Angio-OCT

Degenerazione Maculare Legata all'Età

Giuseppe Querques

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Financial Disclosure

ADVISORY BOARD MEMBER:

- Allergan
- Bayer
- Novartis

CONSULTANT:

- Alimera sciences
- Allergan
- Bayer
- Bausch and Lomb
- Heidelberg
- Novartis
- Zeiss

Classification of Neovascularization

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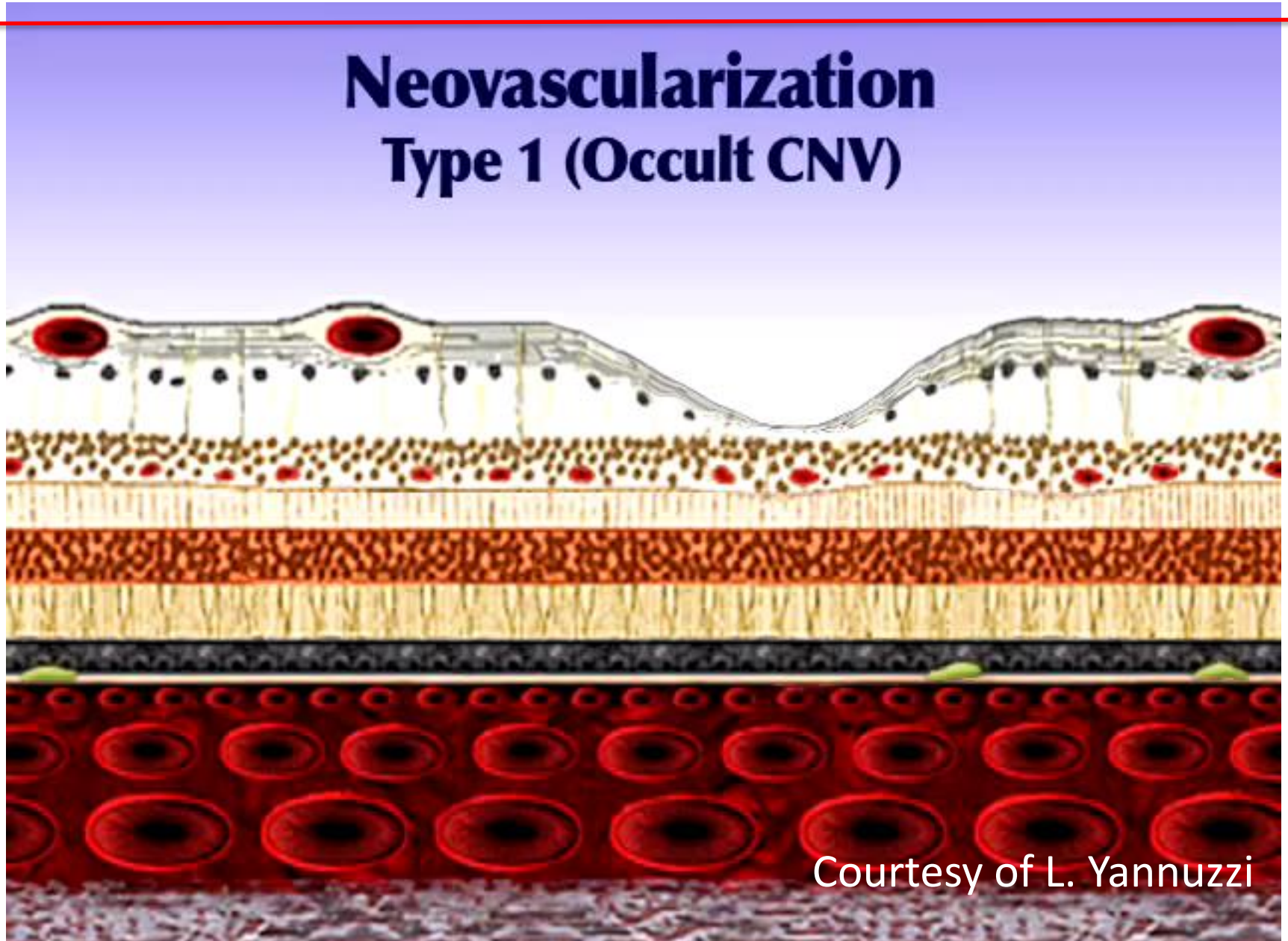
TYPE 1 NEO


Neovascularization
Type 1 (Occult CNV)
Courtesy of L. Yannuzzi

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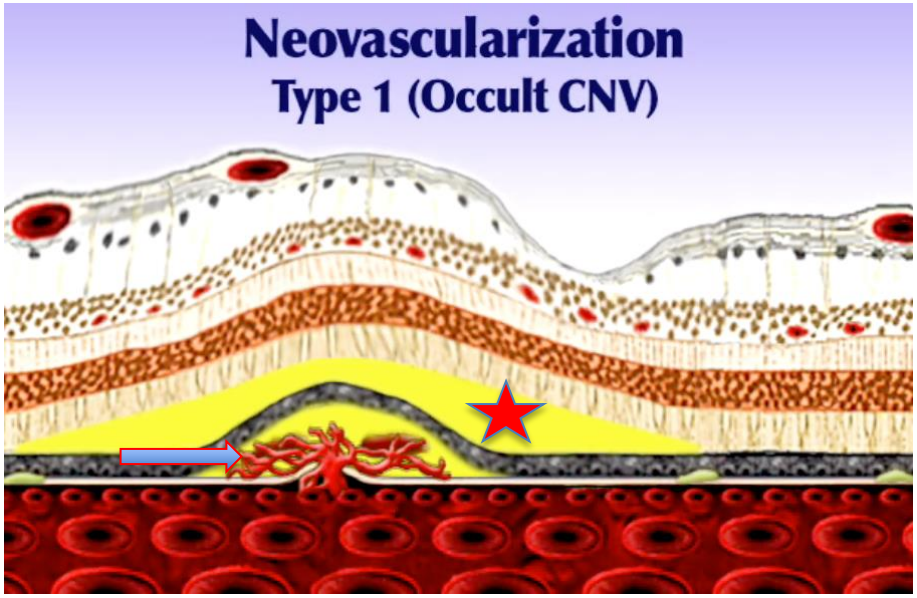

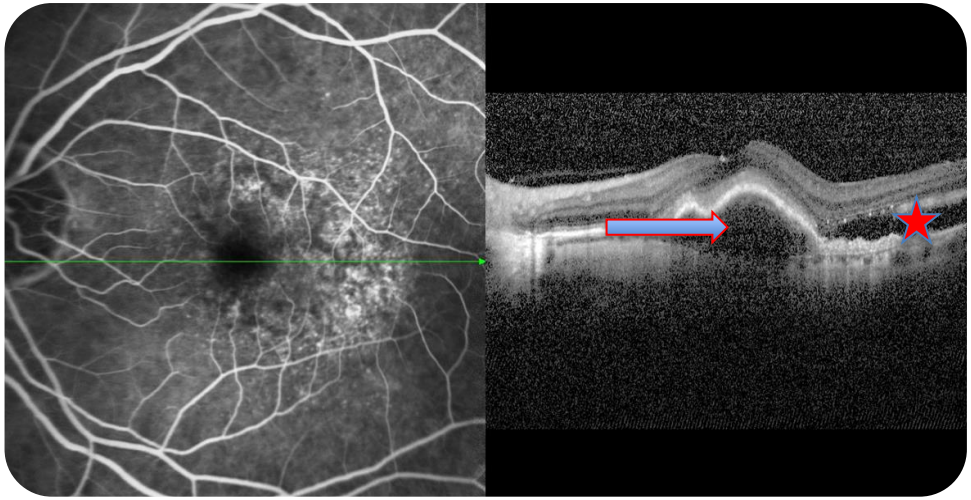

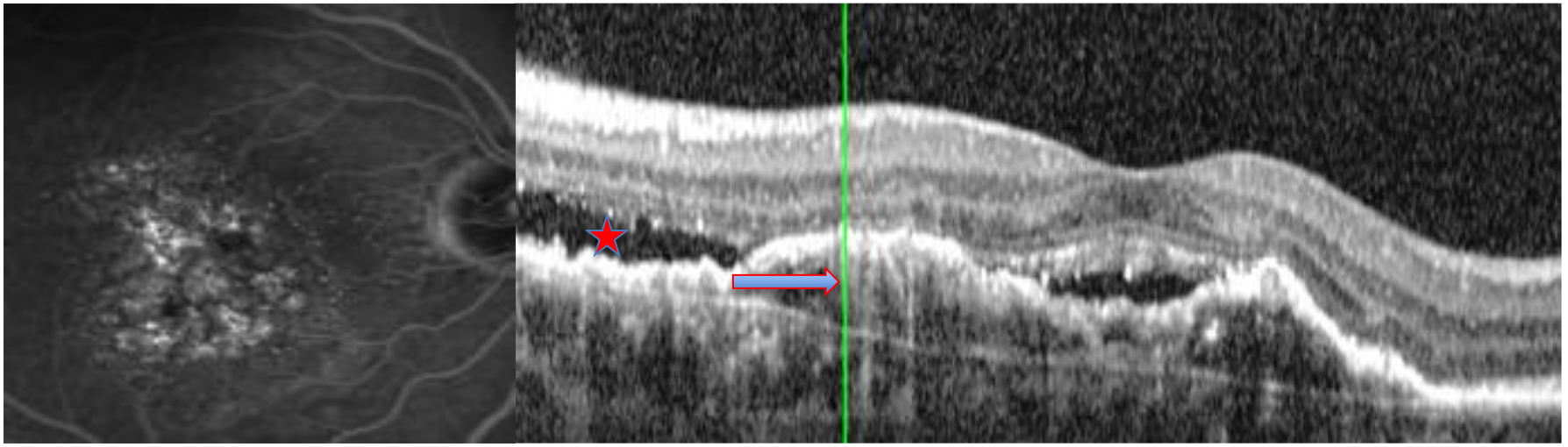

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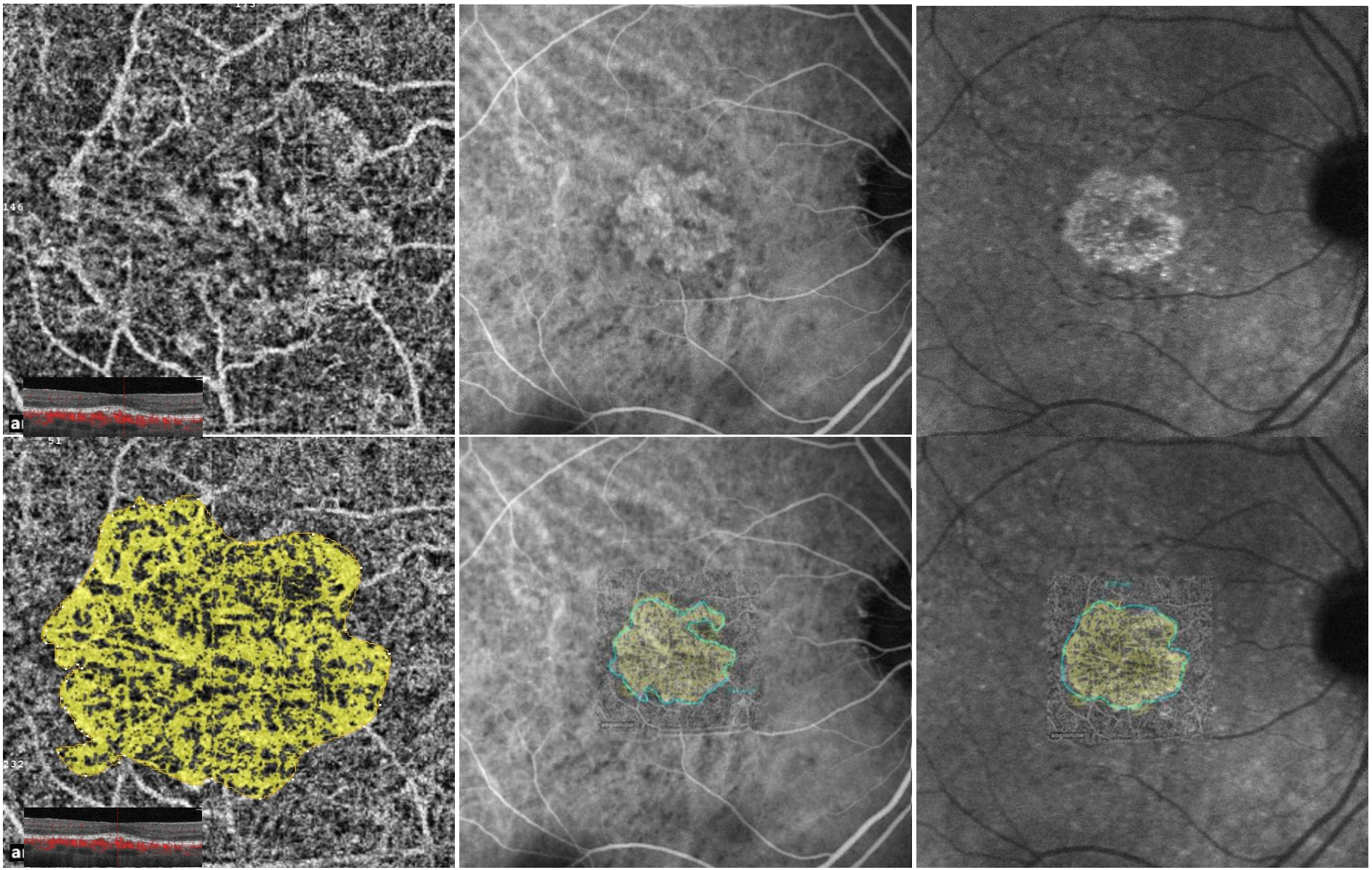

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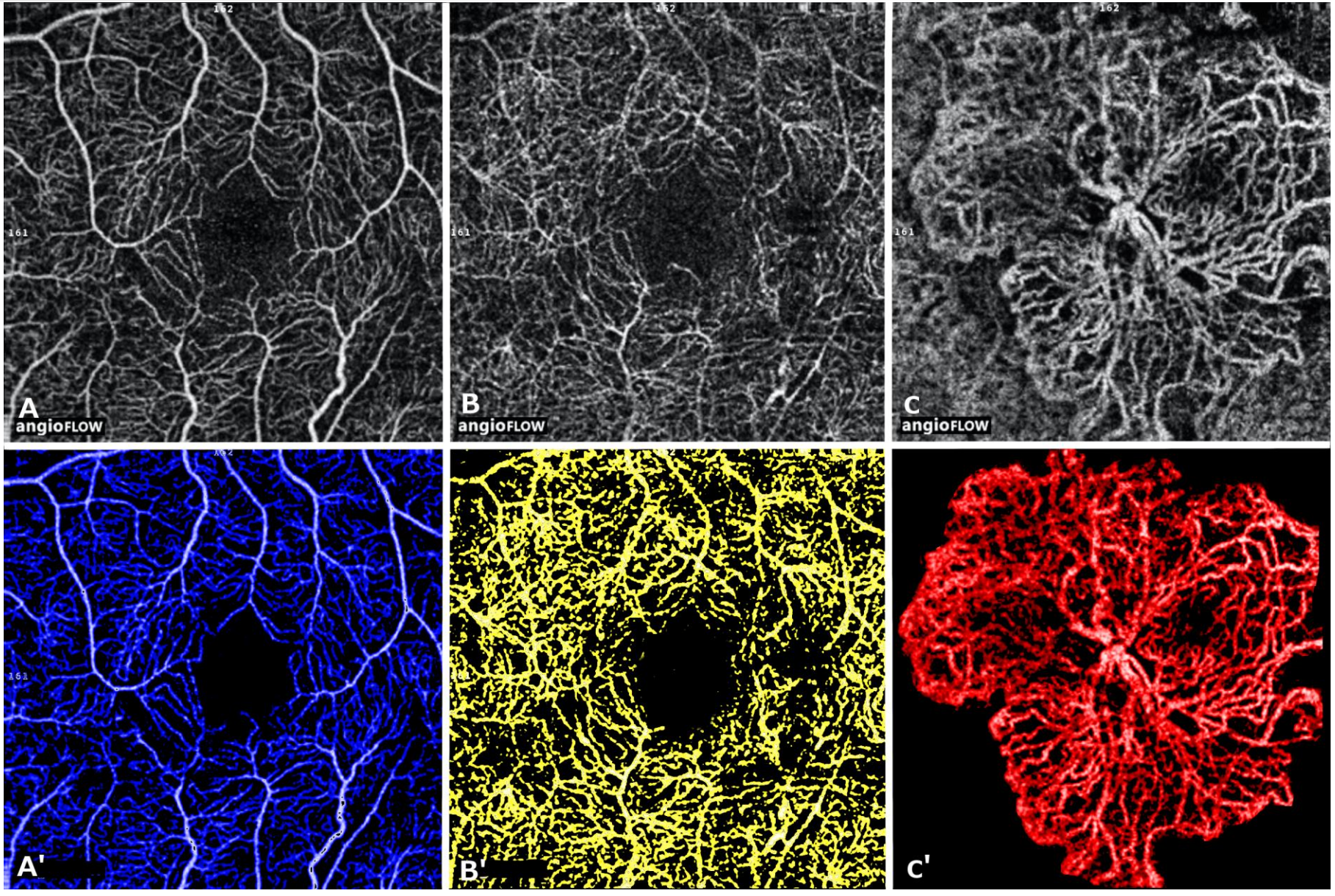

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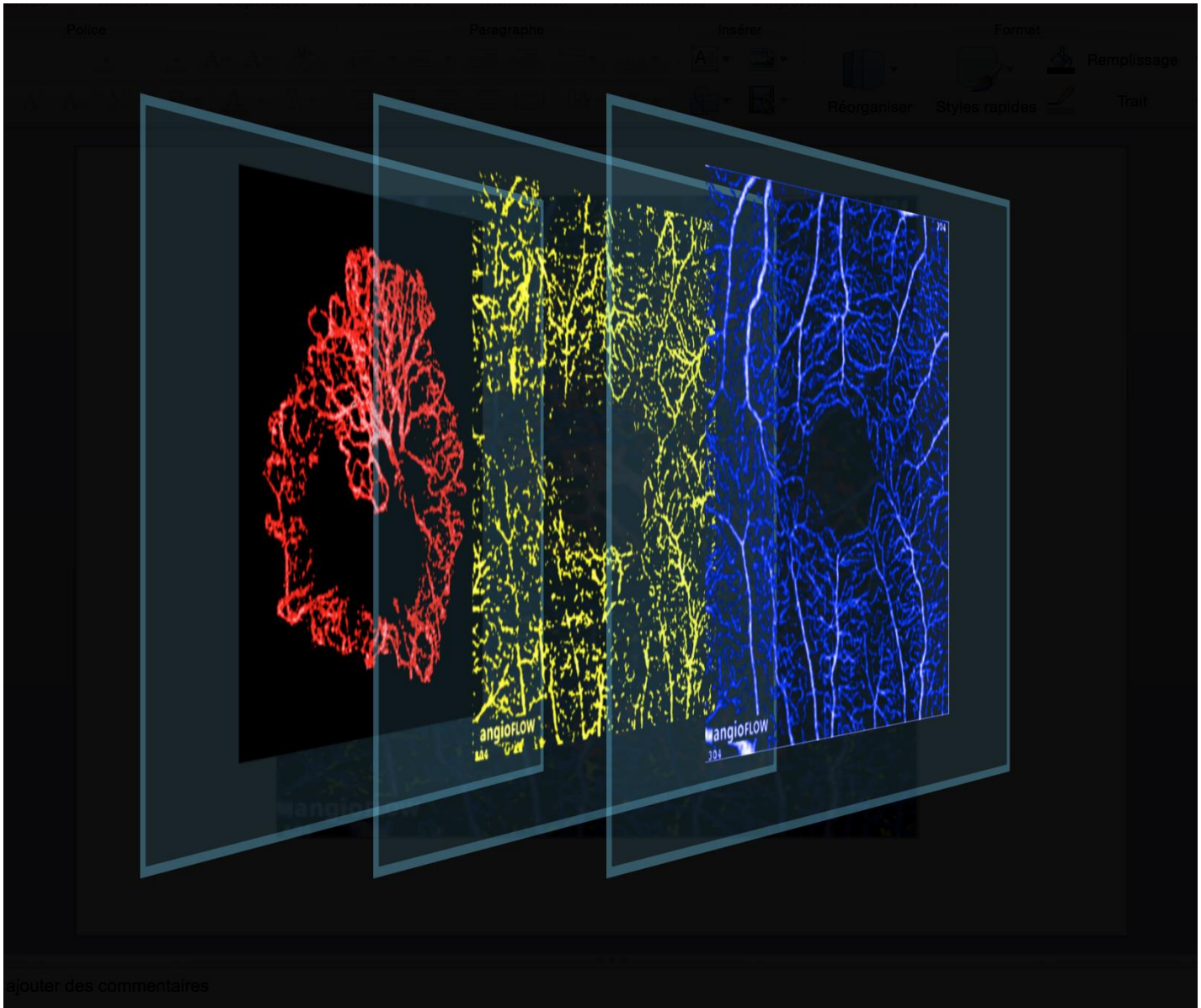

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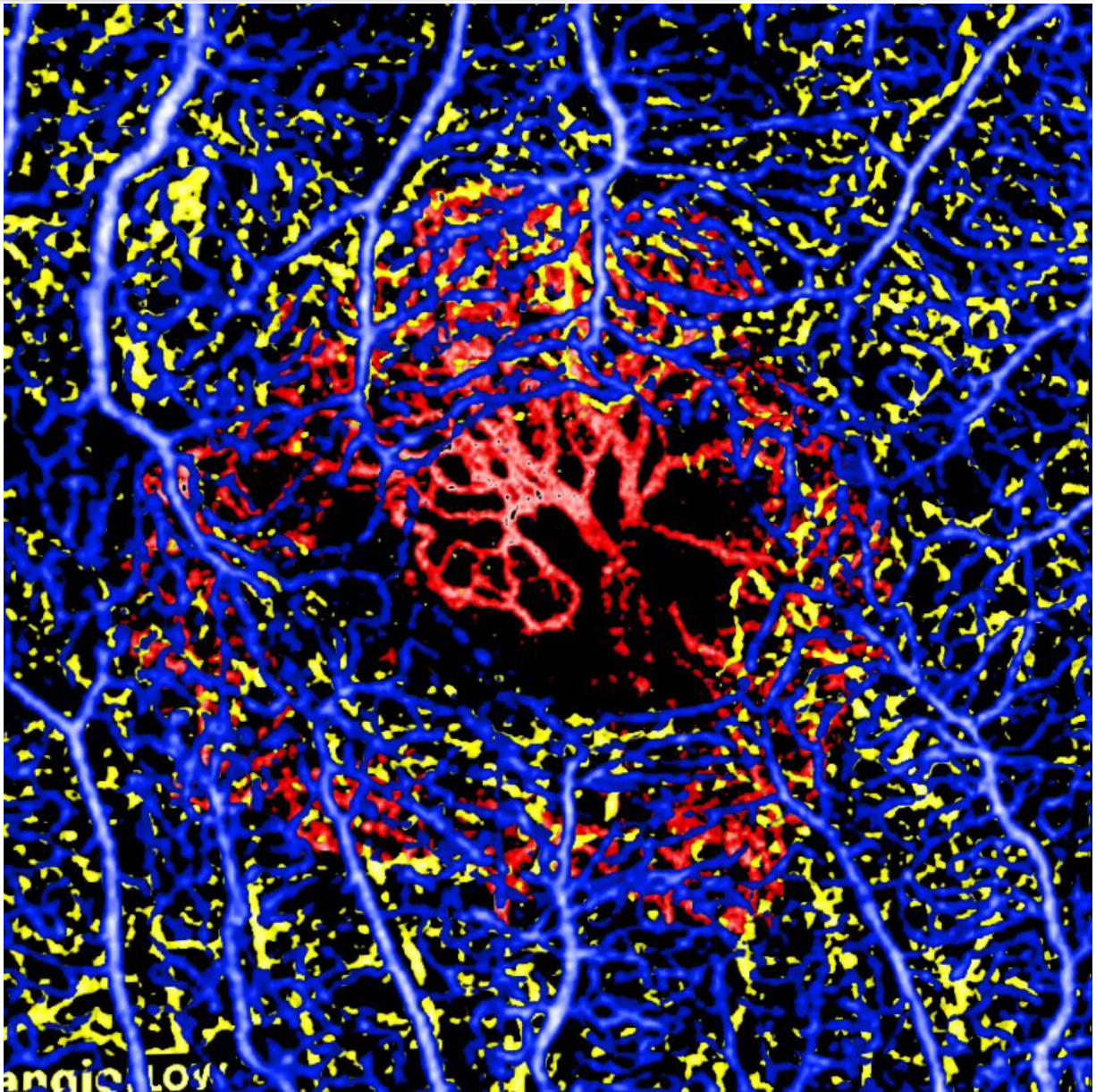

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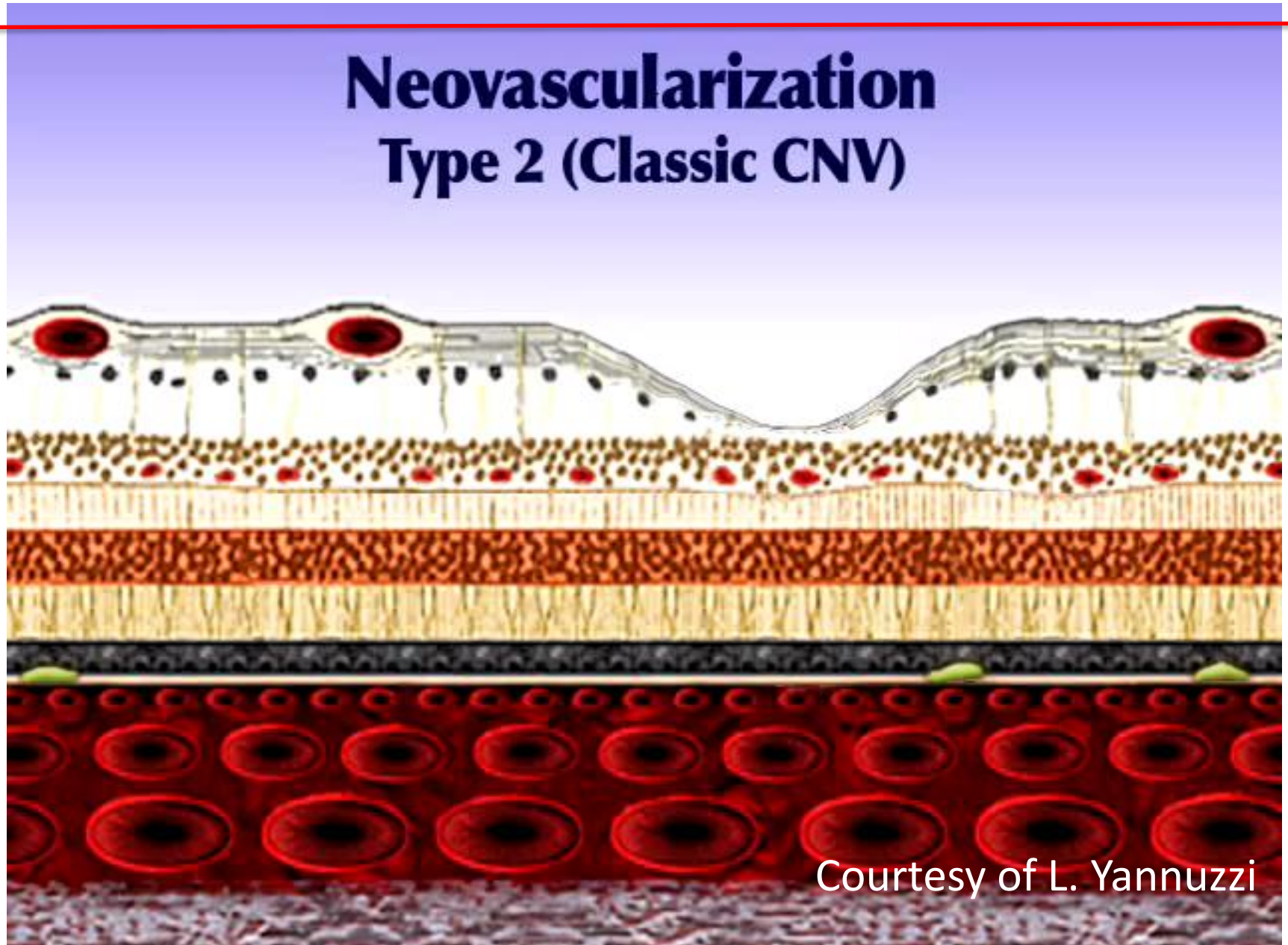
Neovascularization
Type 2 (Classic CNV)
Courtesy of L. Yannuzzi

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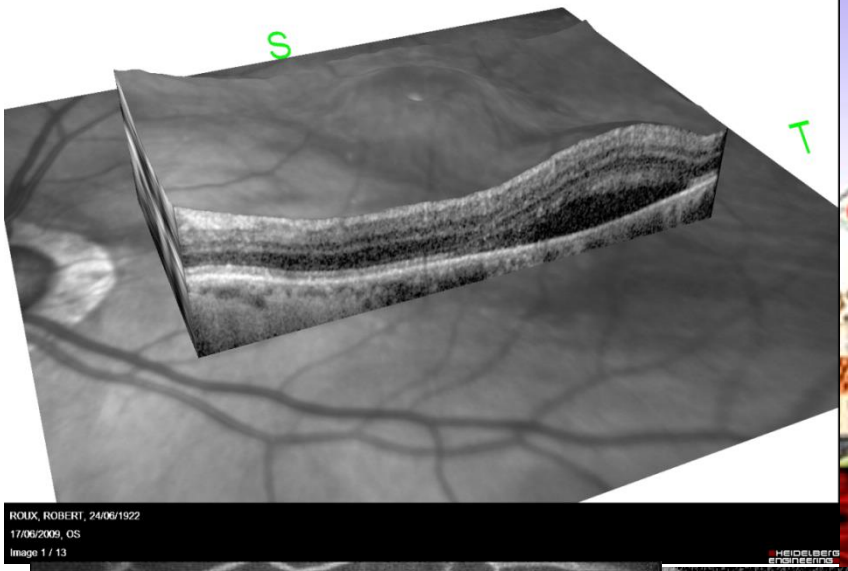
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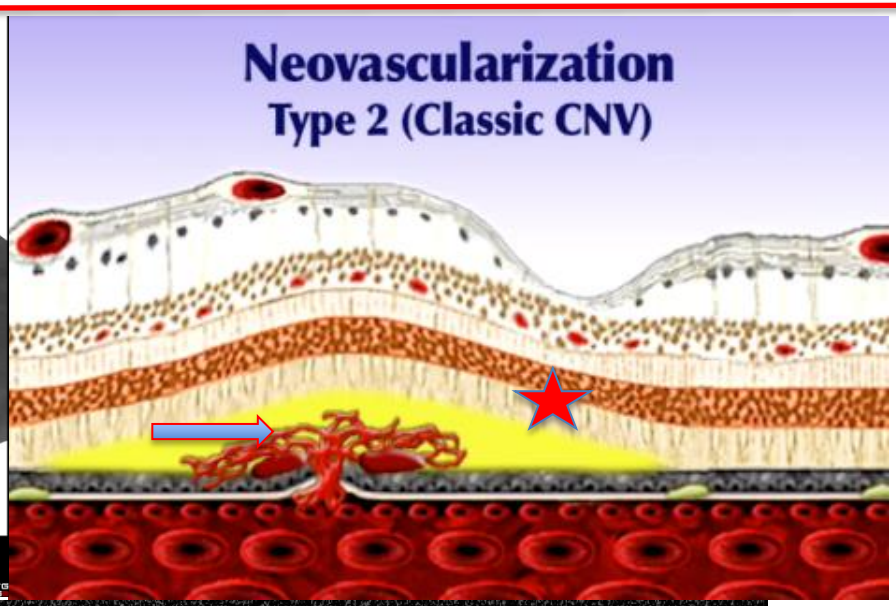
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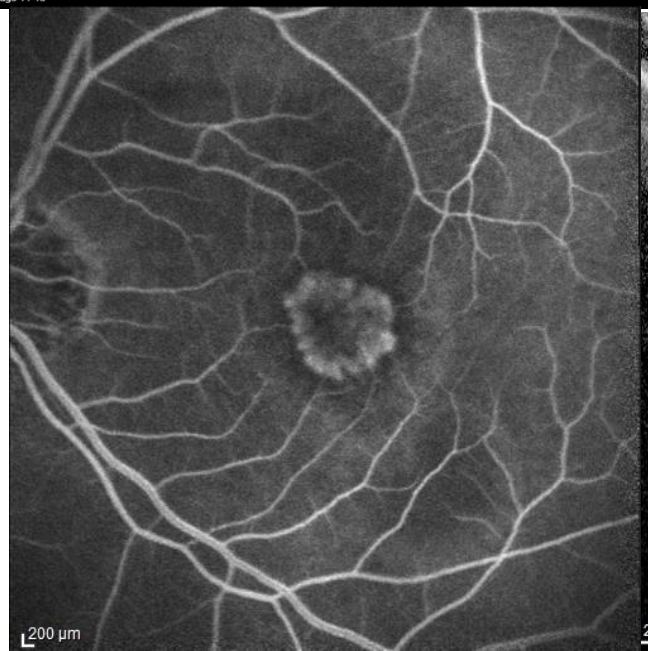
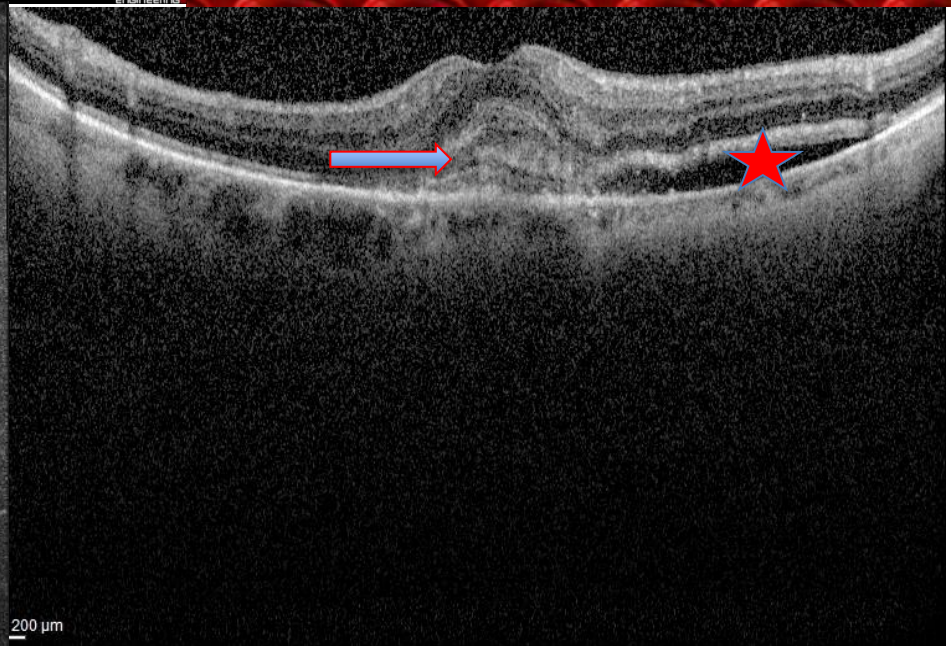

200 µm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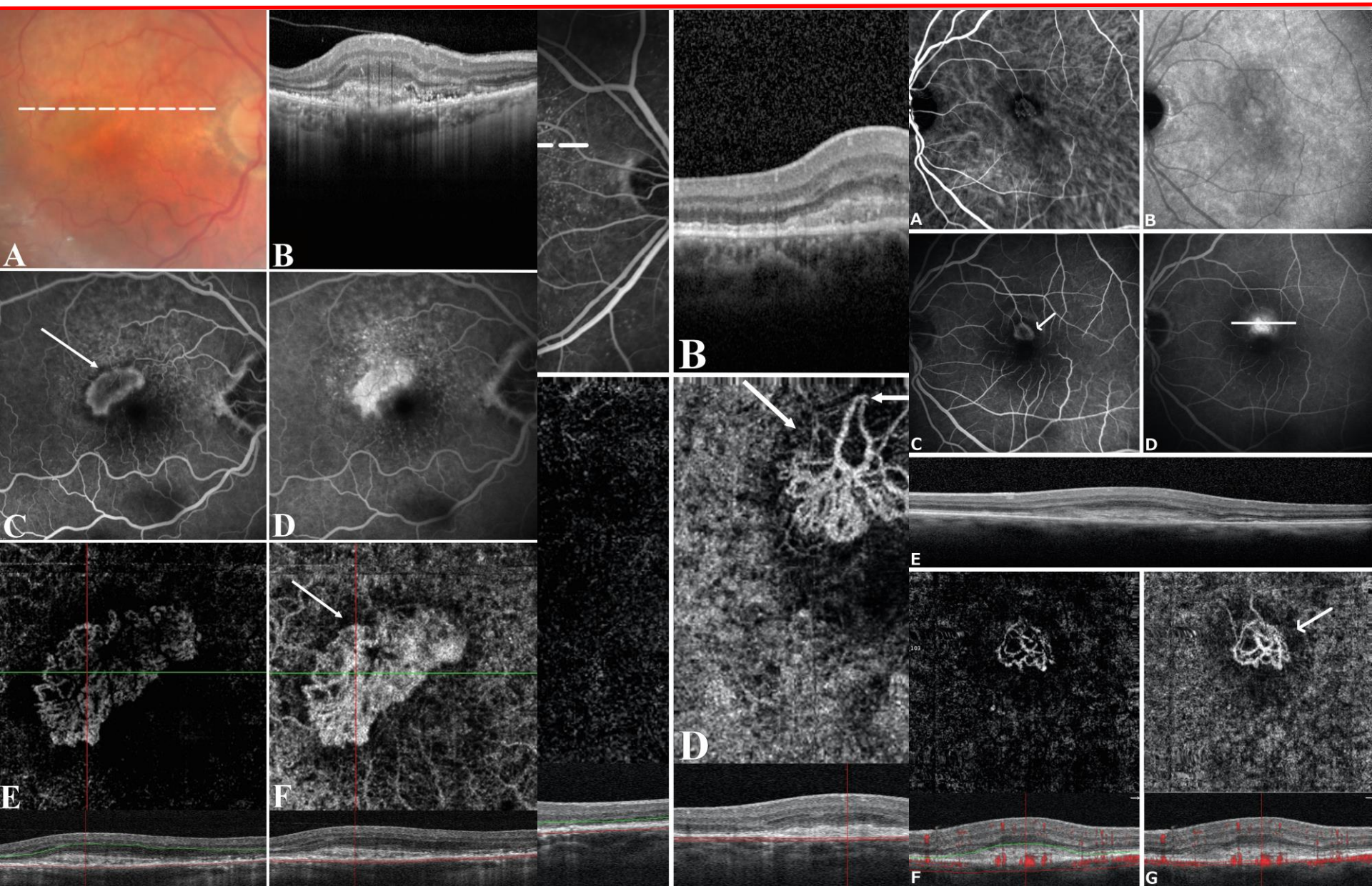
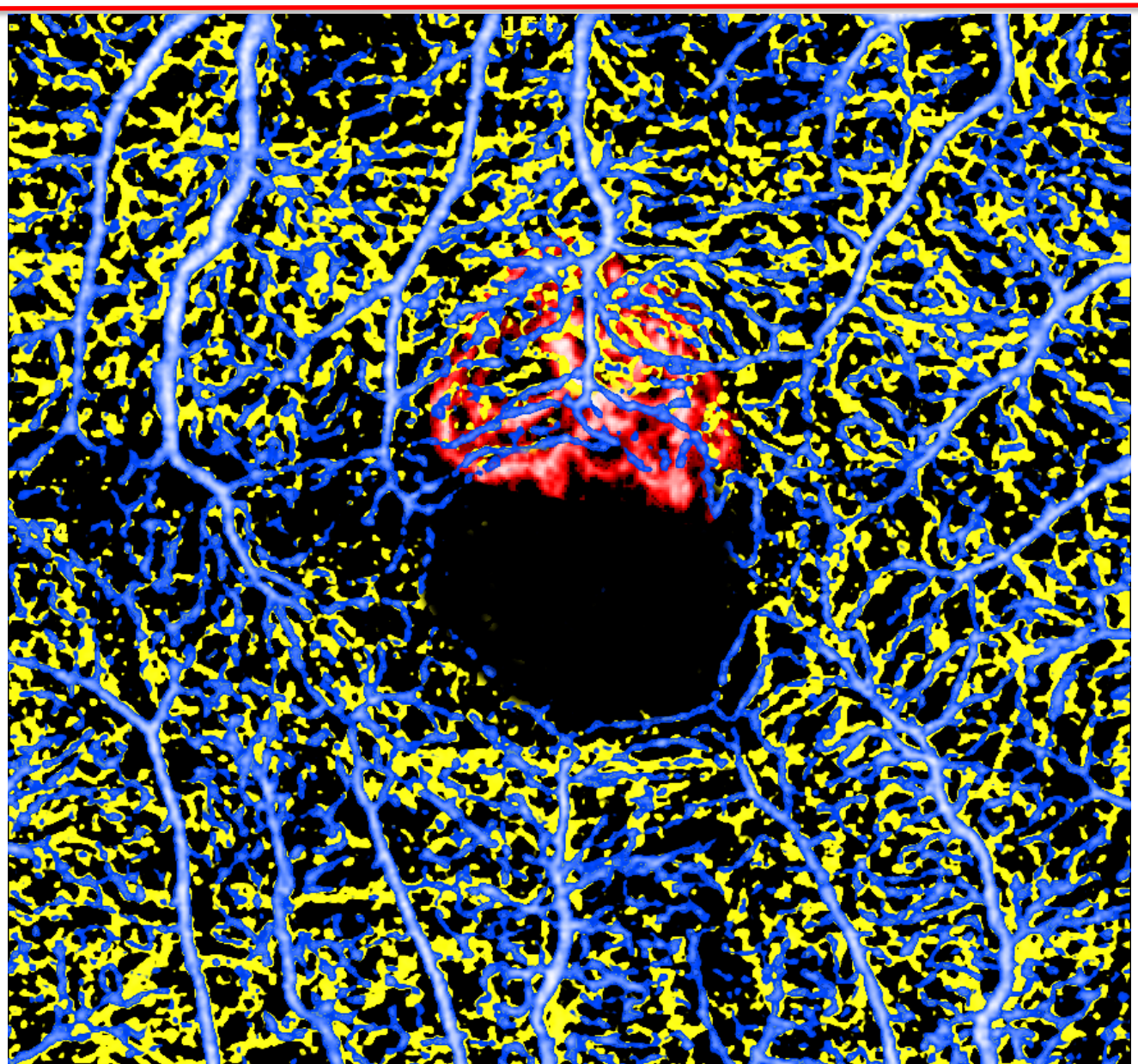
TYPE 2 NEO - OCTA



TYPE 2 NEO - OCTA



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Type 3 Neovascularization

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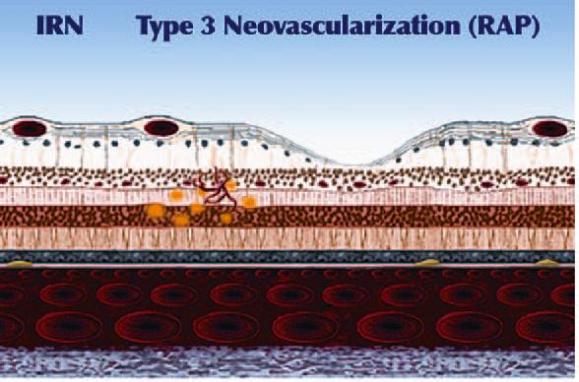
Editorial

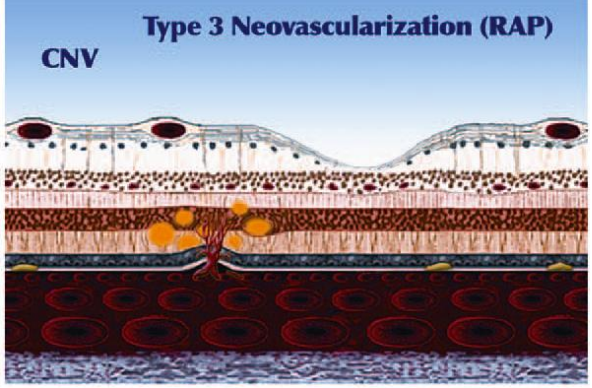
Review of Retinal Angiomatous Proliferation or Type 3 Neovascularization

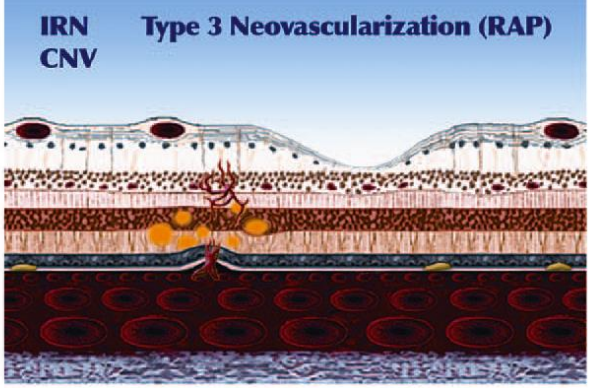
Lawrence A. Yannuzzi, MD
K. Bailey Freund, MD
Beatriz S. Takahashi, MD

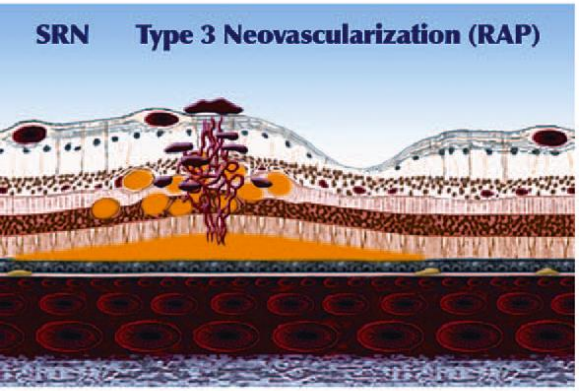
YANNUZZI PROPOSED THREE VARIANTS IN THE VASOGENIC PROCESS:

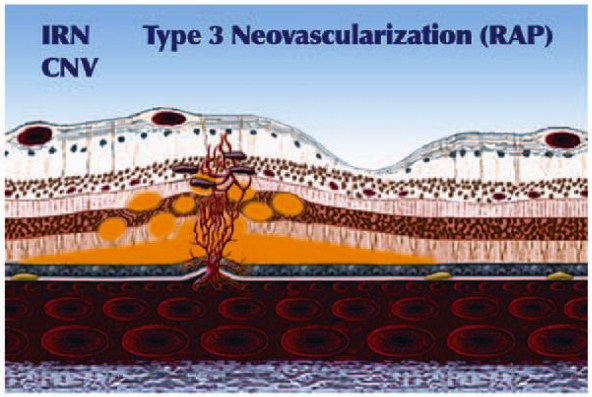
1. Initial focal retinal proliferation and progression
2. Focal retinal proliferation with preexisting or simultaneous choroidal proliferation
3. Initial focal choroidal proliferation and progression

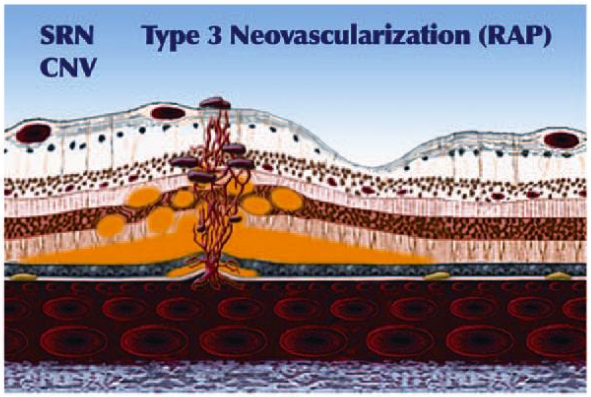


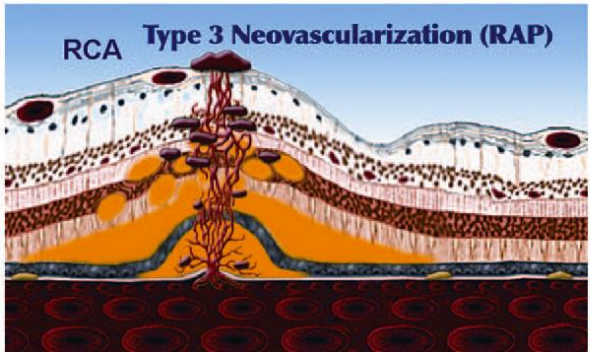












IRN = Intra-retinal neovascularization

SRN = Subretinal neovascularization

CNV = Choroidal neovascularization

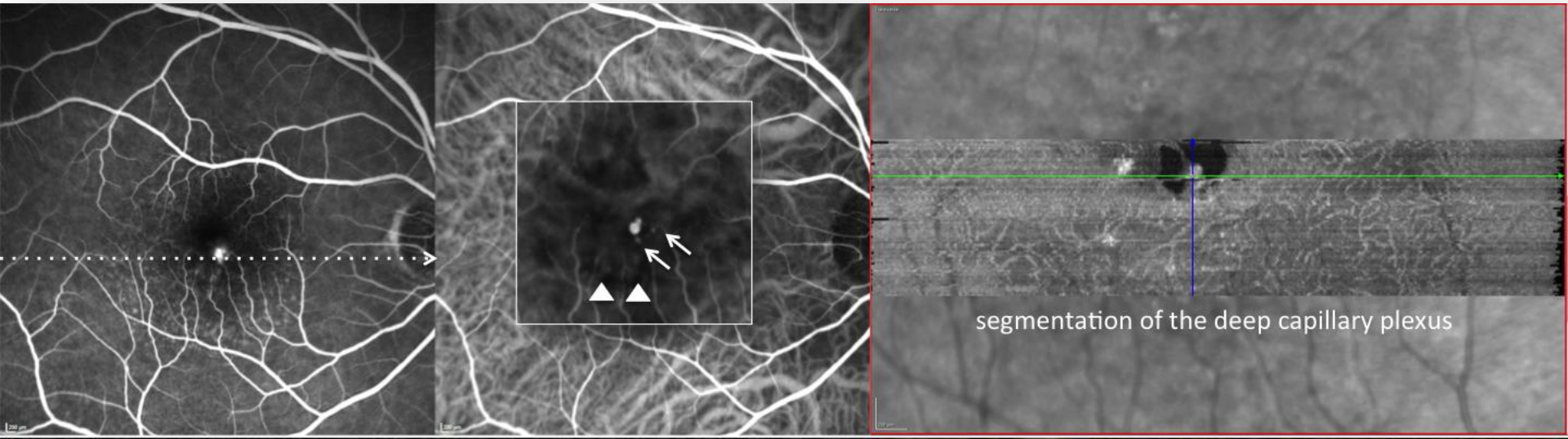
RCA = Retinal-choroidal anastomosis

Multimodal Imaging of Type 3 Neo

- The intraretinal neovascular complex appears as a hyper-reflective lesion located in the outer retina adherent to the underlying RPE

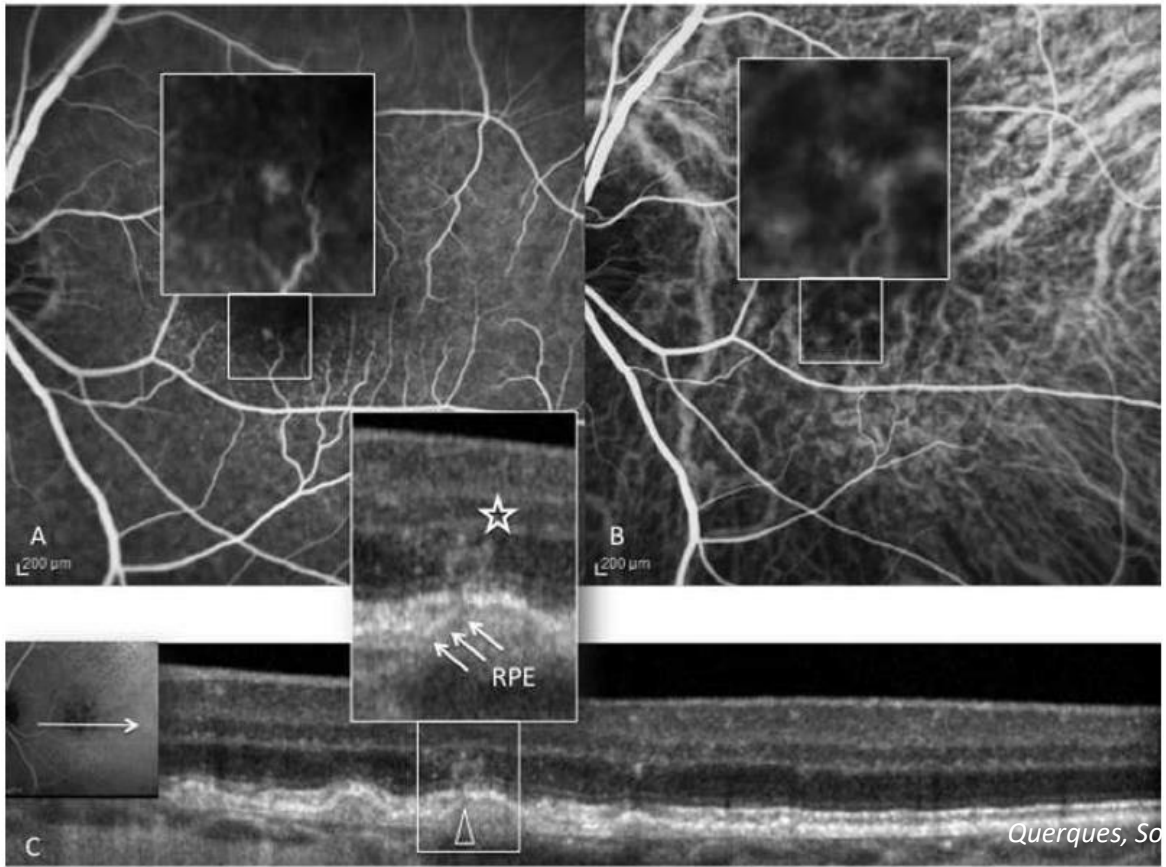
- A focal discontinuity of the RPE band through which the hyper-reflective intra retinal lesion communicated with the underlying material within drusen or drusenoid PED

- No evidence of a communication with the choroid



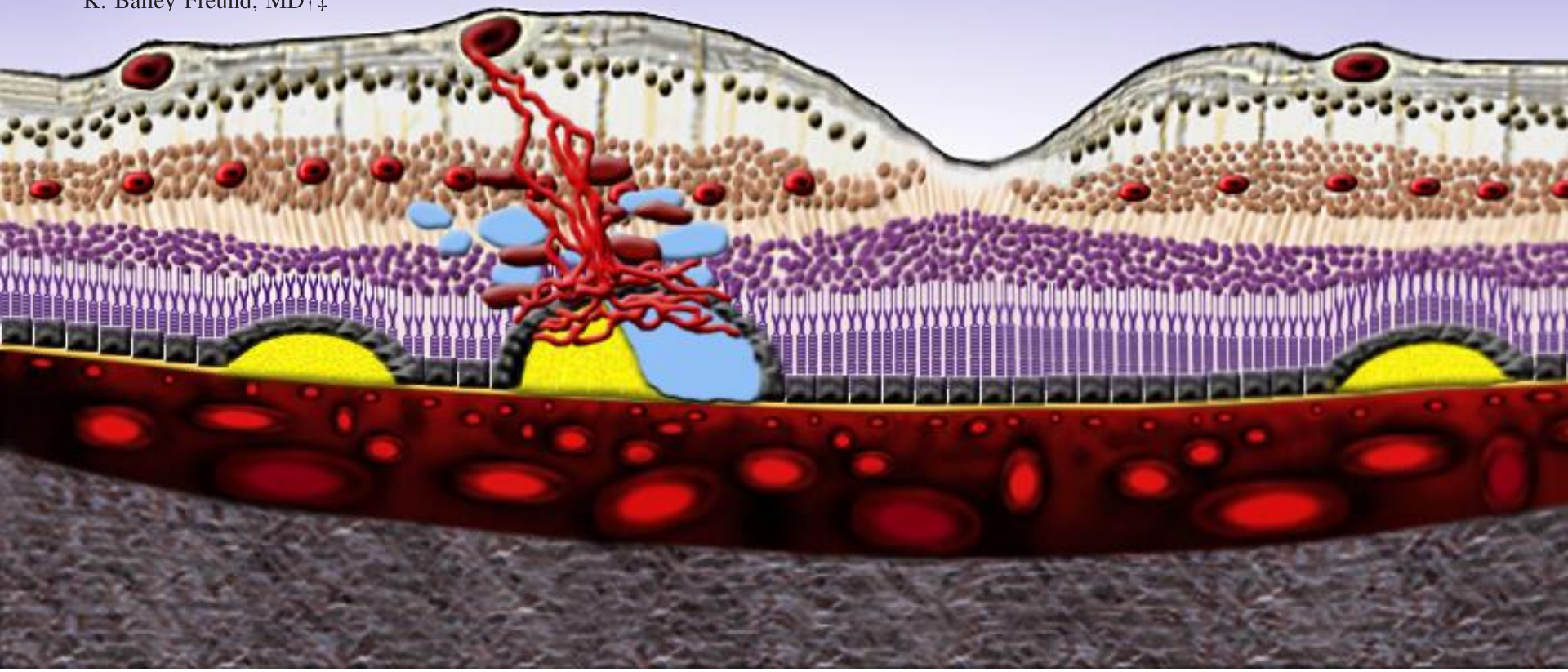
Multimodal Imaging of Type 3 Neo

- Primarily intraretinal proliferation and anastomoses between retinal vessels **and evolving type 1 neovascular tissue within underlying drusen or drusenoid PEDs** without evidence of anastomoses with the choroidal circulation

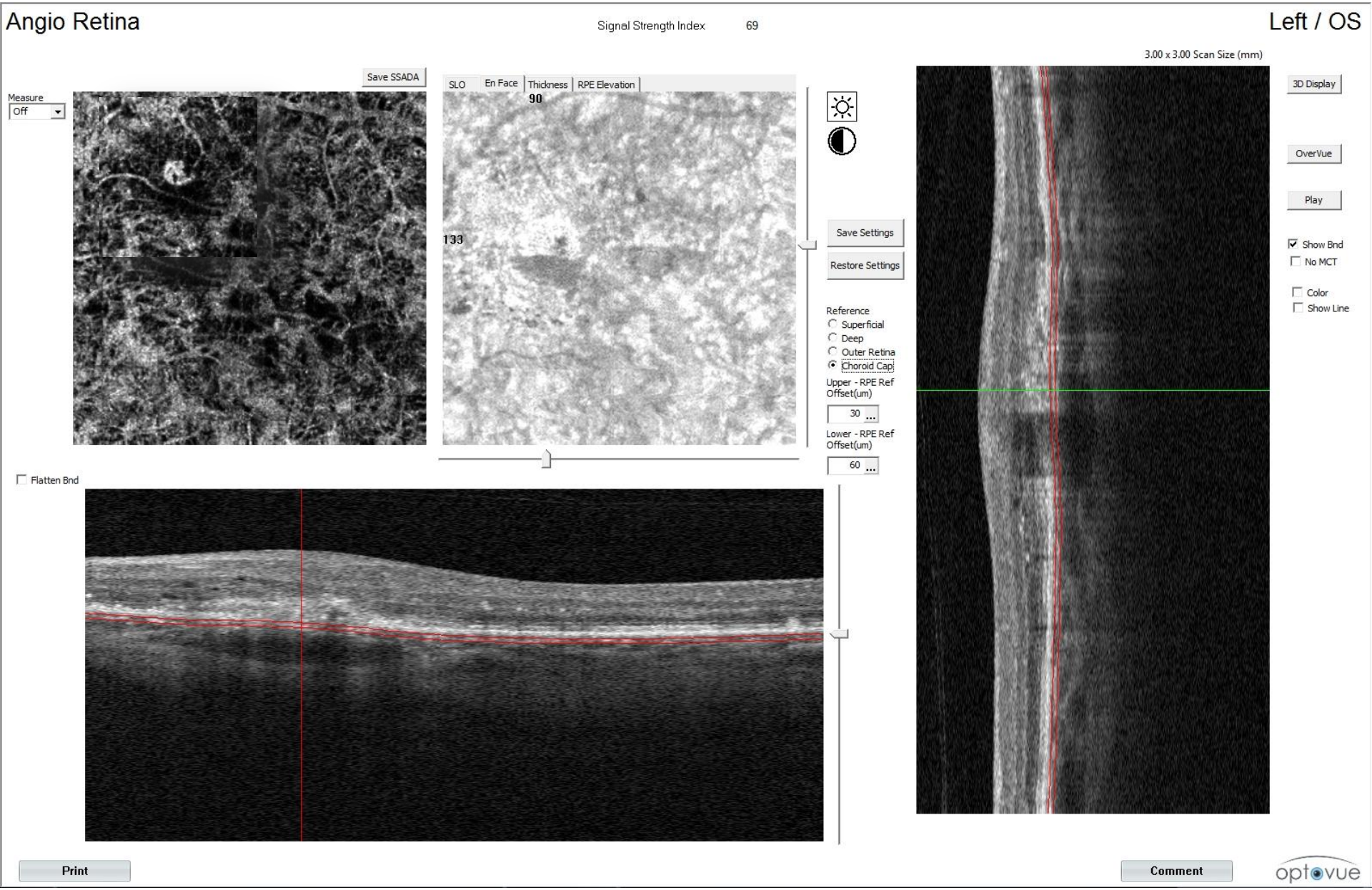


How Has High-Resolution Multimodal Imaging Refined Our Understanding of the Vasogenic Process in Type 3 Neovascularization?

Giuseppe Querques, MD, PhD*
Eric H. Souied, MD, PhD*
K. Bailey Freund, MD†‡



- **However, in vivo imaging does not allow us to conclusively rule out preexisting Type 1 neovascularization or even early RCA**


Angio Retina
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Save SSADA
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Thickness
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133
3D Display
OverVue
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Save Settings
Restore Settings
Show Bnd
No MCT
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Show Line
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Superficial
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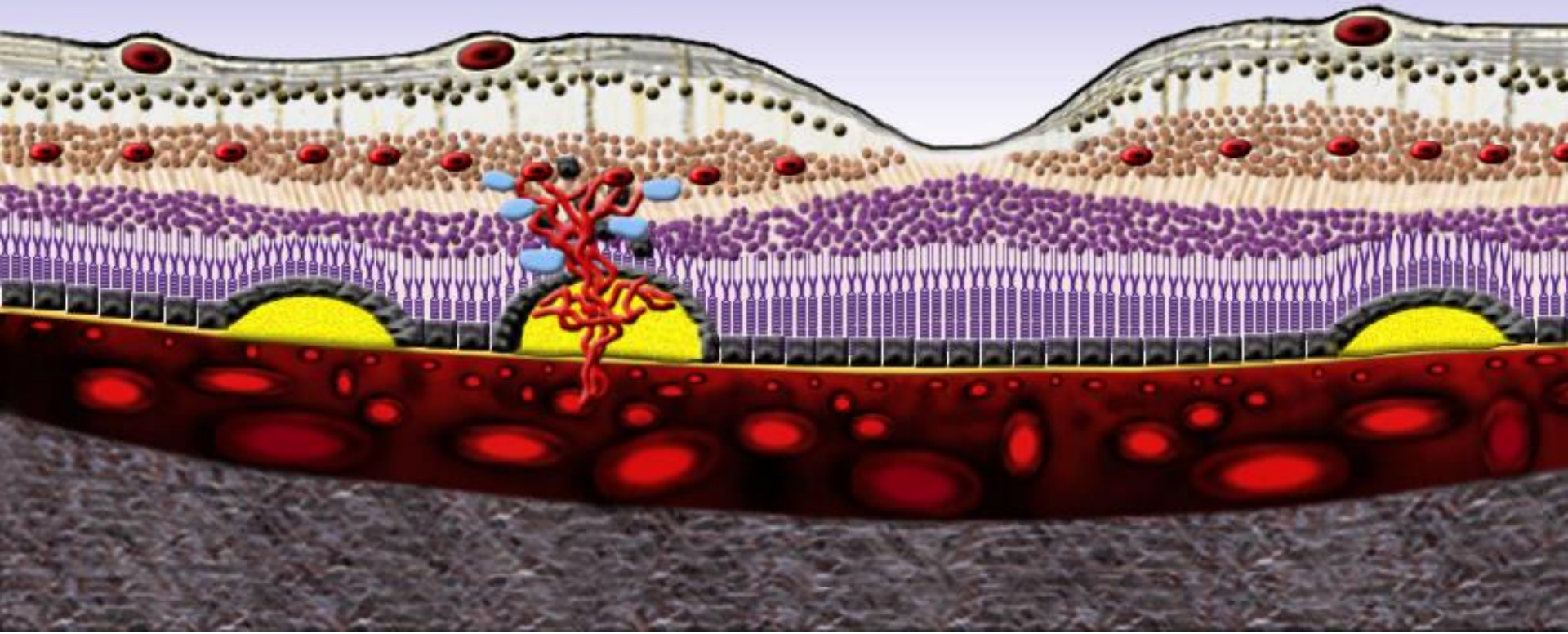
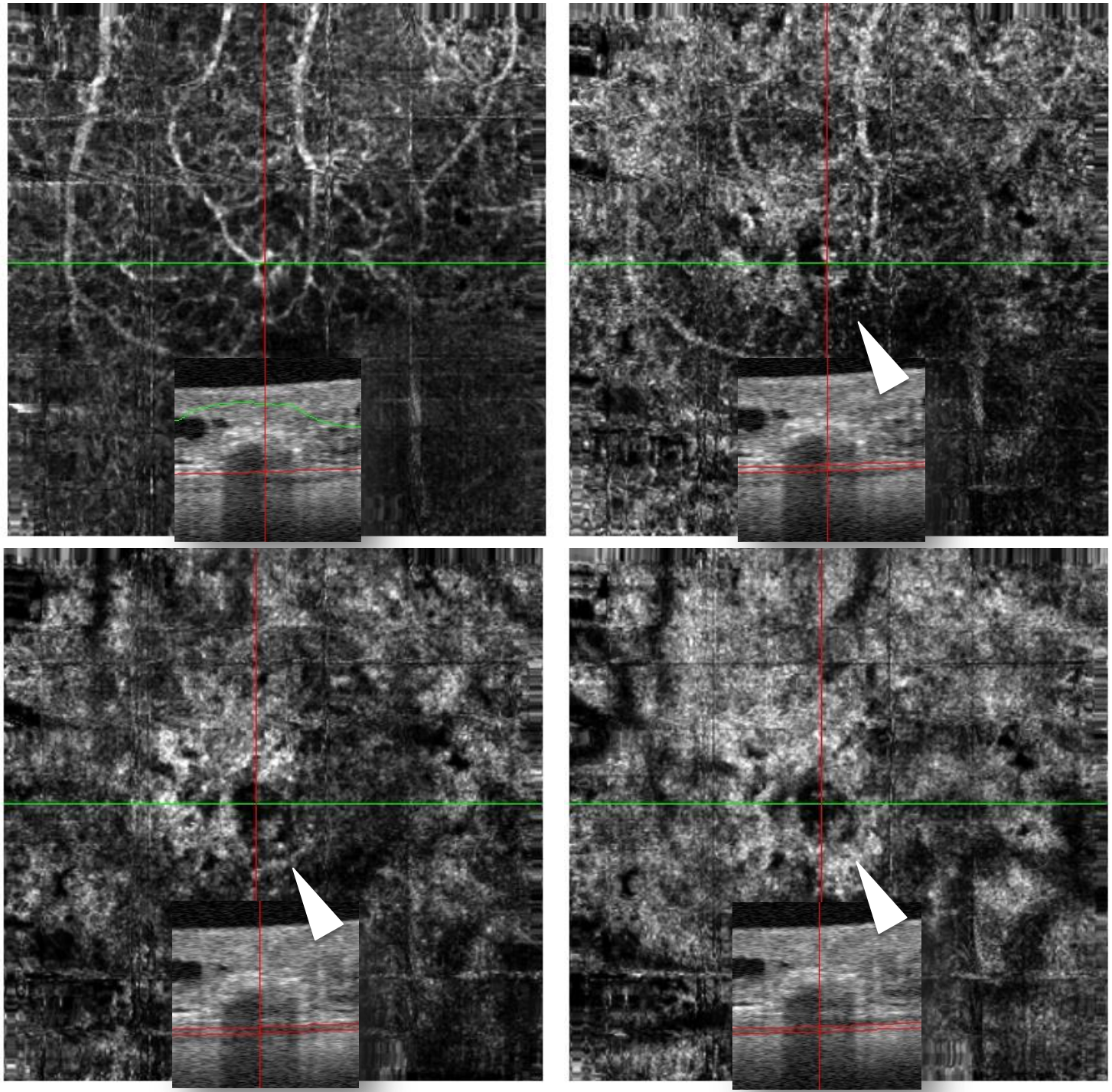
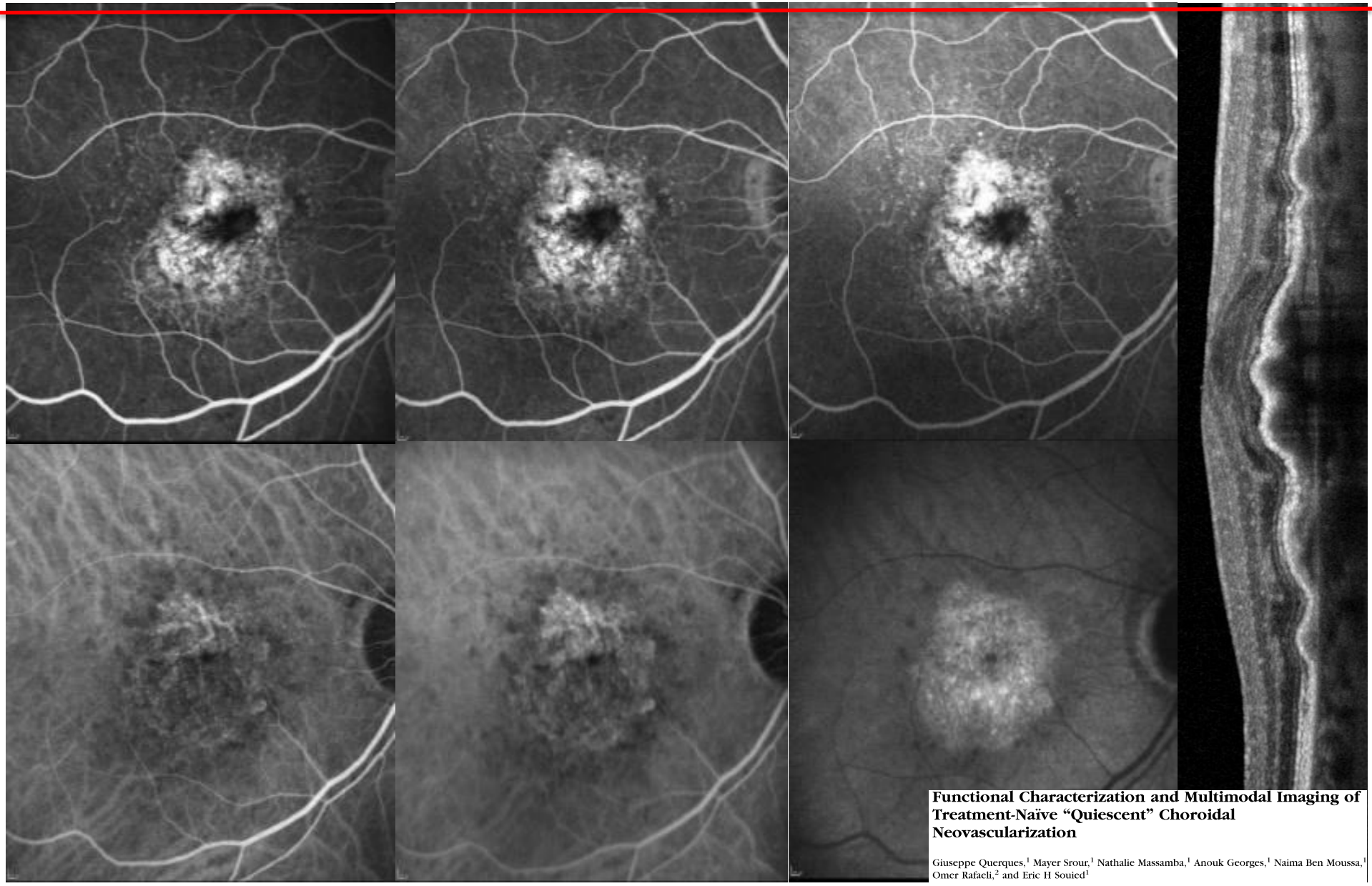




TYPE1 NEO quiescent



Functional Characterization and Multimodal Imaging of Treatment-Naïve "Quiescent" Choroidal Neovascularization

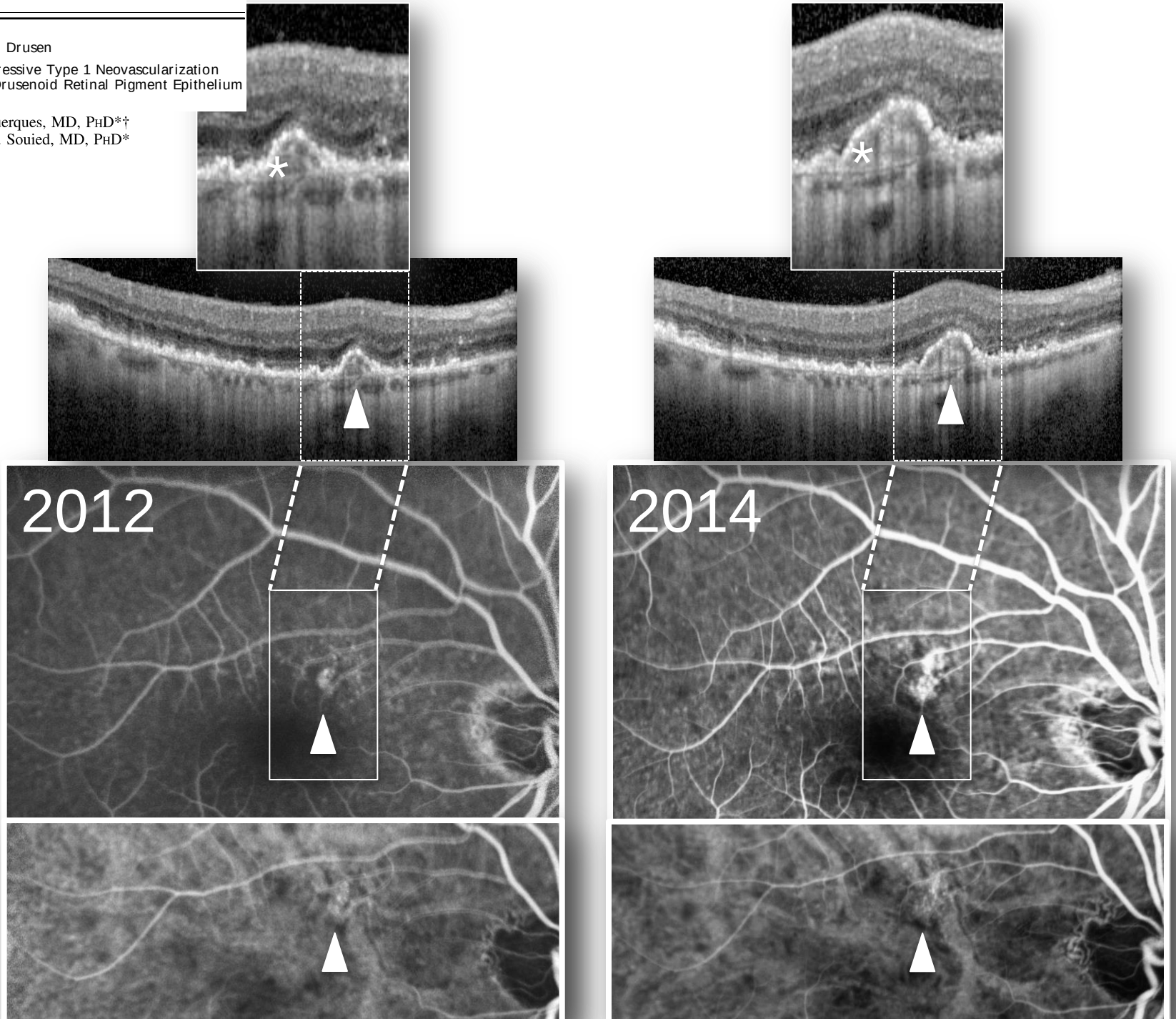
Giuseppe Querques,[1] Mayer Srour,[1] Nathalie Massamba,[1] Anouk Georges,[1] Naima Ben Moussa,[1] Omer Rafaeli,[2] and Eric H Souied[1]

Editorial

Vascularized Drusen

Slowly Progressive Type 1 Neovascularization Mimicking Drusenoid Retinal Pigment Epithelium Elevation

Giuseppe Querques, MD, PhD*†
Eric H. Souied, MD, PhD*



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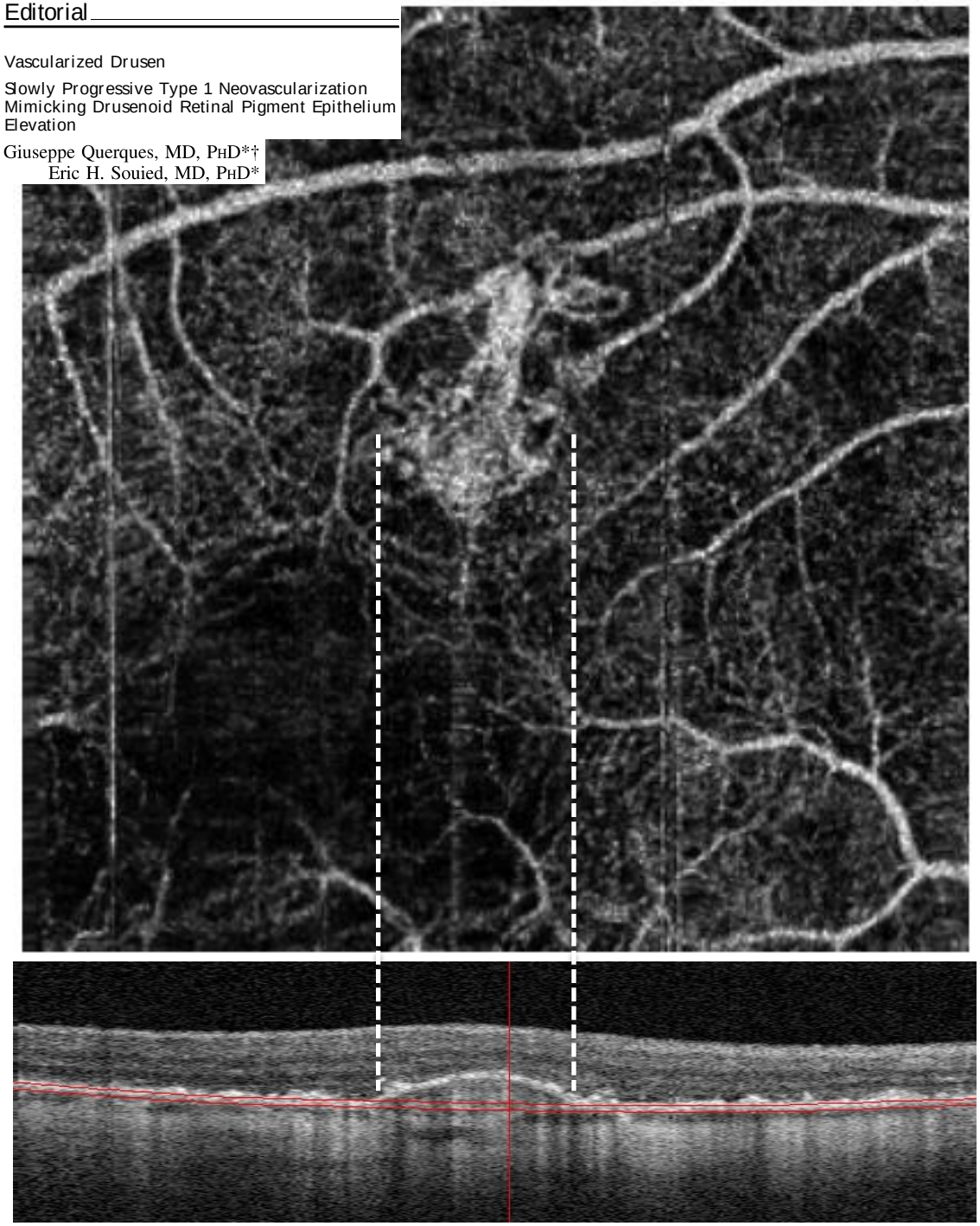

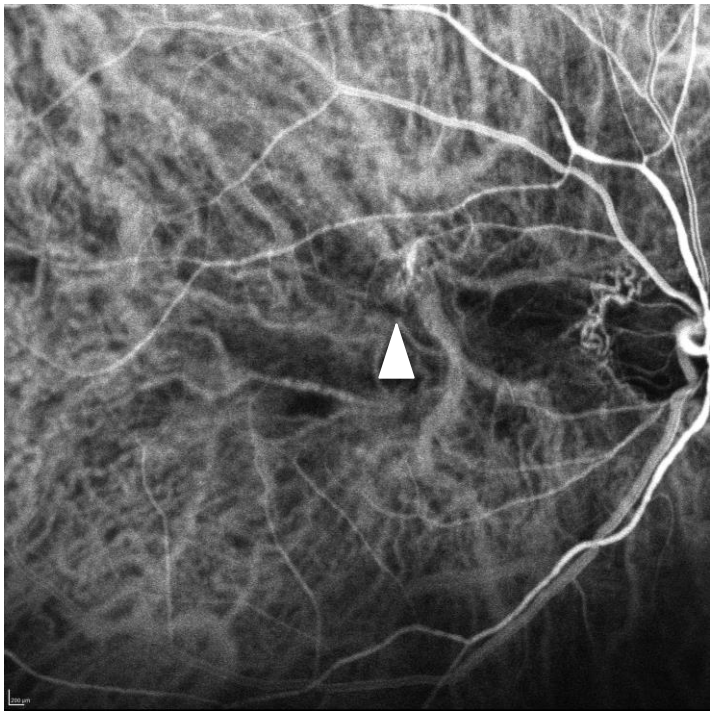

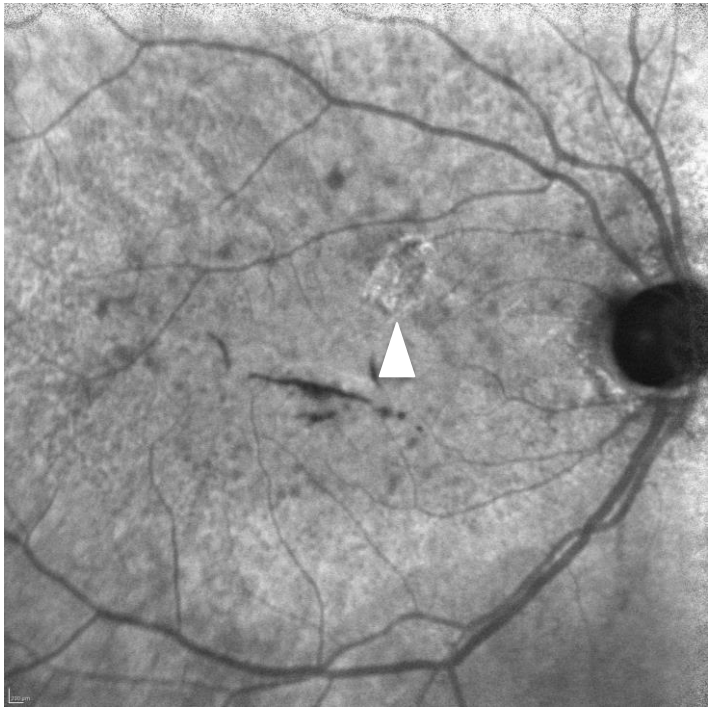

TYPE1 NEO quiescent – OCTA

- We investigated the OCT-A features of treatment-naïve quiescent CNV in 22 AMD eyes and assessed its sensitivity and specificity for neovascular detection

- To estimate the sensitivity and specificity of OCT-A, an additional cohort of 22 eyes of 22 patients with drusenoid PED and no evidence of vascular network at ICGA, were merged to the study group as negative control group

- OCT-A was performed through AngioPlex® CIRRUS HD-OCT model 5000 (Carl Zeiss Meditec, Inc., Dublin, USA), or using AngioVue® RTVue® XR Avanti (Optovue, Freemont, California, USA)

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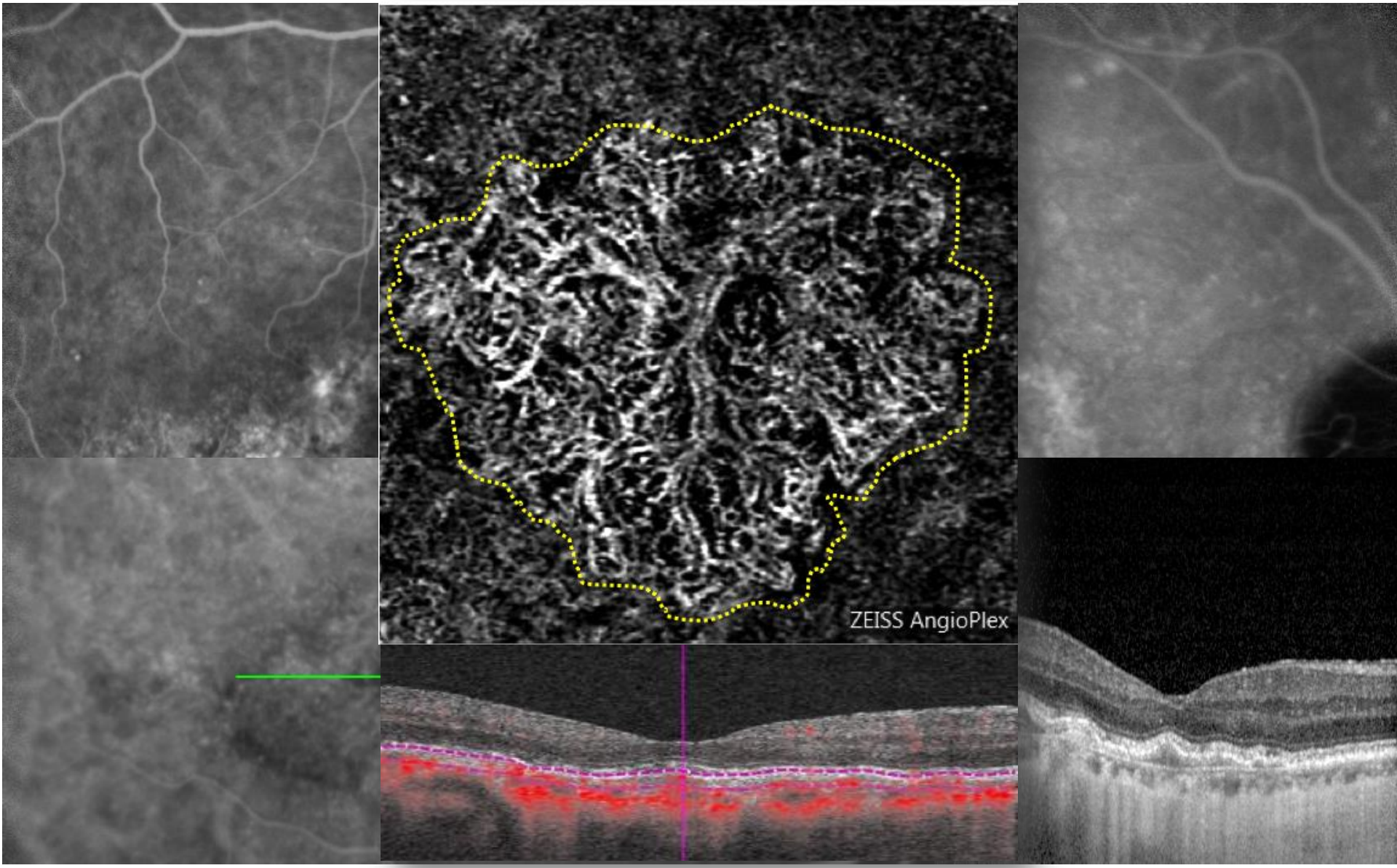
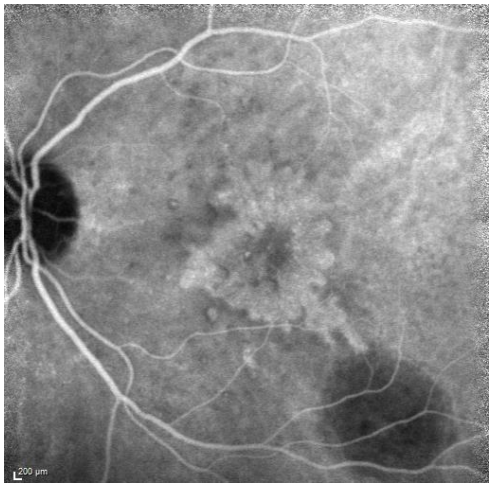
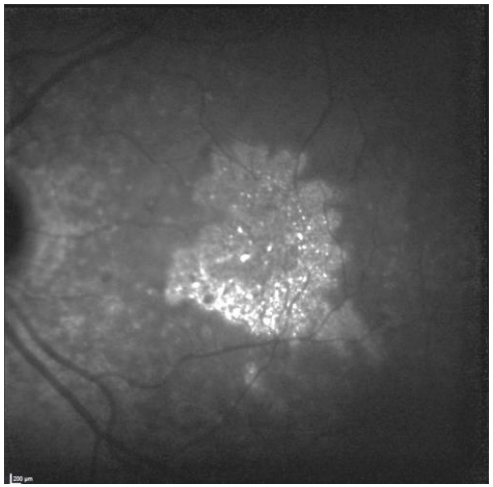
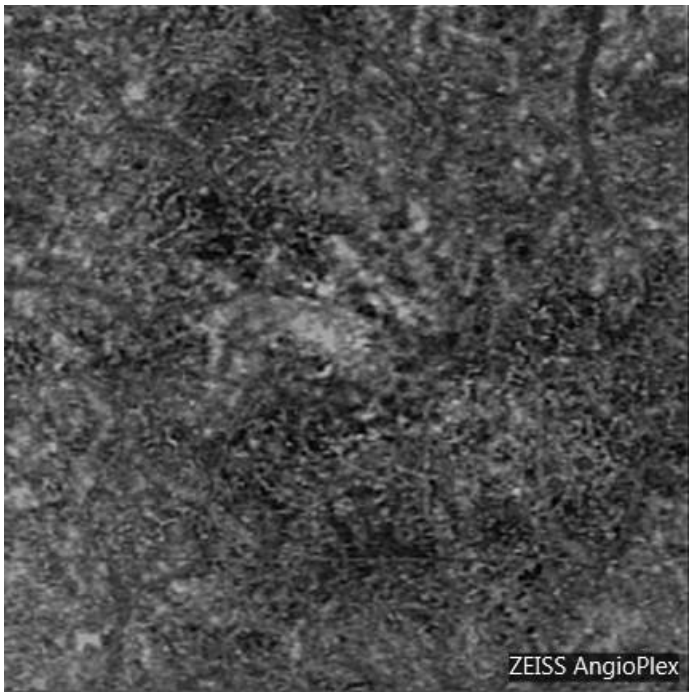


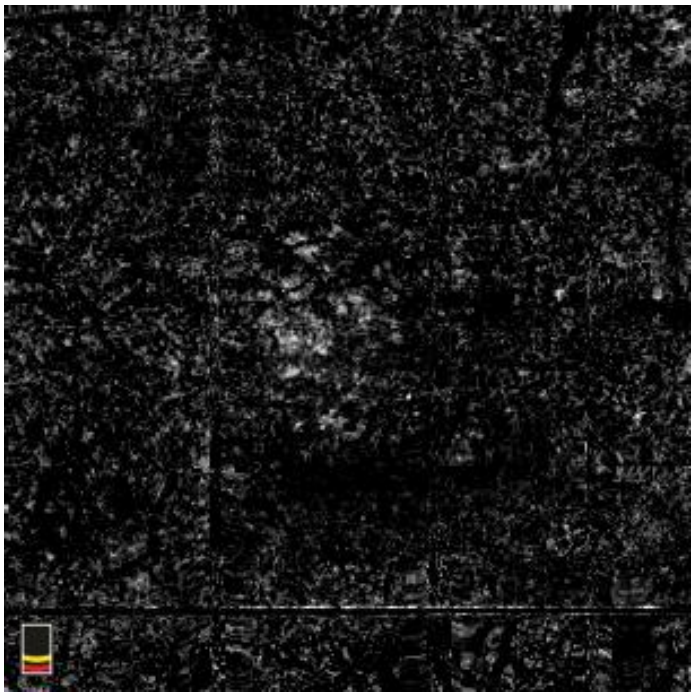
TYPE1 NEO quiescent – OCTA

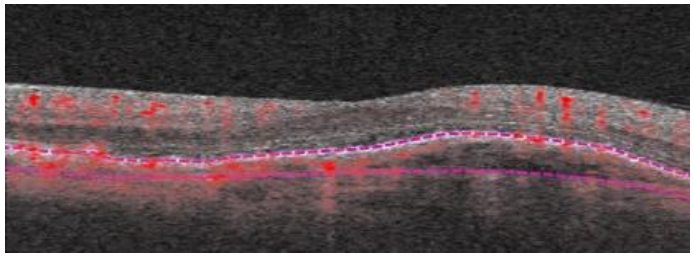
- Two readers correctly identified on OCT-A quiescent CNVs in 18 out of 22 eyes, and correctly excluded all 22 eyes with AMD without CNV.

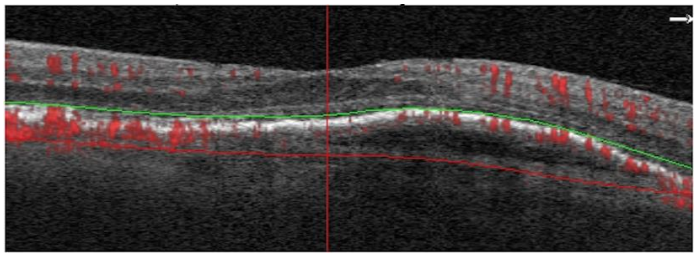












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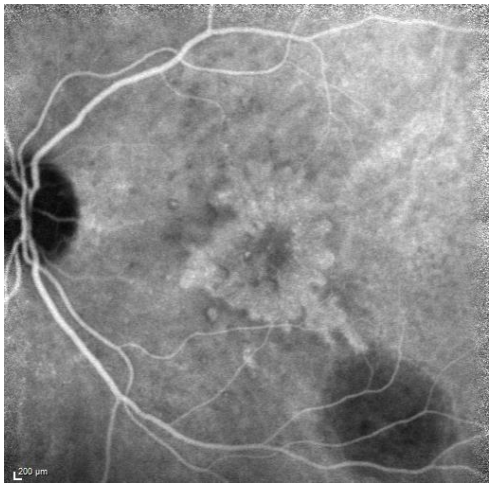
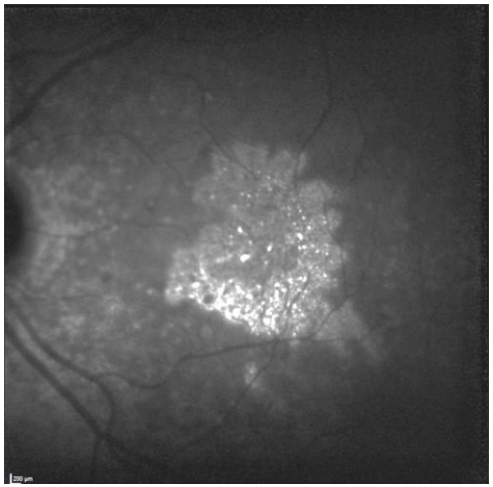
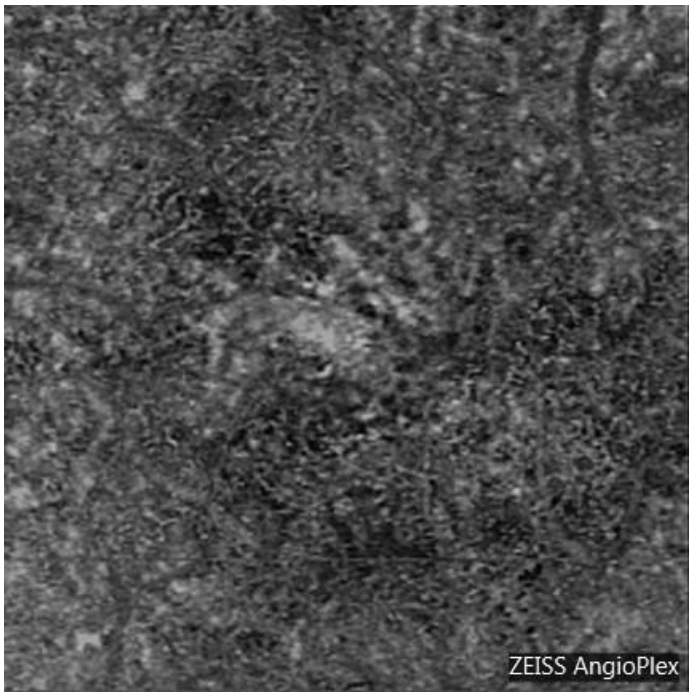
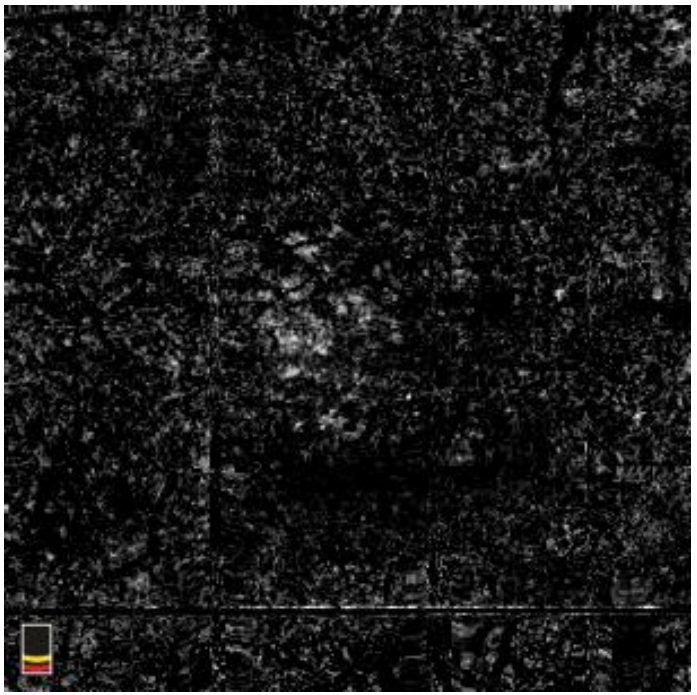
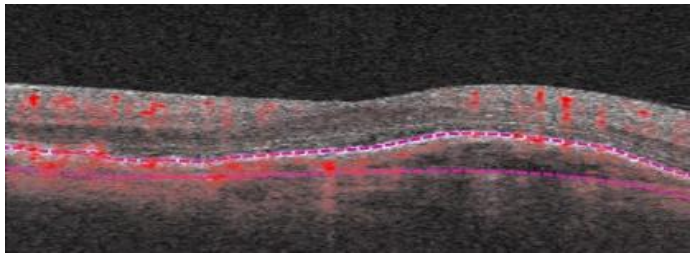
- OCT-A sensitivity turned out to be **81.8%**, and specificity was **100%** and there was complete agreement among the readers

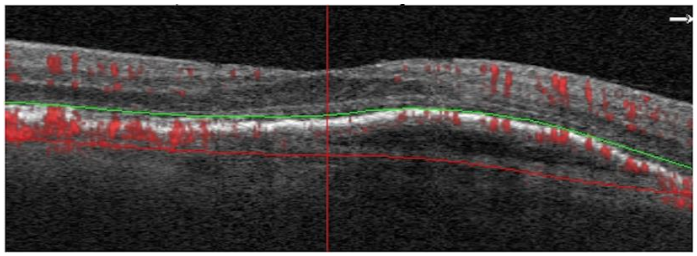










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