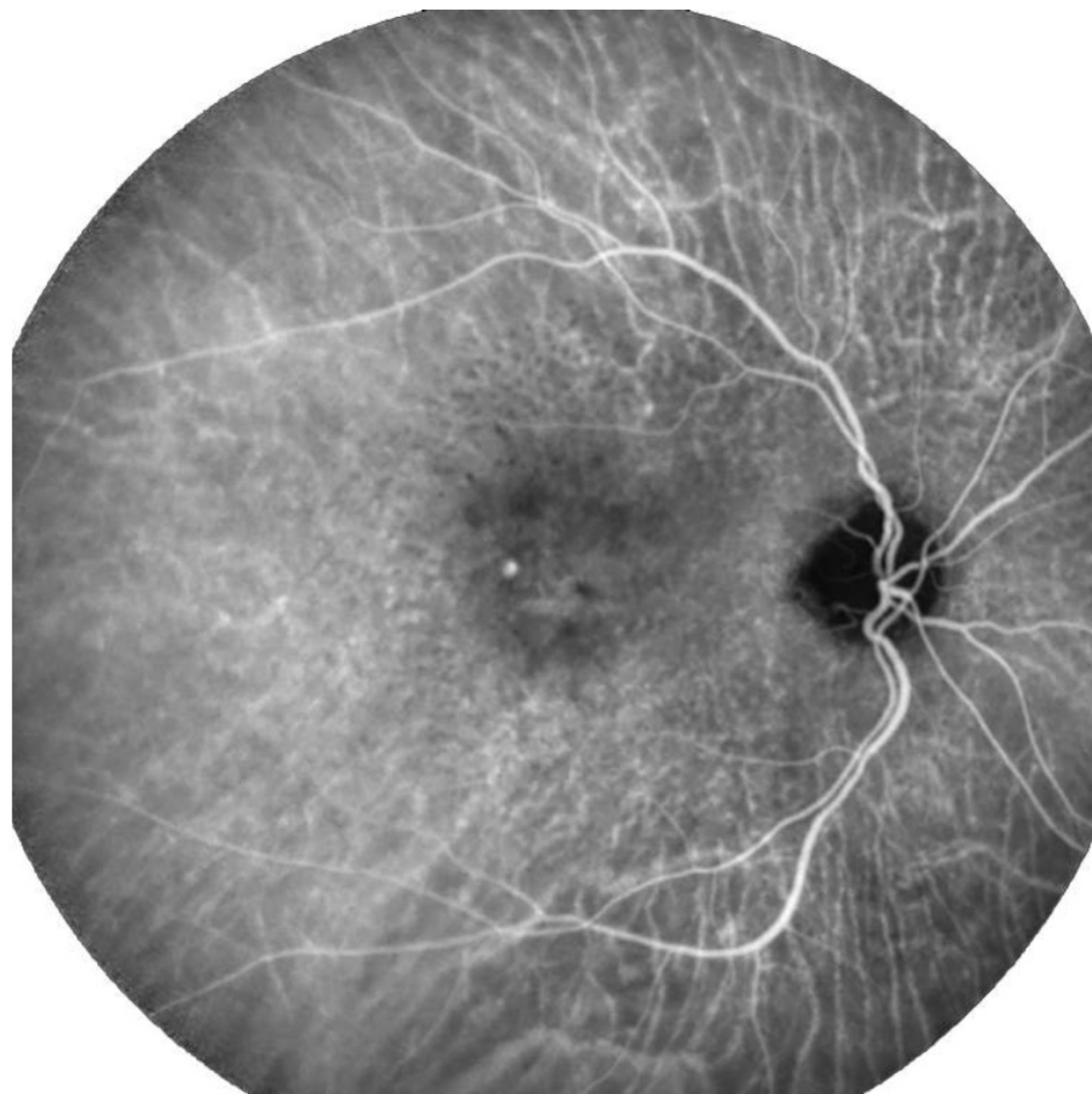
The morphology on OCT angiography (OCT-A) will show quite typical signs of type 3 CNV (RAP).

With this type 3 lesion, neovessels go through the neuroretina which can be well seen on the outer retina slab (if big enough) and can also be seen on cross-sectional OCT-A.

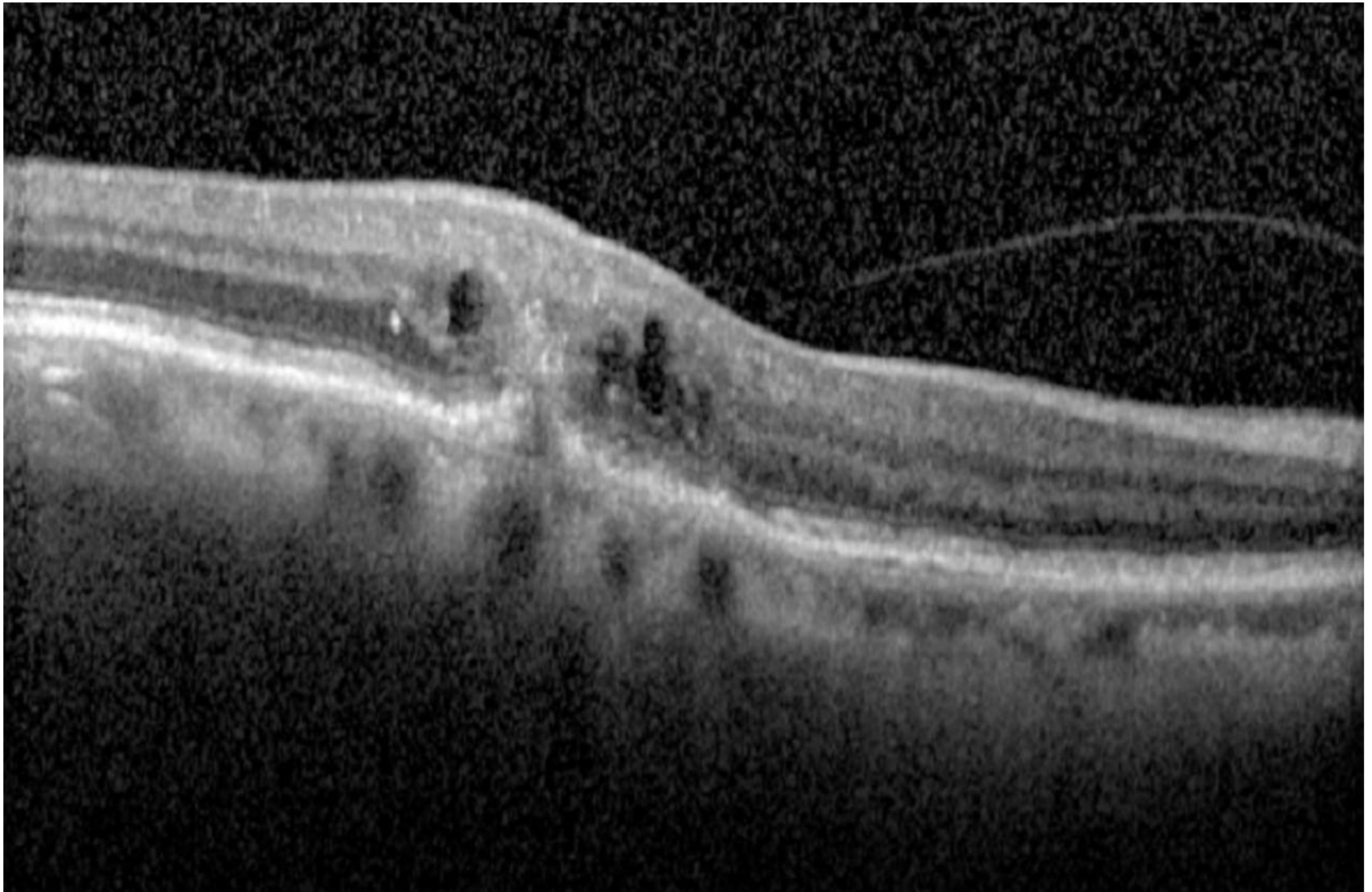




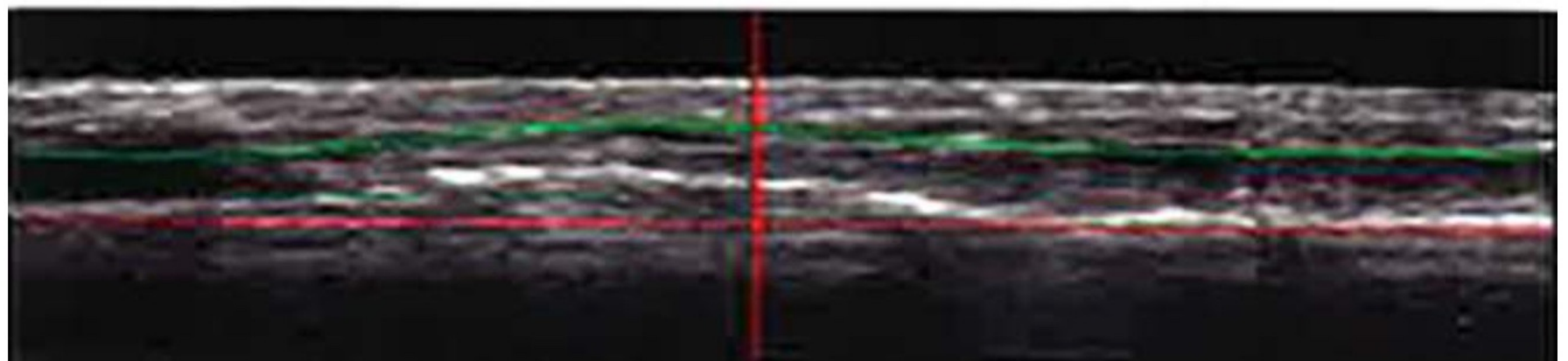
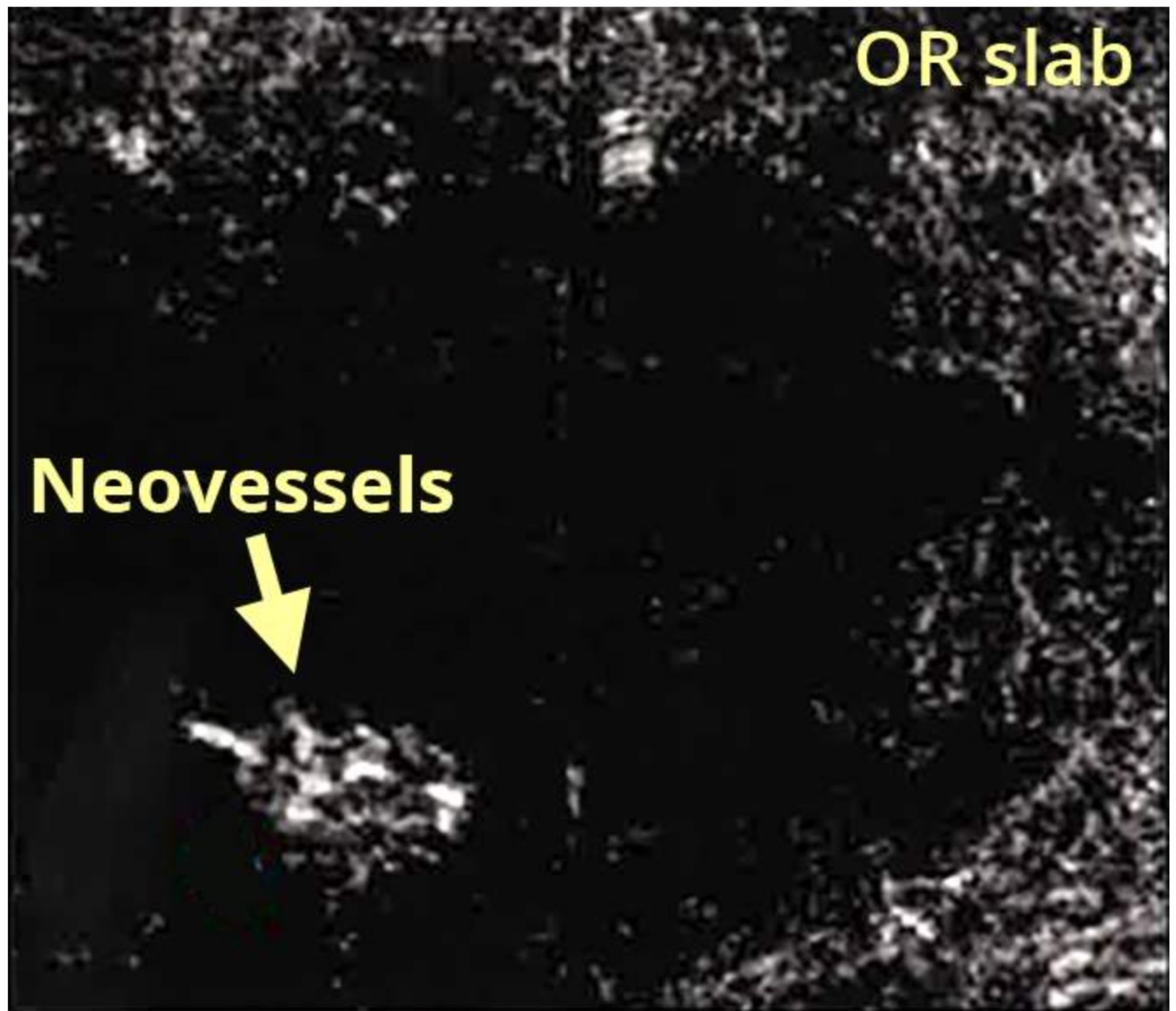
Fluorescein angiography



Fluorescein angiography



OCT



Neovessels going through the neuroretina can be well seen on the outer retina slab if big enough and can also be seen on cross-sectional OCT-A. Outer retina, vascular tuft, high flow (Courtesy of E. Soueid).

Features of type 3 CNV (RAP, retinal angiomatous proliferation) on OCT-A:

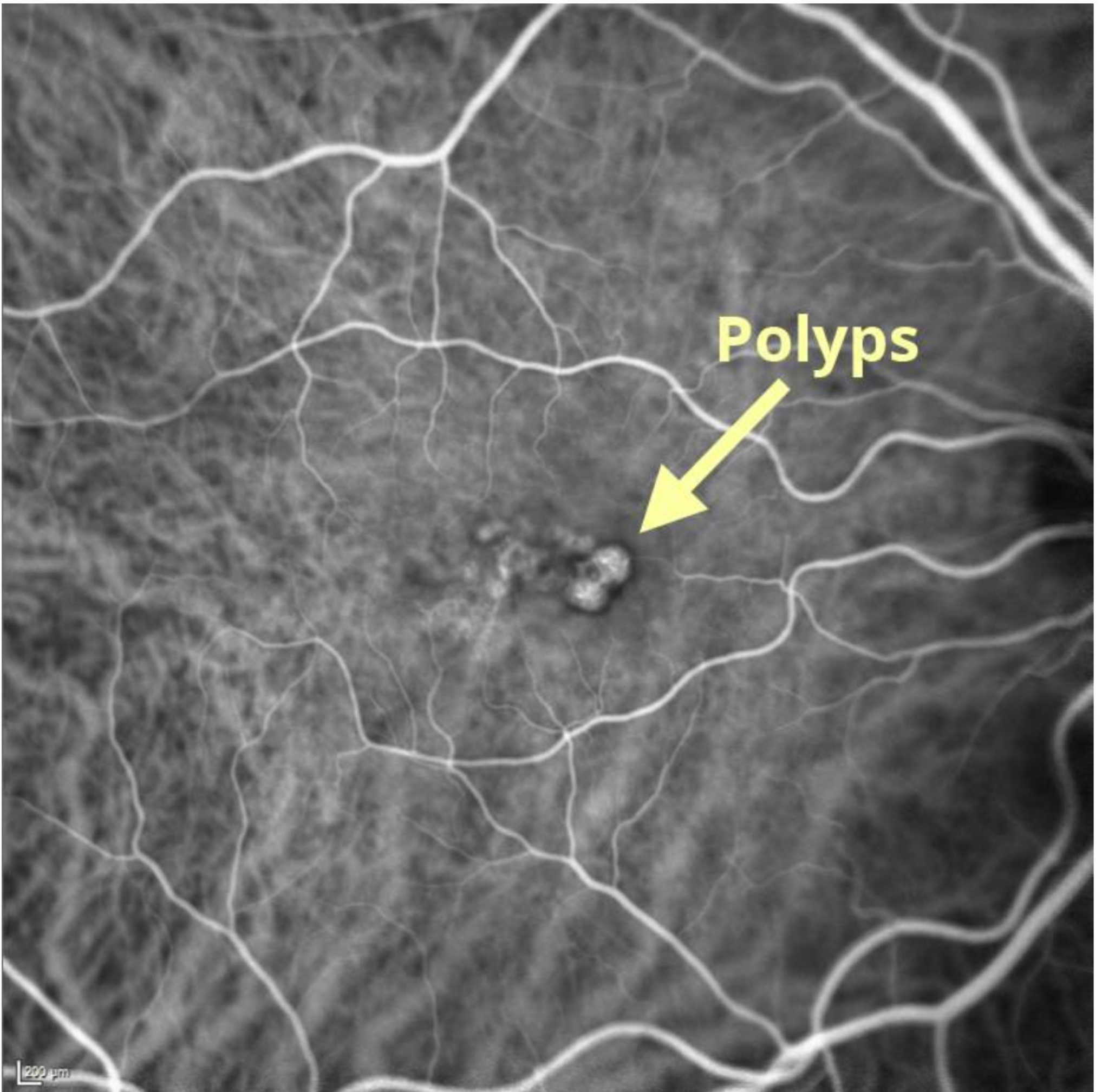
- **Tufts** in the outer retina
- Small and highly responsive vessels

Type 4 CNV

Type 4 neovascular AMD is polypoidal and is also referred to as aneurysmal type 1 CNV.

Features of type 4 CNV (polypoidal AMD) on SD-OCT:

- Pigment epithelial detachment (PED) on top of Bruch's membrane with round lesion
- Double layer sign (dome of the RPE)



Fluorescein angiography: It is important to recognise polyps

SD-OCT

UNDER RPE

ROUND LESION

DOUBLE LAYER SIGN

Polys as seen on SD-OCT



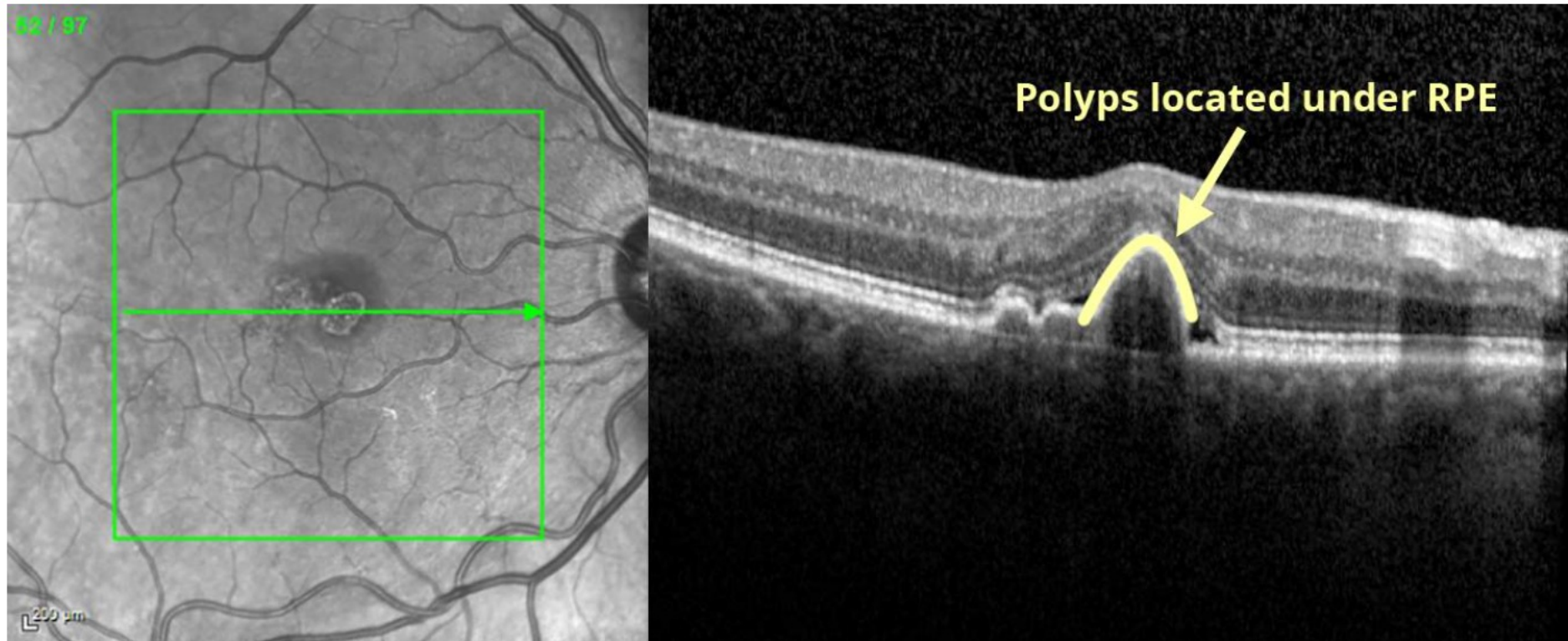
SD-OCT

UNDER RPE

ROUND LESION

DOUBLE LAYER SIGN

Polyps are usually located under the RPE



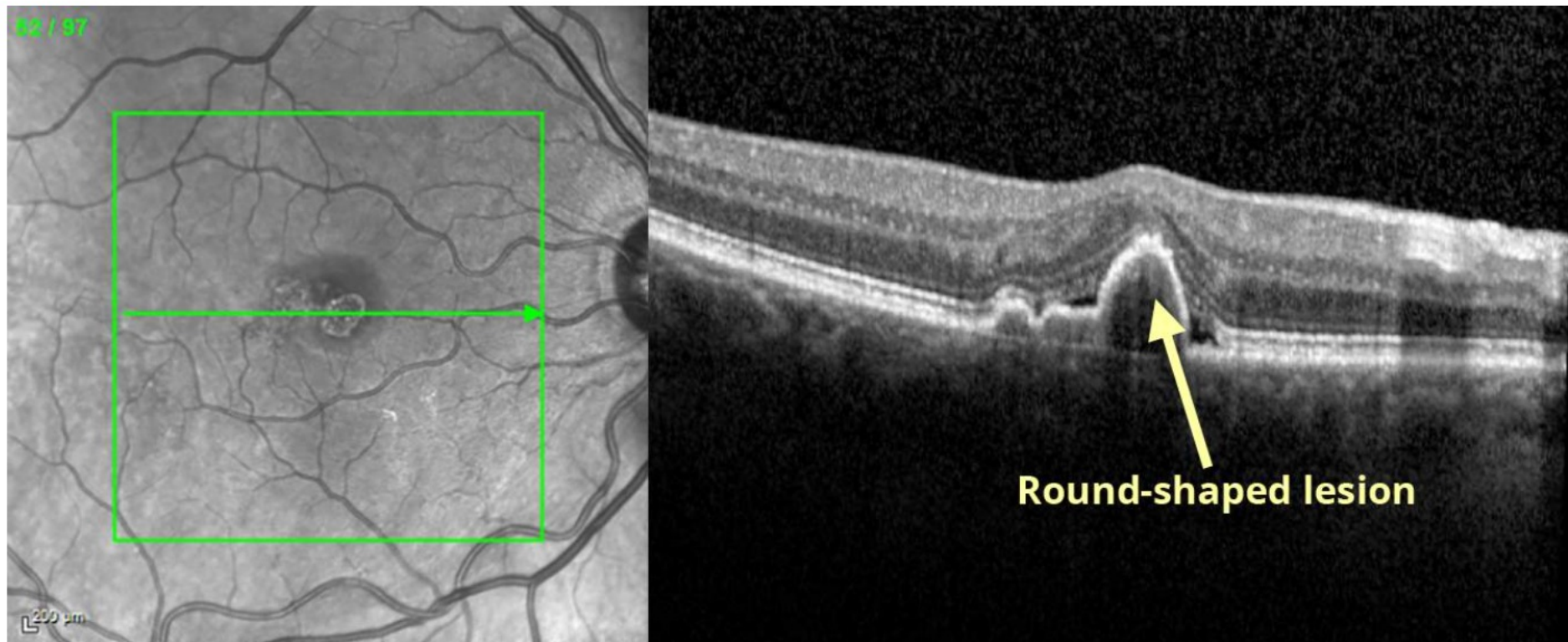
SD-OCT

UNDER RPE

ROUND LESION

DOUBLE LAYER SIGN

Round-shaped lesion seen under the RPE



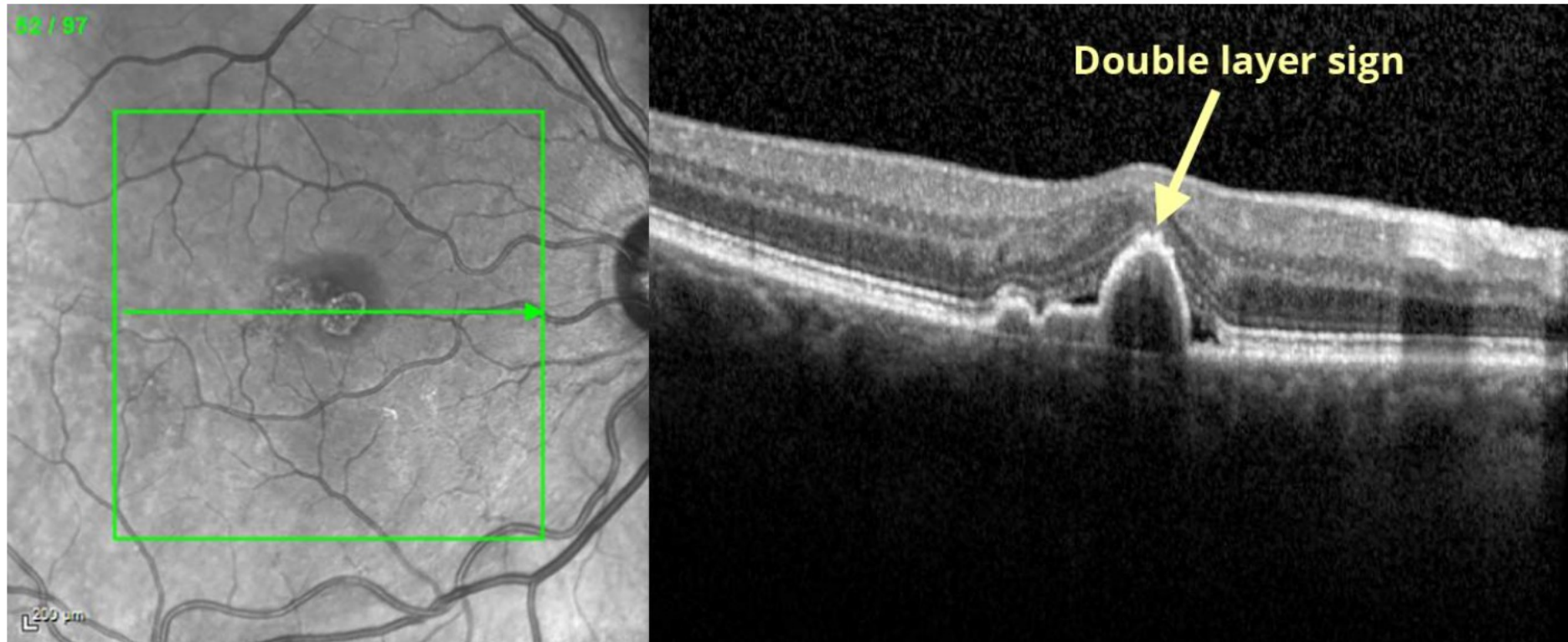
SD-OCT

UNDER RPE

ROUND LESION

DOUBLE LAYER SIGN

Round-shaped lesion with the double layer sign which is recognised as the RPE and the top of the rounded polyps



OCT-A and Wet AMD: Morphology

Identify the 2 correct statements.

- ICGA shows polyps more clearly than OCT-A
- OCT-A shows polyps more clearly than ICGA
- OCT-A shows the branching vascular network more clearly than ICGA
- ICGA shows the branching vascular network more clearly than OCT-A

Identify the 2 correct statements.



ICGA shows polyps more clearly than OCT-A



OCT-A shows polyps more clearly than ICGA



OCT-A shows the branching vascular network more clearly than ICGA



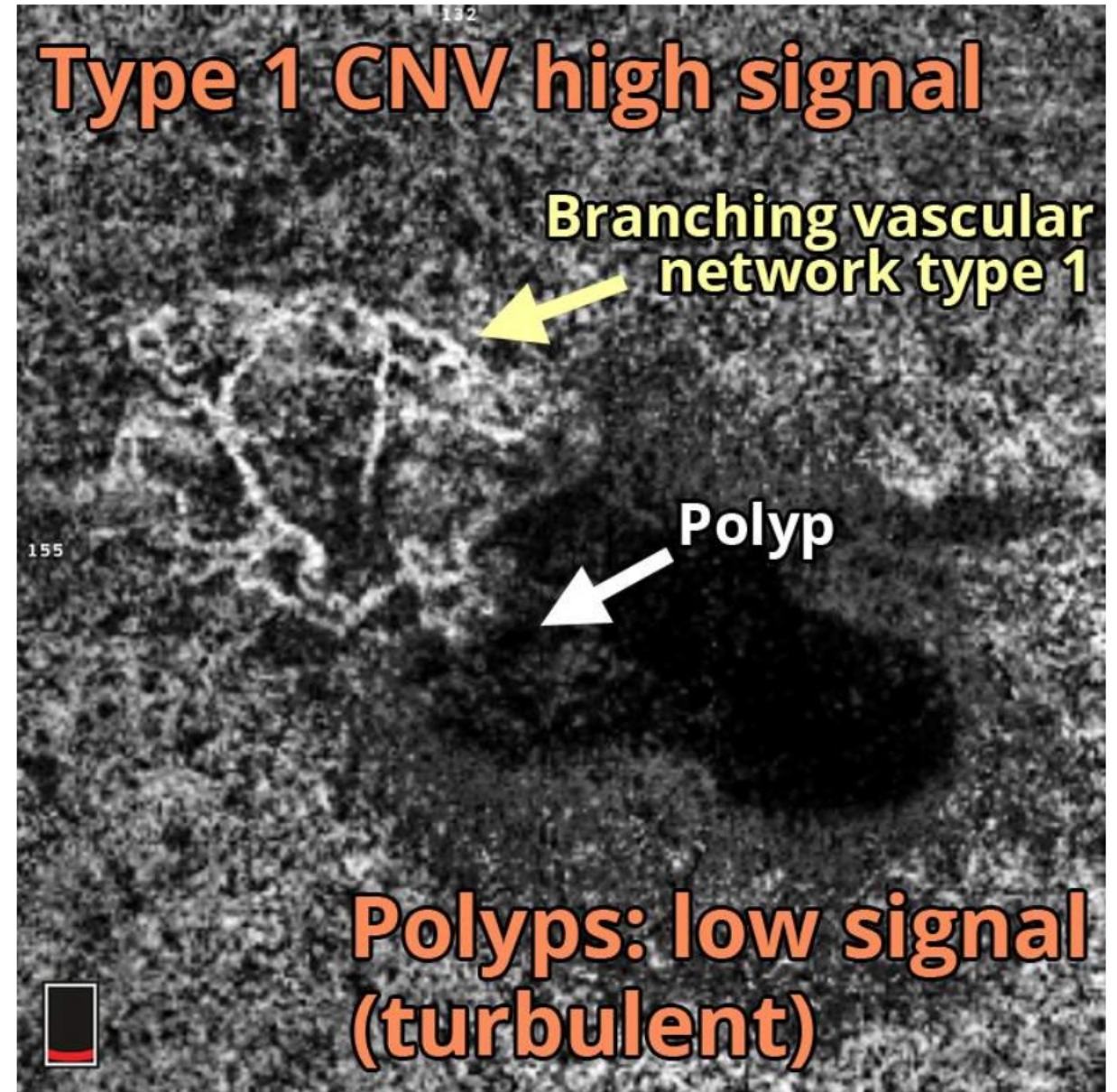
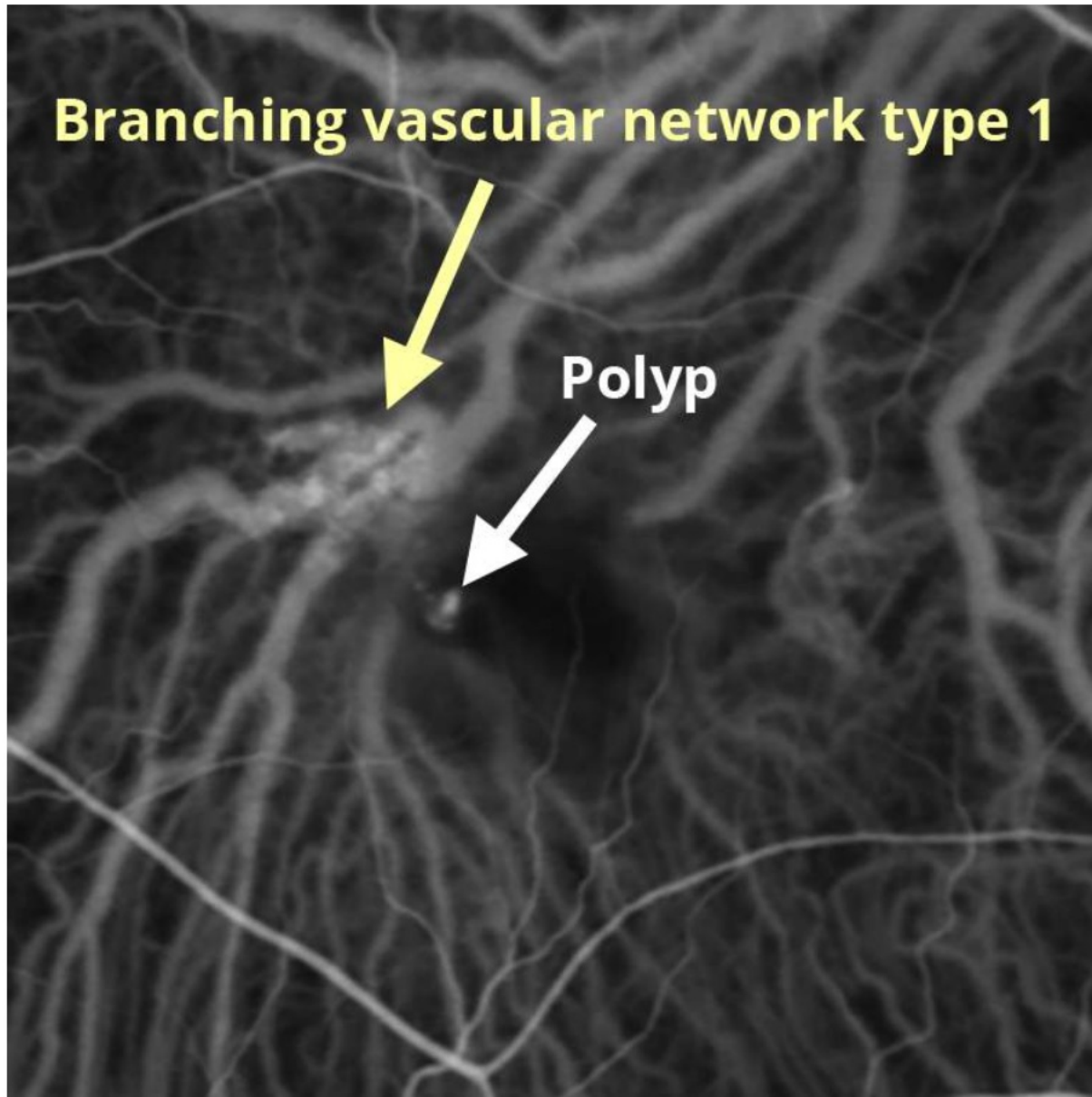
ICGA shows the branching vascular network more clearly than OCT-A

Neovessels type 4 (polypoidal vasculopathy):

- Polyps have mostly no signal on OCT-A
- OCT-A detection of polyps is 20 – 45% according to various studies



Indocyanine Green Angiography (ICGA)



ICGA clearly shows the polyp (quite hypercyanescent). It may also show the branching vascular network type 1 but it may not be too clear.

OCT-A does not show the polyp clearly (it is lost because the flow is turbulent and it needs to be linear to be seen on OCT-A). However, the branching vascular network is well visible on OCT-A.

Remember:

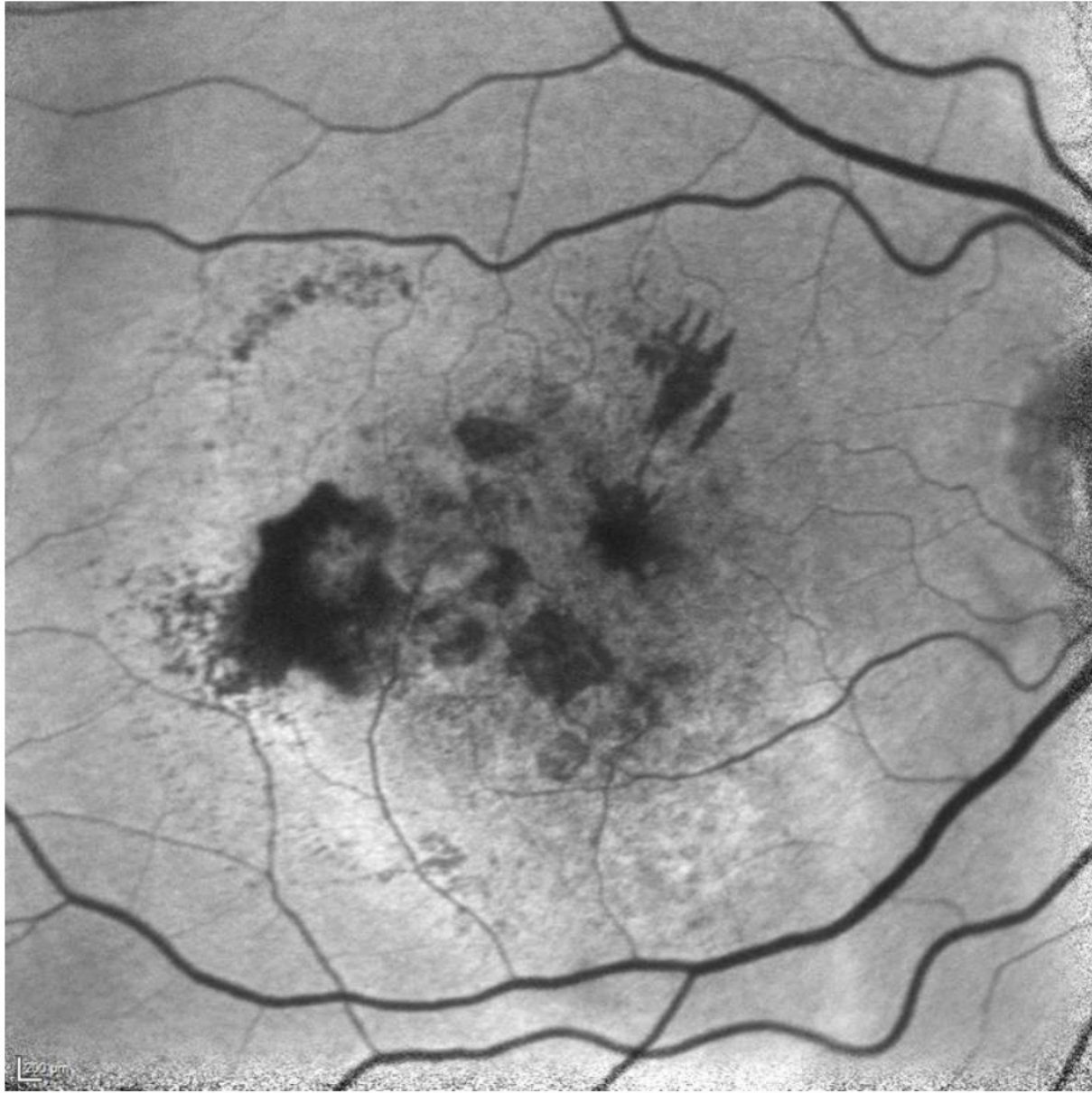
**A weakness of OCT-A is that it
does not clearly show polyps**

The onion sign

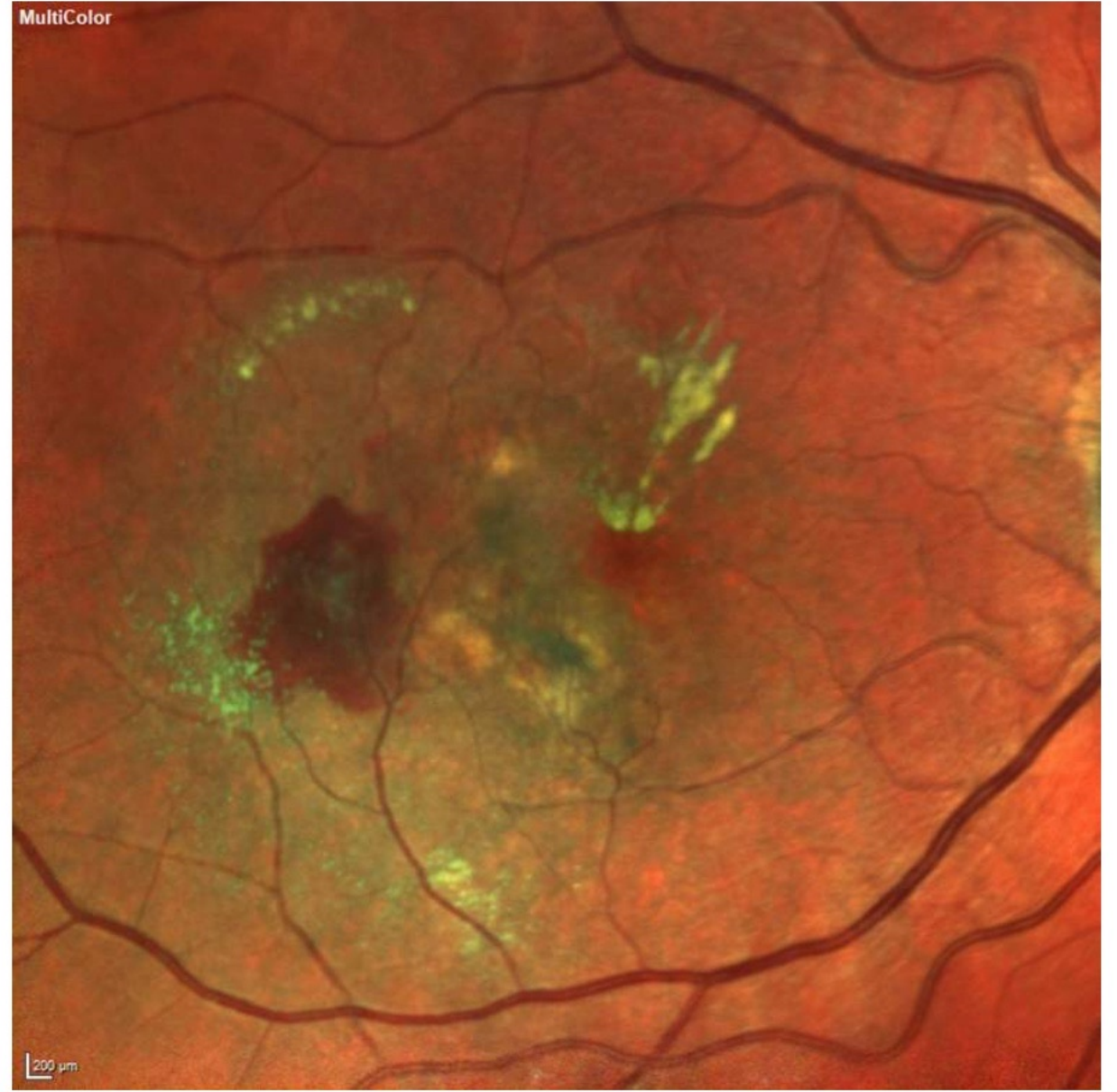
The onion sign is an important feature sometimes seen in neovascular AMD that should be recognised.

Features of the onion sign:

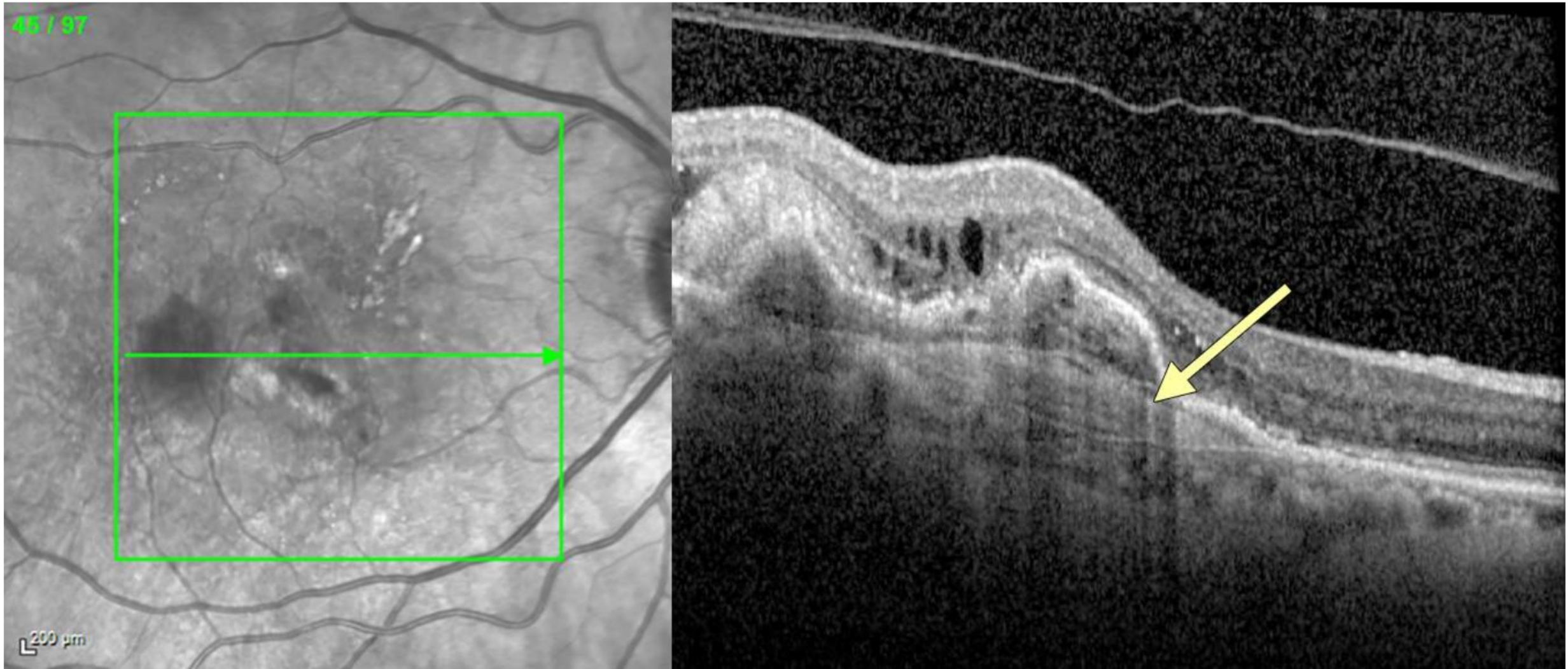
- Hyperreflective multilayer lesions on Bruch's membrane with the ability to transmit light as seen on SD-OCT
- Cholesterol and lipids components that shrinks in 80% of cases with time



Fundus autofluorescence



Colour fundus photograph



SD-OCT showing the onion sign (hyperreflective multilayer lines seen on Bruch's membrane with the ability to transmit light, and the light can be seen going into the choroid). Mostly composed of cholesterol and lipids.

RPE tear

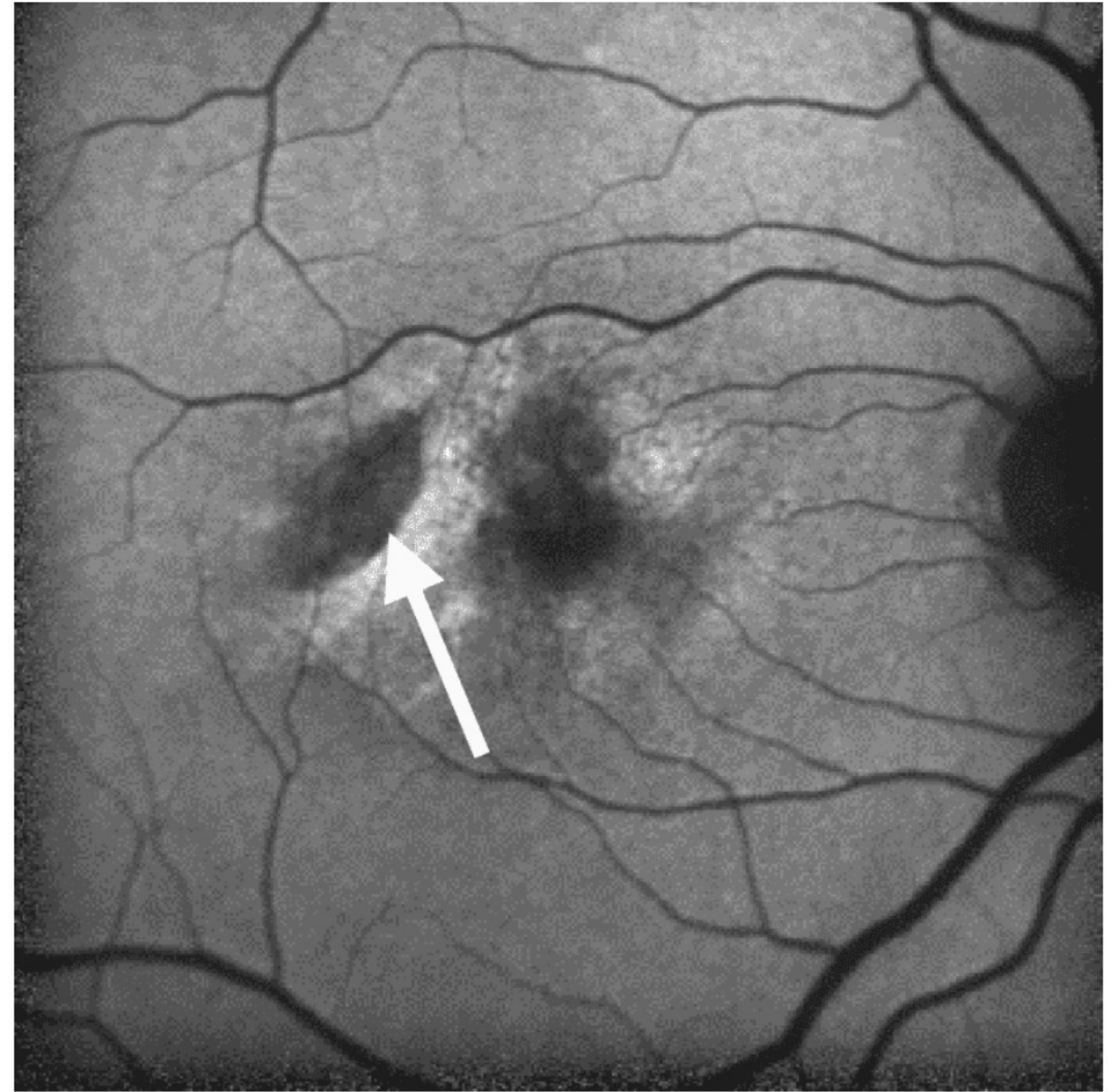
An RPE tear is a complication of neovascular AMD that should be recognised.

Features of an RPE tear on SD-OCT:

- Vertical hyperreflective line
- SRF (choroidal exudation)
- Prevents light transmission in the choroid



RPE tear clearly visible on colour fundus photograph

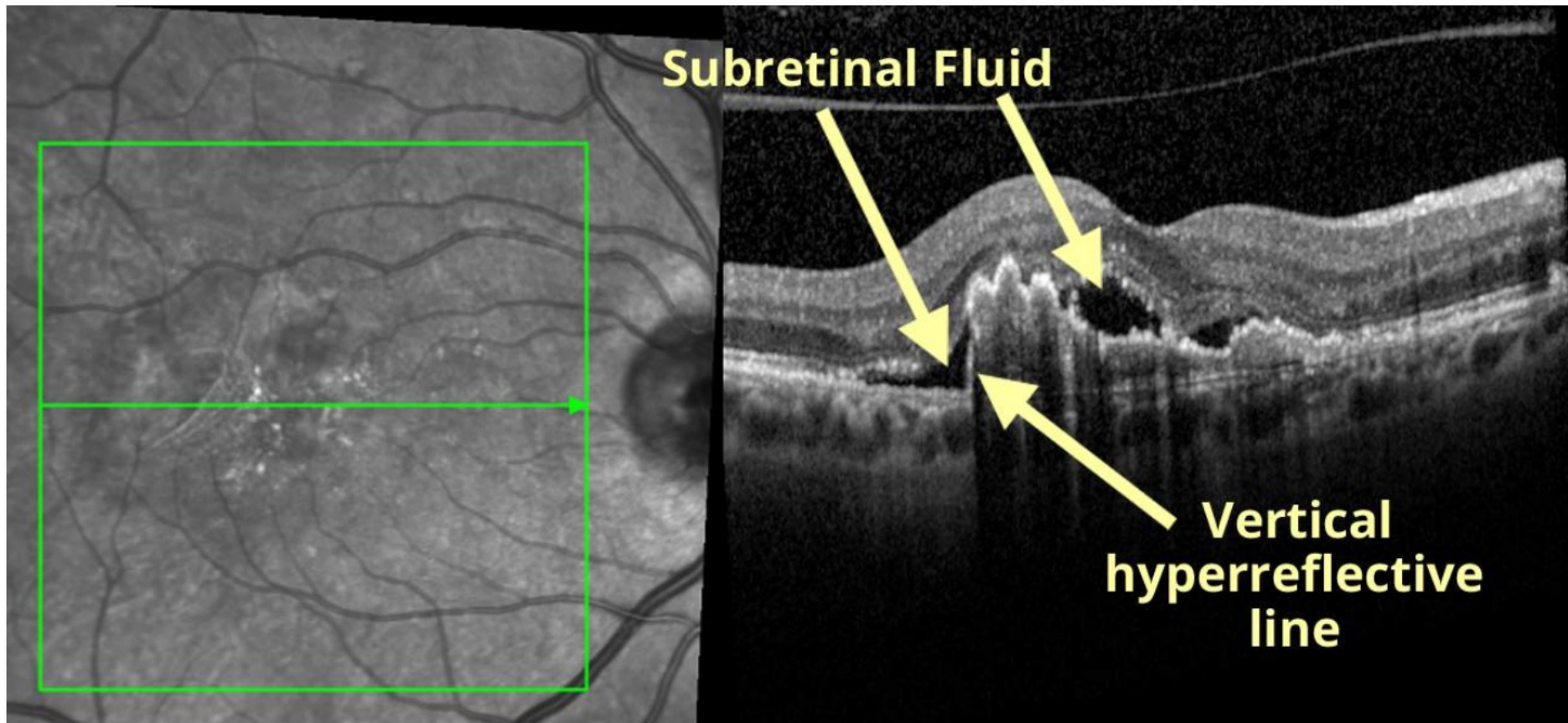


RPE tear clearly visible on fundus autofluorescence

SD-OCT

IMAGE WITHOUT LABELS

SD-OCT shows a vertical hyperreflective vertical line that is typical of an RPE tear. Subretinal fluid is present as the choroidal exudation is not stopped anymore by the RPE. It then prevents light transmission due to packed RPE cells.



SD-OCT

IMAGE WITHOUT LABELS



Outer retinal tubulation (ORT)

Outer retinal tubulation (ORT) is an important feature sometimes seen in neovascular AMD that should be recognised.

Outer retinal tubulations should not be mixed up with cysts so as to avoid unnecessary treatments.

Features of outer retinal tubulation (ORT) on SD-OCT:

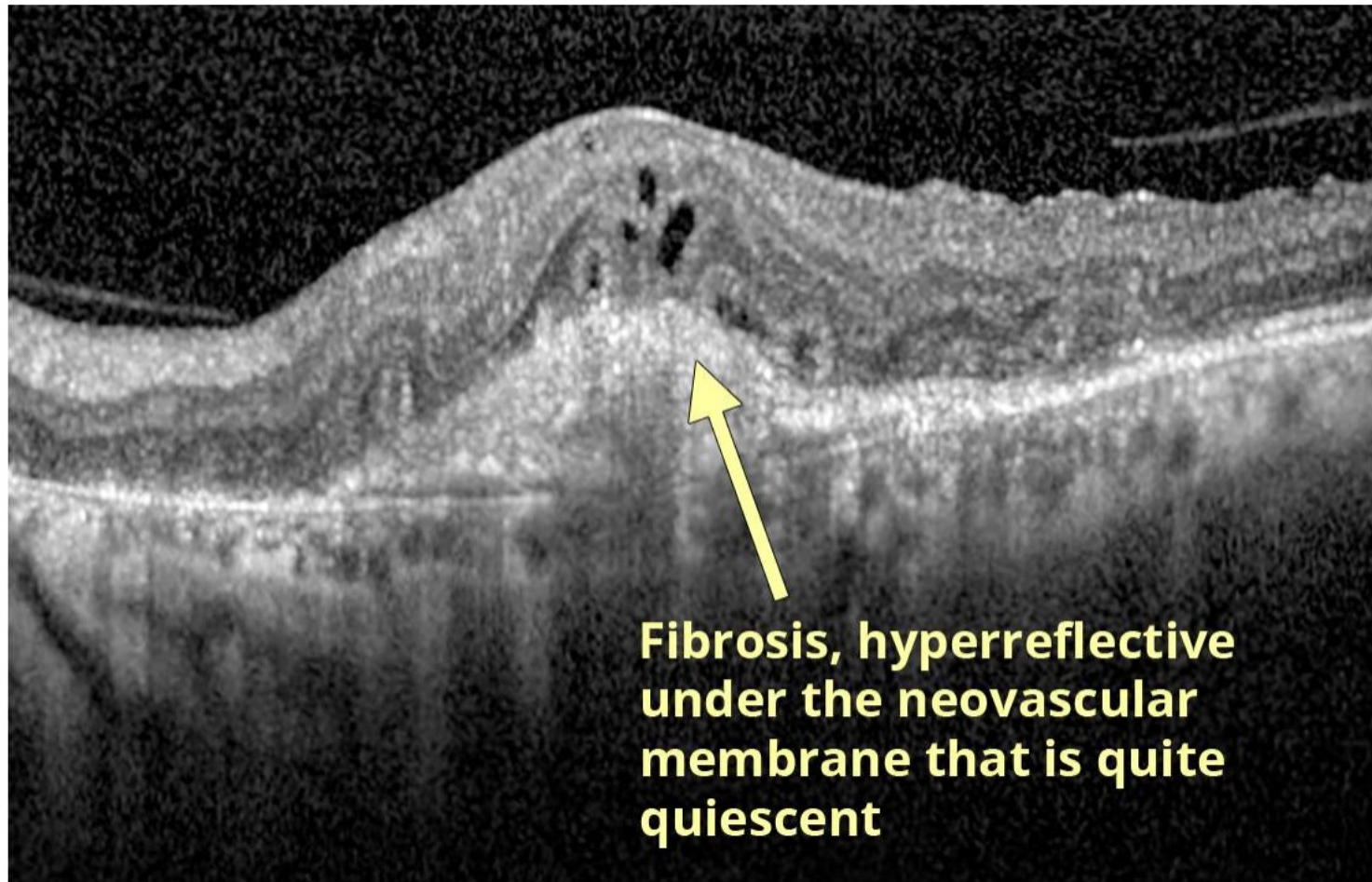
- Round or ovoid lesion with hyporeflective lumen and **hyperreflective band** in **ONL**
- Severe disorganisation of the external retina layers and **dysmorphic or absent RPE**
- On top of hyperreflective lesion (fibrotic neovascular membrane)

FIBROSIS

ORT

FIBROTIC LESION

SD-OCT showing the fibrosis which is hyperreflective under the neovascular membrane that is quite quiescent.

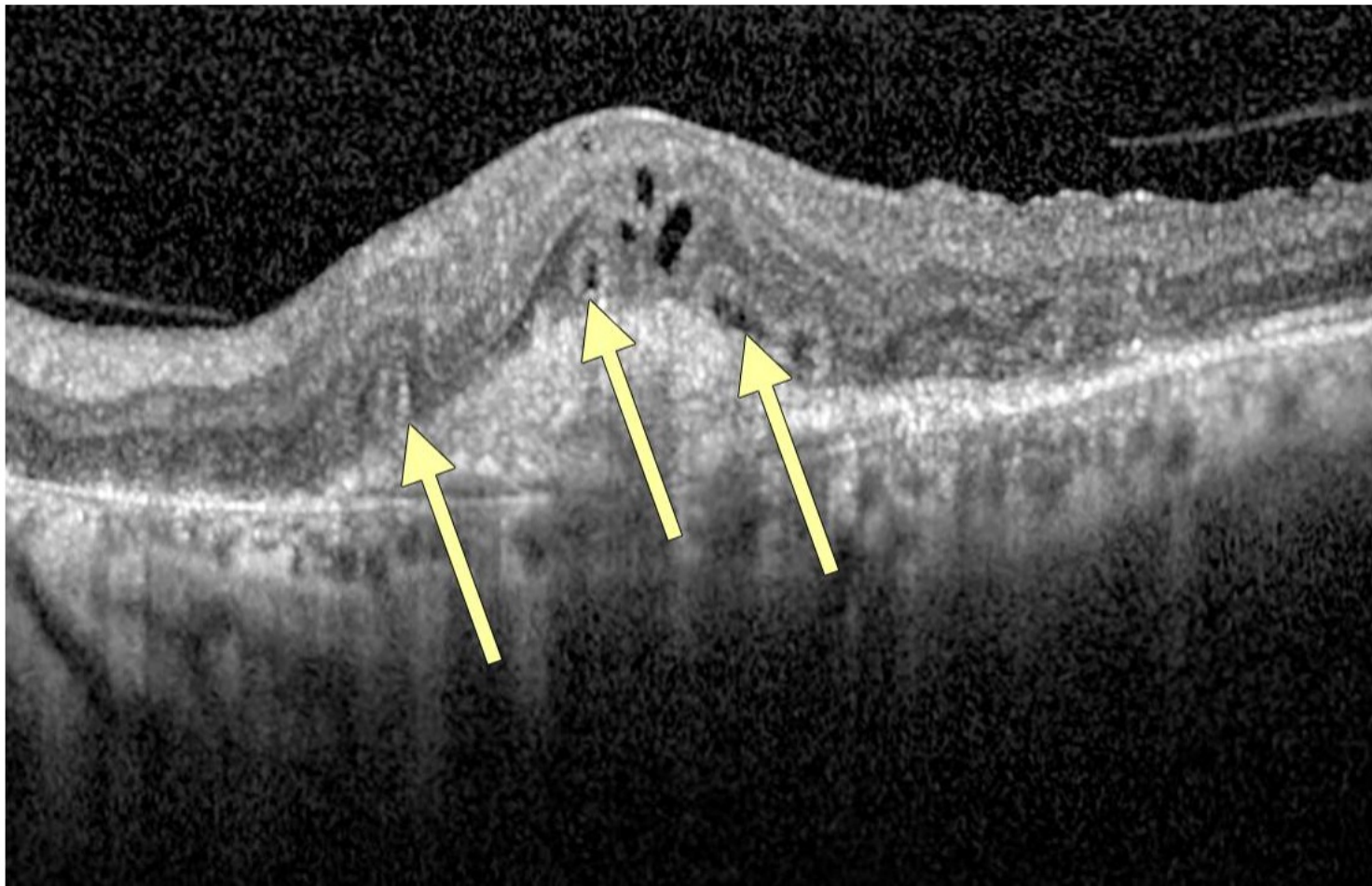


FIBROSIS

ORT

FIBROTIC LESION

SD-OCT shows round ovoid lesions with hyporeflective lumen and hyperreflective band in the outer nuclear layer (ONL).

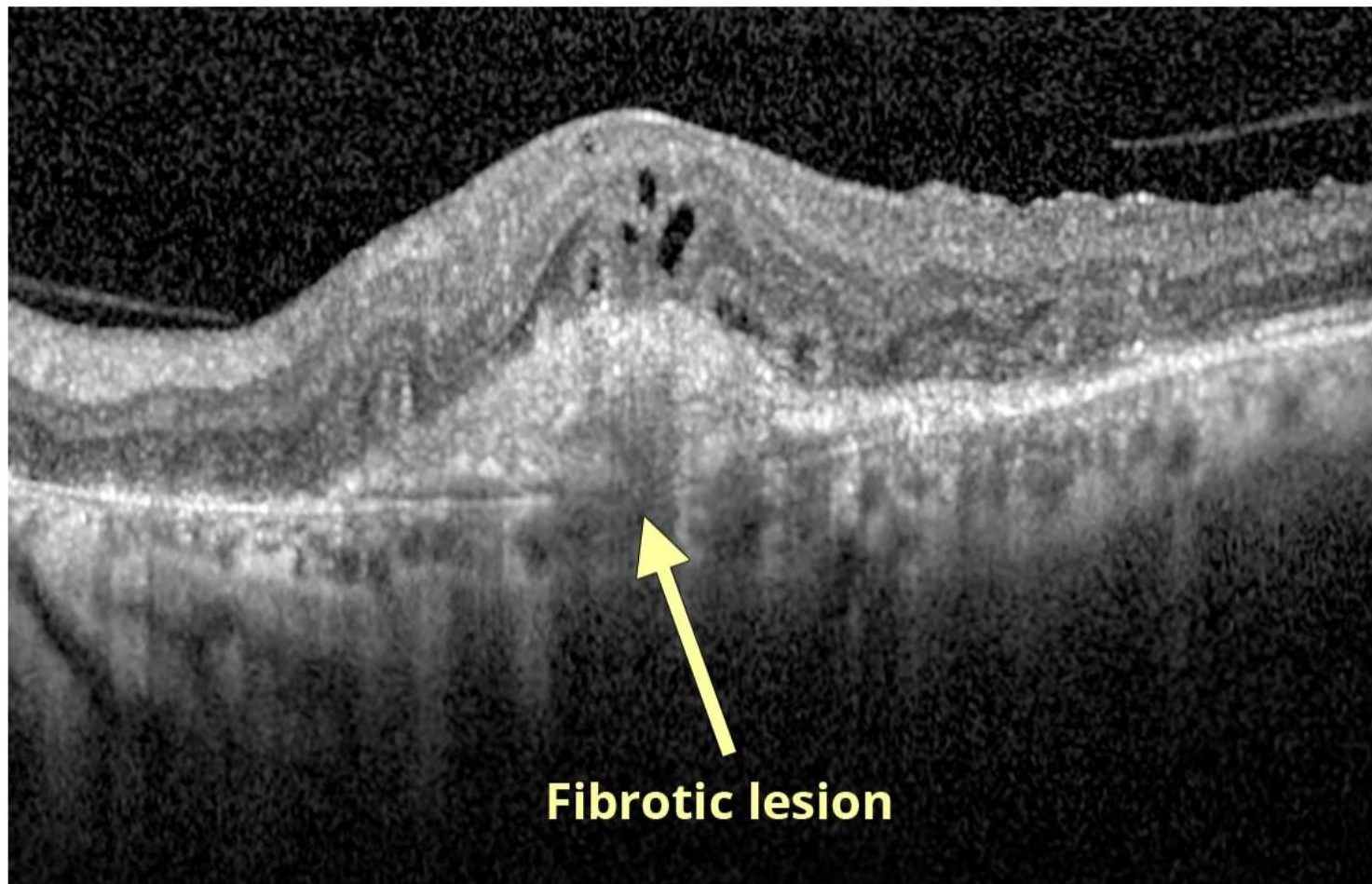


FIBROSIS

ORT

FIBROTIC LESION

SD-OCT shows severe disorganisation of the external retina layer, and dysmorphic or absent RPE on top of a fibrotic lesion.



SD-OCT follow-up for anti-VEGF treatment

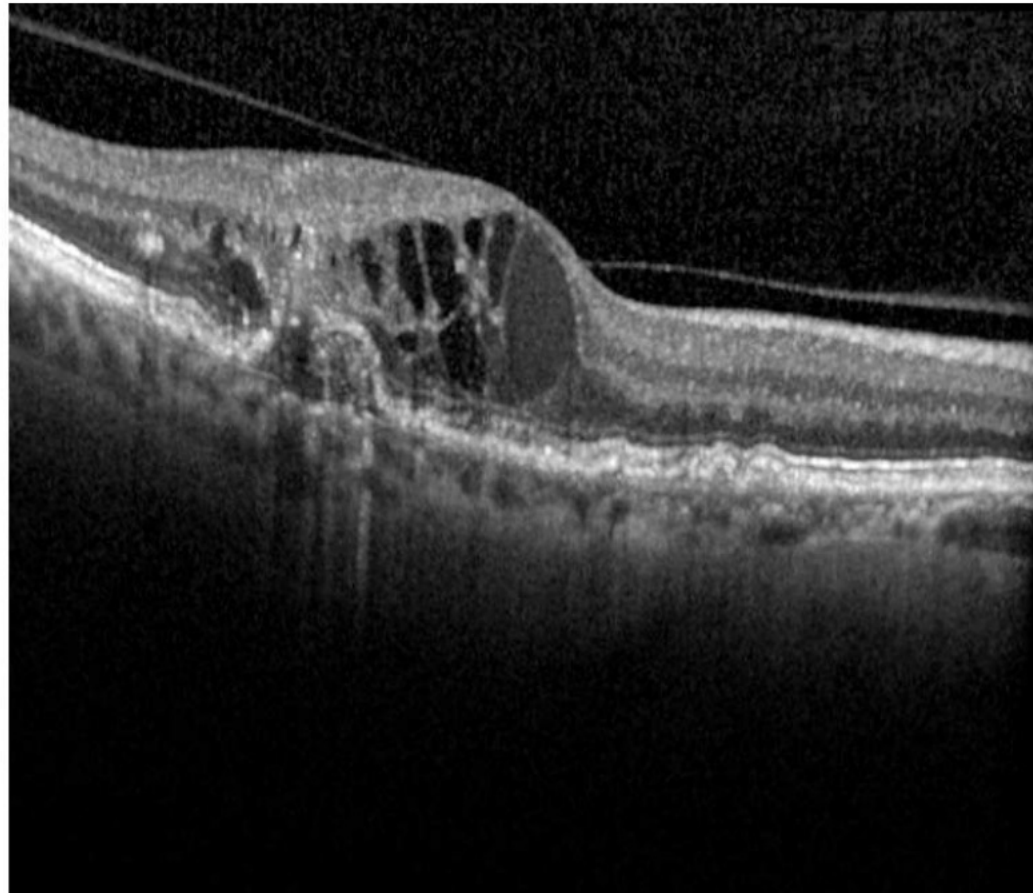
What is the standard follow-up for patients with neovascular AMD under anti-VEGF treatment?

- SD-OCT follow-up according to a **Pro re nata (PRN) regimen**
- SD-OCT follow-up according to an **observe and plan regimen**
- SD-OCT follow-up according to a **treat and extend regimen**

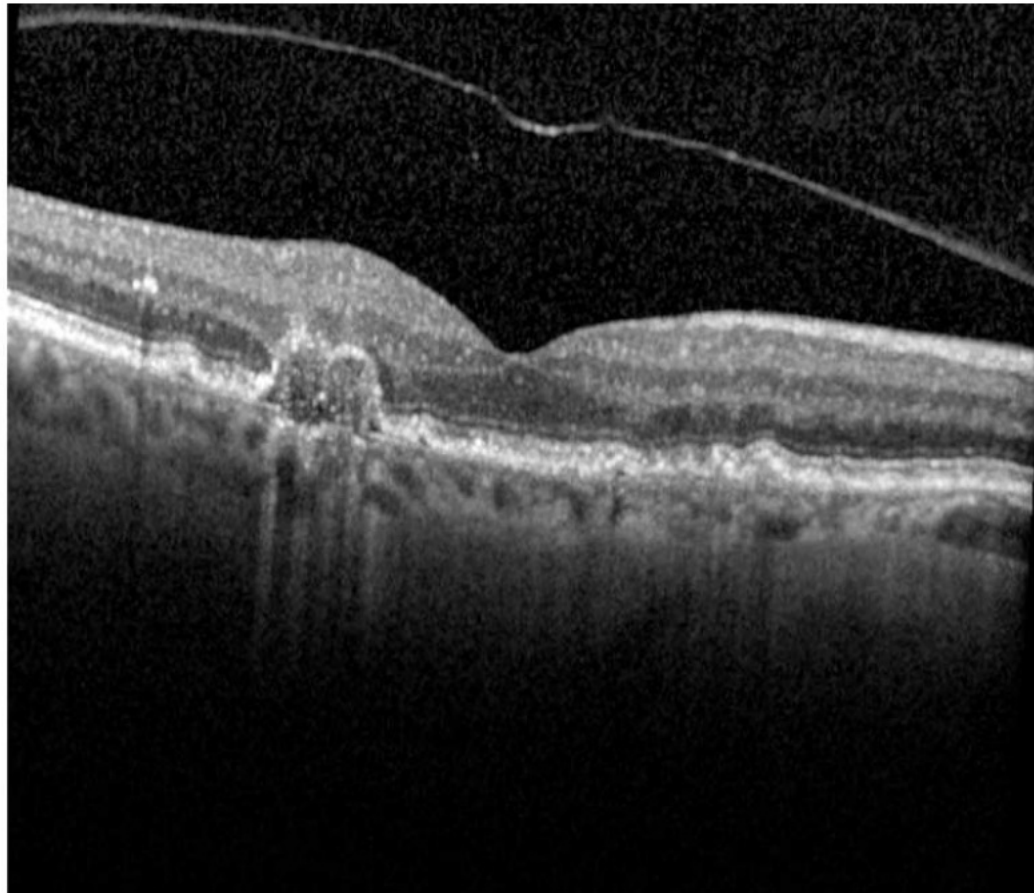
For neovascular AMD, OCT follow-up according to an **observe and plan regimen** is the **standard** for patients under anti-VEGF treatment.

The SD-OCT imaging sequence below shows how neovascular AMD decreases with treatment and then reappears when therapy is halted (observe). The neovascular AMD then, once again, decreases when treatment continues.

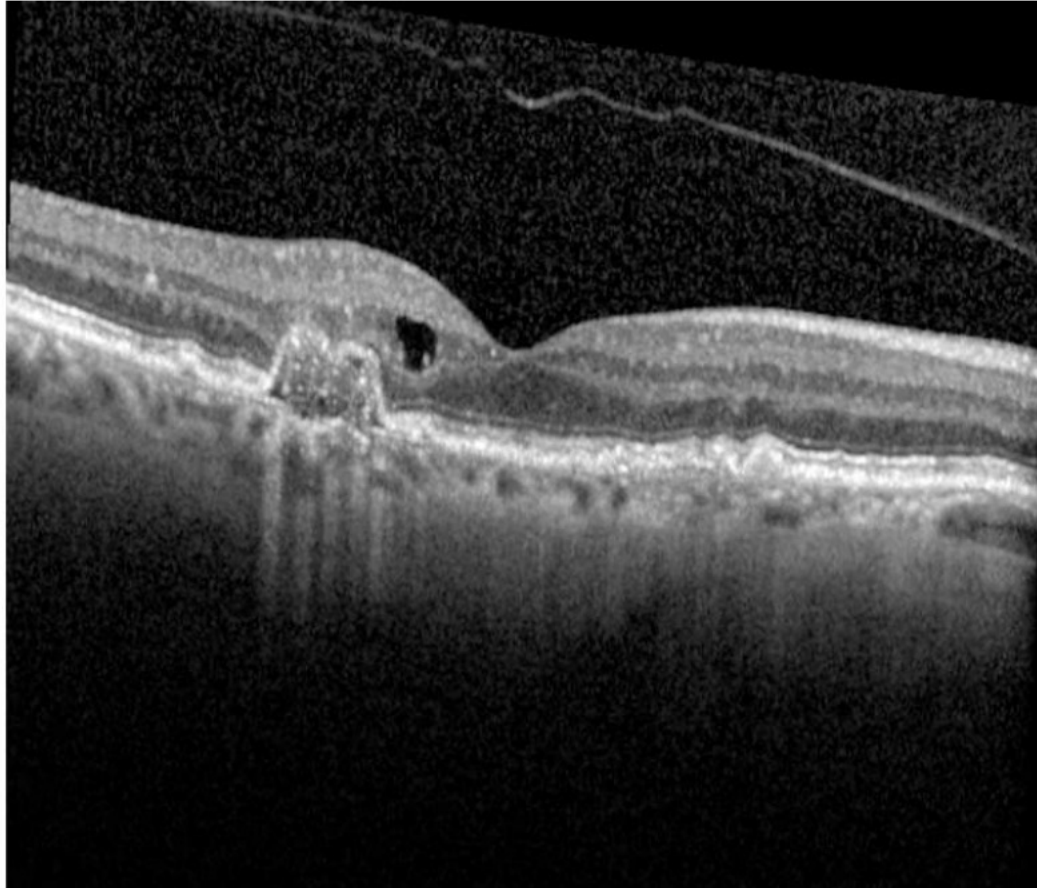
Neovascular AMD clearly visible on SD-OCT, patient then treated with IVT 3
x 1 month



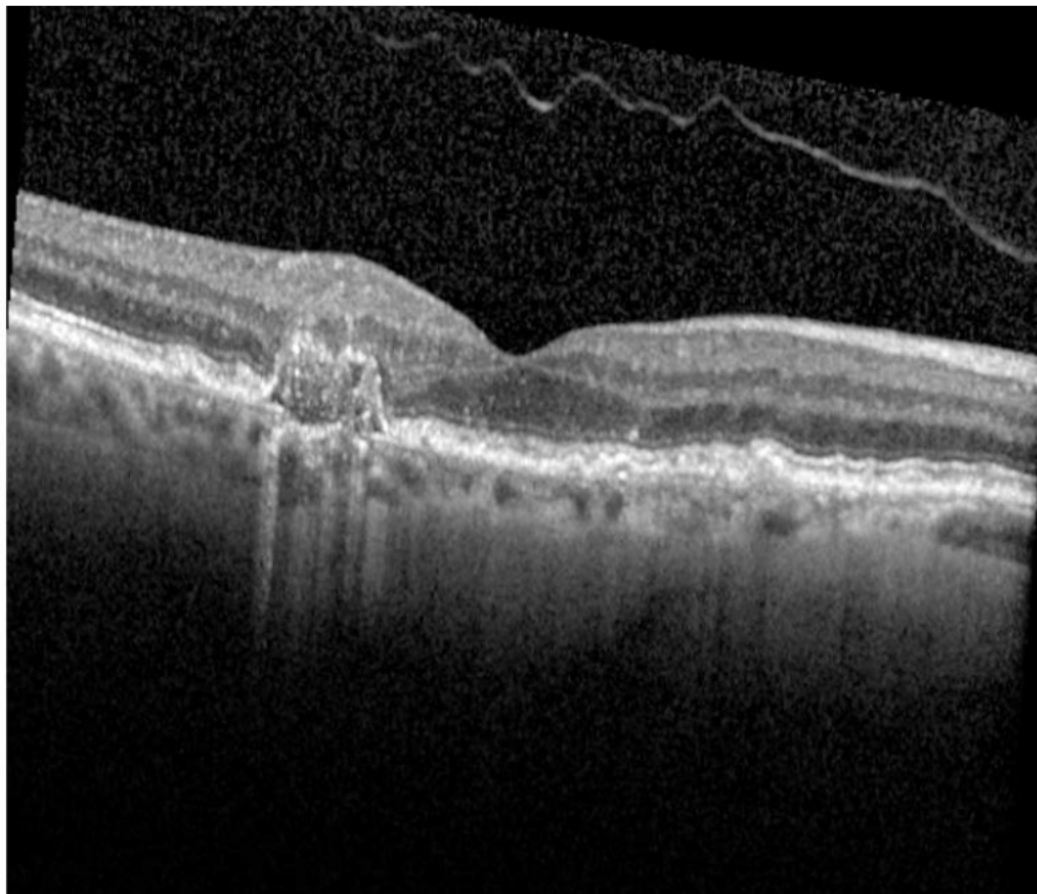
Following treatment (IVT 3 x 1 month), neovascular AMD decreases



Neovascular AMD then reoccurs when treatment stops (Observe 1 month)



Following treatment (IVT 3 x 1.5 months), neovascular AMD decreases once again



OCT biomarkers of activity of CNV

Some recent studies have looked at the biomarkers of activity of CNV on OCT angiography.

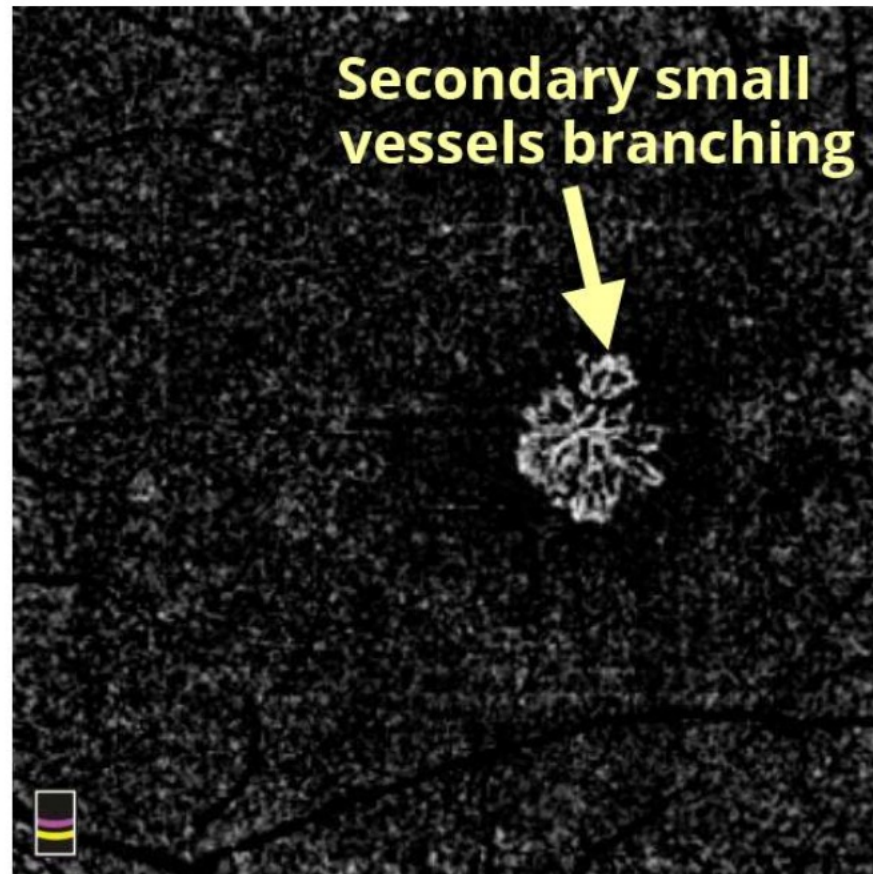
OCT-A biomarkers of activity of CNV:

- Secondary small vessels branching
- Peripheral arcades with anastomosis and loops
- Greater fractal dimension

SECONDARY VESSELS

PERIPHERAL ARCADES

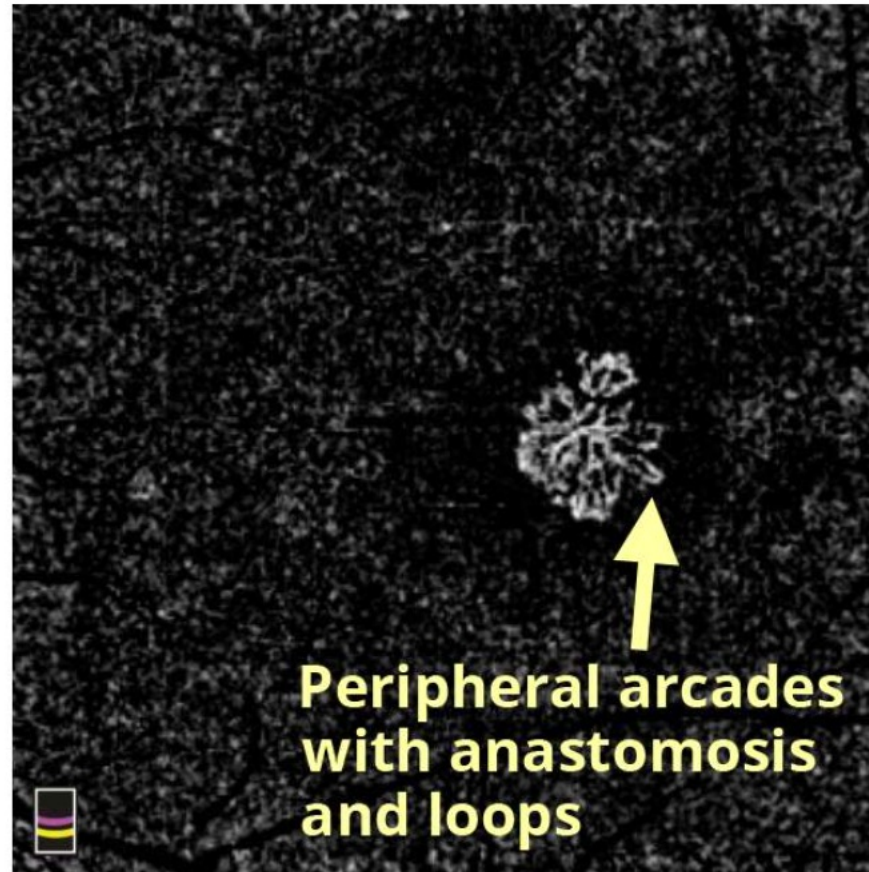
OCT-A shows this quite packed secondary small vessel branching.



SECONDARY VESSELS

PERIPHERAL ARCADES

Peripheral arcades with anastomosis and loops, and a greater fractal dimension.

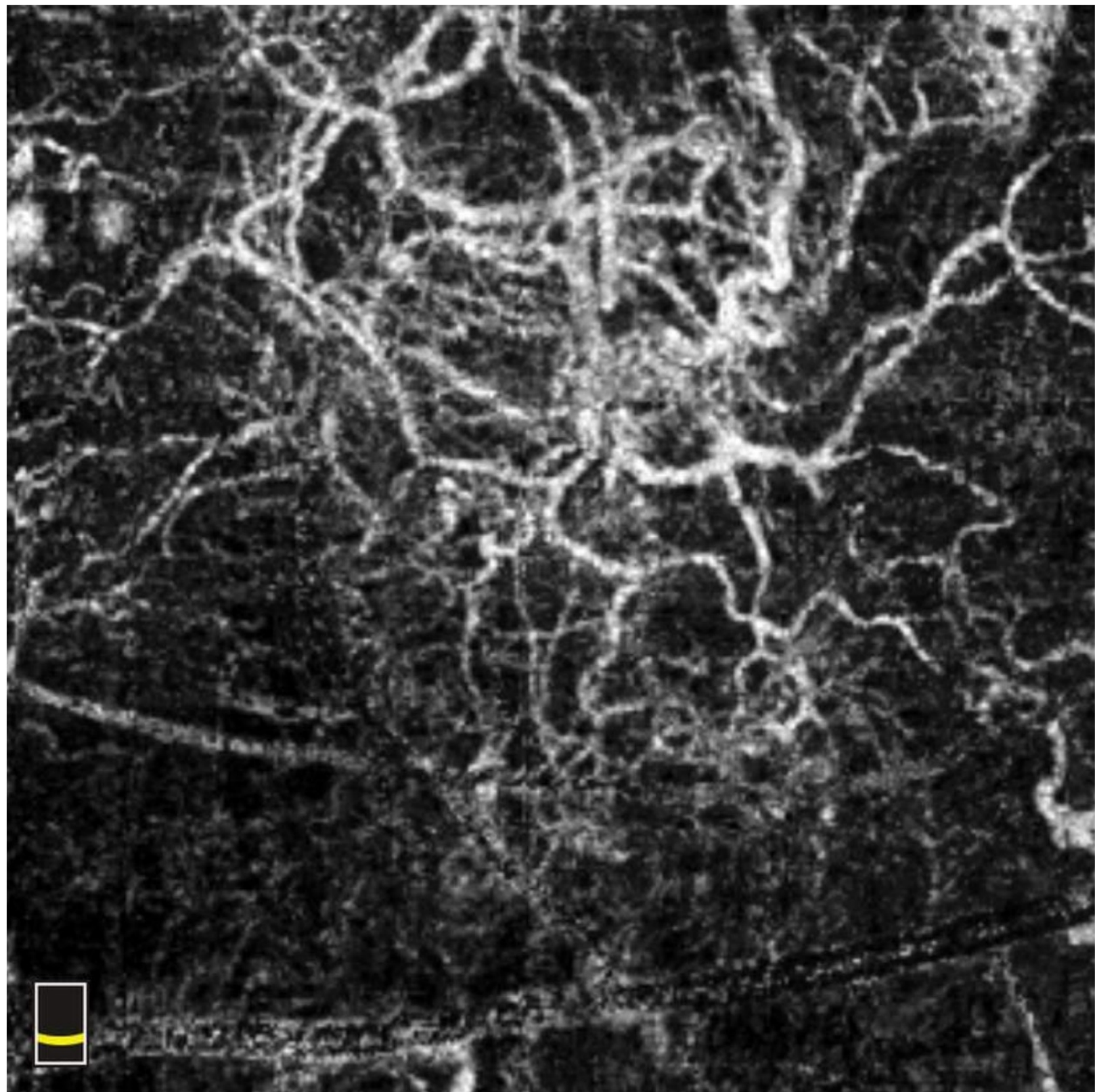


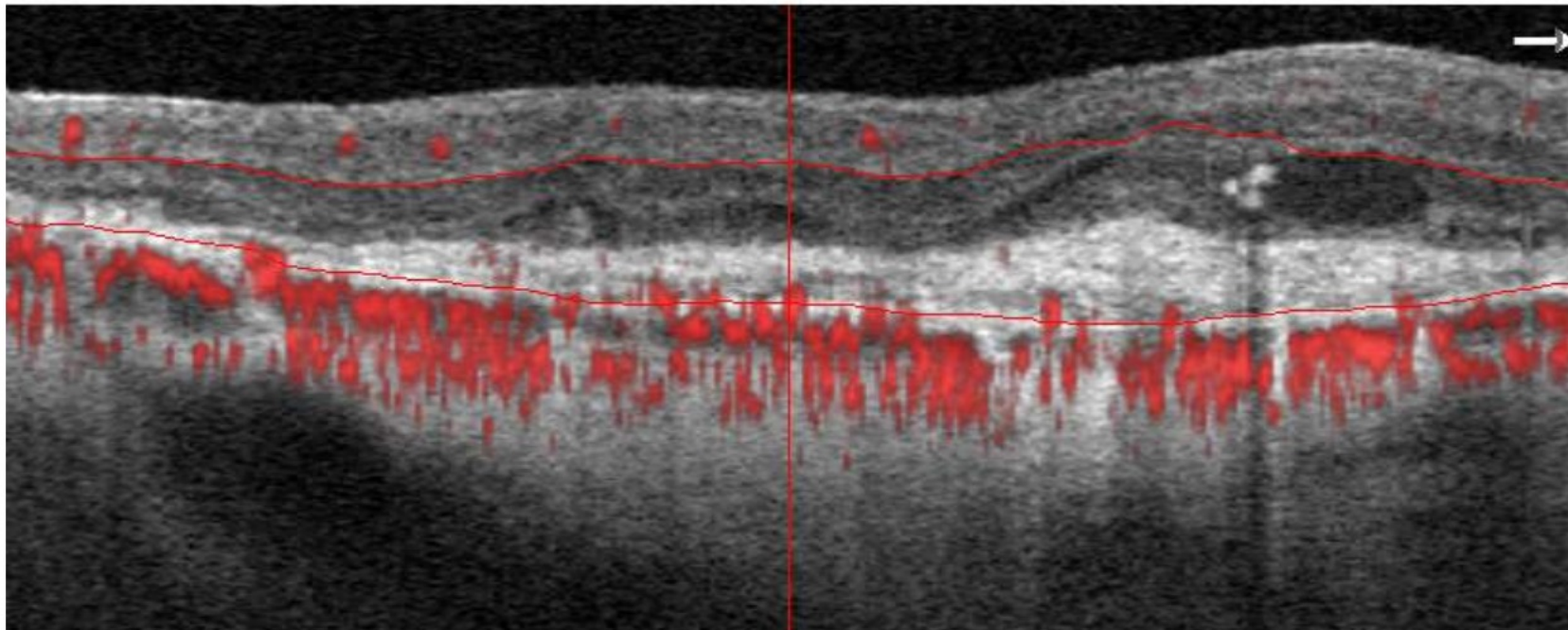
OCT biomarkers of quiescent CNV

In the opposite case, quiescent CNV (i.e. with inactive neovessels) also has various OCT-A biomarkers.

OCT-A biomarkers of quiescent CNV:

- Straight vessels
- No peripheral arcades
- No small vessel branching
- Looks like a **dead tree**





OCT-A showing straight vessels, no peripheral arcades, no small vessel branching. Quiescent CNV looks like a dead tree.



Quiescent CNV on OCT-A looks like a dead tree

OCT-A follow up for anti-VEGF treatment

OCT angiography may now be used **with precaution** to follow up patients under anti-VEGF treatment.

With neovascular (wet) AMD, OCT-A follow up for anti-VEGF treatment shows:

2 Weeks

Click to flip 

4 Weeks
(before fluid on
OCT)



6 Weeks



With neovascular (wet) AMD, OCT-A follow up for anti-VEGF treatment shows:

Shut down of
CNV flow



Reopening of flow



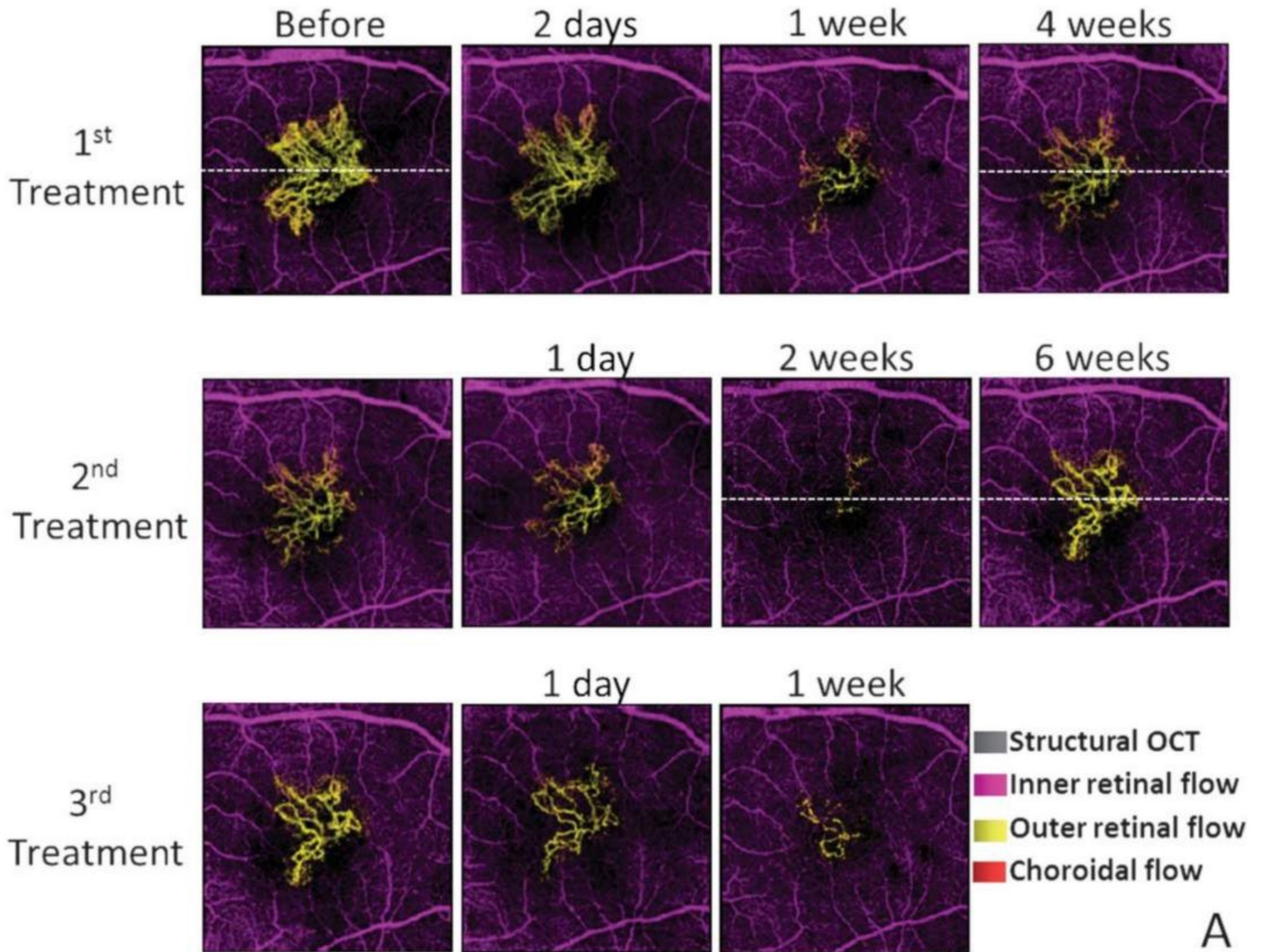
Fluid
accumulation in
OCT



From Research

The images below (from Huang et al., 2015) show the time course of CNV response to anti-VEGF treatment over 3 cycles using en face OCT-A.

The images show the CNV before first injection, the CNV shrinking 2 days and 1 week after the first injection. However, the CNV then recurs, as seen at 4 weeks.



En face OCT-A showing time course of CNV response to anti-VEGF treatment over 3 cycles. (Huang et al., 2015)



Huang D, Jia Y, Rispoli M, Tan O, Lumbroso B. **OPTICAL COHERENCE TOMOGRAPHY ANGIOGRAPHY OF TIME COURSE OF CHOROIDAL NEOVASCULARIZATION IN RESPONSE TO ANTI-ANGIOGENIC TREATMENT.** *Retina.* 2015; 35(11): 2260-4.

[SEE IN PUBMED](#)



Lupidi M, Cerquaglia A, Chhablani J, et al. **Optical coherence tomography angiography in age-related macular degeneration: The game changer.** *Eur J Ophthalmol.* 2018; 28(4): 349-357.

[SEE IN PUBMED](#)

Conclusions

SD-OCT in AMD

- Drusen-specific characteristics, that are indicators of progression and risk of visual acuity loss (they should be recognised to help physicians in informing patients of what they should likely expect in the future)
- Type-specific features according to CNV
- New signs such as onion and plateau sign in AMD (that we should recognise as wet AMD or geographic atrophy, respectively)
- Mandatory to follow up of neovascular (wet) AMD patients under anti-VEGF treatment

OCT-A in AMD

- Specific signal flow features according to CNV type (1, 2, 3, 4) [can always be combined]
- Biomarkers of CNV activity/inactivity
- Possibly useful in the follow up of neovascular (wet) AMD under anti-VEGF treatment