

Nodular Retinal Neovascularization in Retinal Vein Occlusion: A Unique Phenotype

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No financial disclosures

The Case

- 56 YO male
- HTN, smoker

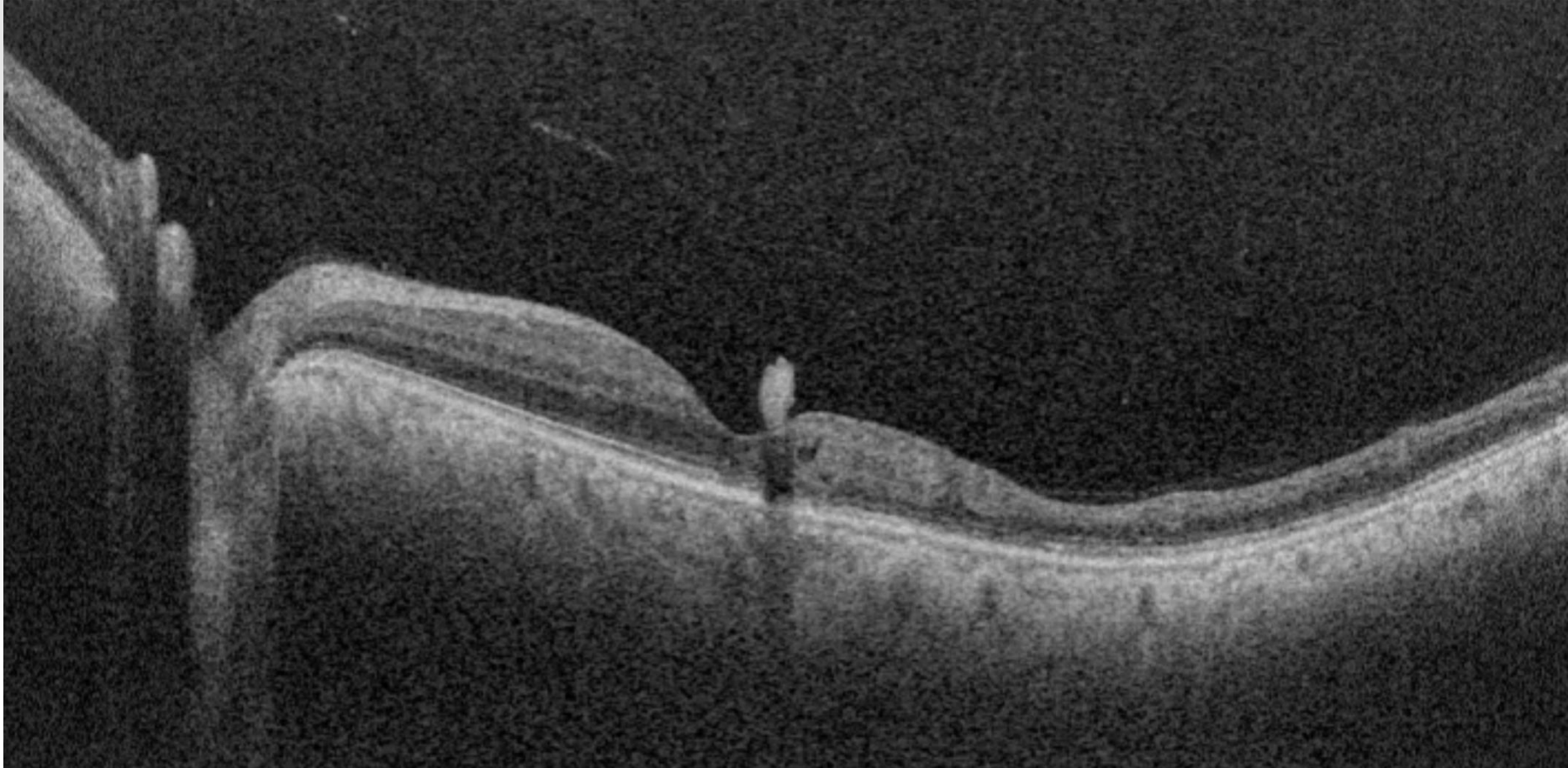
- **C/O** poor vision both eyes more in the right right for several months.

- **VAsc:** OD HM – OS 20/80
- Anterior segment exam was unremarkable.





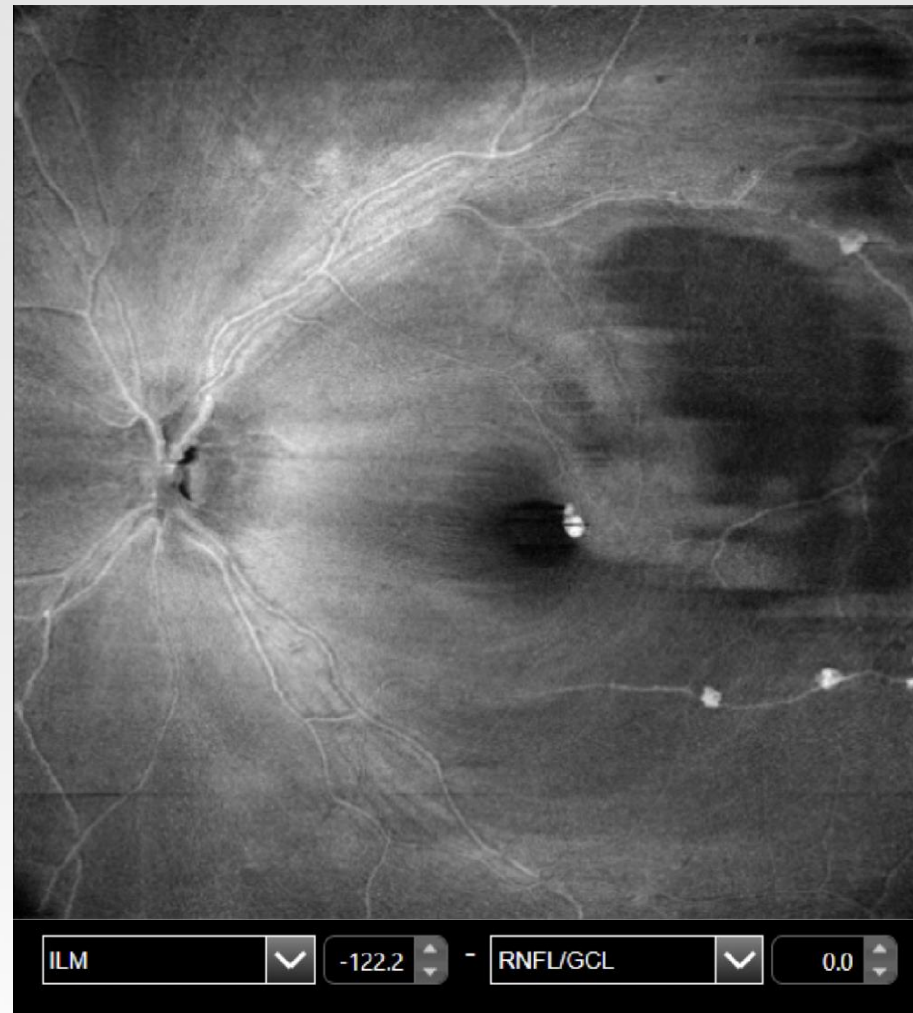




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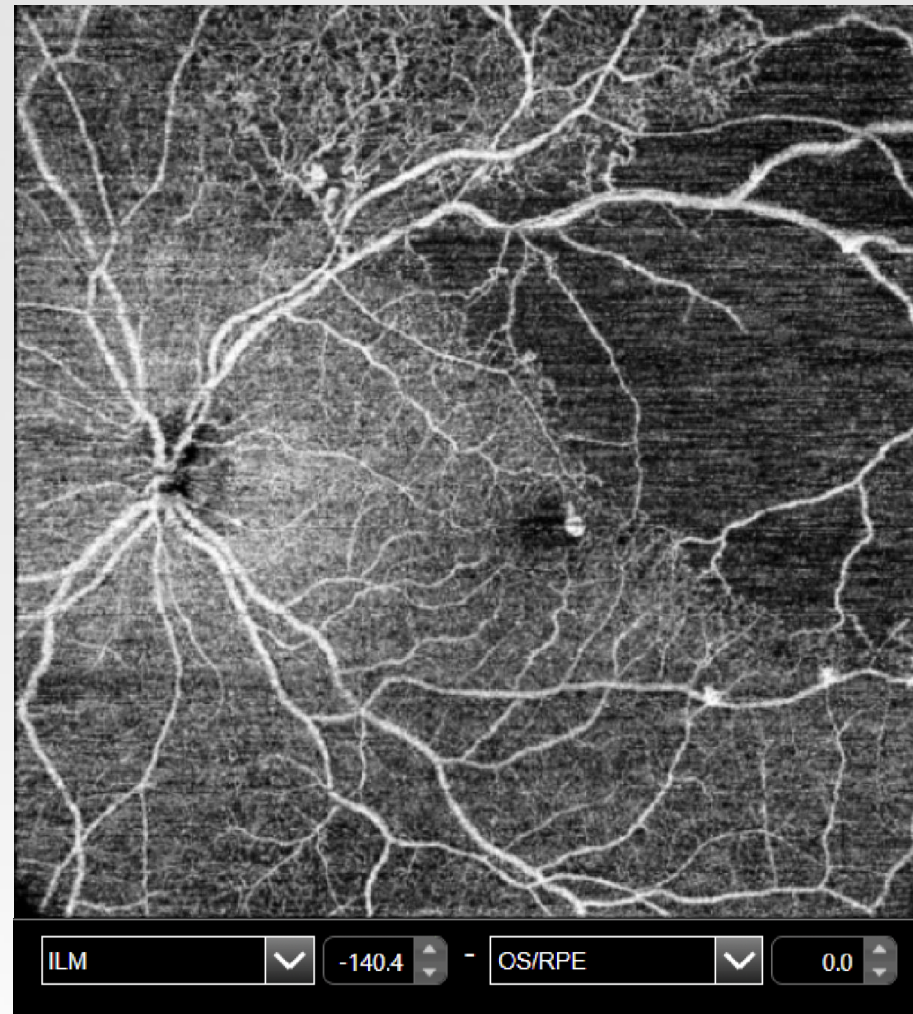
En Face OCT



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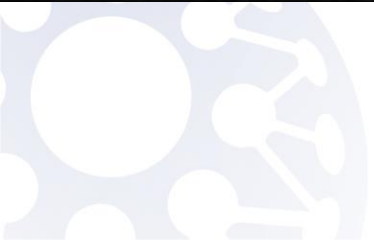
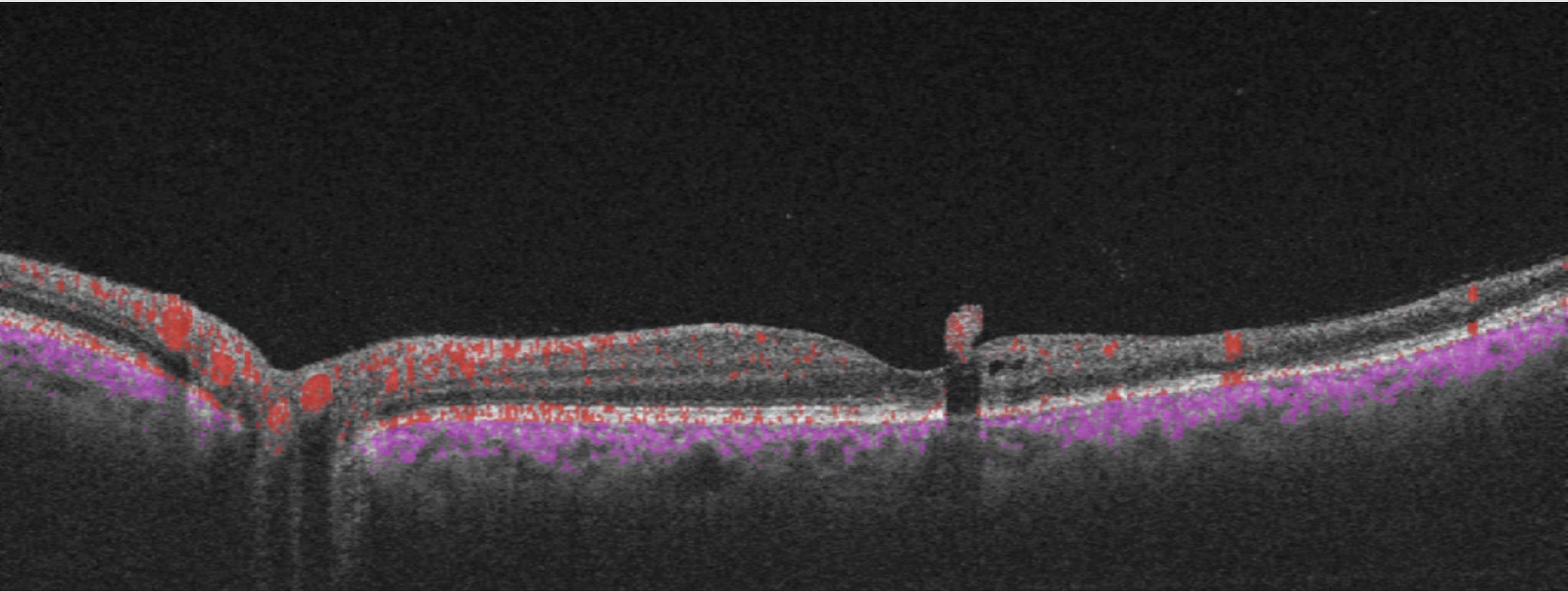


OCT-angiography




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B-scan with flow overlay



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Phenotyping of retinal neovascularization in ischemic retinal vein occlusion using wide field OCT angiography

[Josef Huemer](#), [Hagar Khalid](#), [Siegfried K. Wagner](#), [Luke Nicholson](#), [Dun Jack Fu](#), [Dawn A. Sim](#), [Praveen J. Patel](#), [Konstantinos Balaskas](#), [Ranjan Rajendram](#) & [Pearse A. Keane](#) 

[Eye](#) **35**, 2812–2819 (2021) | [Cite this article](#)



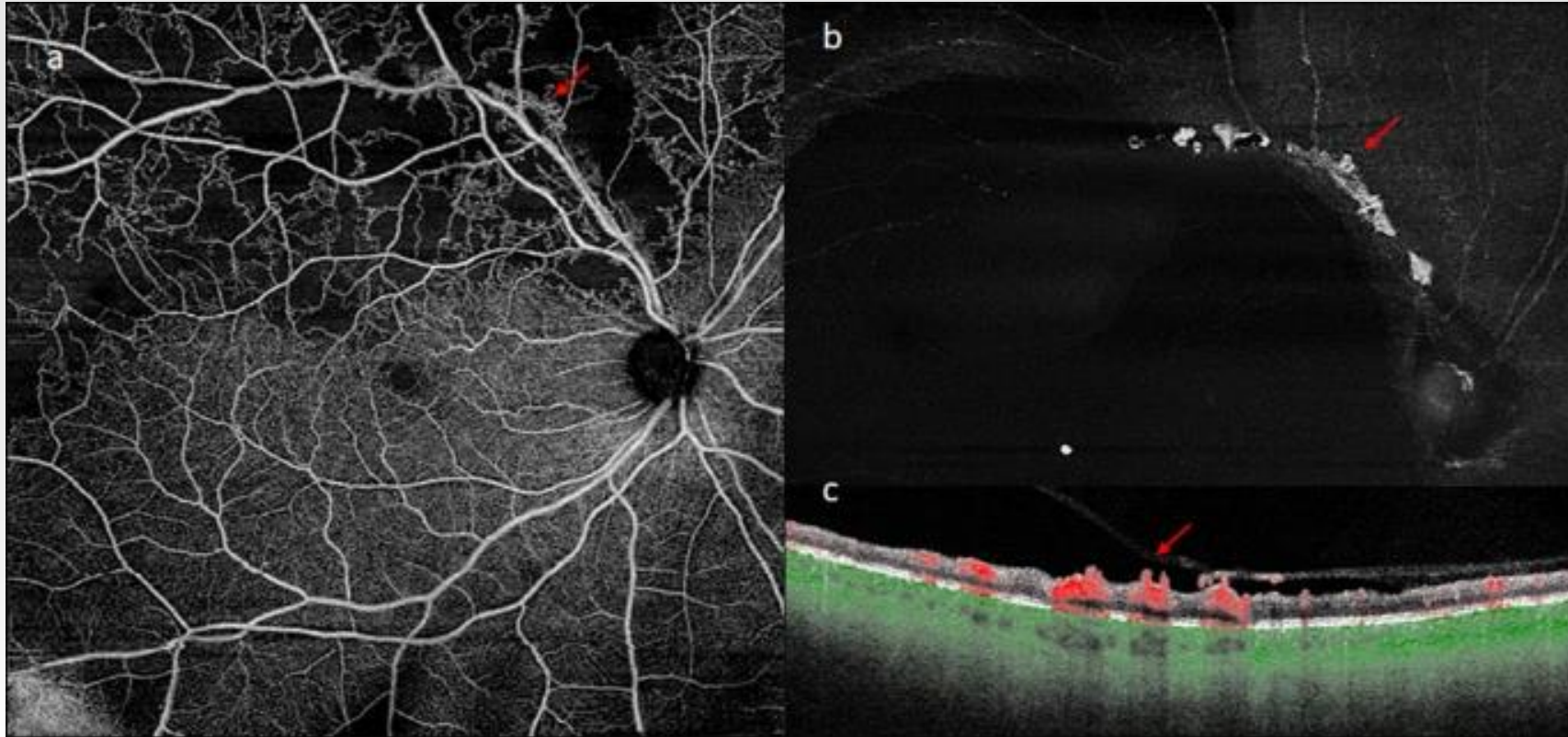
Literature review

- 39 eyes with ischemic RVO
- Clinical examination only identified 4/39 with NVE (10.3%)
- WF-OCTA detected NVE in 16 of 39 eyes (41%), 81.25% of those NVEs were in eye with BRVO

- **Two different types of new vessels:** sea-fan type vessels and nodular vessels.
- Twelve eyes (75%) showed NVE of a nodular type - detected with advanced imaging only.
- Four eyes (25%) had both nodular type vessels and sea-fan type vessels – the four eyes with clinically detectable NVE.
- In one case, NVE found on WF-OCTA was not observed on UWF-FA , which was a nodular type.

Phenotyping of retinal neovascularization in ischemic retinal vein occlusion using wide field OCT angiography. *Eye* **35**, 2812–2819

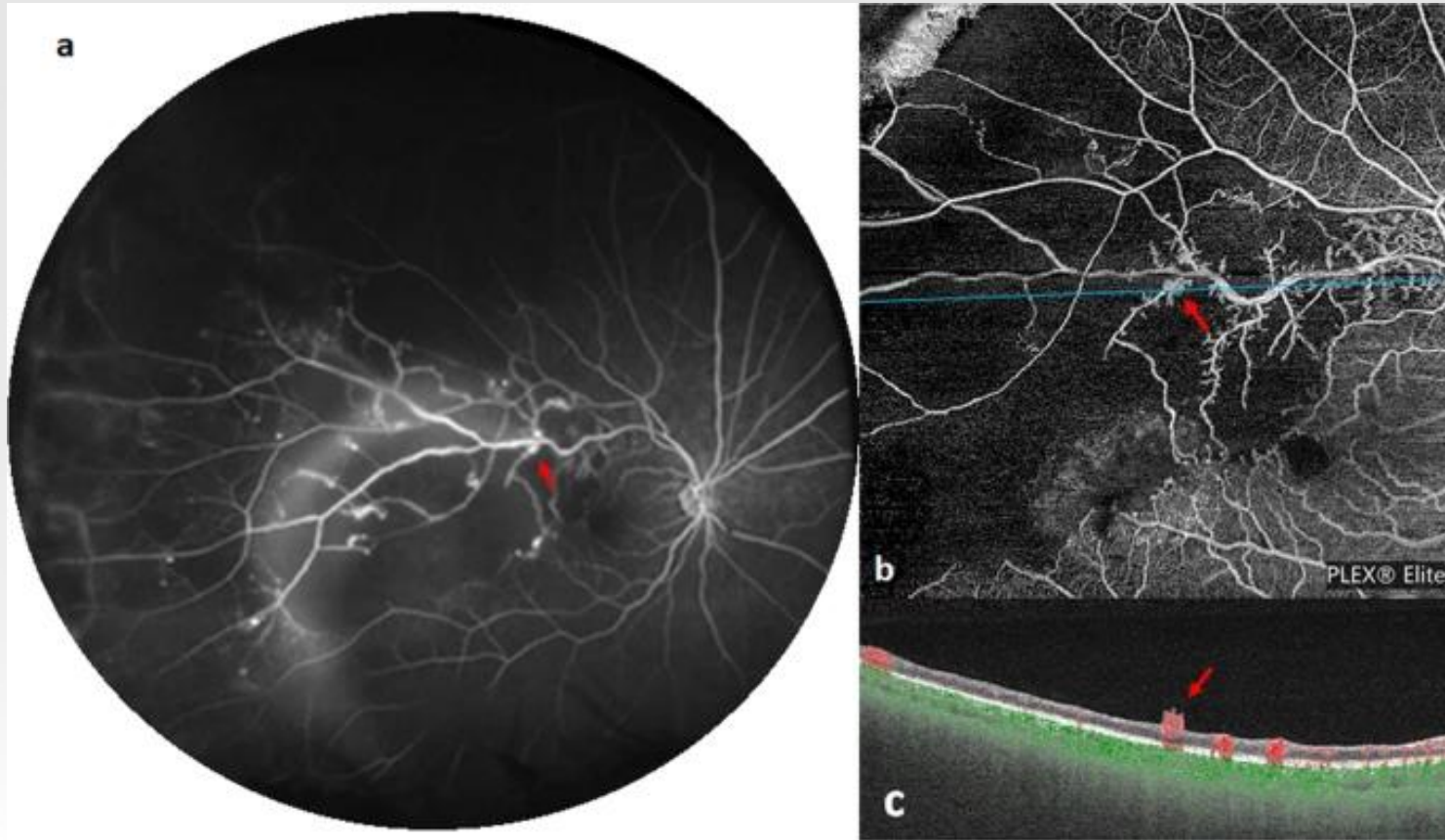
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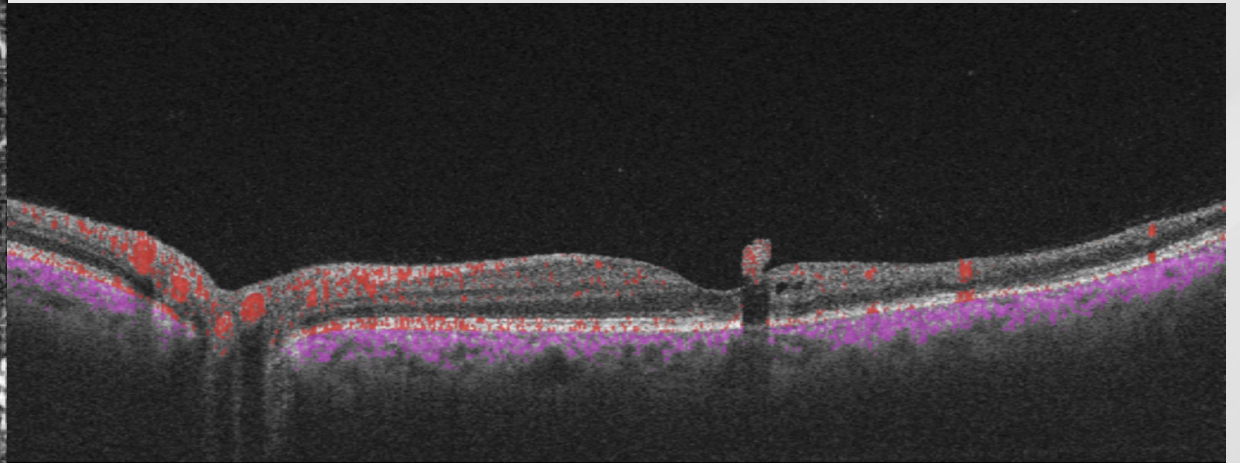
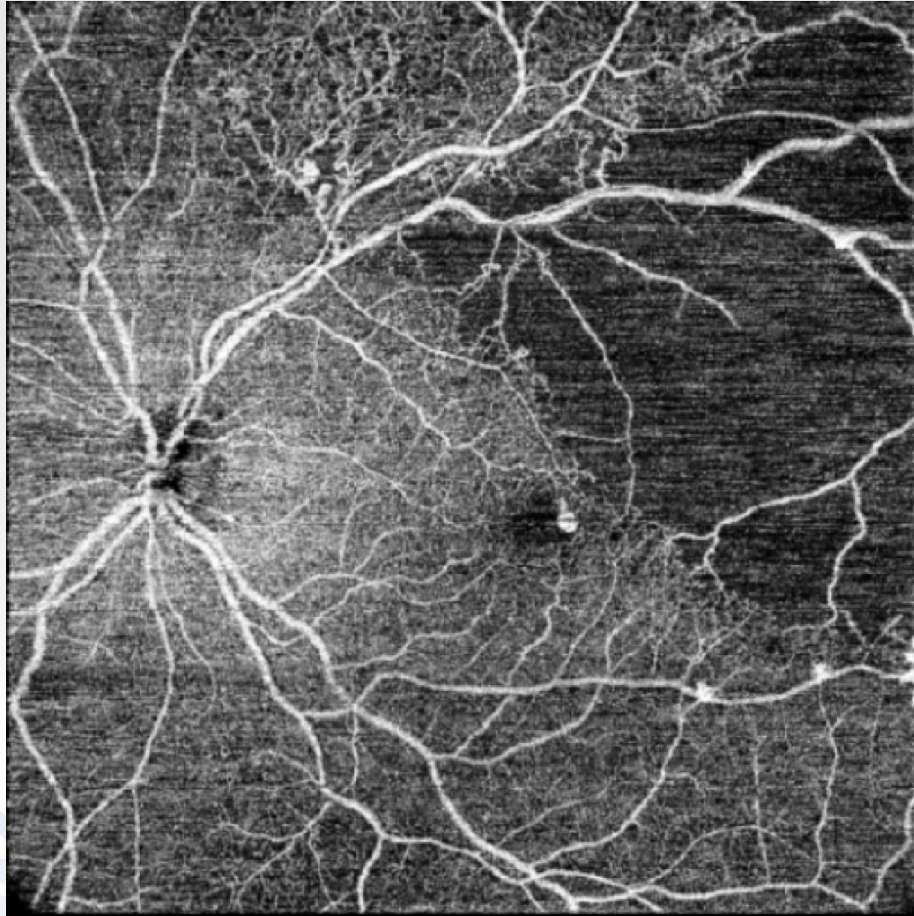
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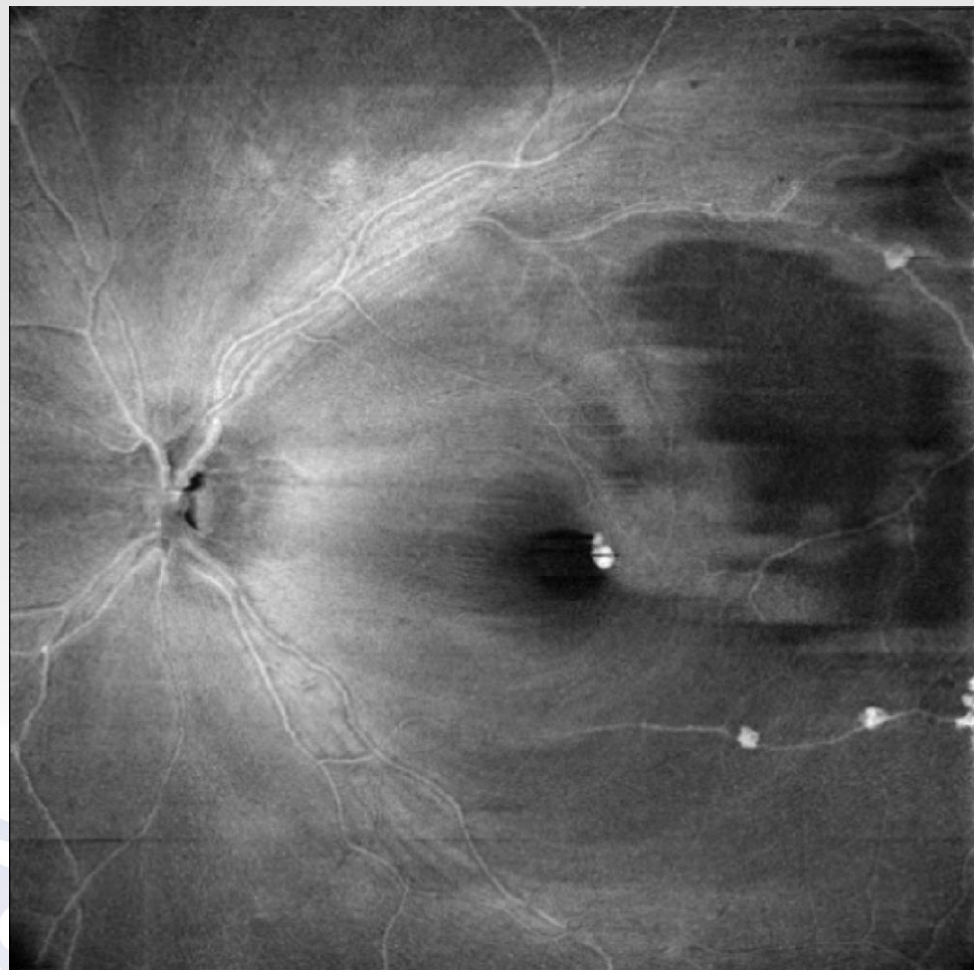
Current case



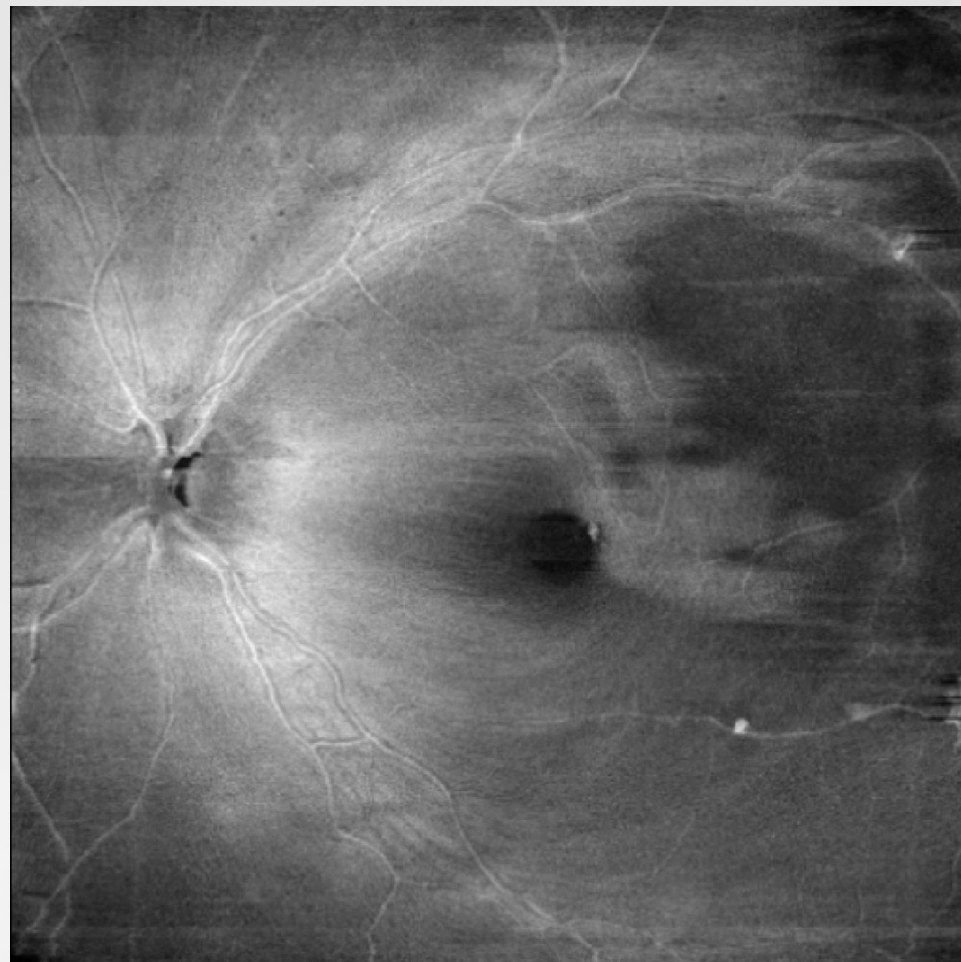
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Post sectoral laser and anti-VEGF

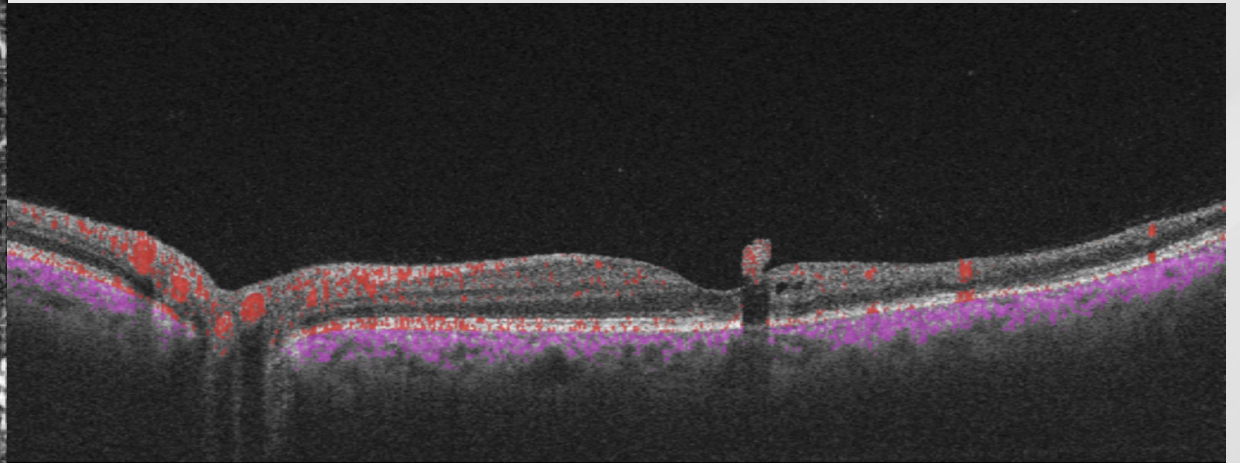
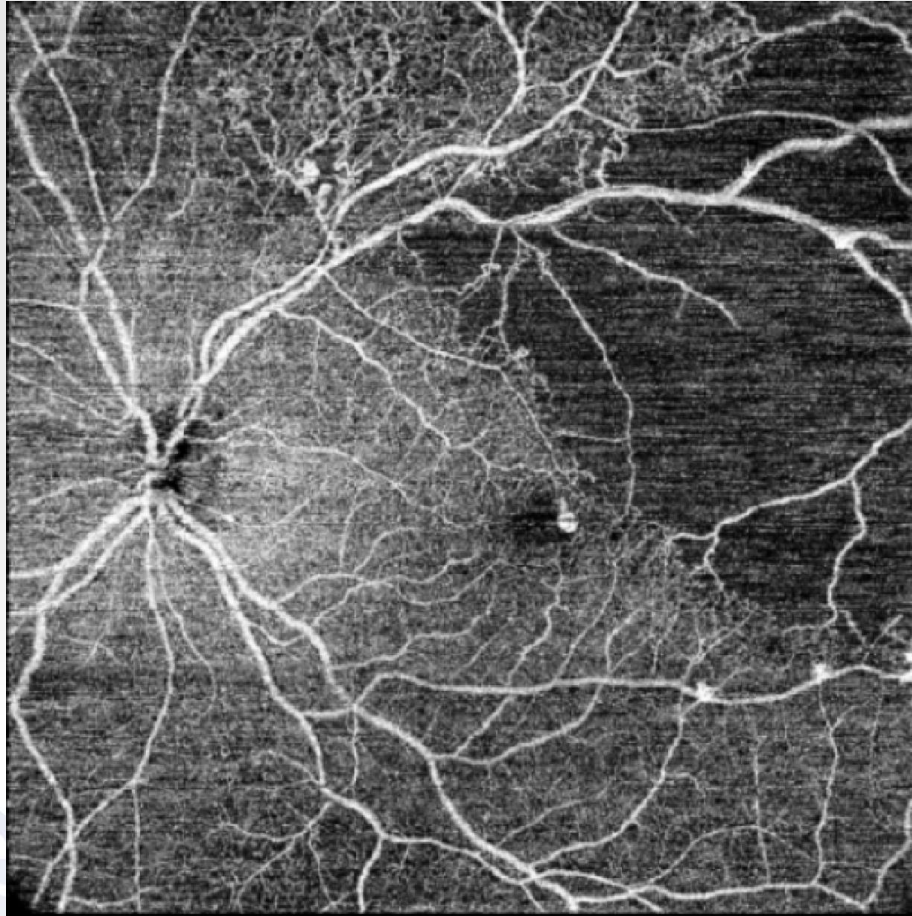
Before



After

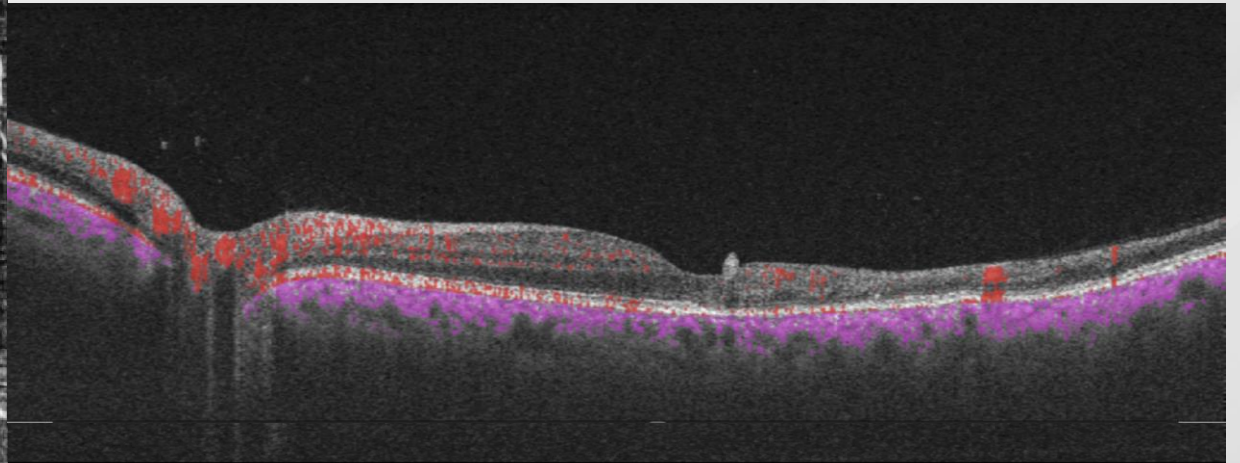
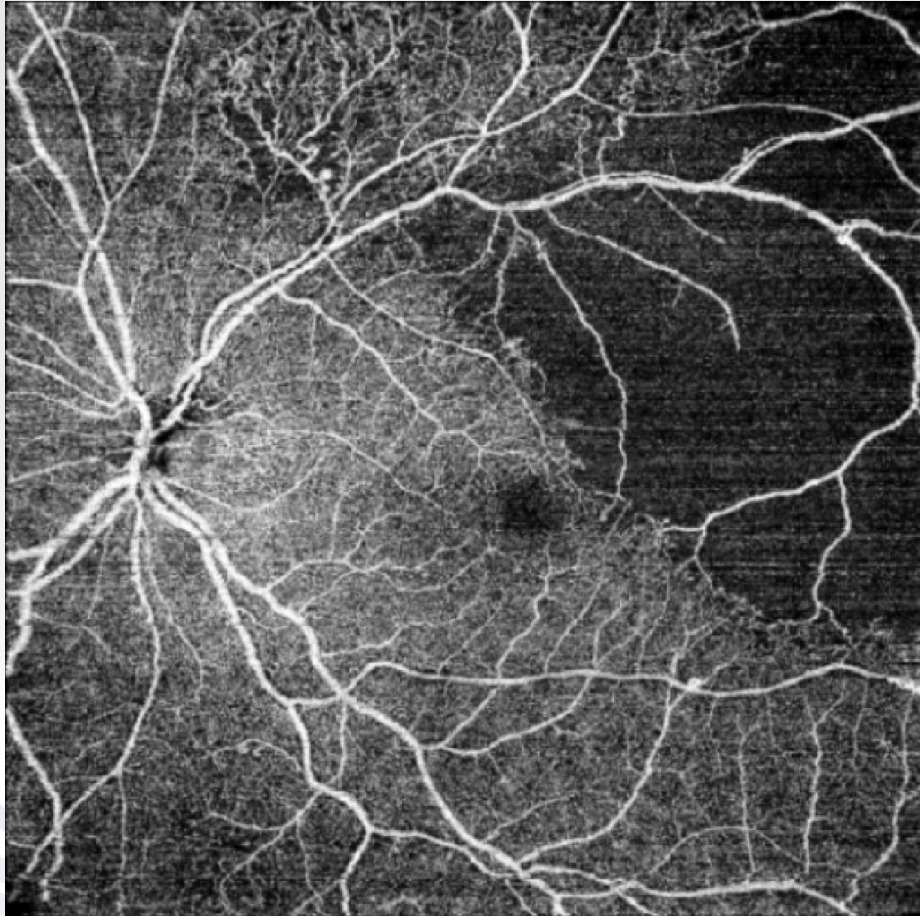


Before sectoral laser and anti-VEGF



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After sectoral laser and anti-VEGF



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Conclusion

- Nodular neovascularization is a unique pattern in ischemic RVOs
- Clinical examination might show only blood at the location of those NVs
- Advanced imaging (OCT-A) is required for accurate phenotyping.
- Longitudinal prospective studies are needed to describe their clinical significant and response to treatment

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