



*DRI OCT Triton series  
Case Samples*

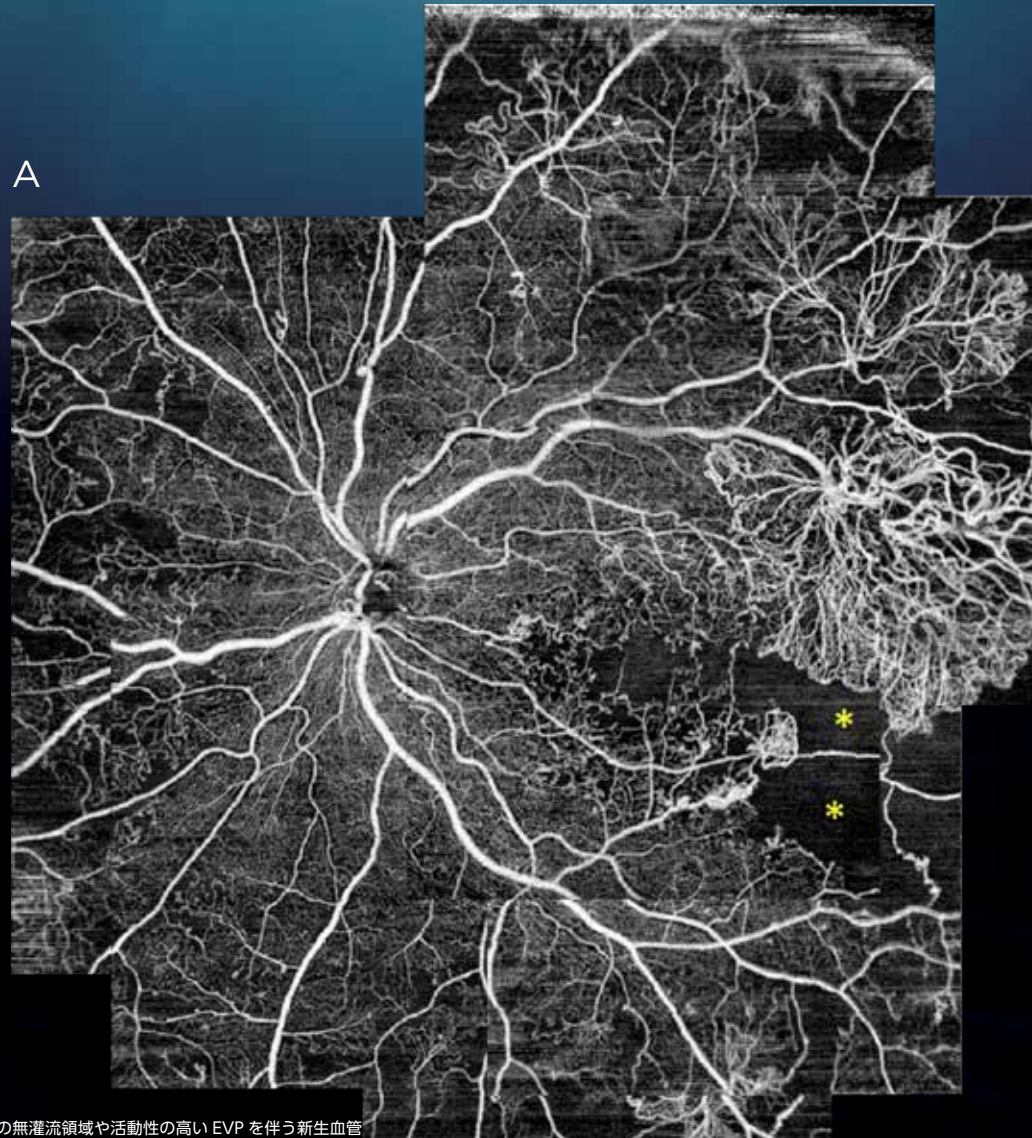
# Proliferative Diabetic Retinopathy

Discover what lies beneath  
**SS OCT Angio™**

## CASE 1

9mm x 9mm

SS OCT Angio x 9 images

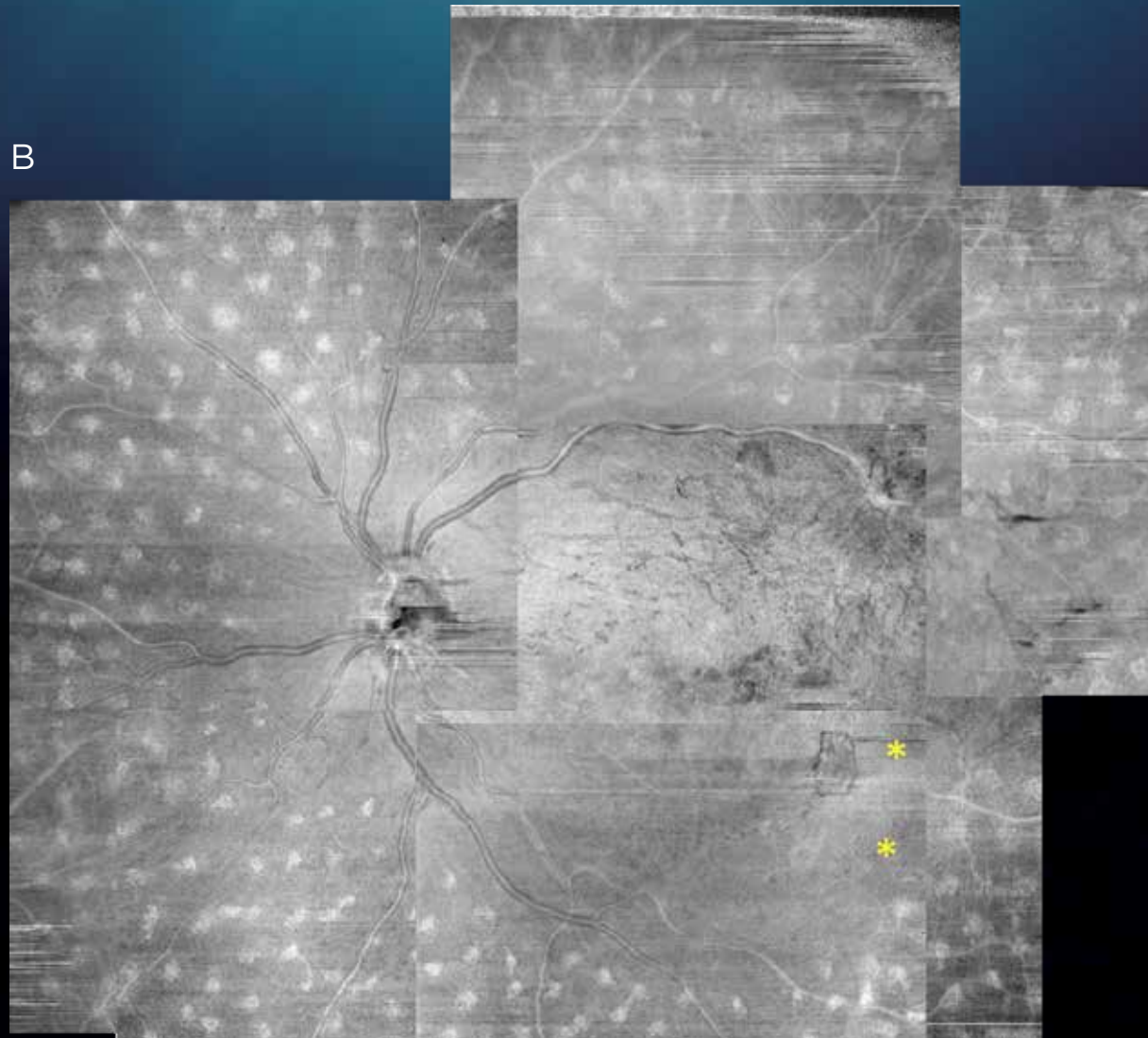


A: 網膜全層スラブを9枚合成したパノラマOCTA。周辺部の無灌流領域や活動性の高いEVPを伴う新生血管が明瞭に描出され、FAで撮影する画角に近い領域まで捉えられている。

文献 問瀬 智子 石羽澤 明弘：糖尿病網膜症の読影すぐ技マニュアル、眼科グラフィック Vol.7, No.3 2018 320 ページ 図 9A

# Proliferative Diabetic Retinopathy

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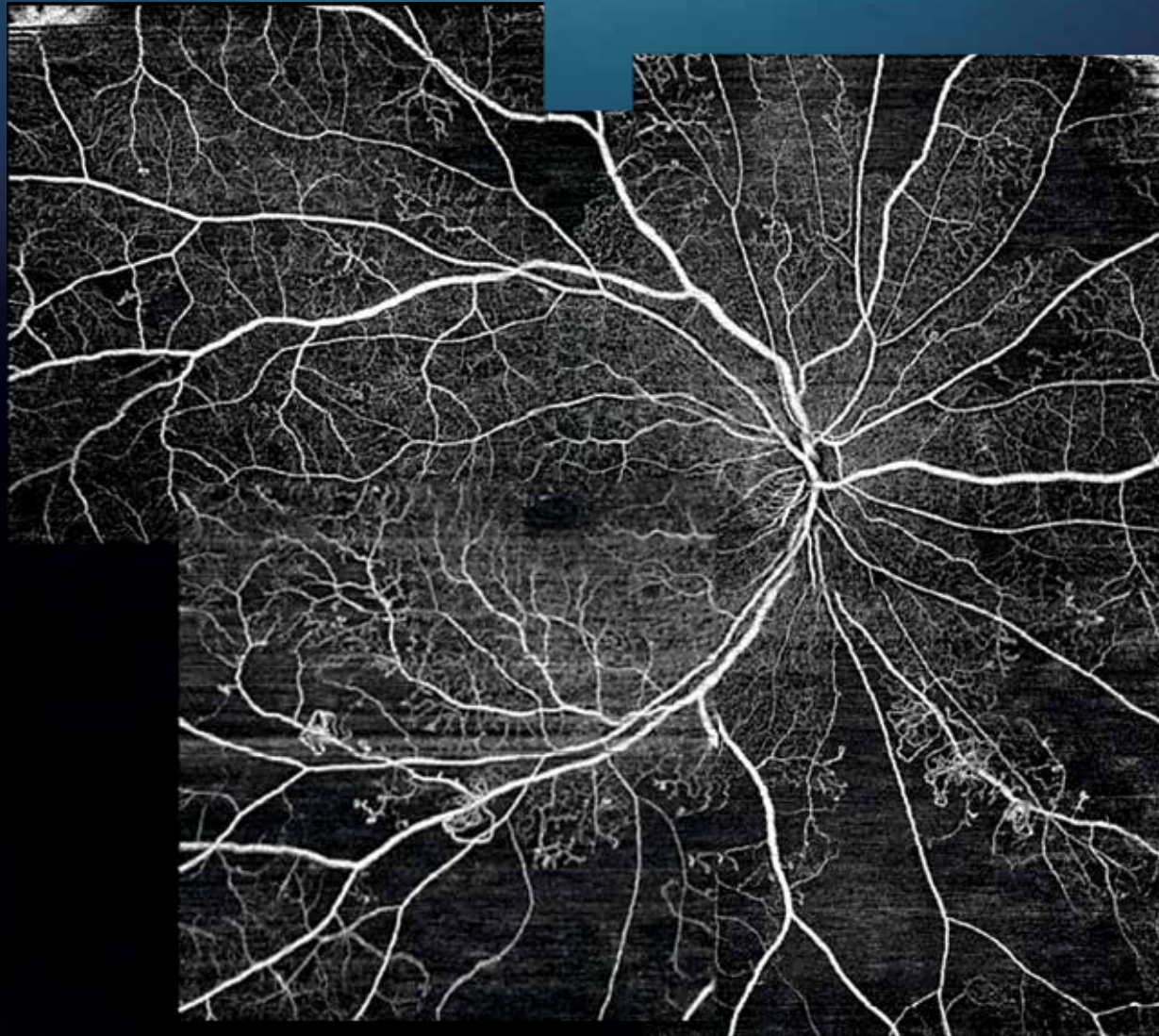
B:Aと同じスラブの en-face OCT 画像。 en-face と照らし合わせることで、OCTA の無灌流領域と汎光凝固斑と照らし合わせた読影が可能である。 例えば、\* で示した領域はまだ光凝固が不足していることが分かる。

文献 間瀬 智子 石羽澤 明弘：糖尿病網膜症の読影すご技マニュアル、眼科グラフィック Vol.7, No.3 2018 320 ページ 図 9B

# Proliferative Diabetic Retinopathy

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CASE 2



Courtesy: Akihiro Ishibazawa, MD Asahikawa Medial University Graduate School of Medical Sciences, Hokkaido, Japan.

文献 石羽澤 明弘：網膜血管疾患のOCT angiography、あたらしい眼科 Vol.34, No.5, 2017 655 ページ 図5

# Proliferative Diabetic Retinopathy

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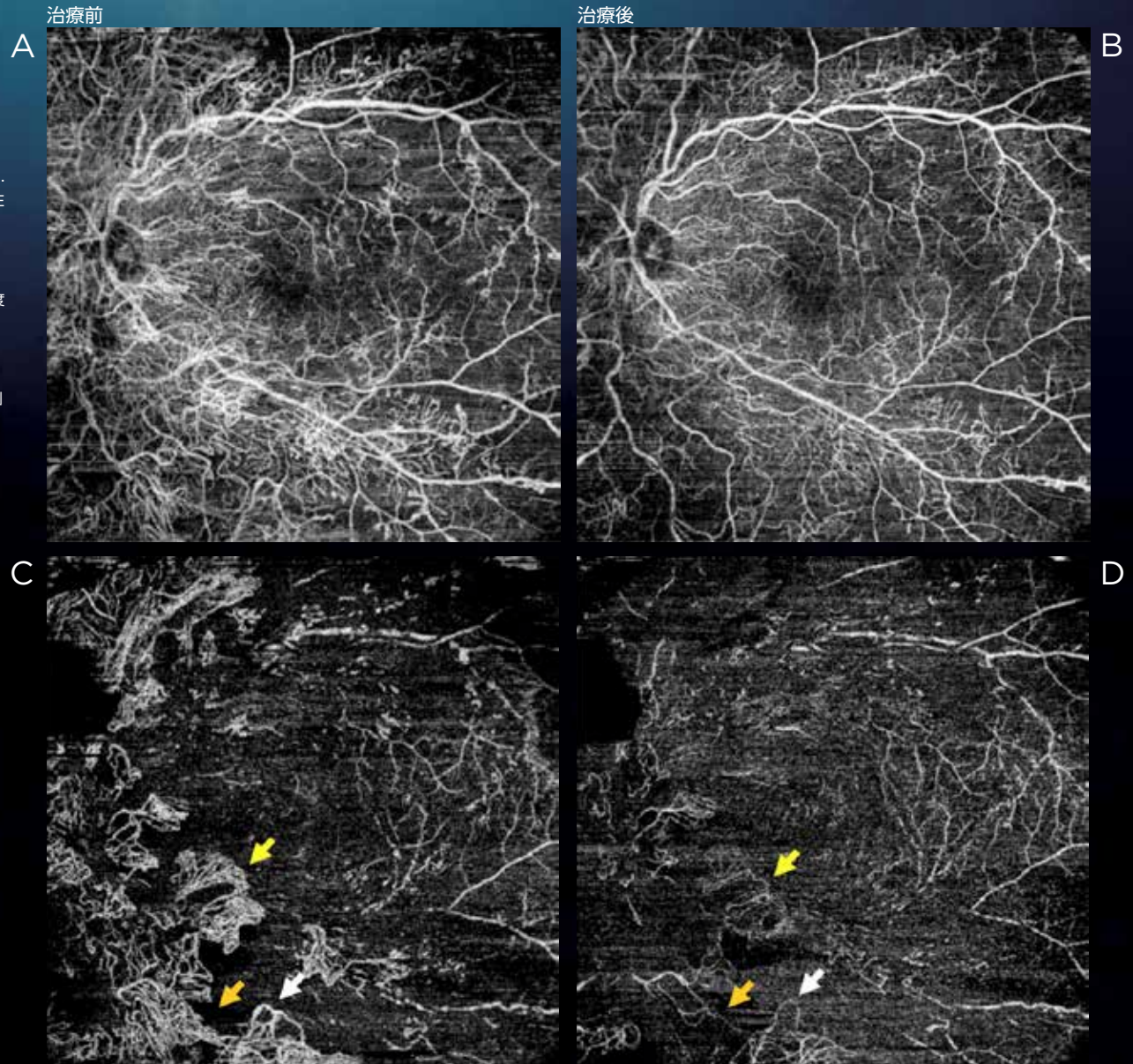
## CASE 3

OCTA で見る治療前後の新生血管  
(NVE) 形状の変化 (Triton, 12 x 12mm)

- 26 歳女性, 糖尿病合併妊娠患者の出産後, 汎光凝固前にラニビズマブ硝子体注射が施行された.
- A: 治療前の網膜全層スラブでは, アーケード血管に沿う繊維血管増殖膜に絡みつく様に NVE が見られる.
  - B: 硝子体注射から 2 日後, 新生血管が退縮していることが分かる.
  - C: 治療前の硝子体スラブでは, EVP<sup>1</sup> を伴う活動性の高い NVE が見られている (矢印)
  - D: 治療前の硝子体スラブでは, NVE の形は剪定され EVP(-) となり (矢印), 眼内の VEGF 濃度の低下が示唆される.

<sup>1</sup> EVP: Exuberant Vascular proliferative(微小血管が密に増殖)

2017 年 第 121 回日本眼科学会総会 ランチョンセミナー 10 「臨床活用と OCT-A の進化」より



# Proliferative Diabetic Retinopathy

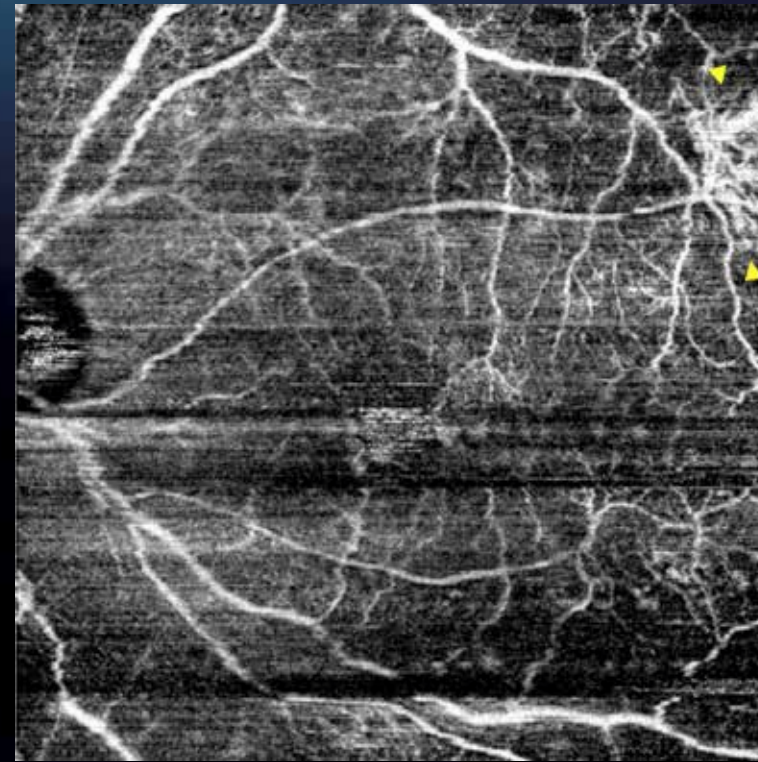
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**SS OCT Angio™**

## CASE 4

A



B



OCTA 撮影が糖尿病網膜症診断に有用だった症例

A: カラー眼底写真では滲出性変化を捉えているものの、中間透光体の混濁と虹彩癒着による散瞳不良により、眼底を透視することが困難であった。

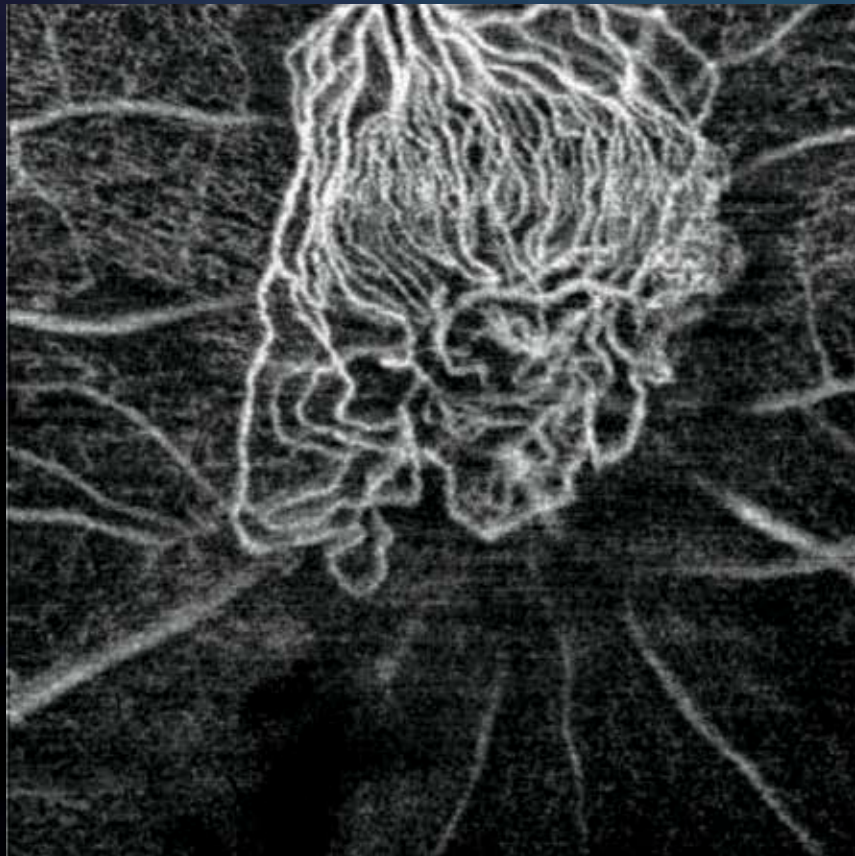
B: 9x9mm (Triton) ではアーチファクトはあるものの、新生血管が明瞭に捉えられた (矢頭)

文献 問瀬 智子 石羽澤 明弘: 糖尿病網膜症の読影すぐ技マニュアル、眼科グラフィック Vol.7, No.3 2018 321 ページ 図 11 A,B

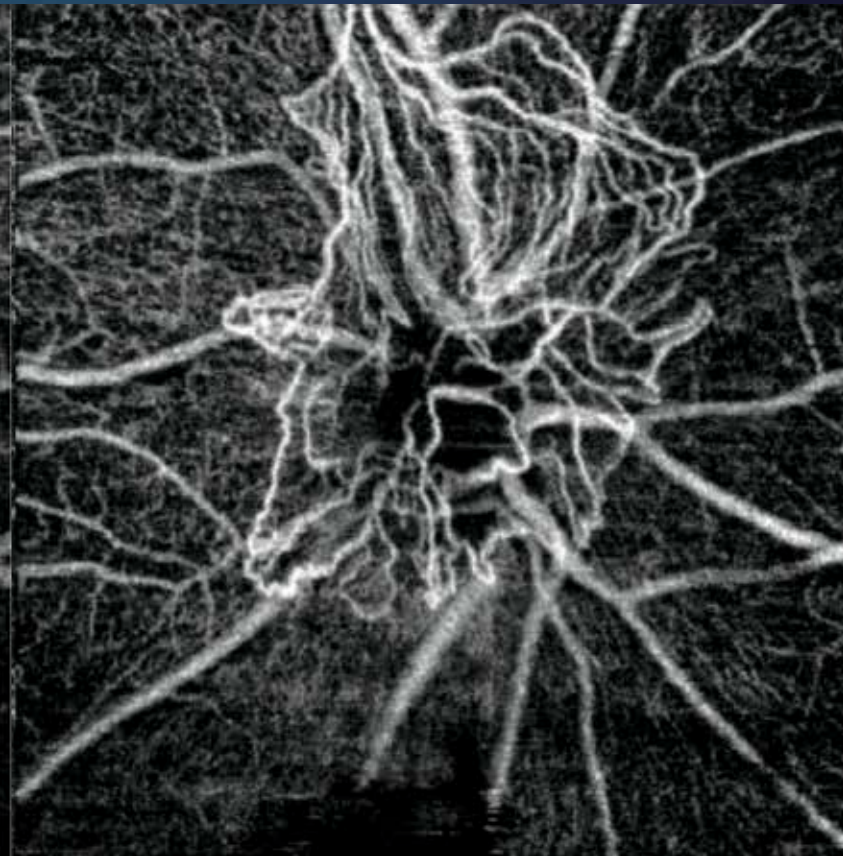
# Neovascularization

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Before PRP



After PRP



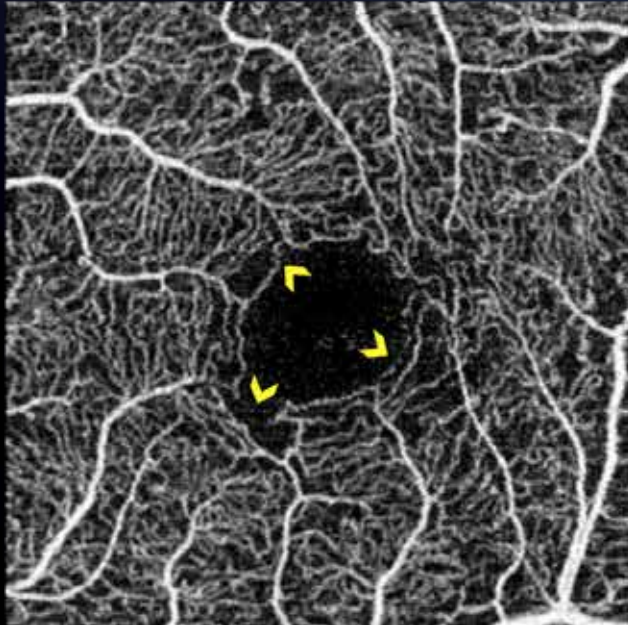
Courtesy: Akihiro Ishibazawa, MD Asahikawa Medial University Graduate School of Medical Sciences, Hokkaido, Japan.

文献 石羽澤 明弘：光干渉断層血管撮影の糖尿病網膜症への応用．あたらしい眼科 Vol.34, No.6, 2017 806 ページ (48) 図表番号 b,d

# Identification of enlarged & irregular FAZ

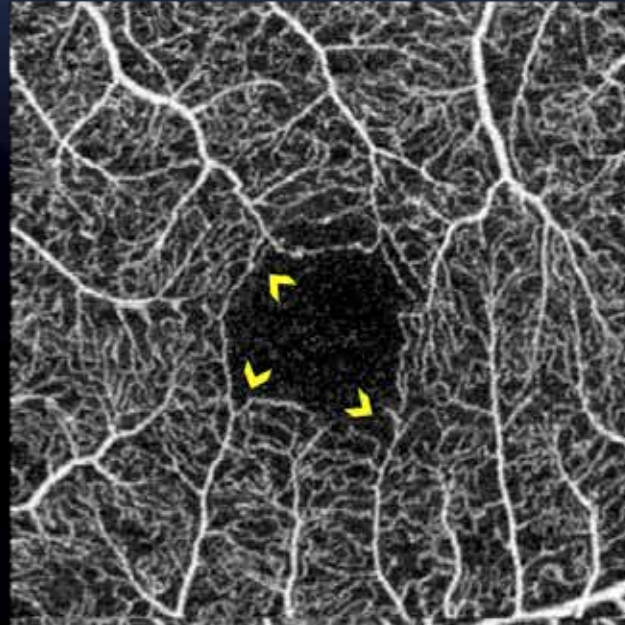
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OCT-A  
Superficial capillary plexus



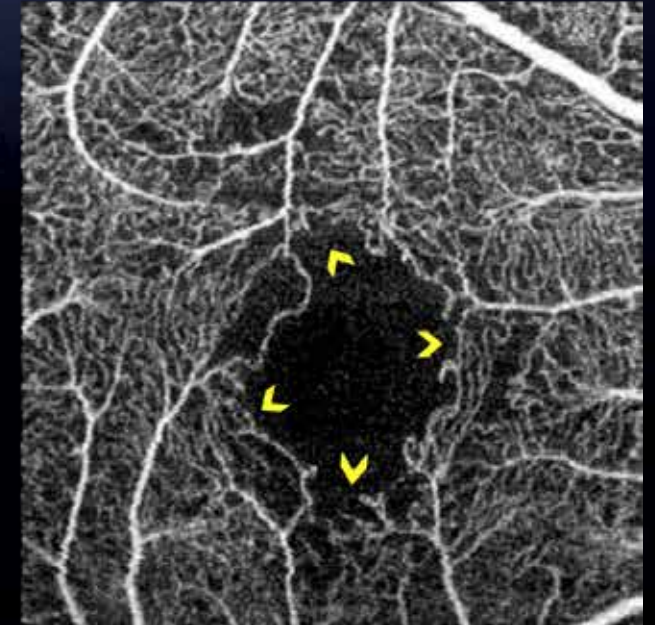
CASE 1

OCT-A  
Superficial capillary plexus



CASE 2

OCT-A  
Superficial capillary plexus



CASE 3

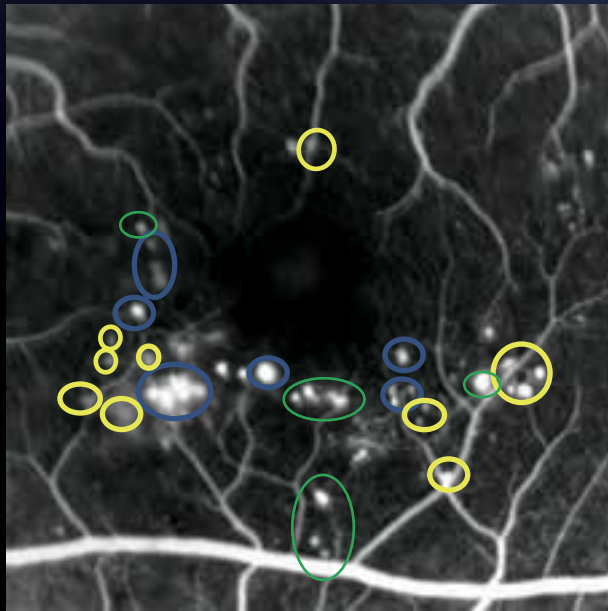


# Identification of Microaneurysms

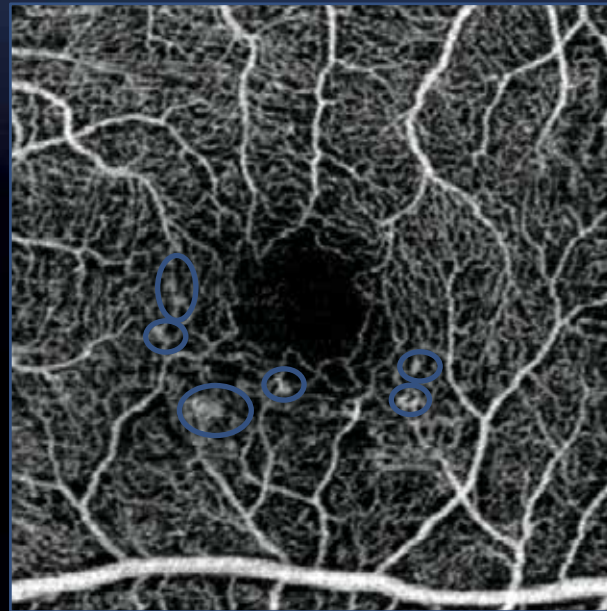
Discover what lies beneath  
**SS OCT Angio™**

## CASE 1

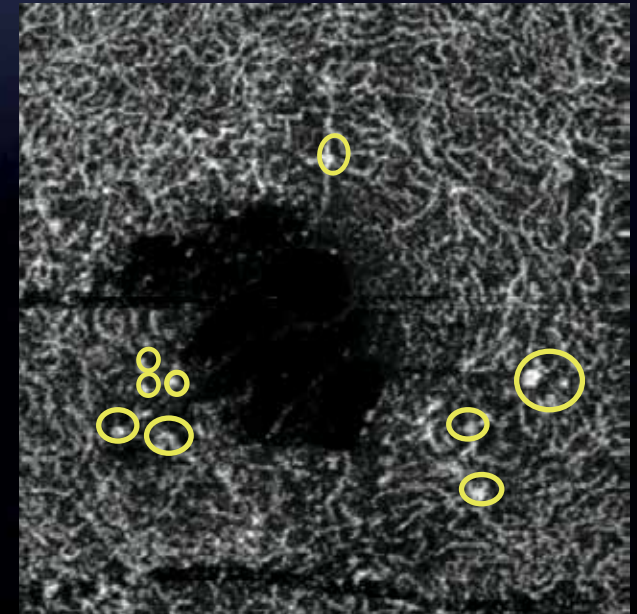
FA



OCT-A  
Superficial capillary plexus



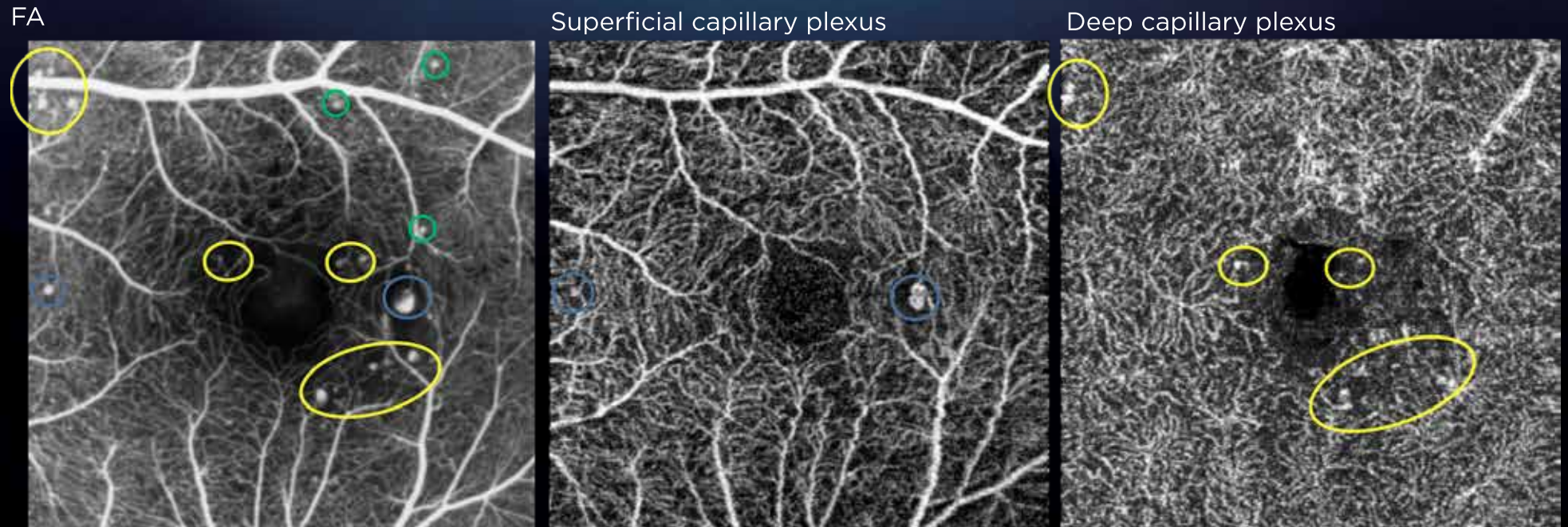
OCT-A  
Deep capillary plexus



# Identification of Microaneurysms

Discover what lies beneath  
**SS OCT Angio™**

## CASE 2



# Branch Retinal Vein Occlusion

Discover what lies beneath  
**SS OCT Angio™**

**Physician:** Professor Yuichiro Ogura Nagoya City University, Nagoya, Japan

**Patient History:** Female, 43 years old

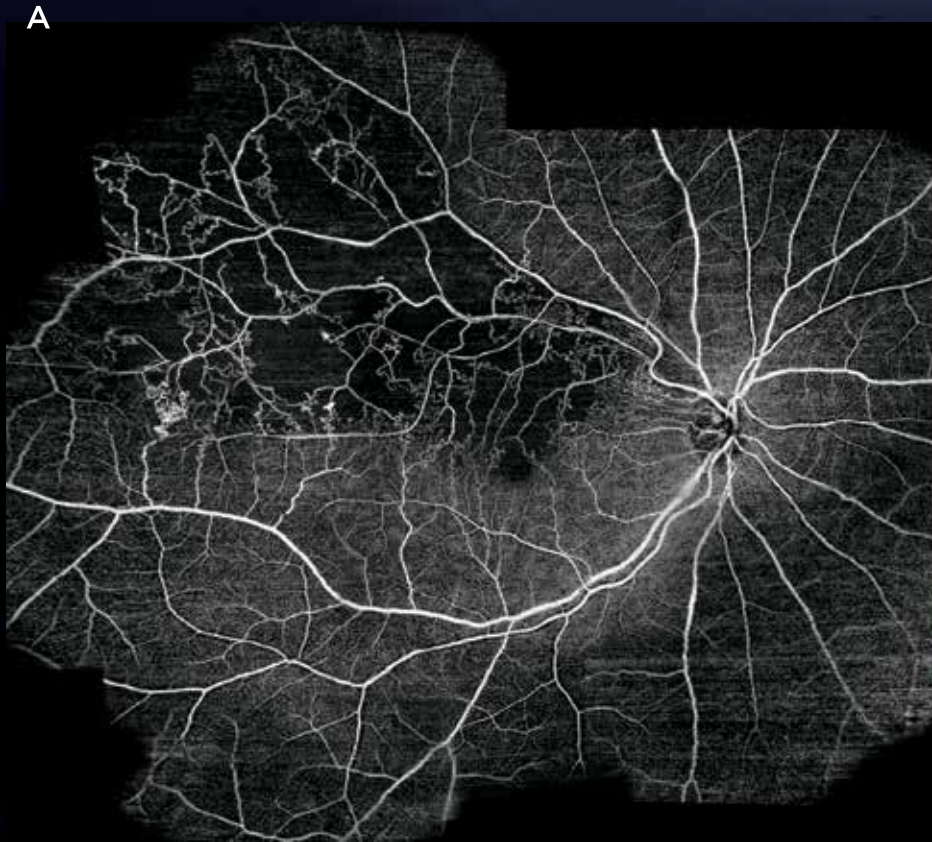
**Diagnosis:** Old branch retinal vein occlusion on the right eye

## Examination Techniques and Results:

Topcon® DRI OCT Triton™ Swept Source OCT-A of 43 years old female patient with an old branch retinal vein occlusion on the right eye which she developed in December of 2014. She received 3 intravitreal injections of 0.5mg ranibizumab into the right eye during the course of 2015. A laser scatter photocoagulation was performed in early 2016. The final BCVA was 0.1 Snellen. Image A shows the OCT-A data with ischemic areas and IRMA. Image B shows the fundus image with visible laser lesions in the ischemic area. This mosaic was created by stitching six 9 x 9mm OCT-A scans and has an effective dimension of more than 20 x 20mm.

## Clinical Relevance:

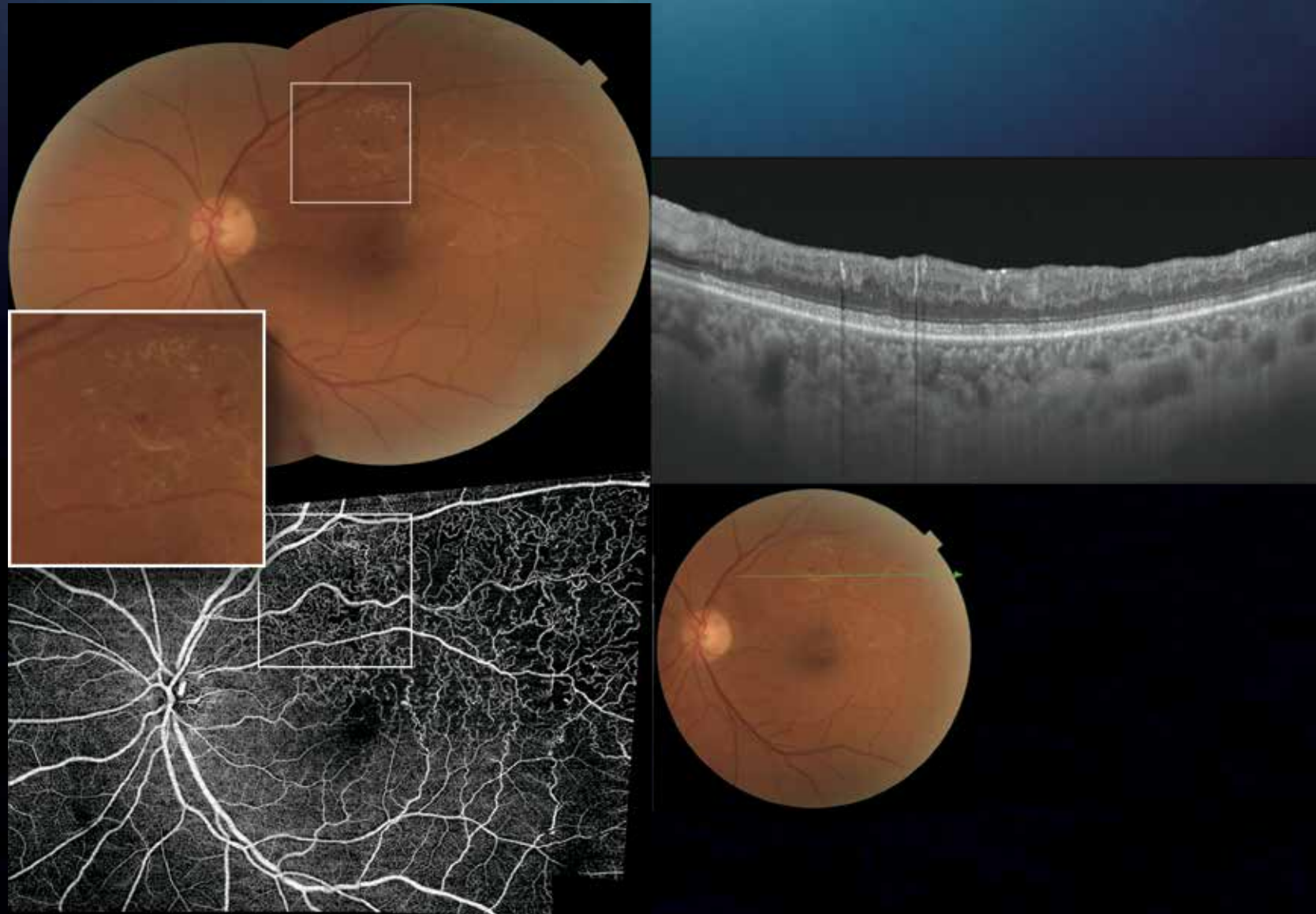
The ability to create a large mosaic, or widefield image, is necessary to screen for retinal ischemia in patients with vascular occlusions of diabetic retinopathy.



Courtesy: Yuichiro Ogura, MD Professor and Chairman of Department of Ophthalmology and Visual Science, Nagoya City University, Nagoya, Japan

# Branch Retinal Vein Occlusion

Discover what lies beneath  
**SS OCT Angio™**



Courtesy: Carl Glittenberg, MD Karl Landsteiner Institute for Retinal Research and Imaging

# Choroidal Neovascularization With Fibrosis

Discover what lies beneath  
**SS OCT Angio™**

**Physician:** Carl Glittenberg MD, Karl Landsteiner Institute for Retinal Research and Imaging Vienna, Austria

**Patient History:** Female, 59 years old

**Diagnosis:** Choroidal Neovascularisation Type II on the right eye

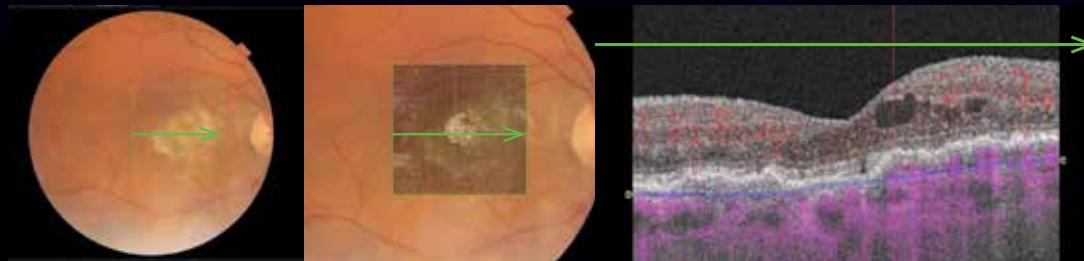
**Treatment:** 5 intravitreal injections of anti-VEGF on the right eye

## Examination Techniques and Results:

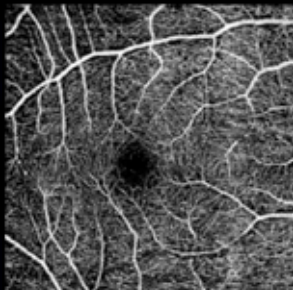
A high definition swept source OCT B-scan, a full color fundus photograph, and a swept source OCT angiography (SS OCT Angio™) were performed. The examinations were collected on a Topcon DRI OCT Triton™ Plus swept source OCT system. The fundus photograph shows an area of macular fibrosis. The B-scan shows a mixture of subretinal highly reflective material (SRHM) and fibrotic material as well as subretinal fluid. The SS OCT Angio™ shows hyper-mature neovascular vessels inside the fibrotic lesion.

## Clinical Relevance:

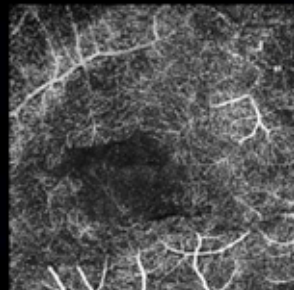
The ability to visualize hyper-matured vasculature inside of fibrotic lesions will improve our understanding of the etiology and treatment of choroidal neovascularisations. Due to the ability of swept source OCT and SS OCT Angio™ to penetrate deeper into such lesions a better visualization can be guaranteed. This will be invaluable as new treatment modalities to avoid hyper maturation of neovascular vessels become available.



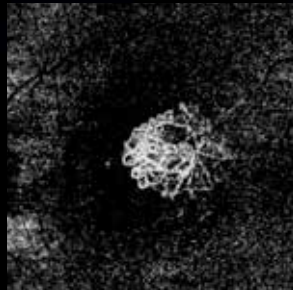
Superficial



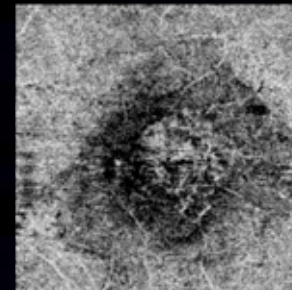
Deep



Outer retina



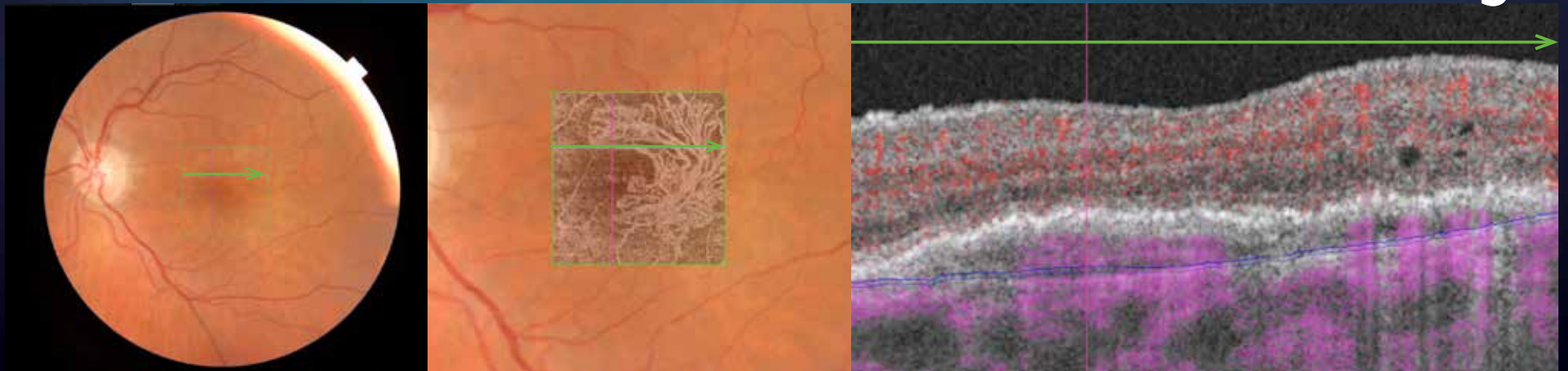
Choriocapillaris



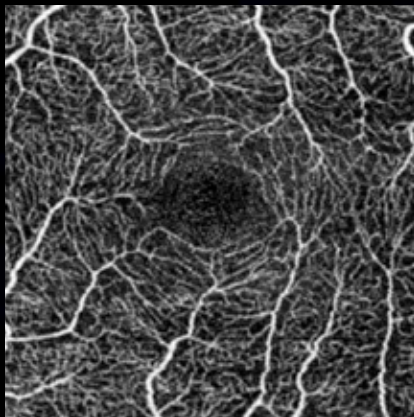
Courtesy: Carl Glittenberg, MD Karl Landsteiner Institute for Retinal Research and Imaging

# Choroidal Neovascularization

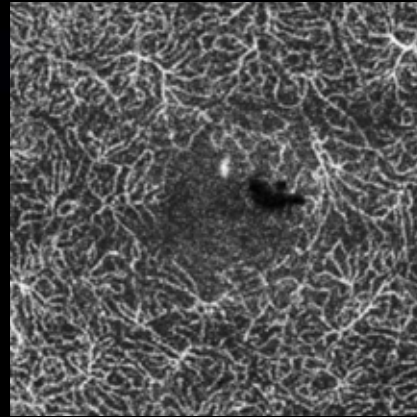
Discover what lies beneath  
**SS OCT Angio™**



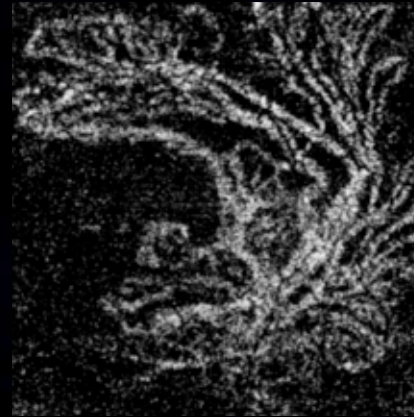
Superficial



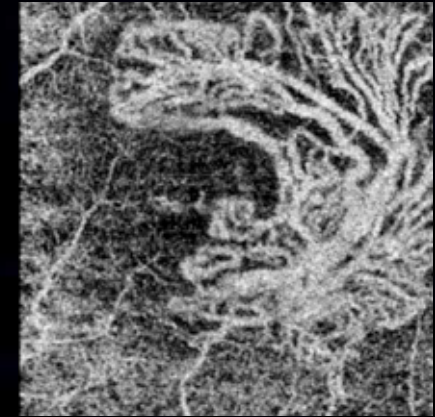
Deep



Outer retina



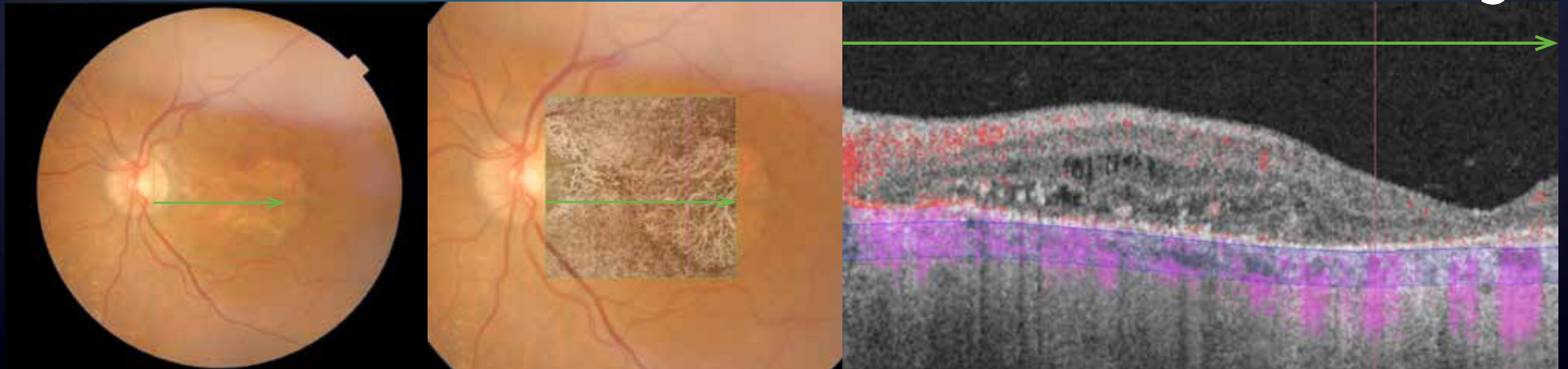
Choriocapillaris



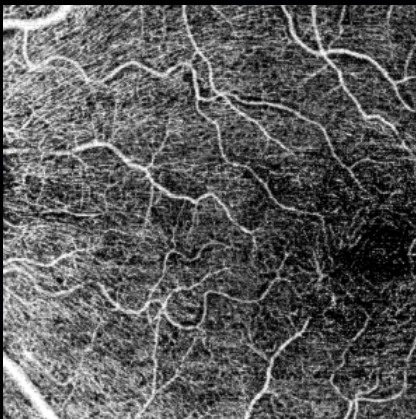
Courtesy: Nadia Waheed, MD and Yasin Alibhai, MD of New England Eye Center

# Polypoidal Choroidal vasculopathy

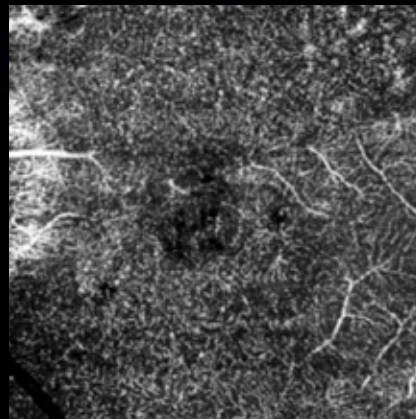
Discover what lies beneath  
**SS OCT Angio™**



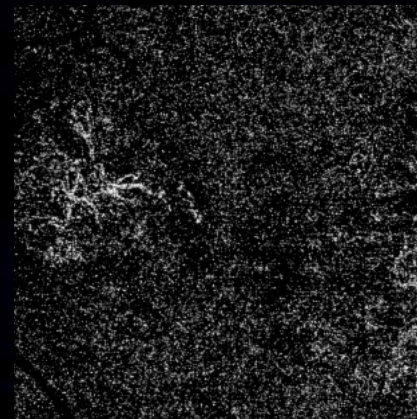
Superficial



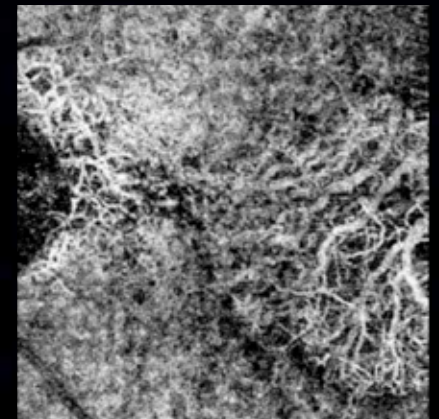
Deep



Outer retina



BM-100  $\mu\text{m}$



# Myopic CNV

**Physician:** Carl Glittenberg MD, Karl Landsteiner Institute for Retinal Research and Imaging Vienna, Austria

**Patient History:** Female, 72 years old

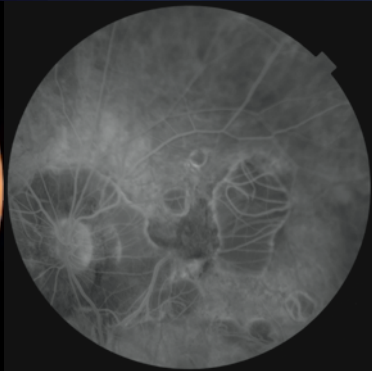
**Diagnosis:** Myopic CNV on the left eye

**Treatment:** 5 intravitreal injections of anti-VEGF on the left eye

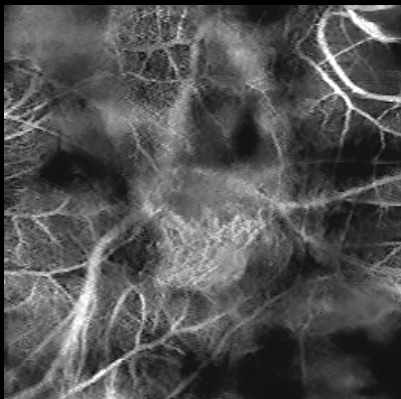
Color Fundus



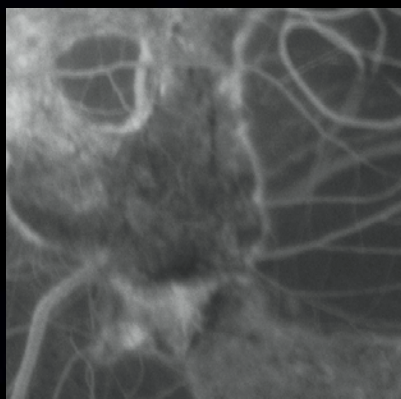
FA



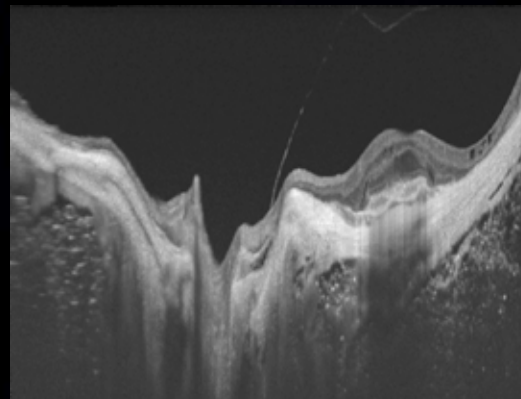
SS OCT Angio



FA



B scan



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## Examination Techniques and Results:

A high-definition swept source OCT B scan, a full color fundus photograph, a fluorescein angiography, and a swept source OCT angiography (SS OCT Angio™) were performed. The examinations were collected on a Topcon DRI OCT Triton™ Plus swept source OCT system. The fundus photograph shows a highly myopic fundus with peripapillary atrophy and an older myopic neovascular lesion with a fresh component on the inferior margin. The B scan shows a myopic fundus, retinoschisis, and intraretinal fluid over the fresh part of the lesion. The fluorescein angiography (top right image) shows leakage in the fresh inferior component. The SS OCT Angio™ (bottom left images) clearly shows vascular proliferation in the area of leakage. OCT Angio image were post processed by Carl Glittenberg MD.

## Clinical Relevance:

The ability to perform SS OCT Angio™ on highly myopic patients is of great importance for early detection of myopic CNV.

Courtesy: Carl Glittenberg, MD Karl Landsteiner Institute for Retinal Research and Imaging



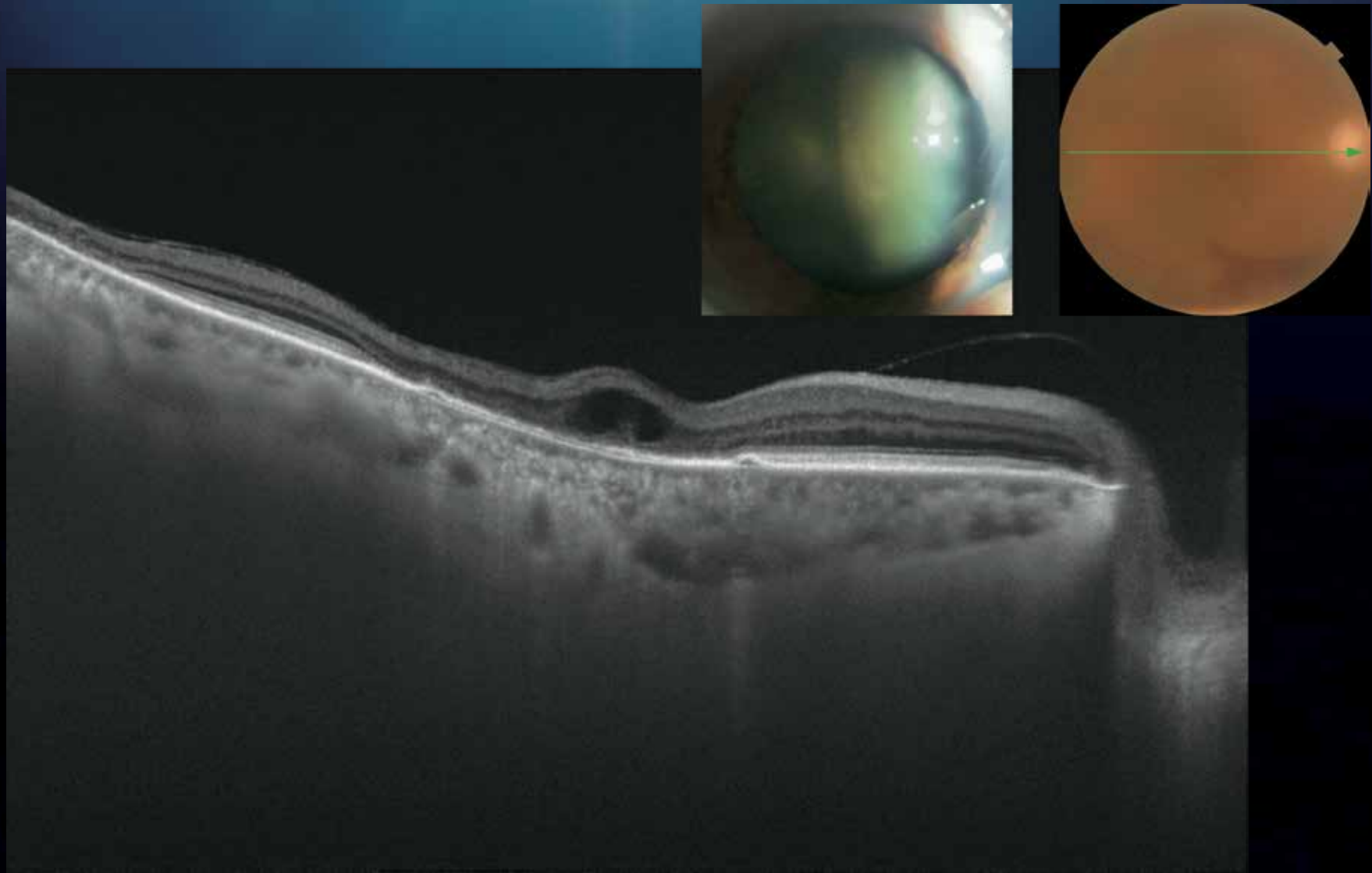
# Myopic Macular Hole

Surgery: 1 day following vitrectomy with 25% SF 6 gas



Courtesy: Netan Choudhry, MD Vitreous Retina Macula Specialists of Toronto

# Cataract

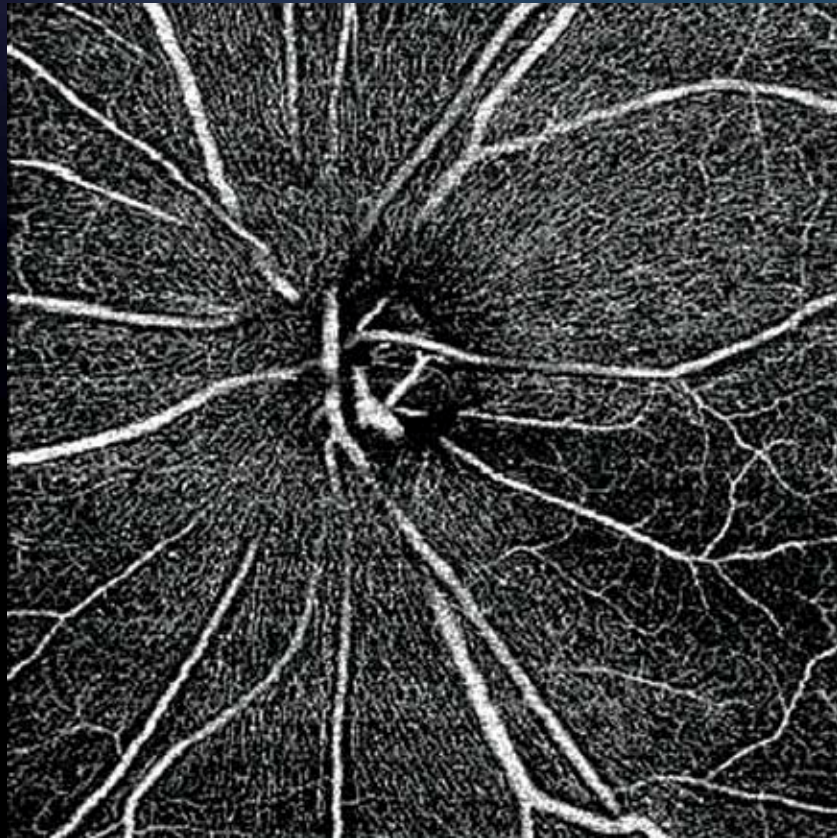


Courtesy: Kazuya Yamagishi, MD Hirakata Yamagishi Eye Clinic, Japan

# Glaucoma

Discover what lies beneath  
**SS OCT Angio™**

SS OCT Angio\_RPC



en face\_RPC



Courtesy: Kazuya Yamagishi, MD Hirakata Yamagishi Eye Clinic, Japan

販売名：3次元眼底像撮影装置 DRI OCT Triton

医療機器認証番号：226AABZX00146000

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