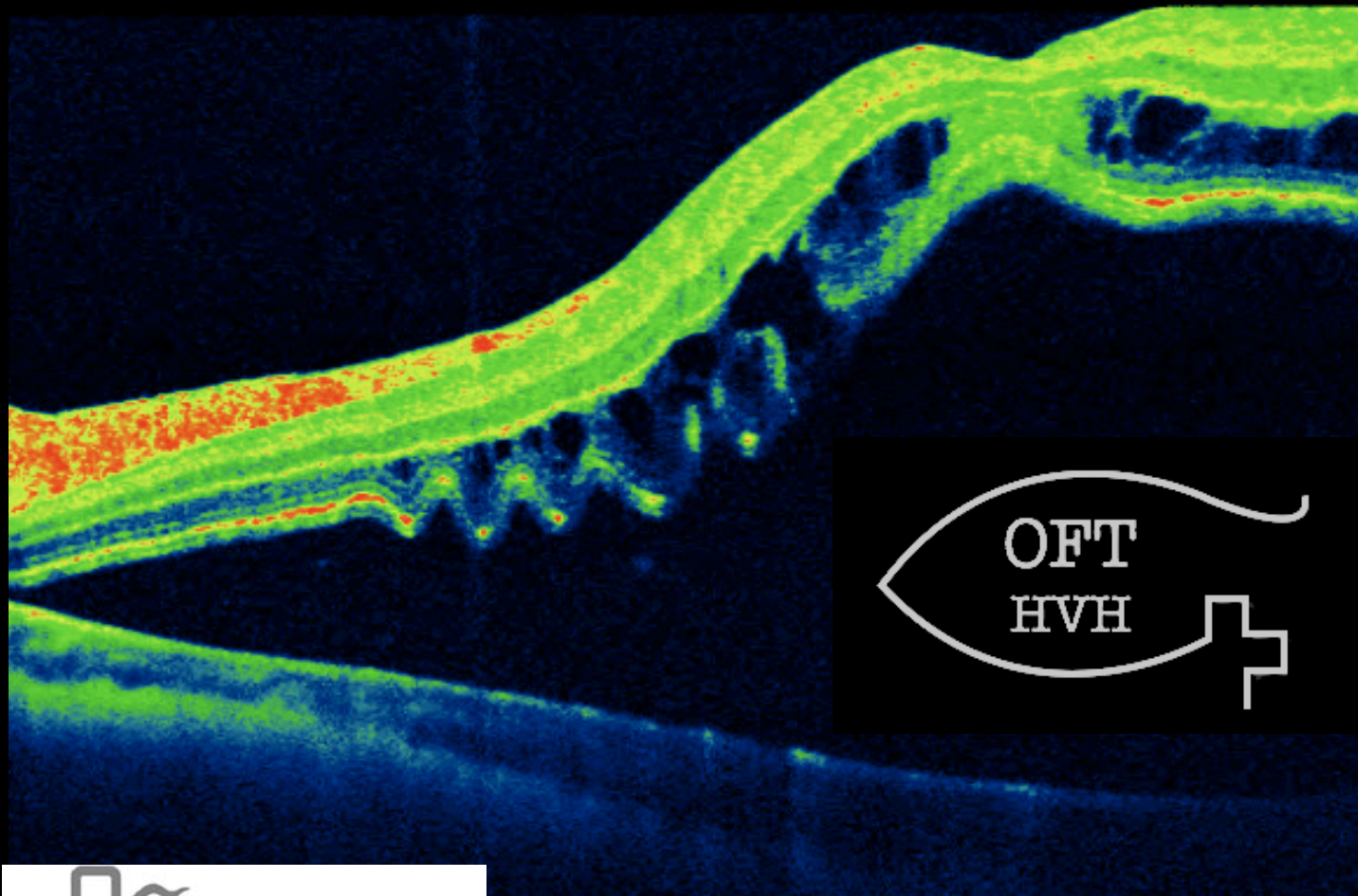


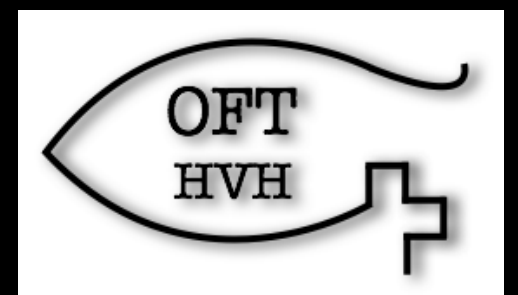
OCT MACULAR EN DRR

CORRELACIÓN ANATÓMICA Y FUNCIONAL



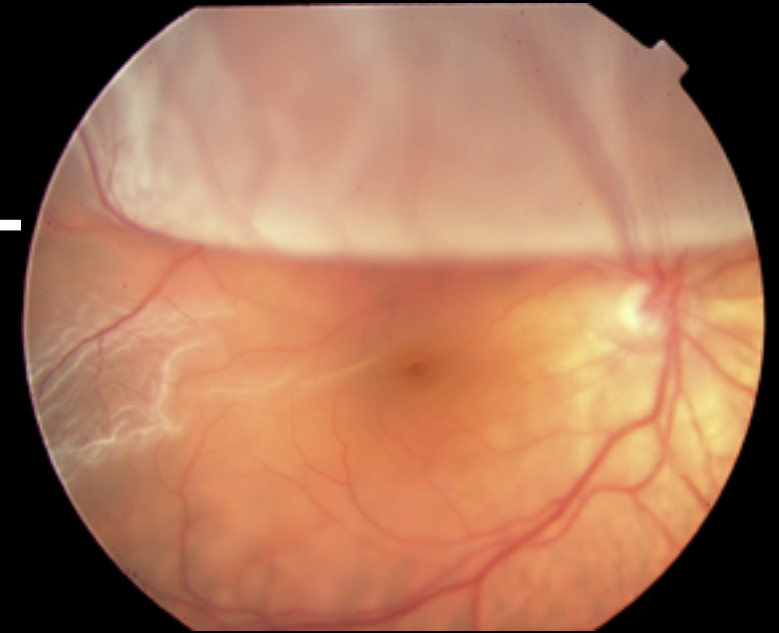
Dr Daniel Velázquez Villoria
Hospital Povisa

2º curso SGO 2016



Introducción

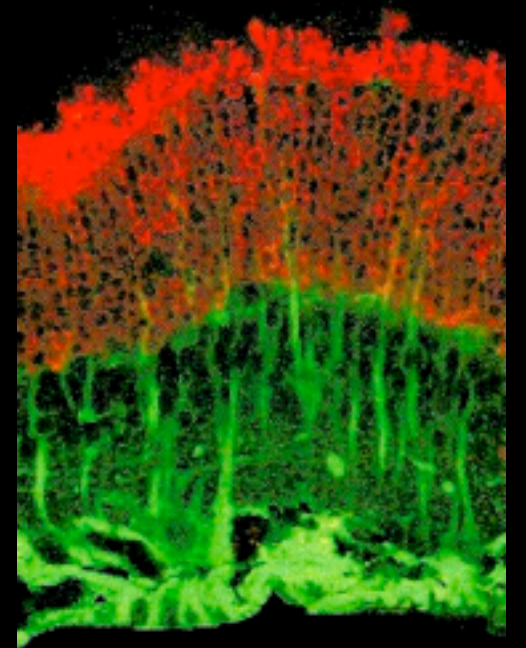
Introducción - Justificación



- Afectación macular en DRR
- Factor predictivo de BCVA final¹⁻².
 - DRR mácula on: probabilidad AV >20/50 80-87%
 - DRR mácula off: probabilidad AV >20/50 30-40%

A pesar del éxito anatómico, no es posible predecir el resultado funcional cuando se afecta la mácula.

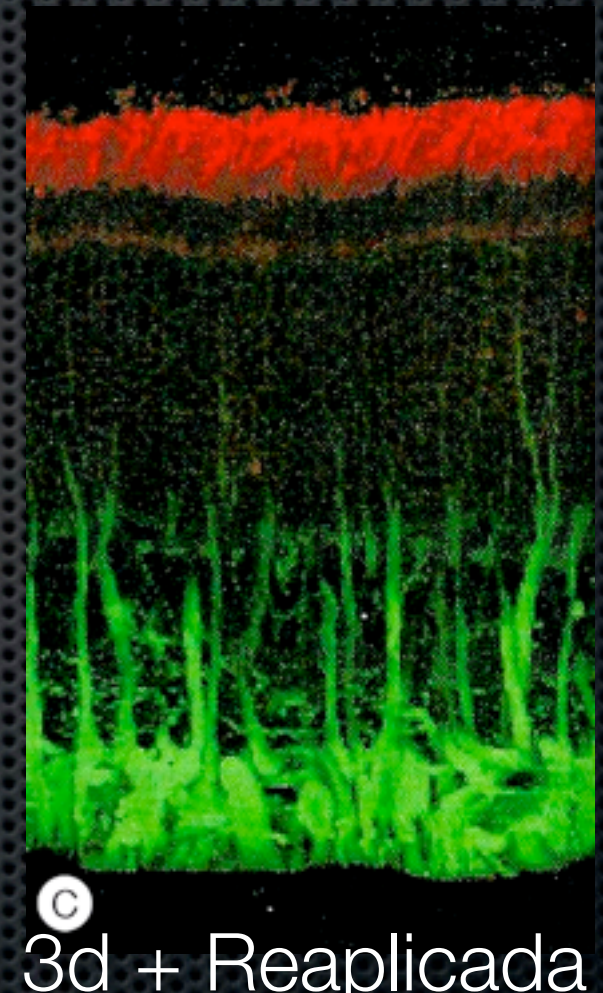
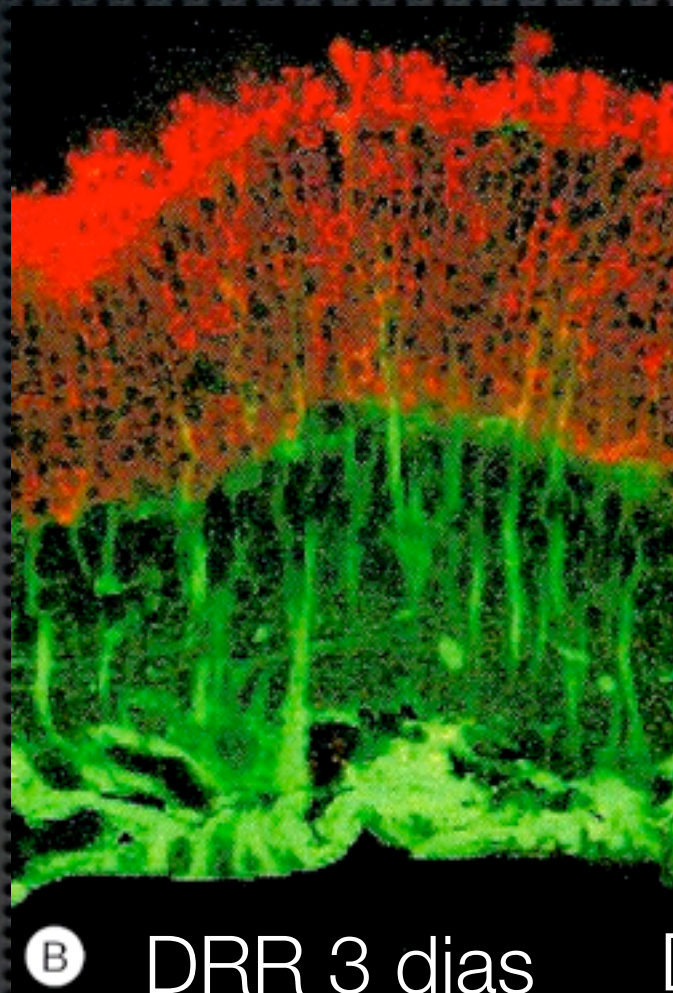
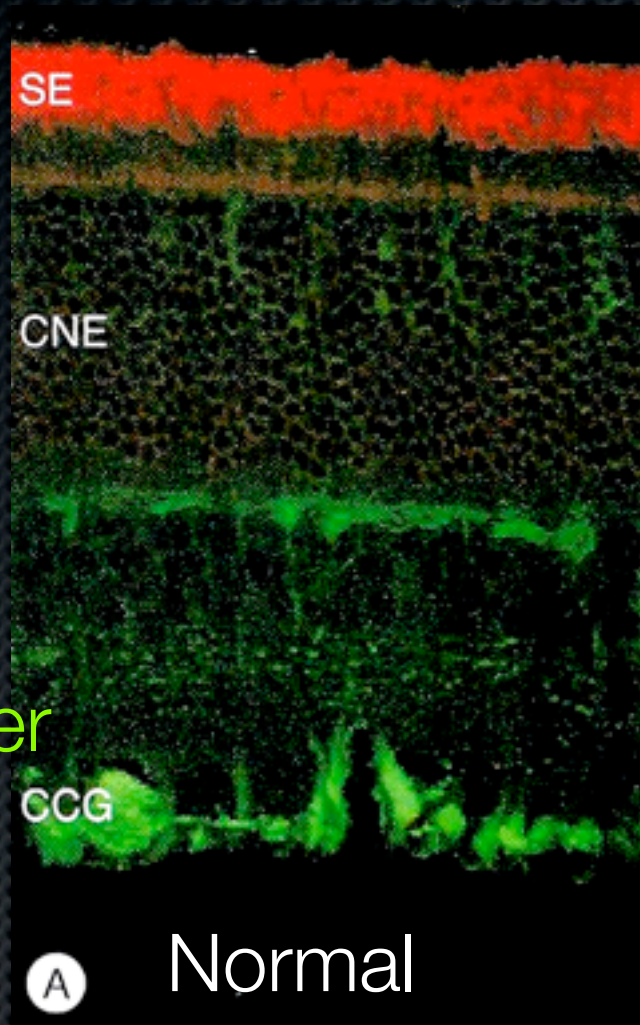
Cambios celulares y funcionales
reversibles / irreversibles en fóvea.



1. Tani P. et al. RRD without macular involvement treated with scleral buckling. Am J Ophthalmol 1980
2. Wilkinson CP. Visual results following scleral buckling for retinal detachments sparing the macula. Retina 1981

Cambios celulares tras Reaplicación retiniana

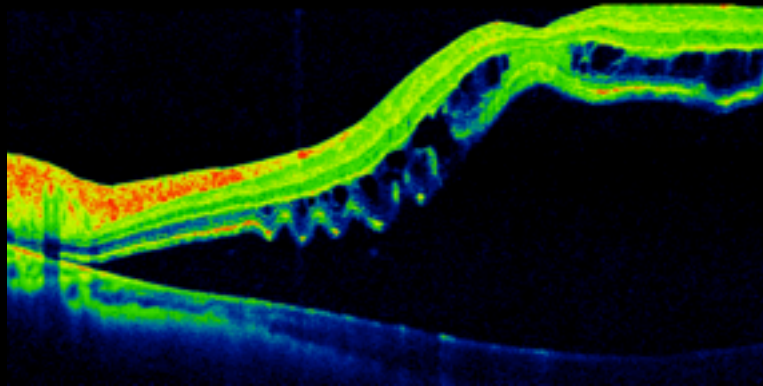
OS



1. Regeneración segmentos externos de fotoR
2. Reducción apoptosis FotoR
3. Reducción replicación cel no neuronales

Estudios OCT - correlación estructura y función visual: Discrepancias entre artículos

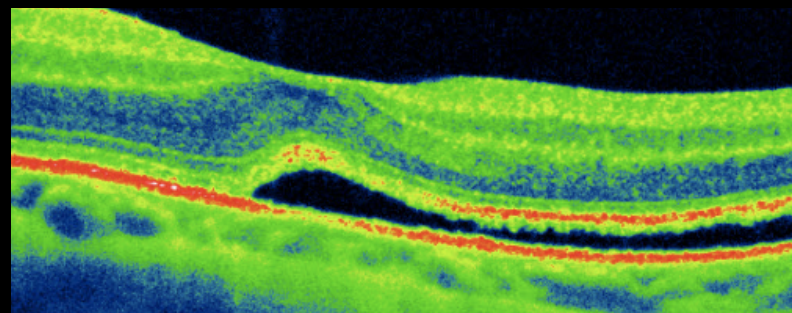
- OCT preoperatorio:



- Hagimura (2000)
- Leclaire (2006)
- Cho (2012)
- Joe (2013)

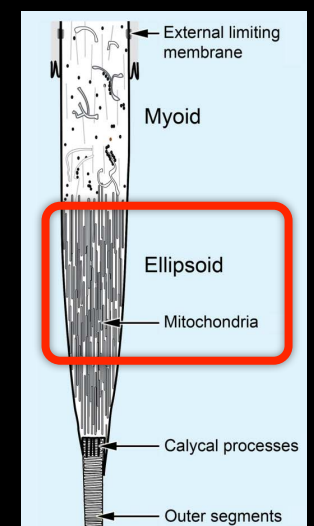
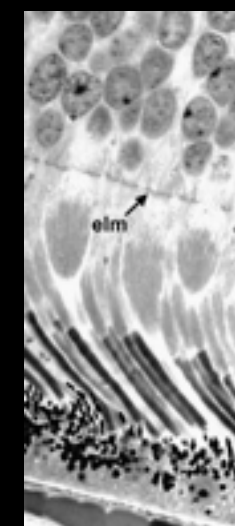
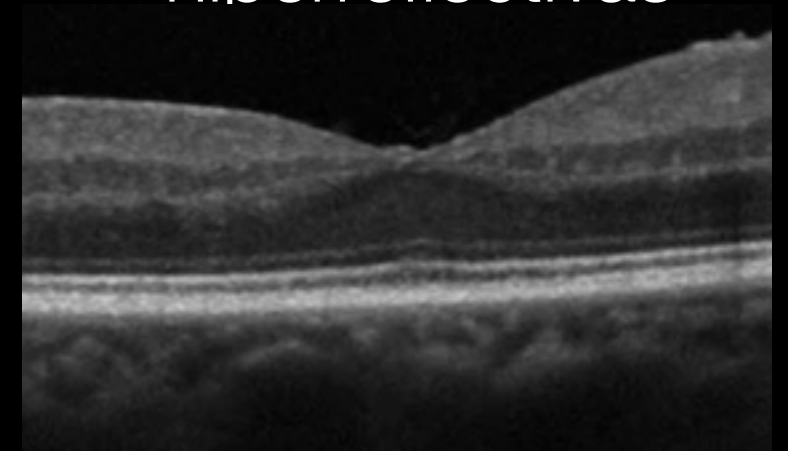
OCT postoperatorio

- Fluido Subfoveal



- Haguimura (2000)
- Wolfensberger (2002)

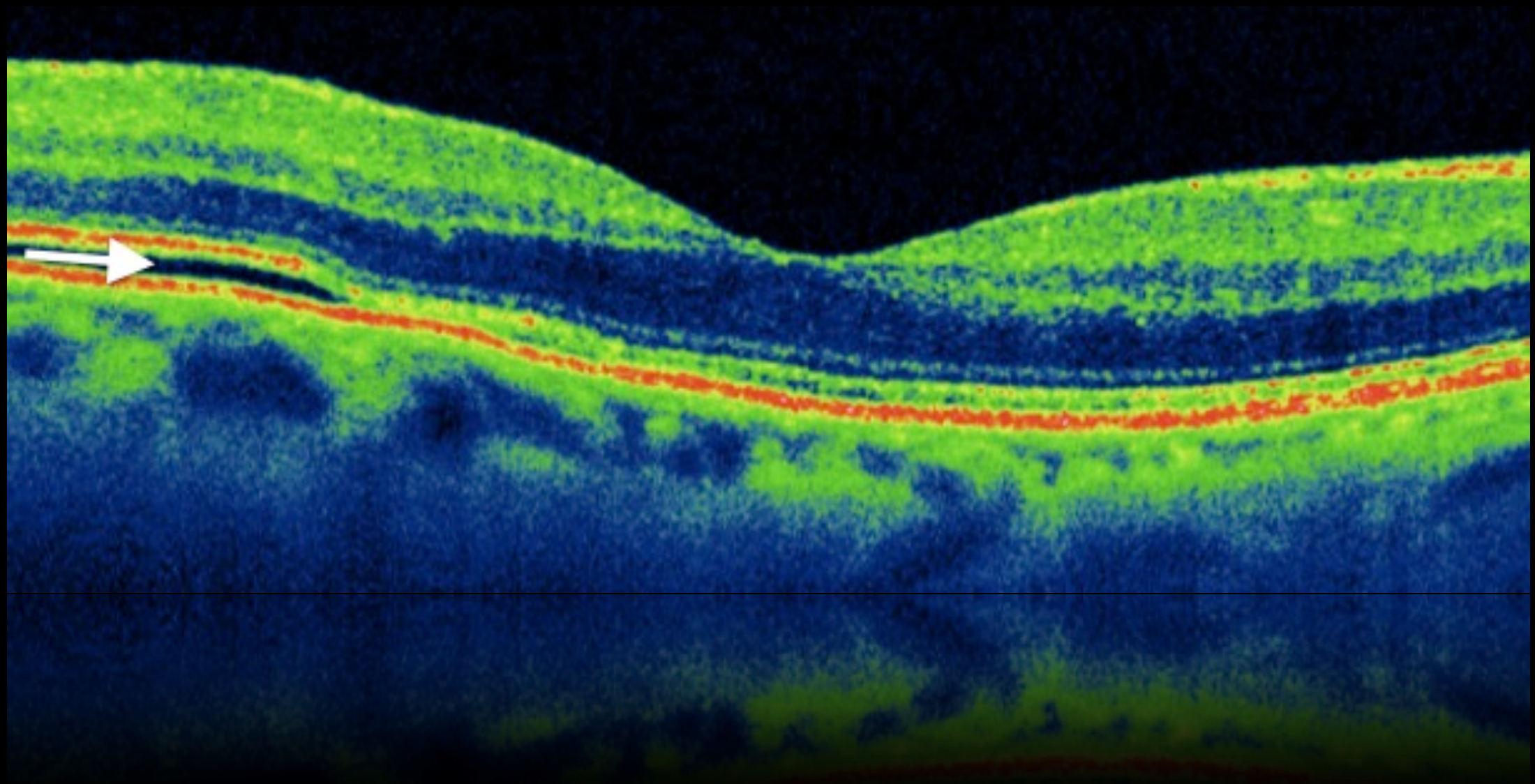
- Lineas hiperreflectivas



- Shoket (2006)
- Wakabayashi y Tano (2009)

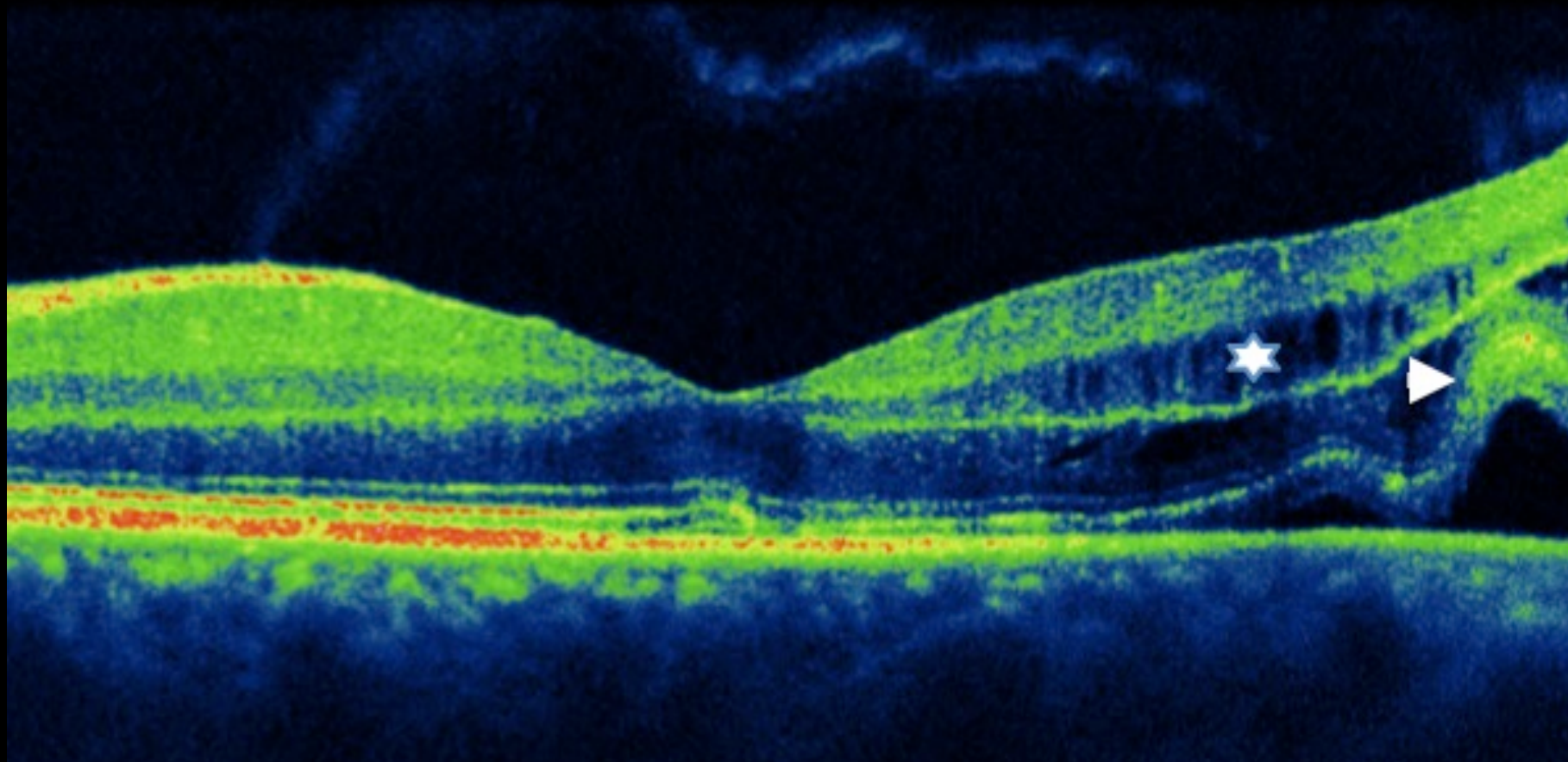
● OCT preoperatorio:

- Secuencia cronológica: DNS, ORC, Quistes intrarretinianos
- Altura DRR a nivel macular



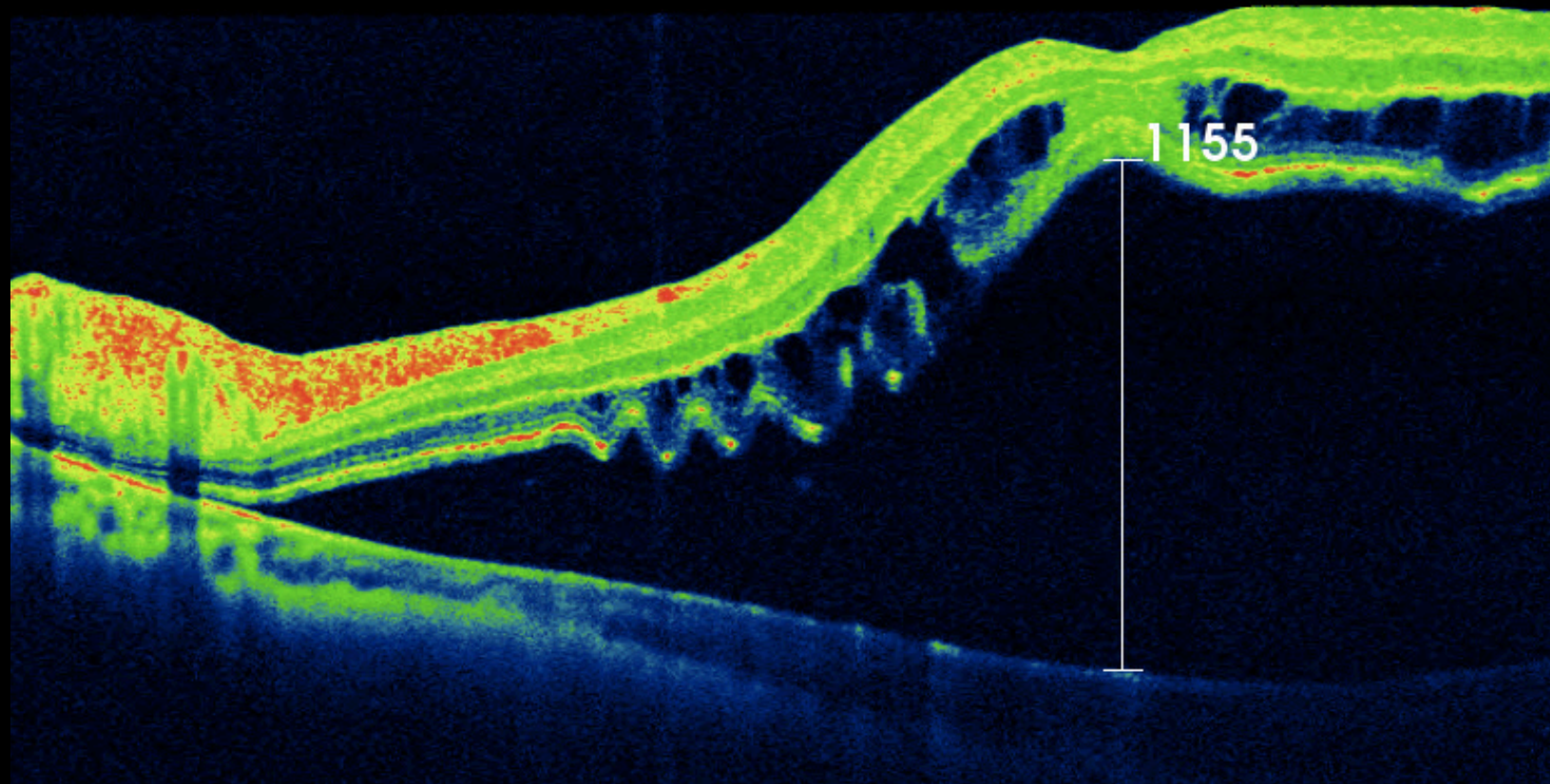
● OCT preoperatorio:

- Secuencia cronológica: DNS, ORC, Quistes intrarretinianos
- Altura DRR a nivel macular



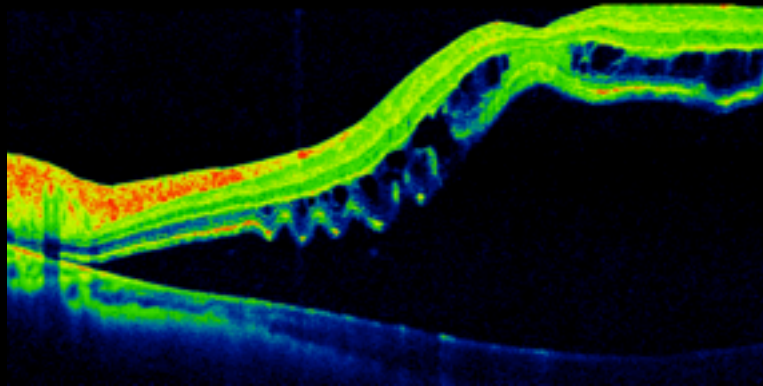
● OCT preoperatorio:

- Secuencia cronológica: DNS, ORC, Quistes intrarretinianos
- Altura DRR a nivel macular



Estudios OCT - correlación estructura y función visual: Discrepancias entre artículos

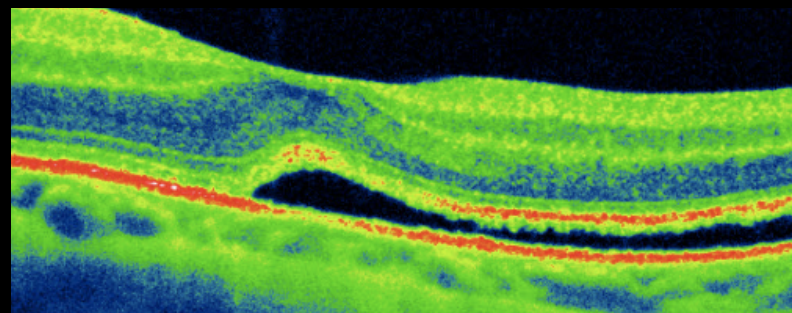
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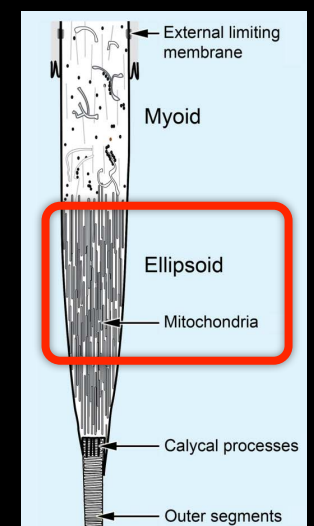
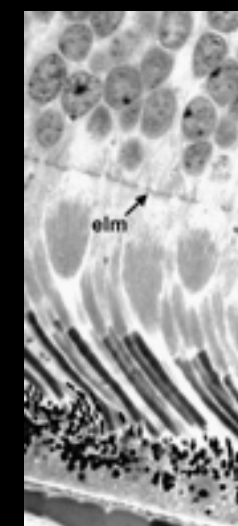
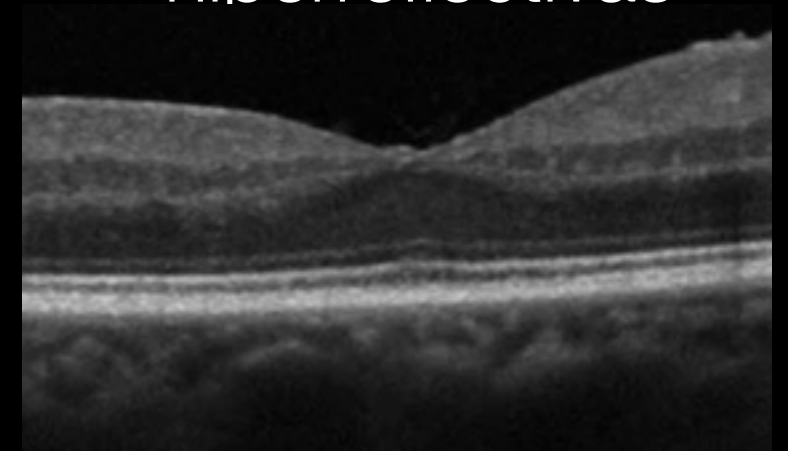
OCT postoperatorio

- Fluido Subfoveal



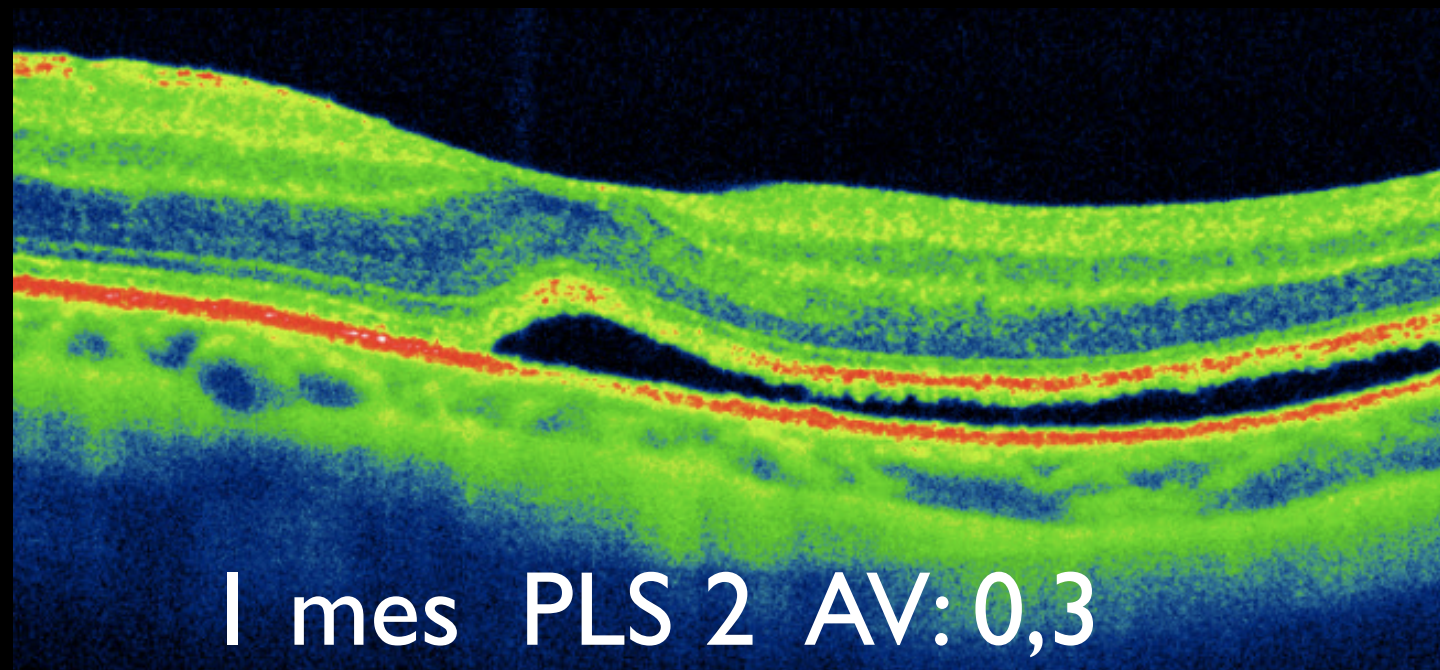
- Haguimura (2000)
- Wolfensberger (2002)

- Lineas hiperreflectivas

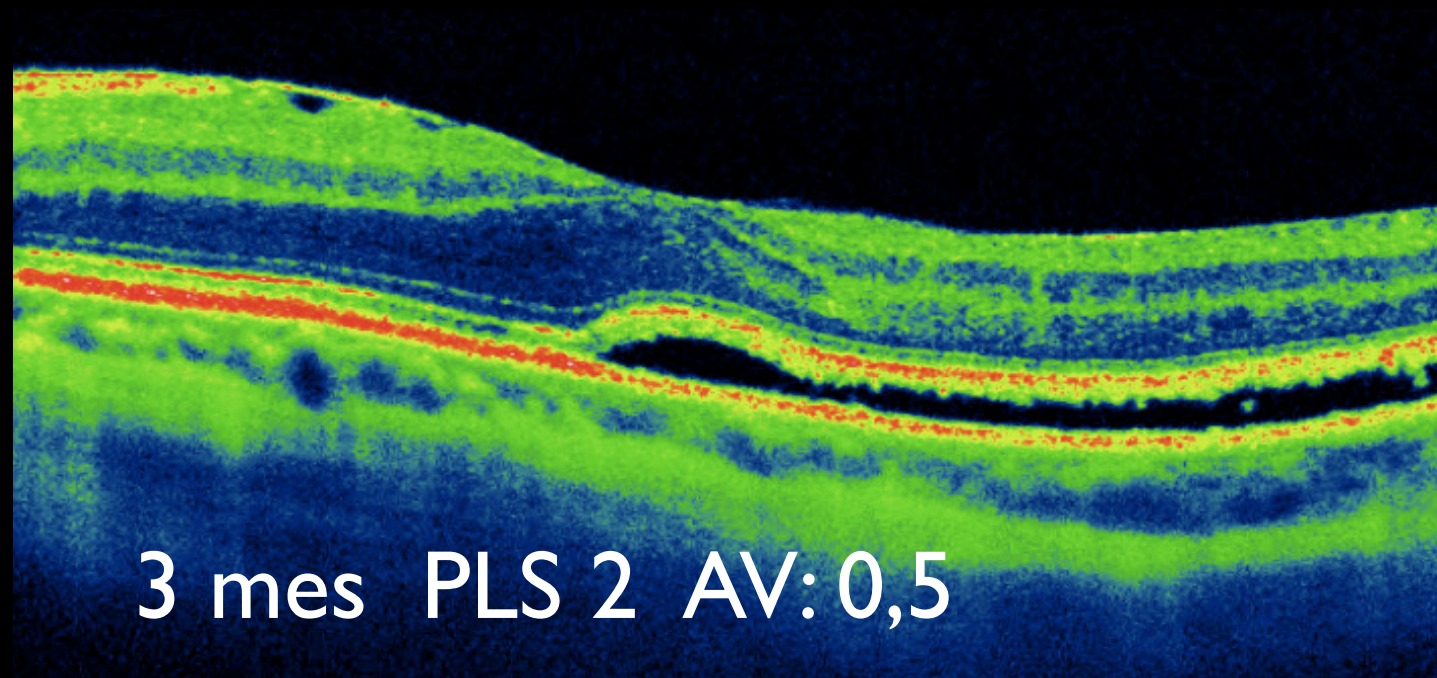


- Shoket (2006)
- Wakabayashi y Tano (2009)

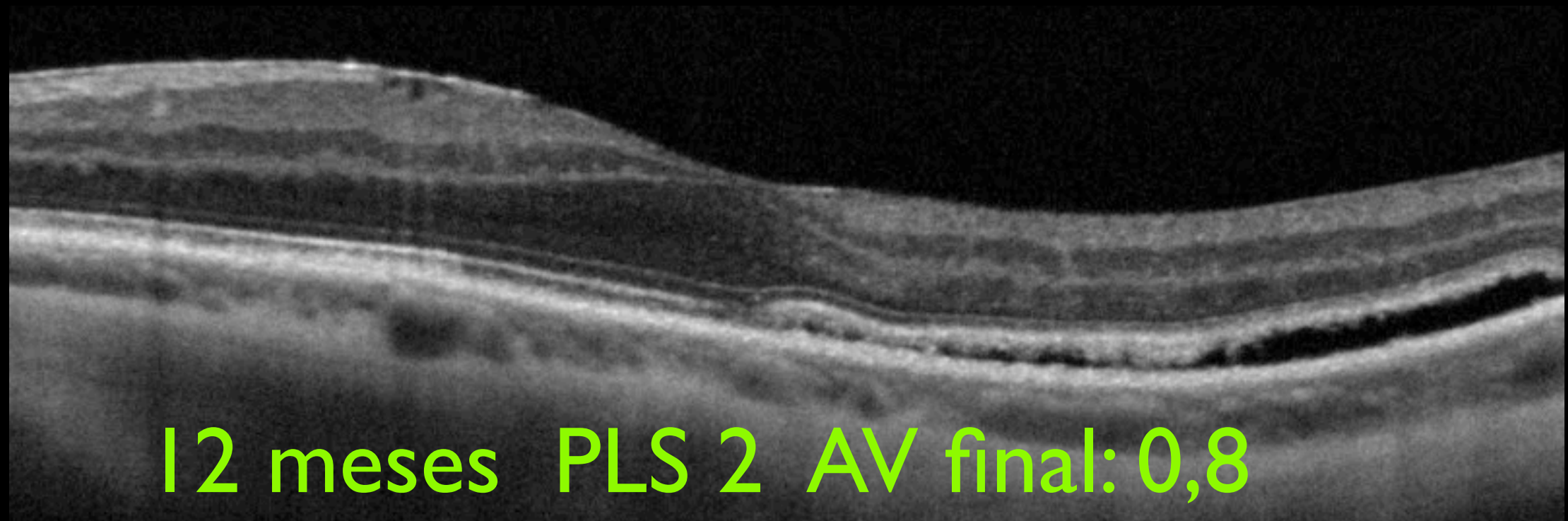
- Fluido Subfoveal persistente



- Fluido Subfoveal persistente

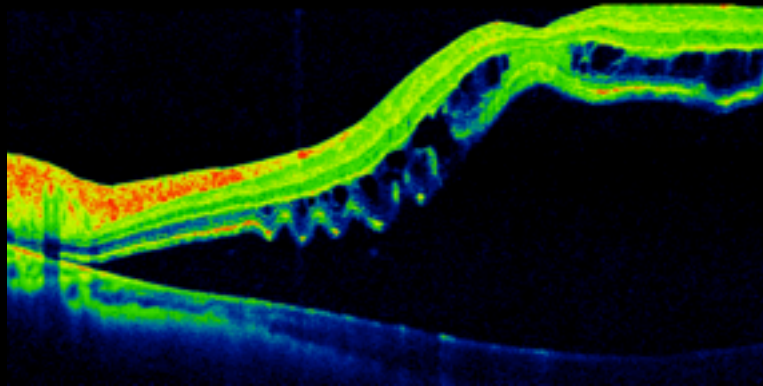


- Fluido Subfoveal persistente



Estudios OCT - correlación estructura y función visual: Discrepancias entre artículos

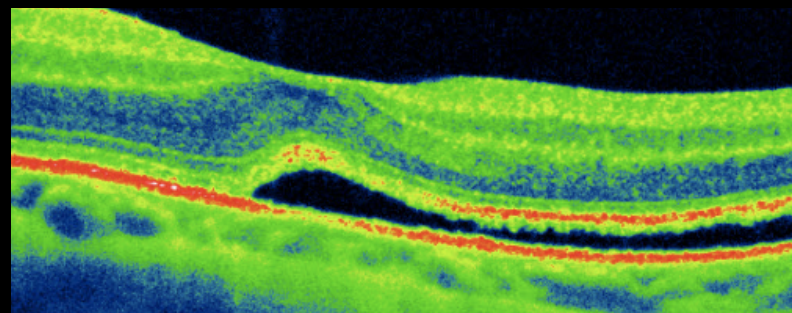
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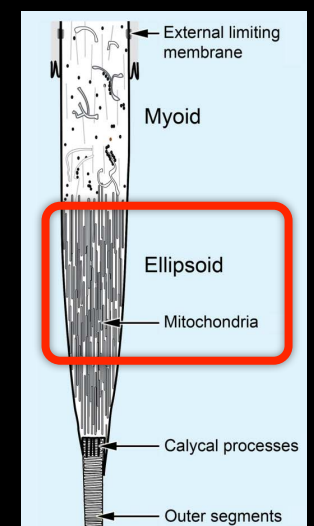
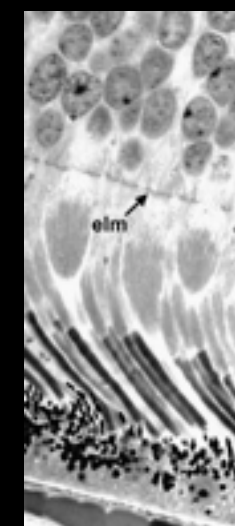
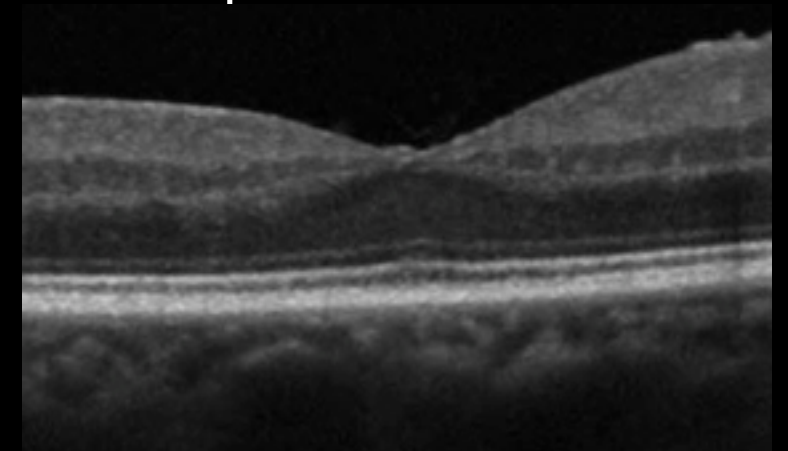
OCT postoperatorio

- Fluido Subfoveal



- Haguimura (2000)
- Wolfensberger (2002)

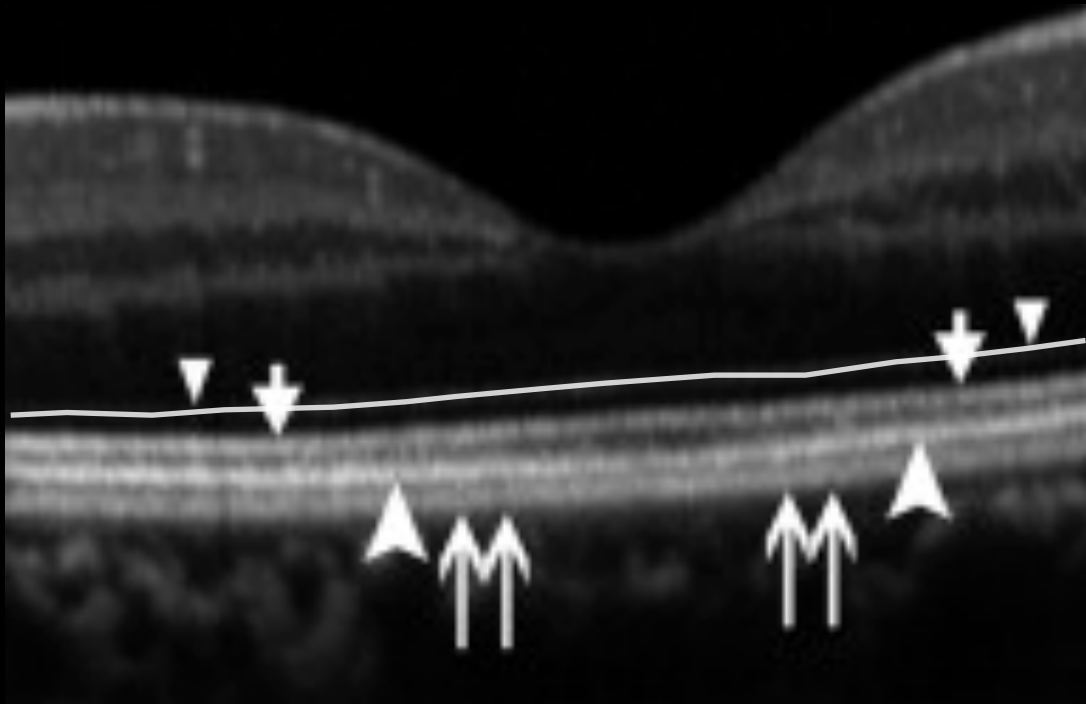
- Lineas hiperreflectivas



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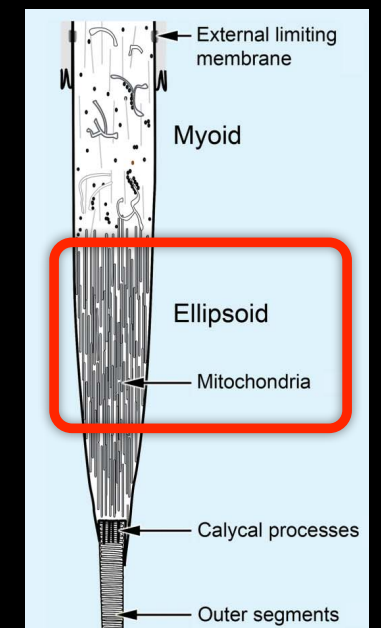
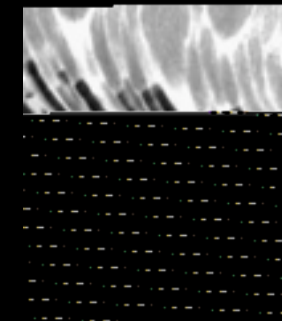
ANATOMIC CORRELATES TO THE BANDS SEEN IN THE OUTER RETINA BY OPTICAL COHERENCE TOMOGRAPHY. LITERATURE REVIEW AND MODEL

R. Spaide, C. Curcio (Retina 2011)



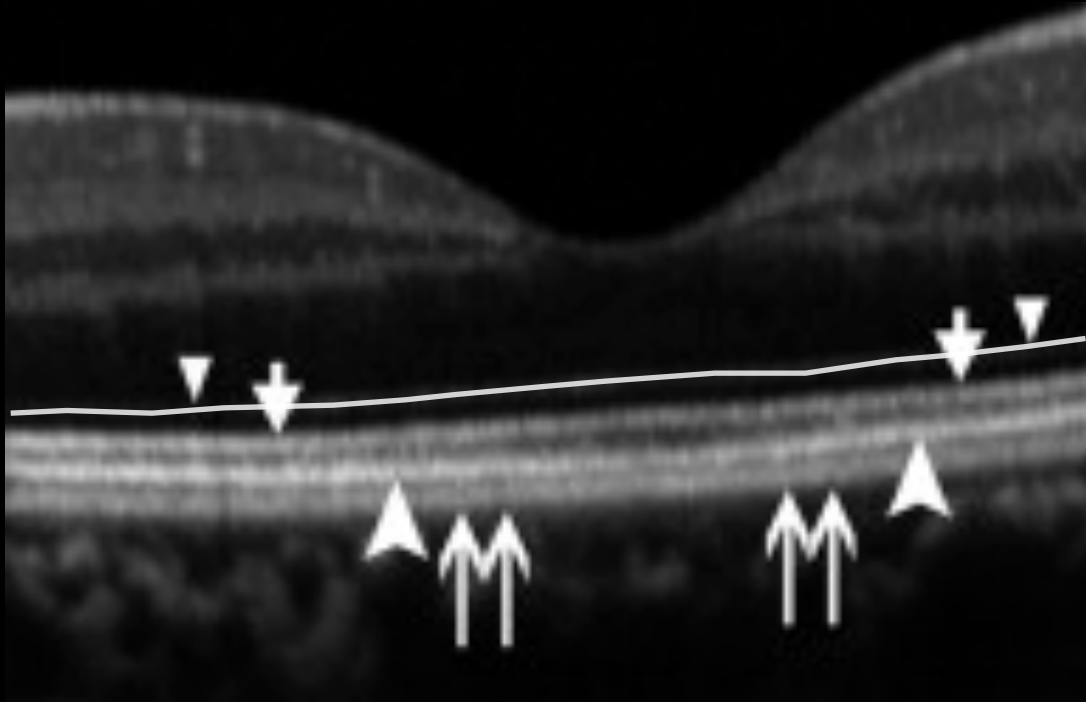
- Lineas hiperreflectivas

- ✦ **1 banda: MLE:** complejos de unión céls. Muller y fotoR
- ✦ **2 banda:** región **Elipsoide** del IS
- ✦ 3 banda: Contact Cylinder
- ✦ 4 banda: EPR +/- Mb Bruch



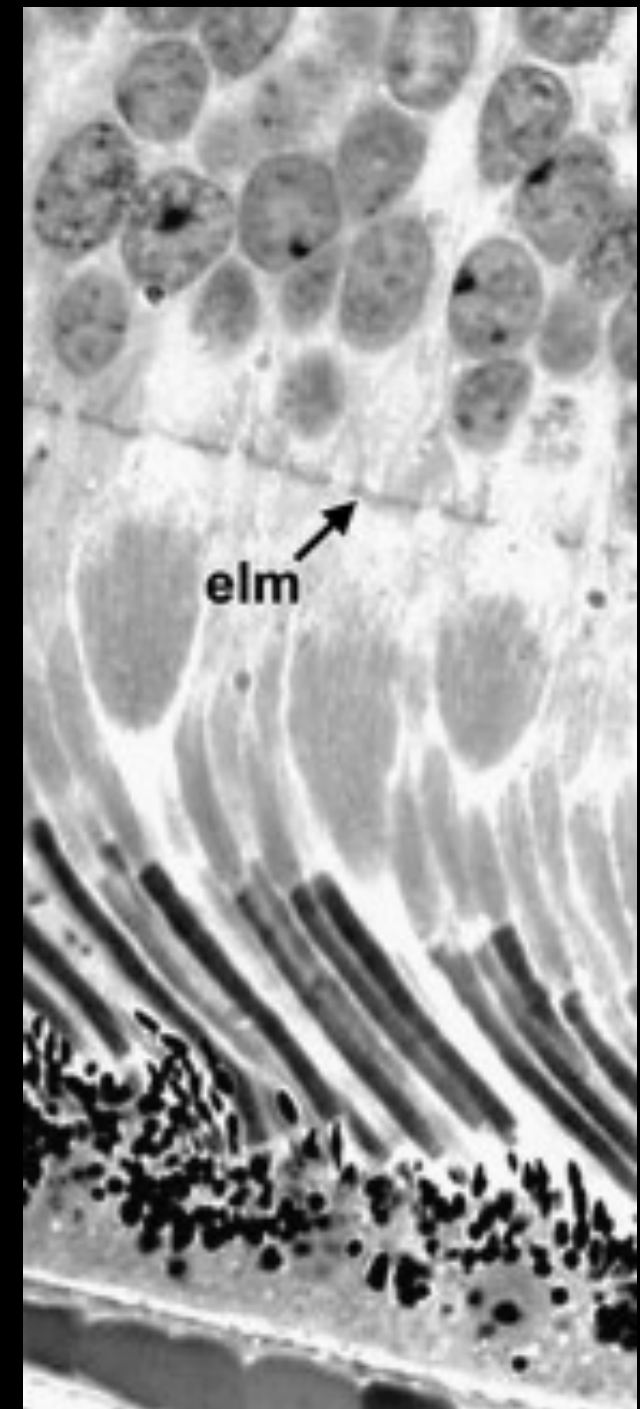
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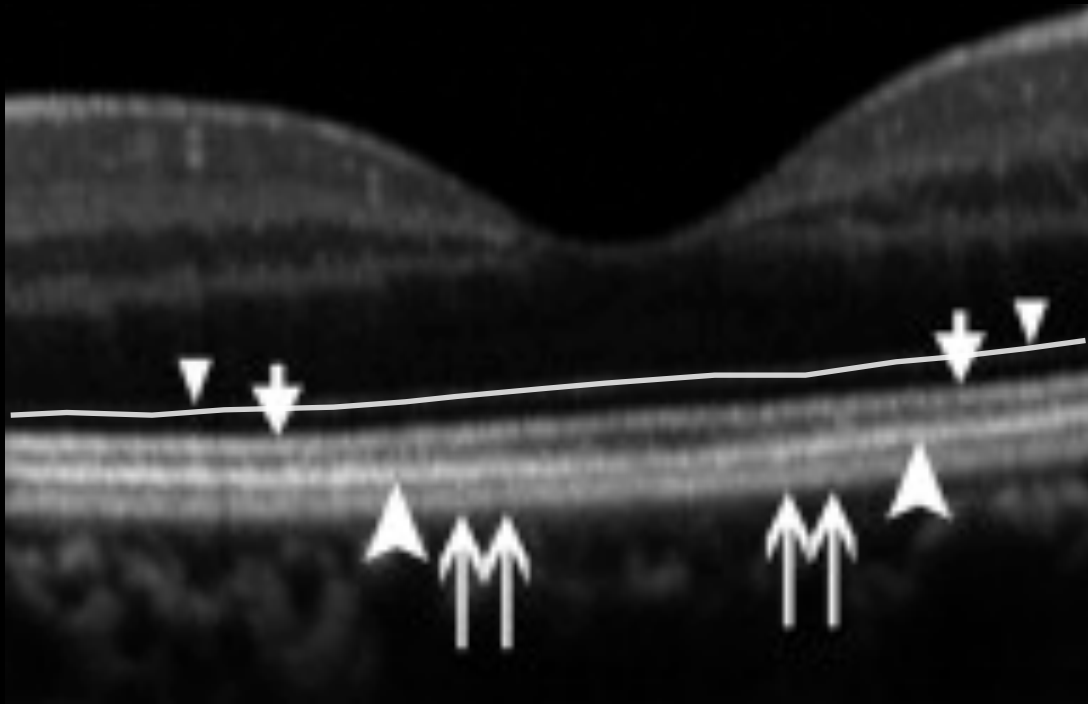
- Lineas
hiperreflectivas

- ✦ **1 banda: MLE**: complejos de unión céls. Muller y fotoR
- ✦ **2 banda**: región **Elipsoide** del IS
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- ✦ 4 banda: EPR +/- Mb Bruch



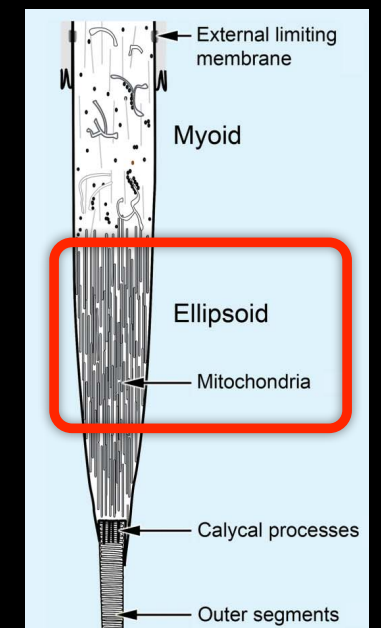
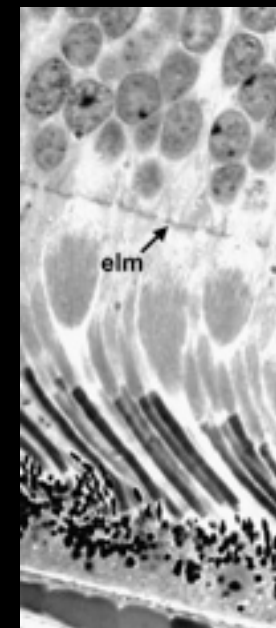
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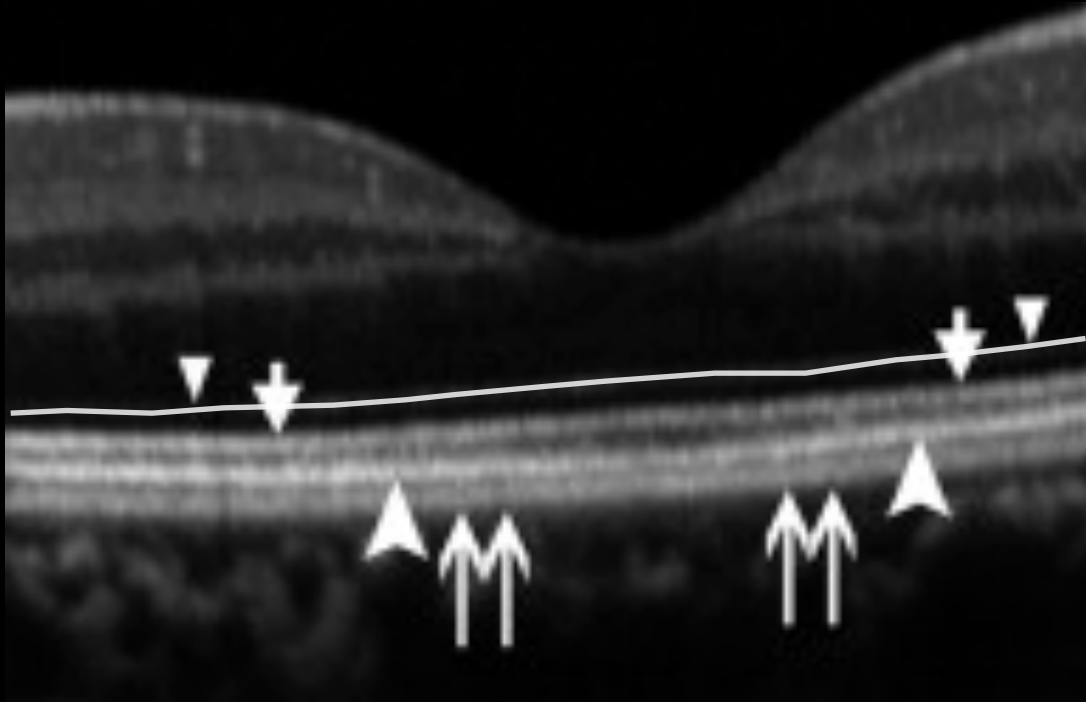
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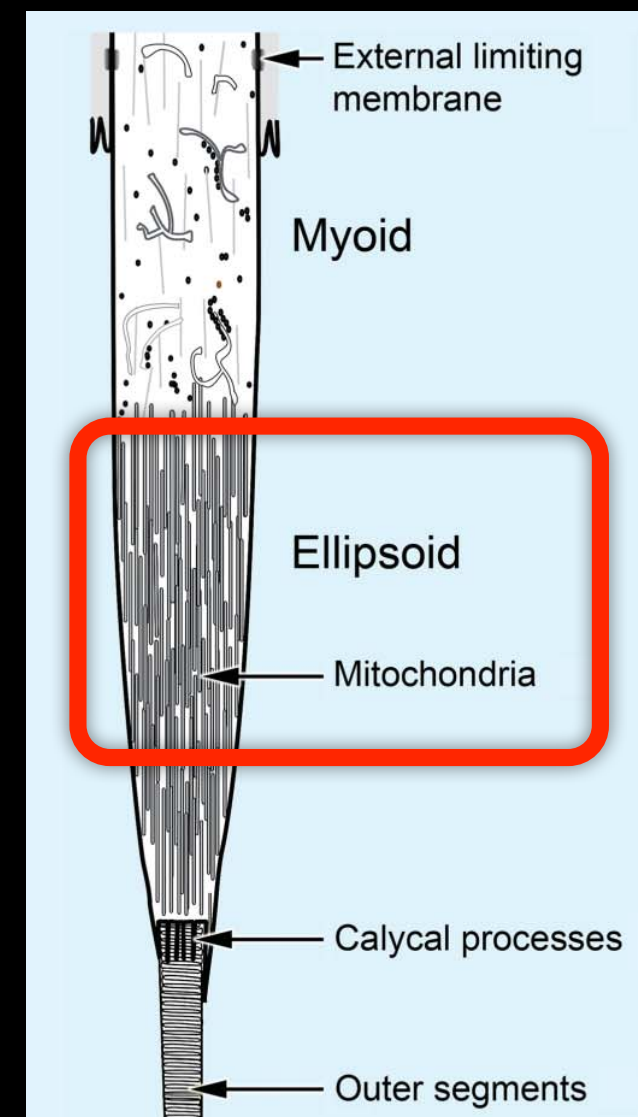
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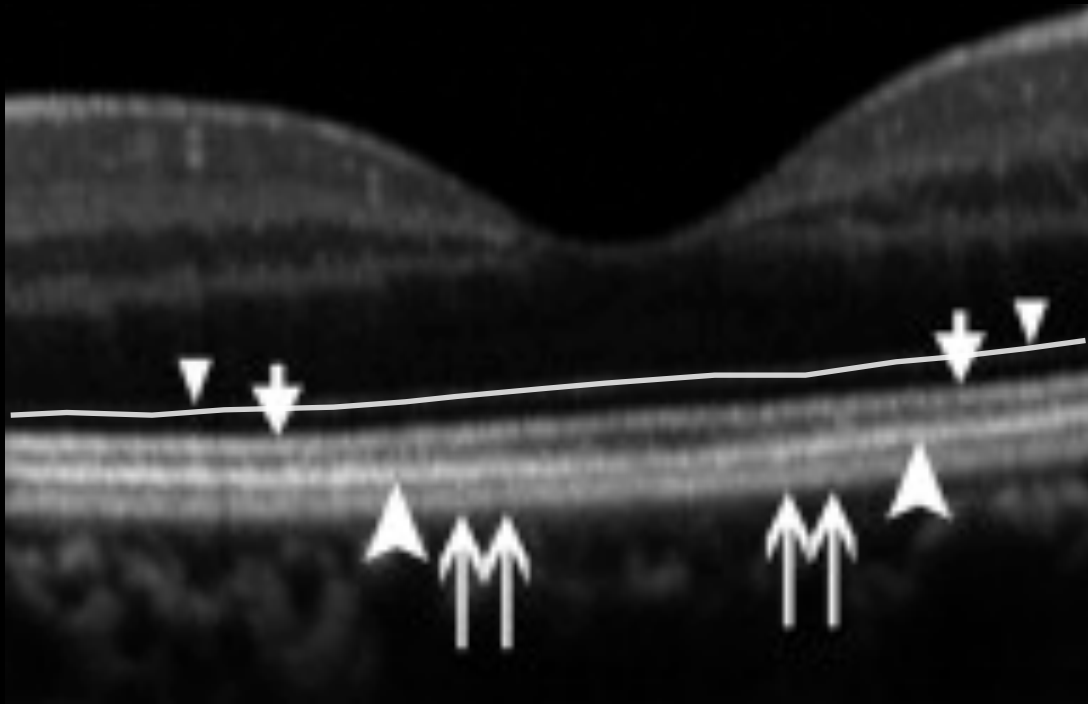
- Lineas hiperreflectivas

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- ✦ 4 banda: EPR +/- Mb Bruch



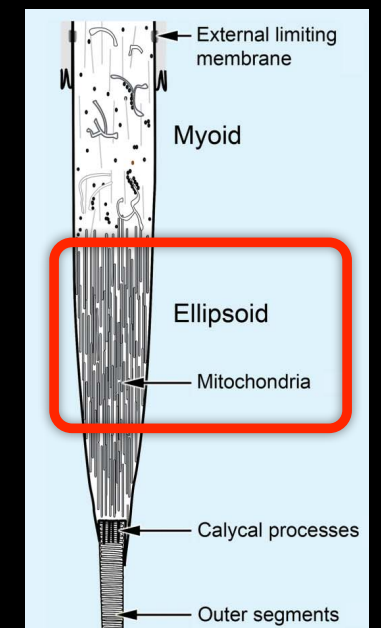
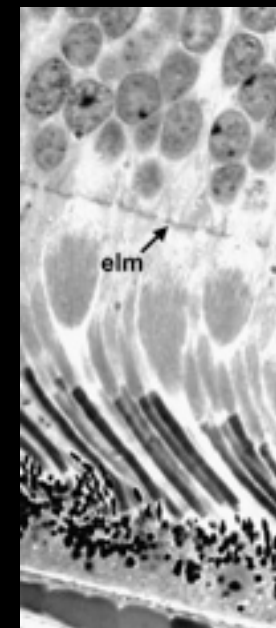
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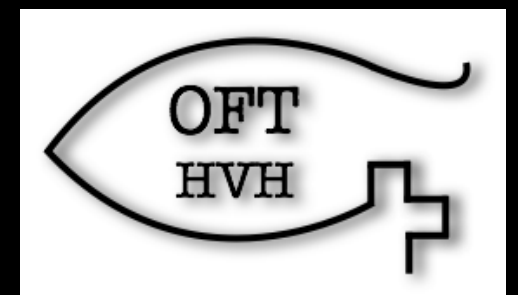


- Lineas hiperreflectivas

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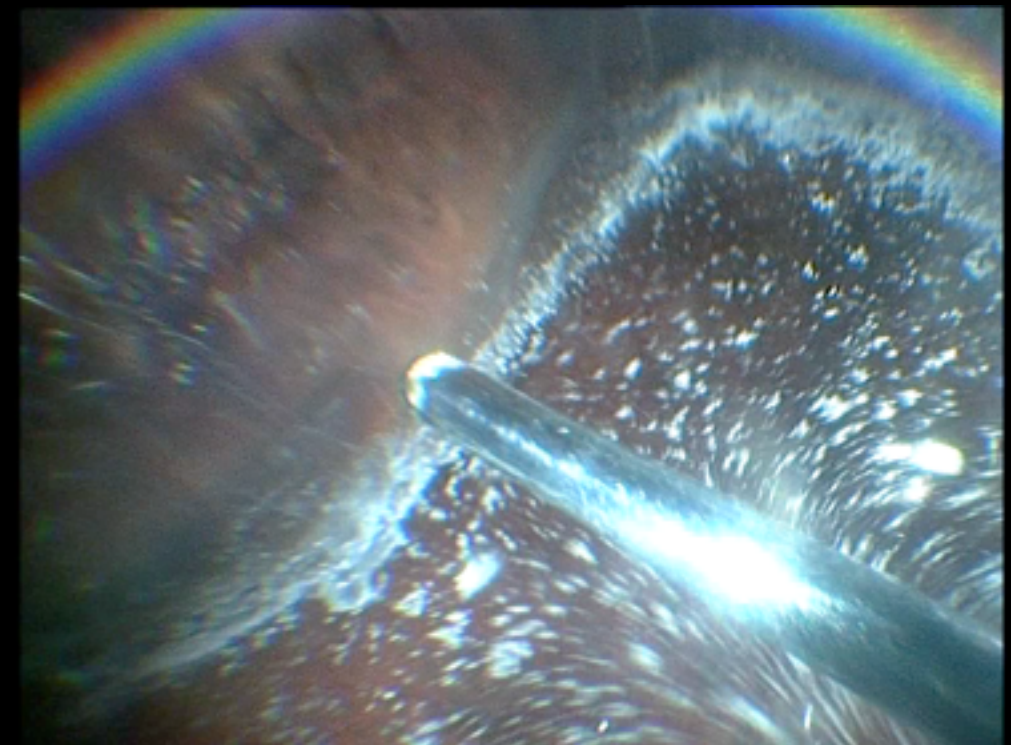
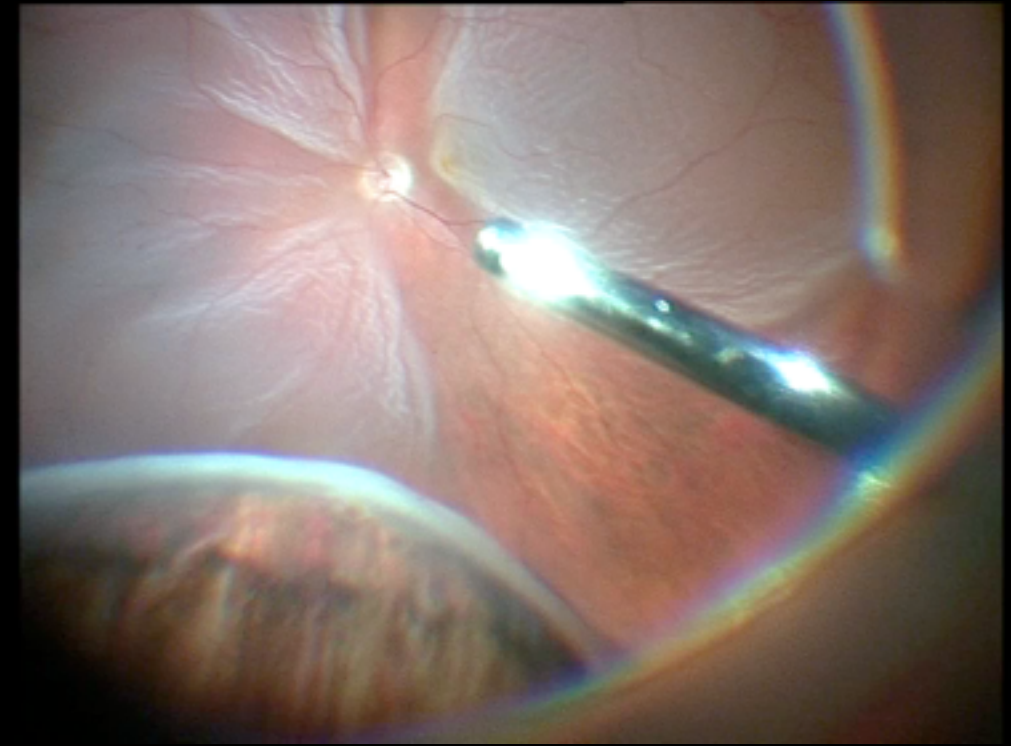
Estudio HVH



Material y Métodos

- Prospectivo. 12 meses
 - ✦ Criterios Inclusión
 - ✦ DRR primario intervenidos de VPP sin cirugía escleral + taponamiento gas
 - ✦ Criterios Exclusión
 - ✦ DRR crónico (>30 días)
 - ✦ PVR grado \geq C

Inclusión 104 pacientes DRR mácula off
DMD: 10,8 días



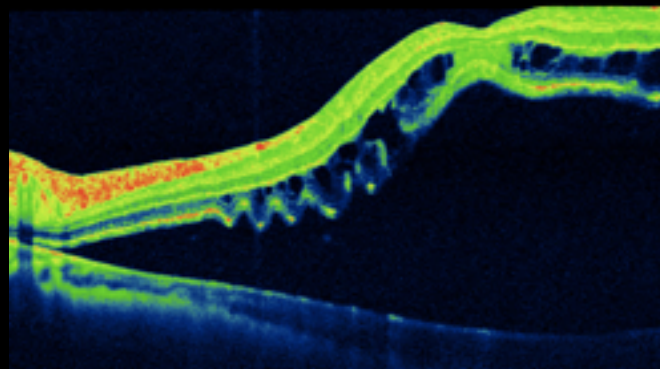
Diseño

PREOPERATORIO

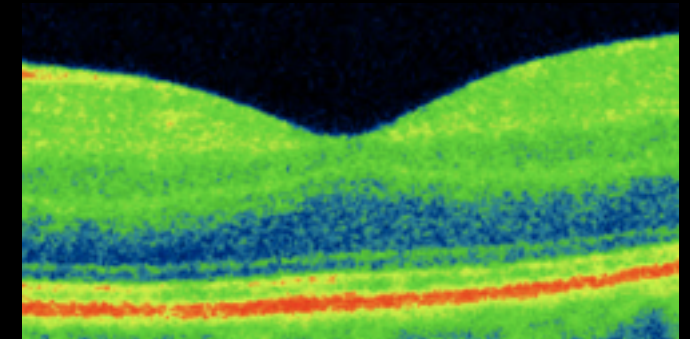
POSTOPERATORIO

**OCT
PREOPERATORIO**

**OCT
POSTOPERATORIO:
1 MES; 3 MESES;
6 MESES; 12 MESES**



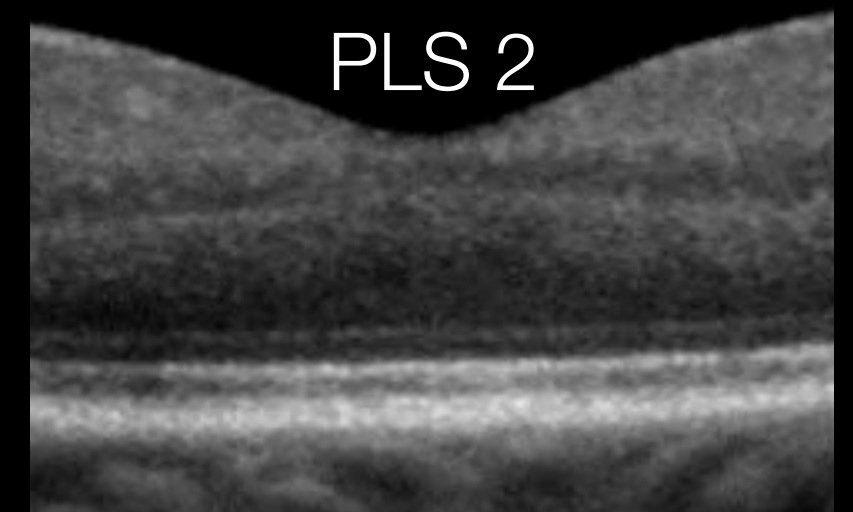
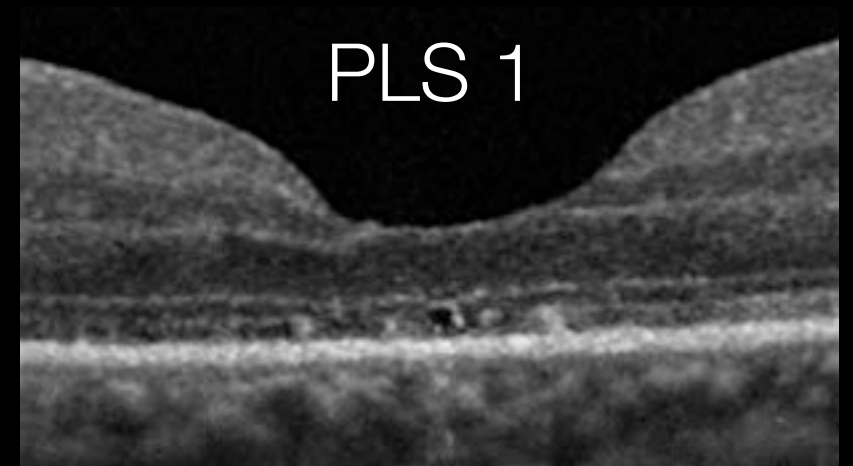
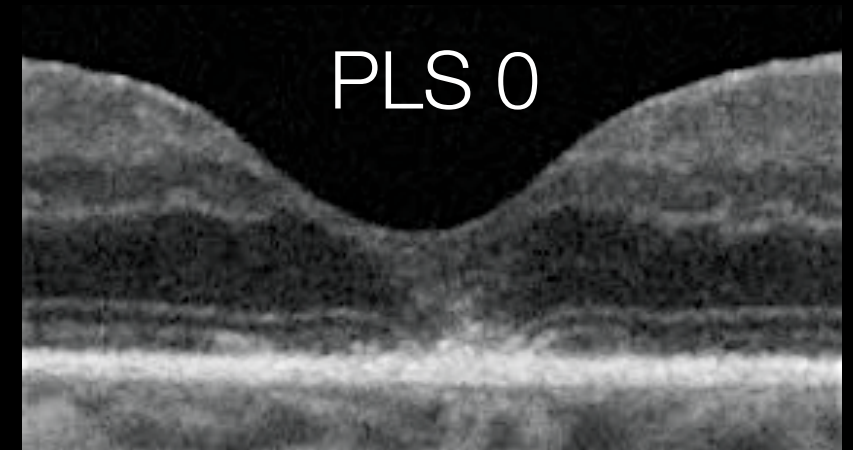
OCT SD



Evaluación resultados: **2 observadores independientes**

PLS: Photoreceptor Layer Status

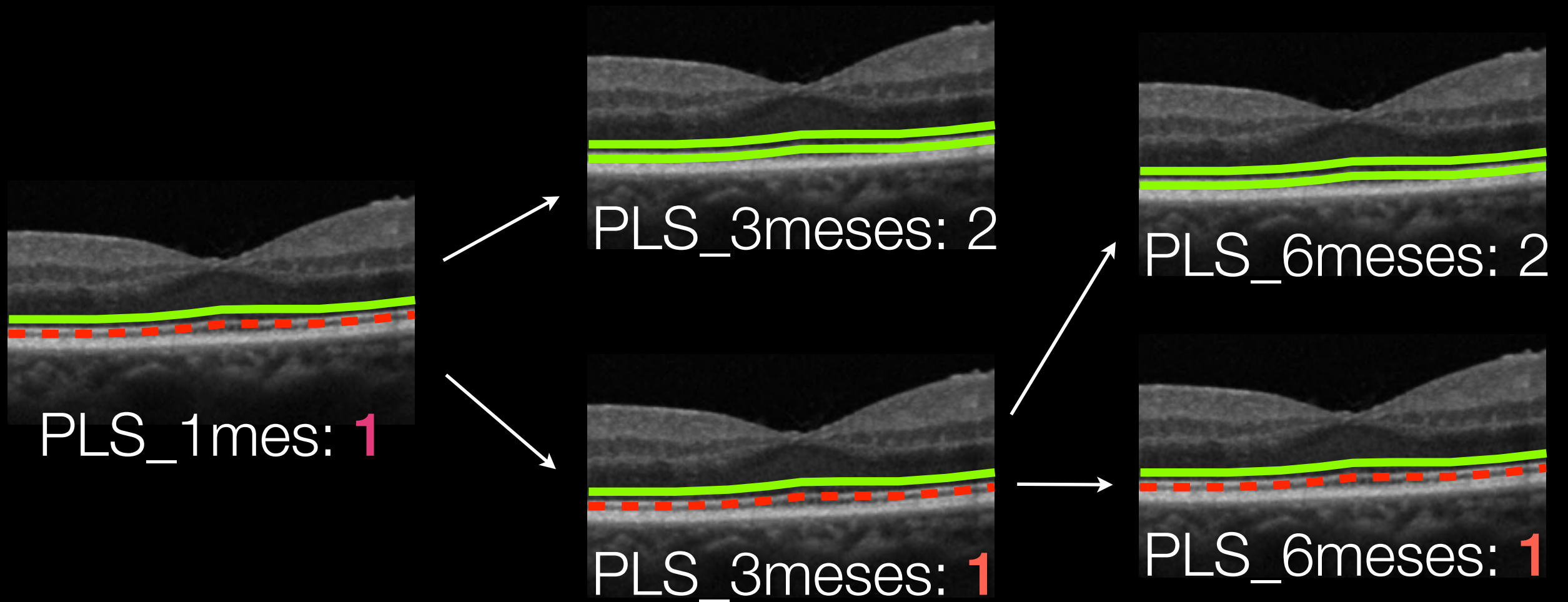
PLS	MLE	Elipsoides
0	Alterada	Alterada
1	Íntegra	Alterada
2	Íntegra	Íntegra



Wakabayashi, Tano. Foveal Microstructure and Visual Acuity after RRD Repair. Ophthalmology 2009

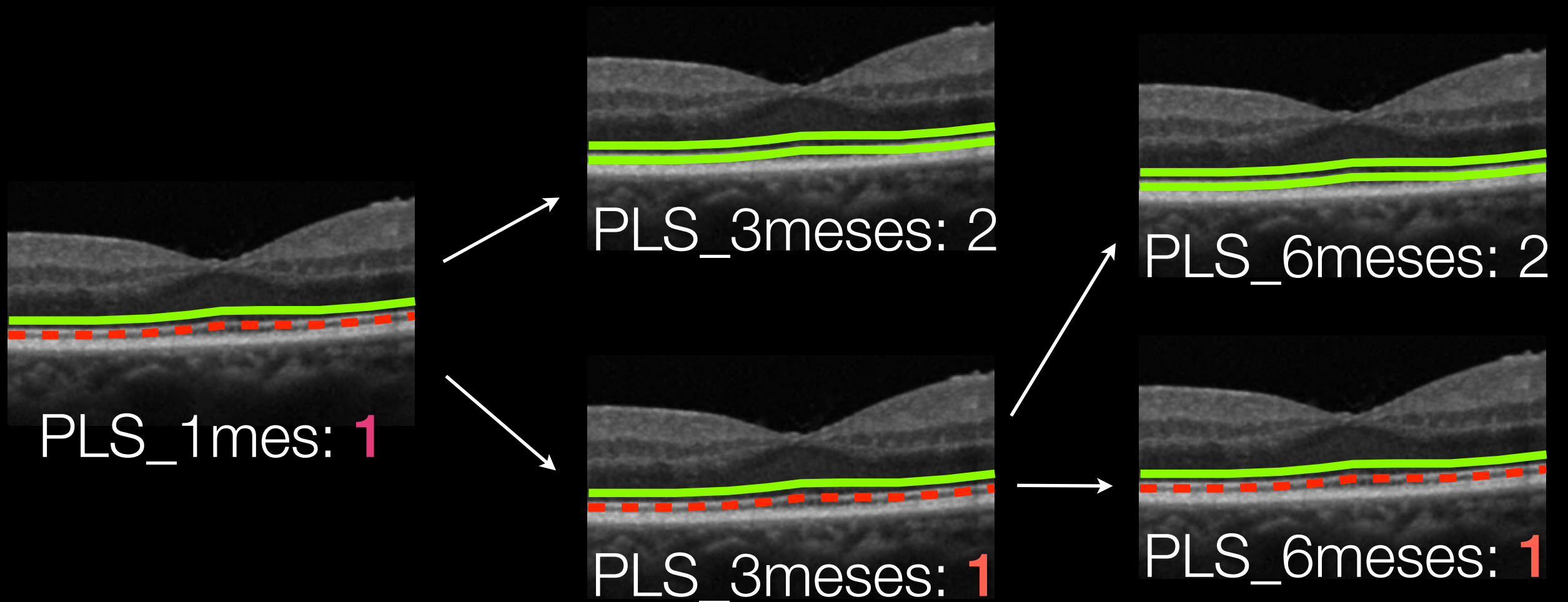
ESTUDIO PROSPECTIVO

PLS	MLE	Elipsoides
0	Alterada	Alterada
1	Íntegra	Alterada
2	Íntegra	Íntegra



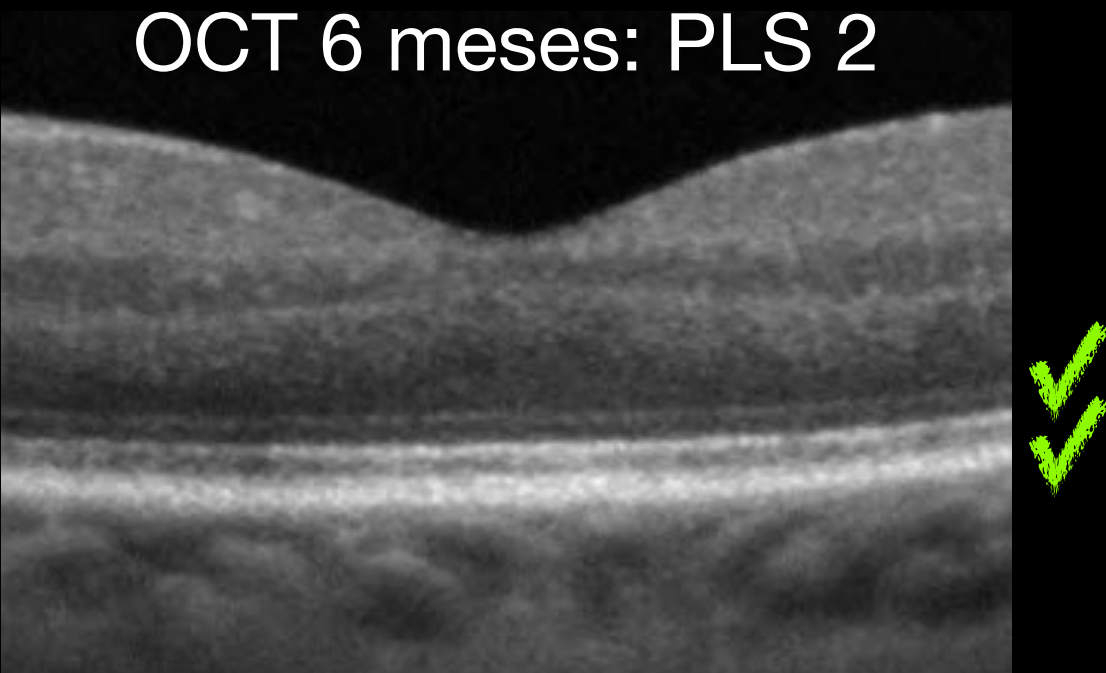
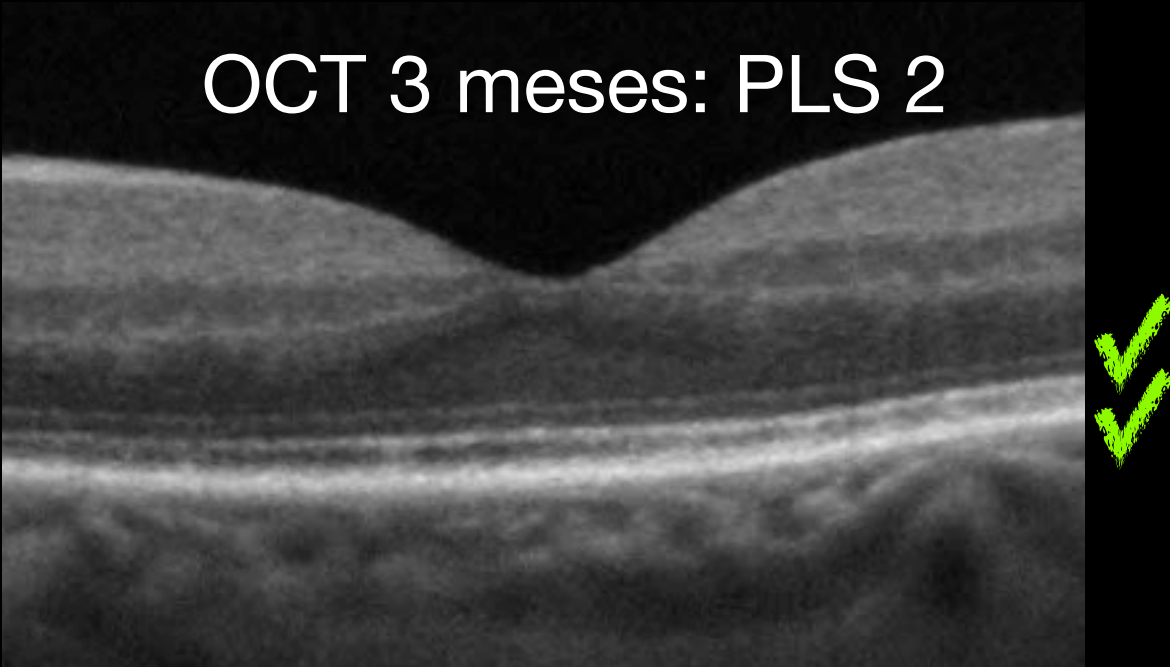
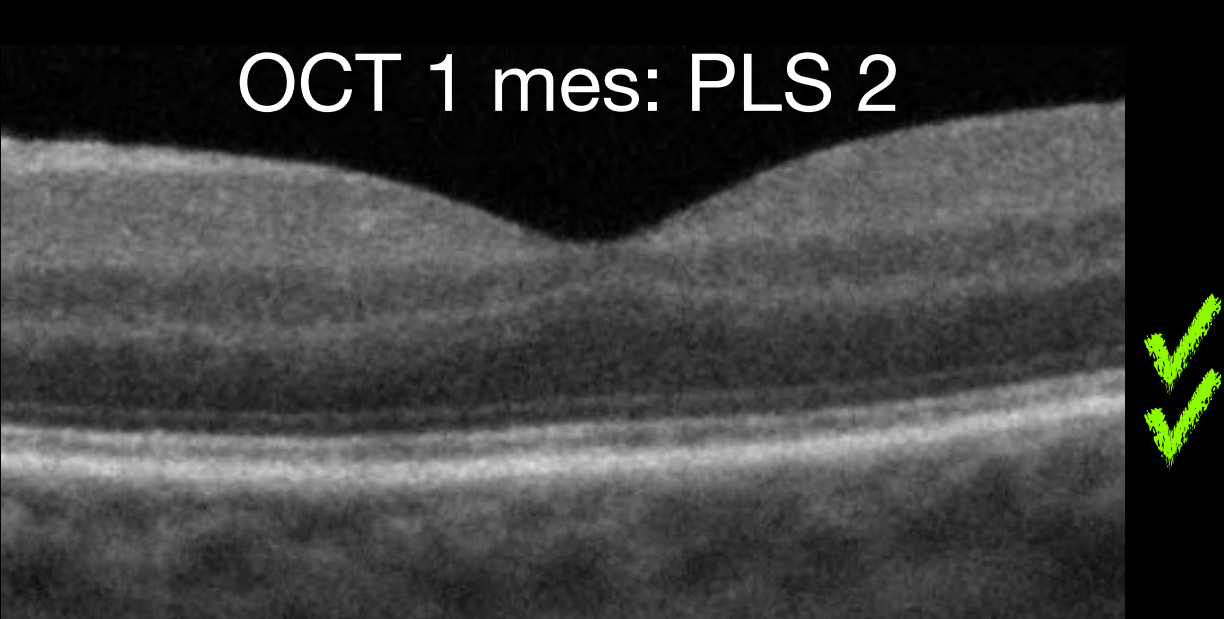
ESTUDIO PROSPECTIVO

PLS	MLE	Elipsoides
0	Alterada	Alterada
1	Íntegra	Alterada
2	Íntegra	Íntegra



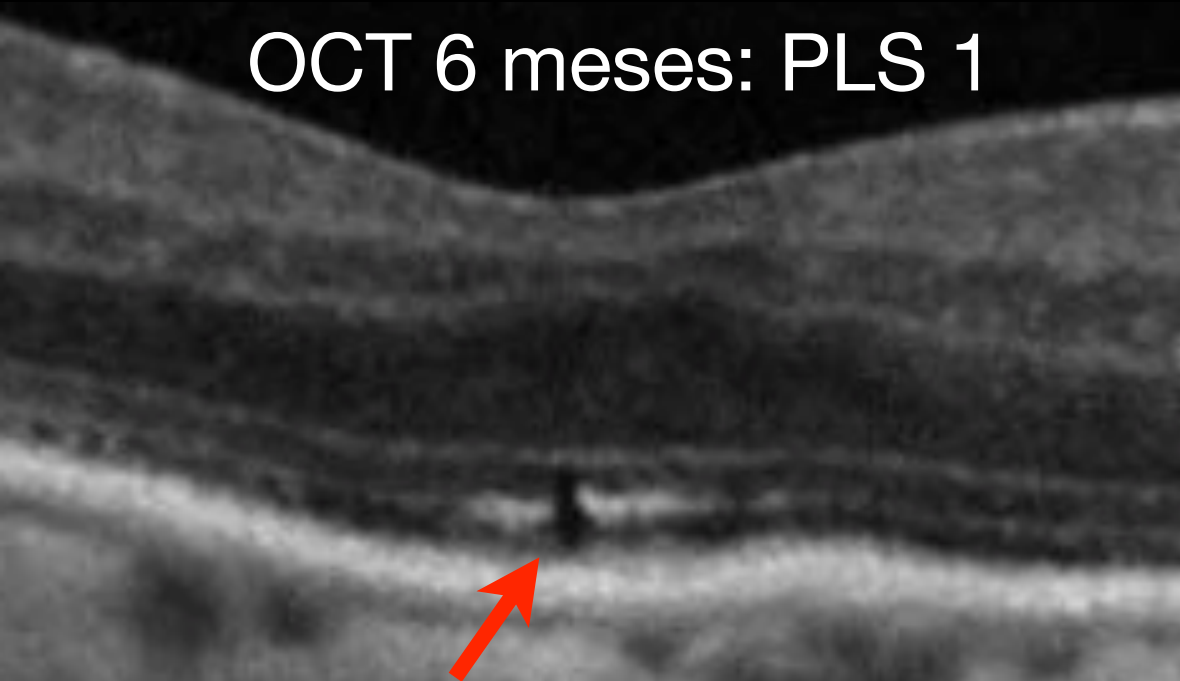
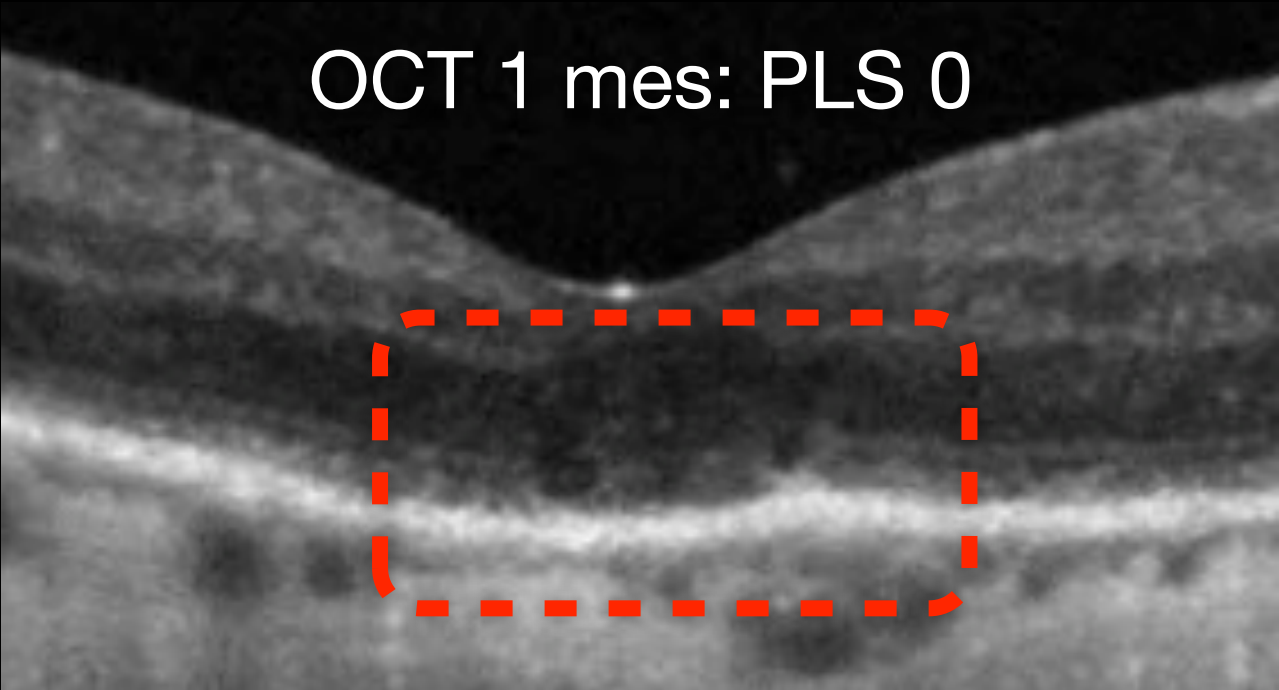
VELOCIDAD RESTAURACIÓN PLS

Caso 1



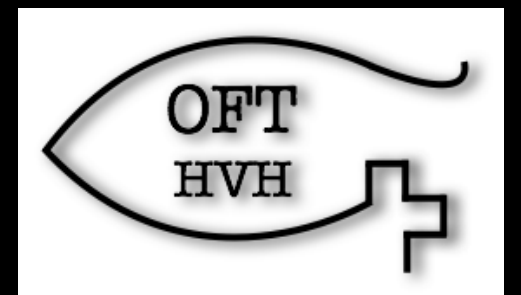
PLS	MLE	Elipsoides
0	Alterada	Alterada
1	Íntegra	Alterada
2	Íntegra	Íntegra

Caso 2

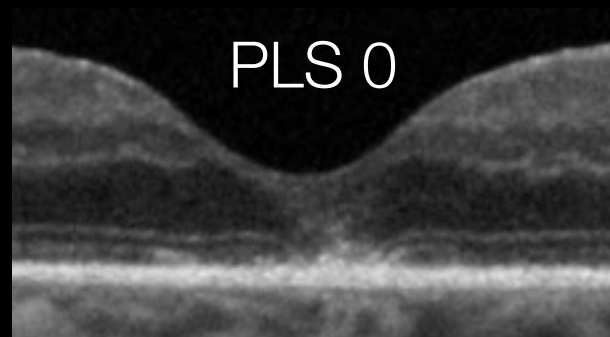


PLS	MLE	Elipsoides
0	Alterada	Alterada
1	Íntegra	Alterada
2	Íntegra	Íntegra

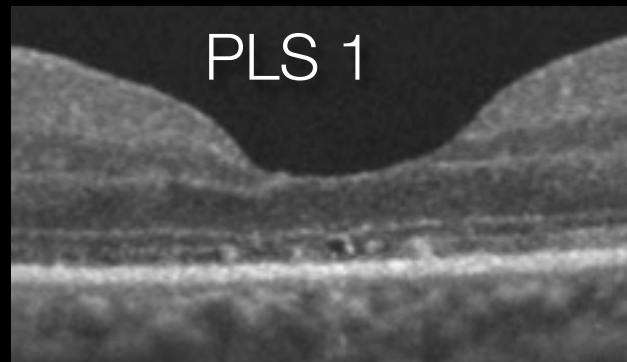
Resultados



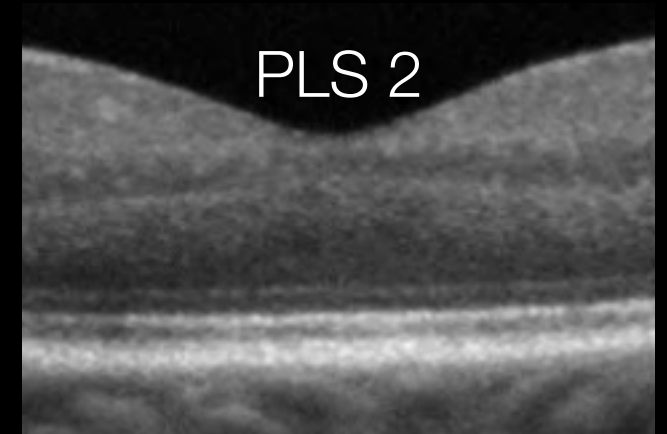
Restauración progresiva Elipsoides



PLS 0



PLS 1



PLS 2

■ PLS 0

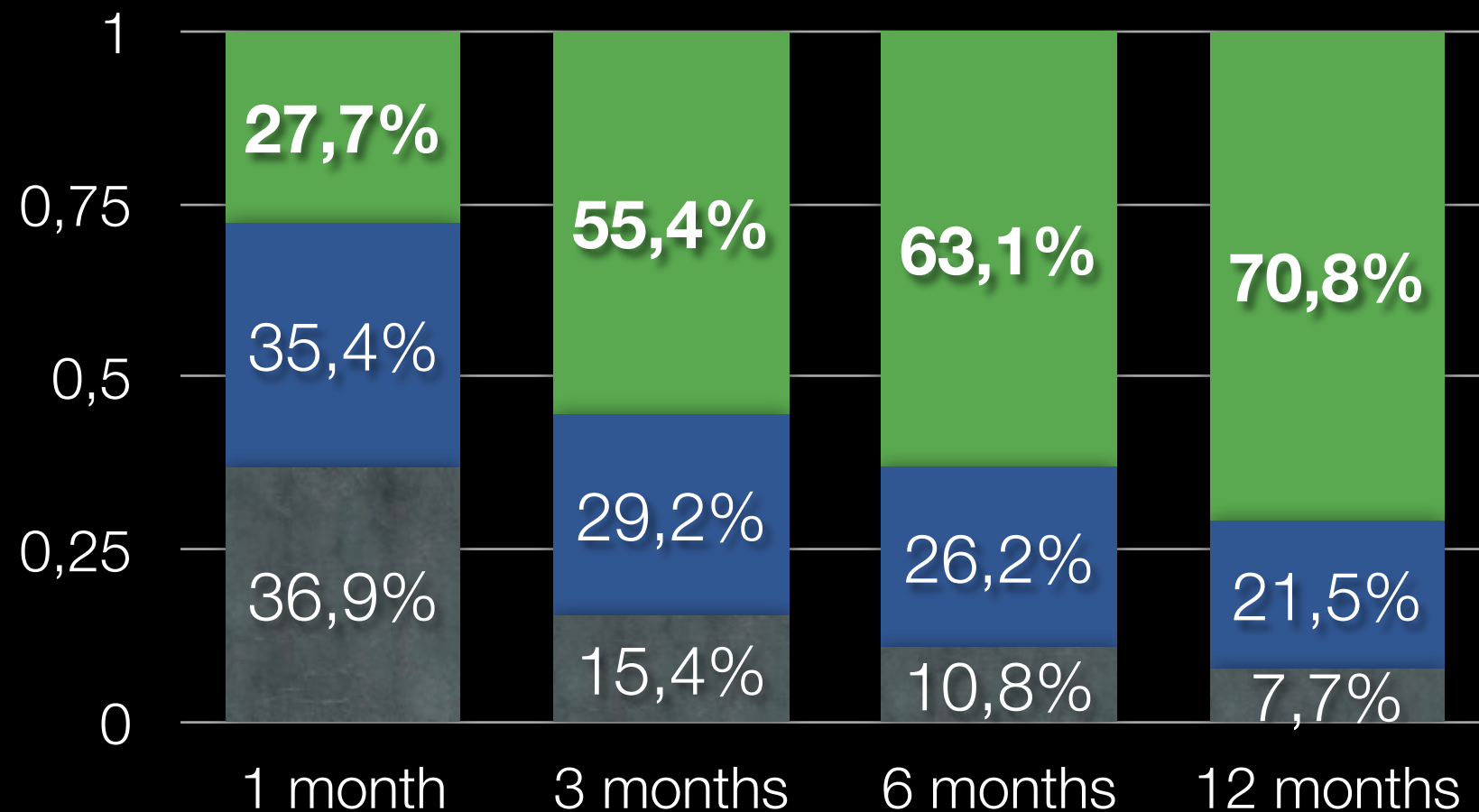
■ PLS 1

■ PLS 2

Alt MLE + Elipsoides

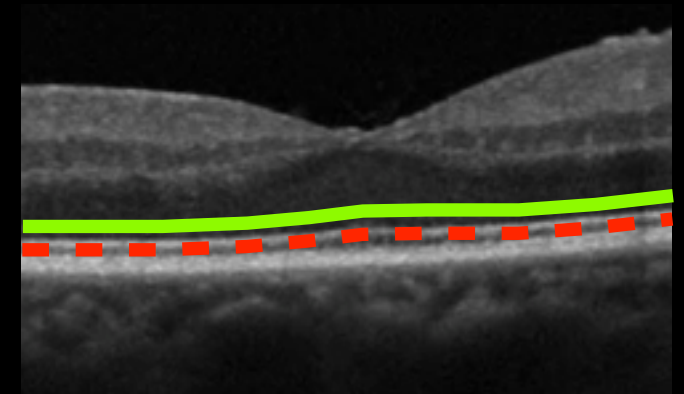
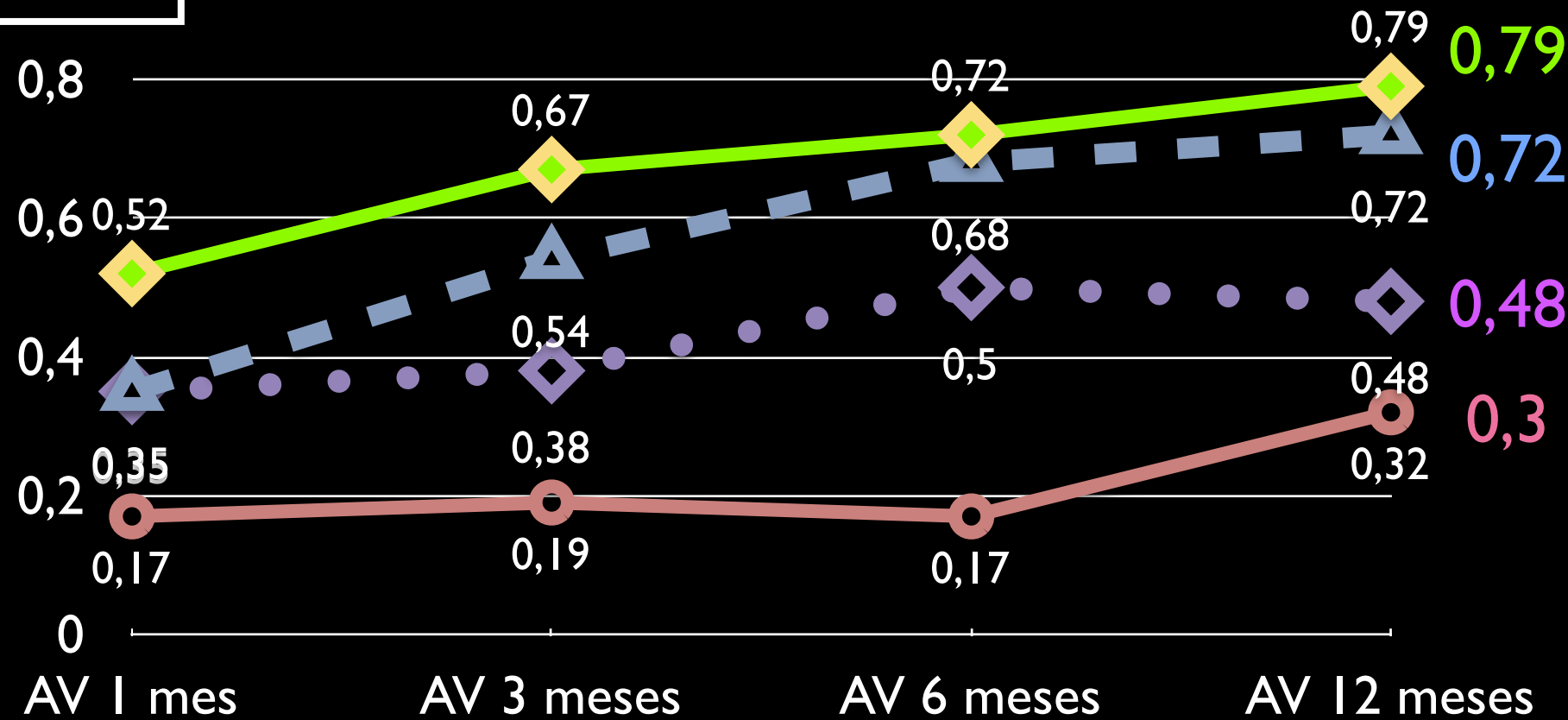
Integridad MLE + Alt Elipsoides

Integridad MLE + Elipsoides



Velocidad restauración Elipsoides

AV



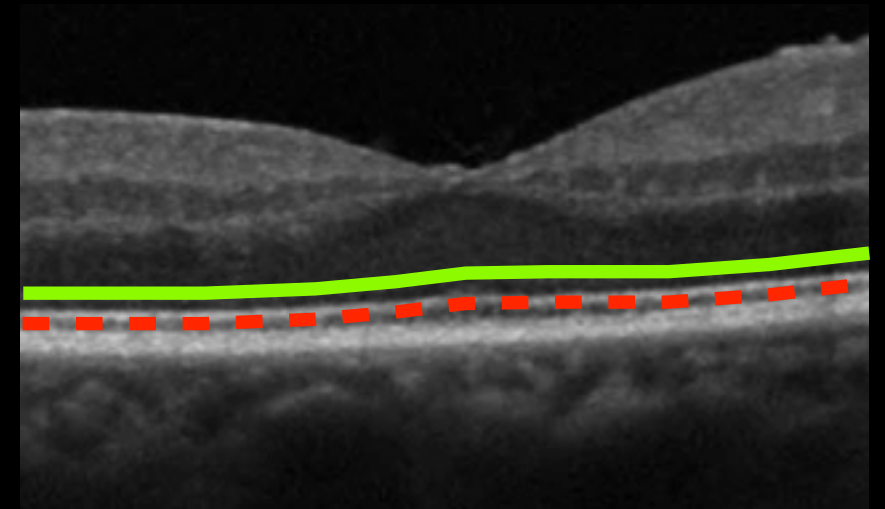
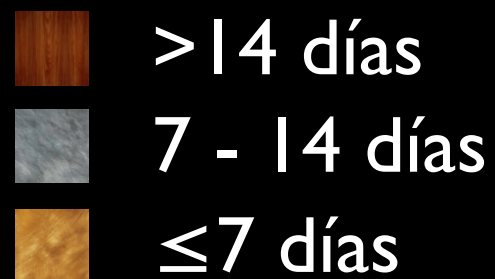
- Rest 1 mes
- Rest 3 meses
- Rest 6 meses
- No restaurac

rho: 0,76
p: 0,001

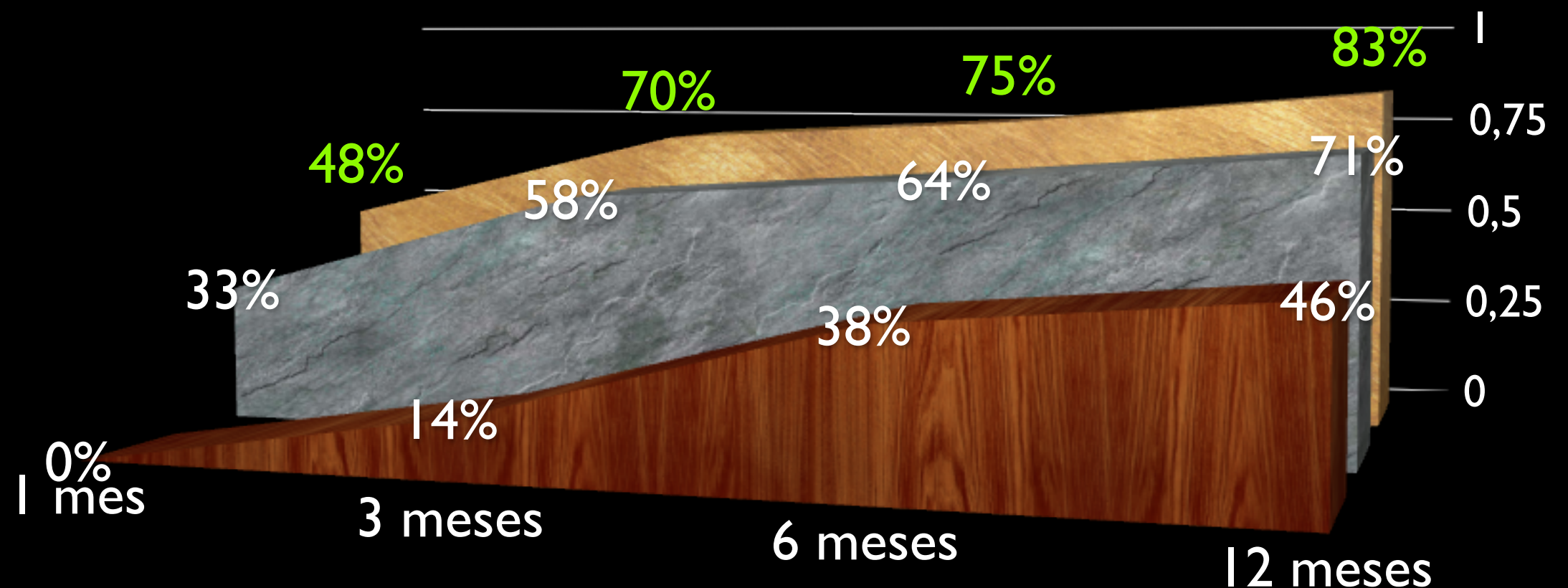
Correlación: Velocidad de restauración de líneas hiperreflectivas y AV final

Correlación: Duración DRR - Restauración Elipsoides

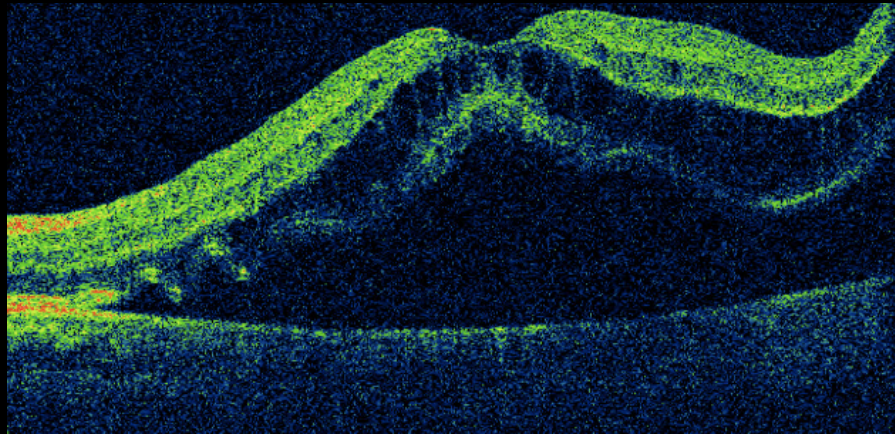
Duración DRR



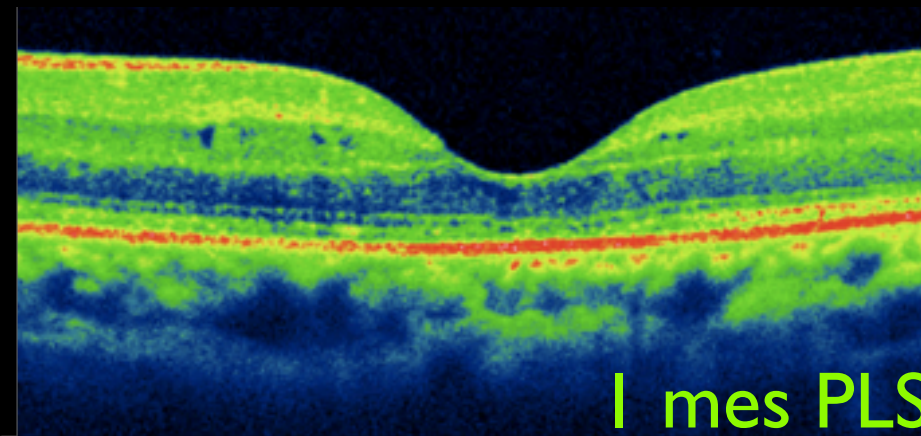
% casos Restauración Elipsoides



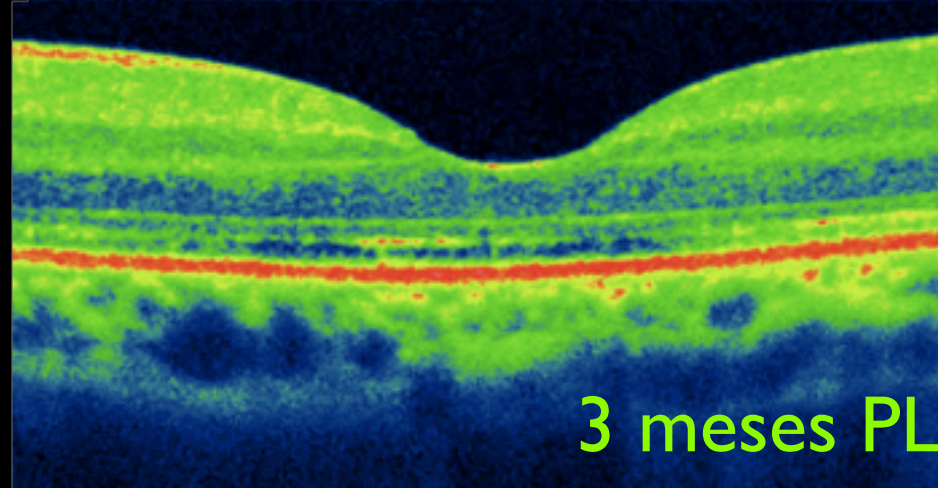
Caso #30



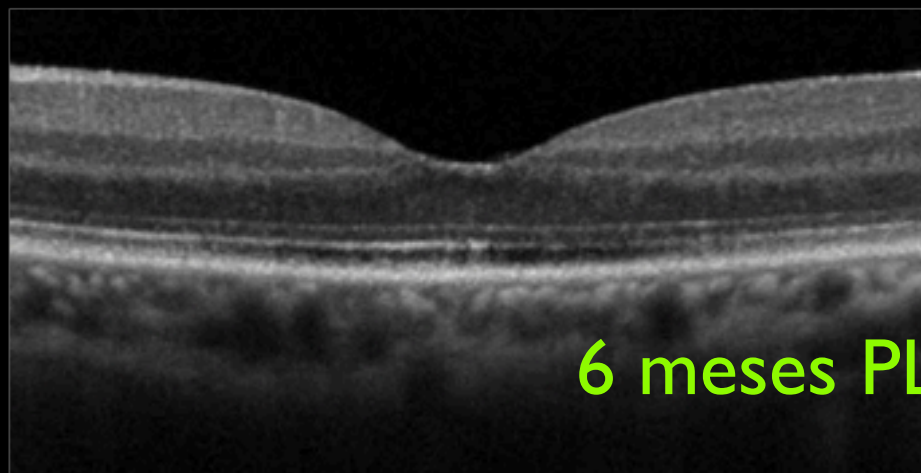
AV preop: CD
 Altura 627 μ
 16 días DMD



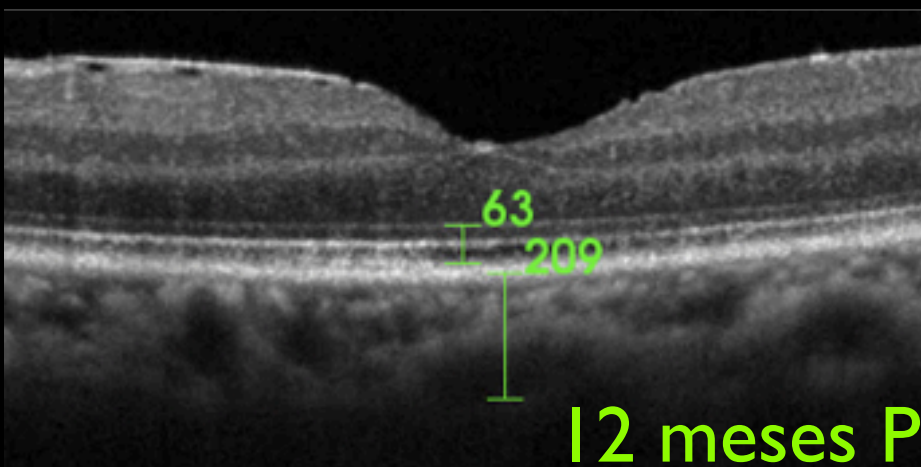
1 mes PLS 1 AV: 0,3



3 meses PLS 1 AV: 0,3



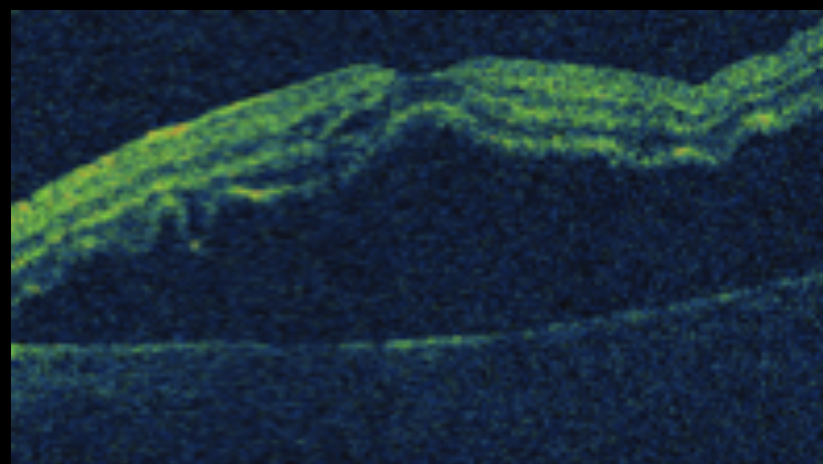
6 meses PLS 2 AV: 0,5



12 meses PLS 2 AV: 0,6



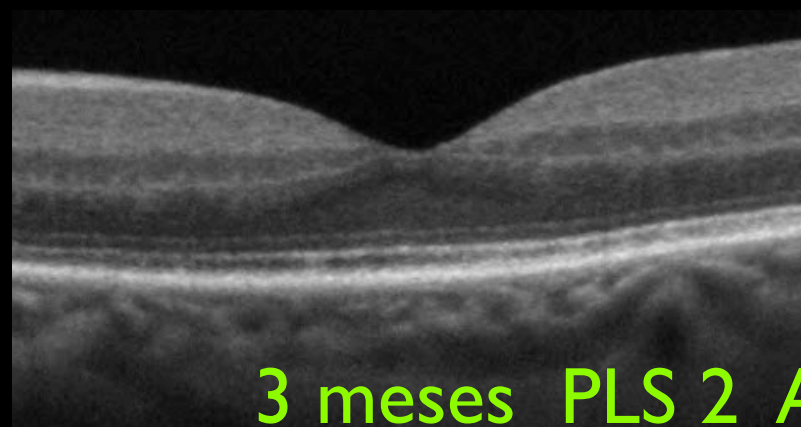
Caso #43



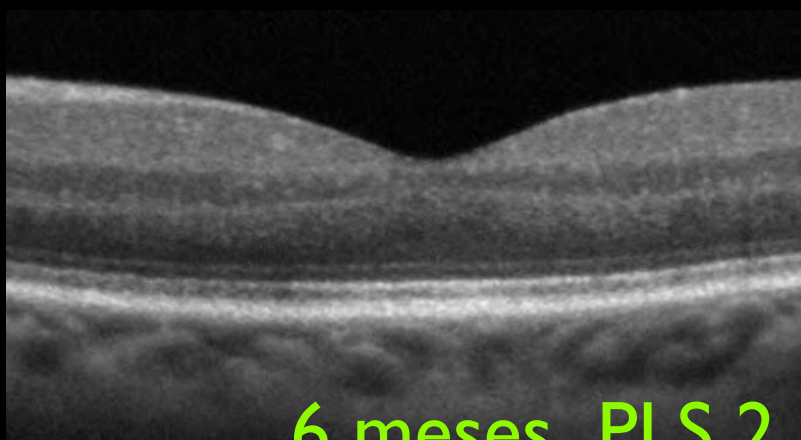
AV preop: MM
Altura 787µ
7 días DMD



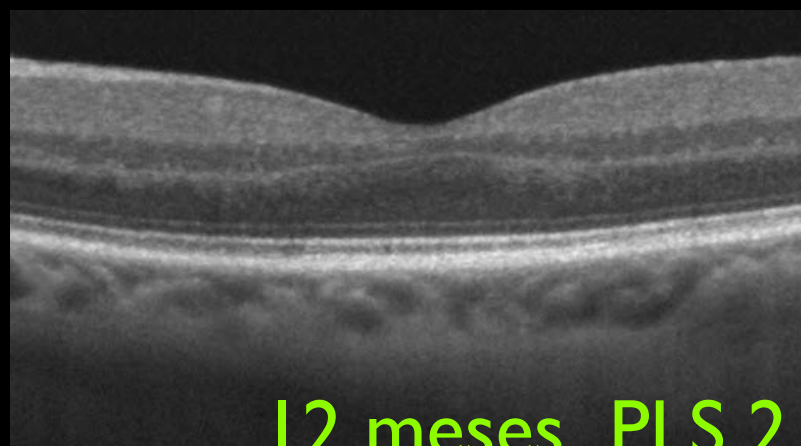
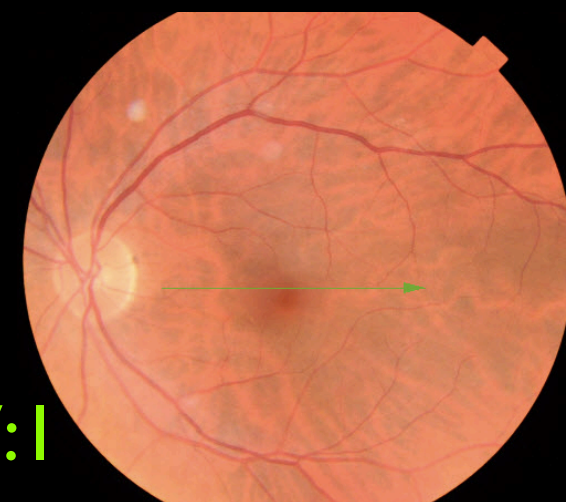
1 mes PLS 2 AV:0,7



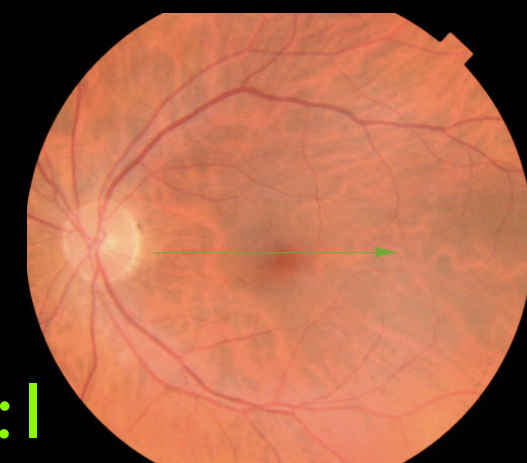
3 meses PLS 2 AV:0,9



6 meses PLS 2 AV:1



12 meses PLS 2 AV:1



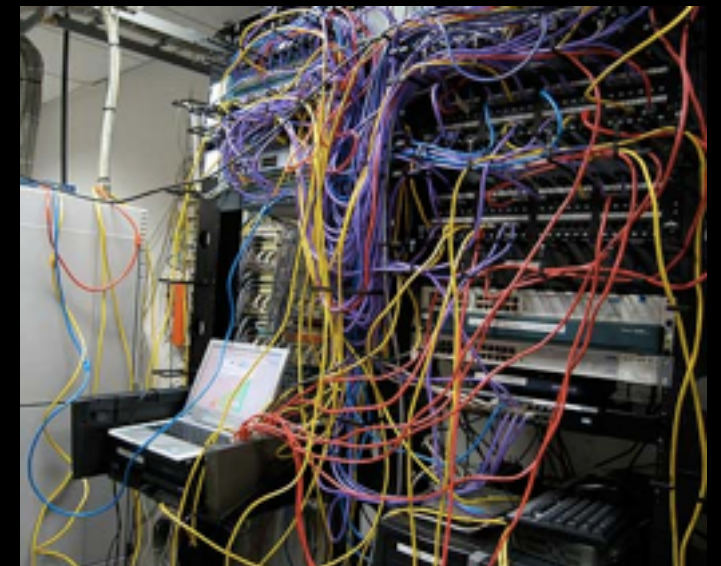
Discusión: Reflexión: Qué valor tienen hallazgos OCT ?

- ✦ Hallazgos estructurales No justifican enteramente la recuperación funcional
- ✦ Retina estructura neural compleja altamente organizada.
 - ✦ Remodelación neuronal: no estudiado por OCT

Discusión: Reflexión: Qué valor tienen hallazgos OCT ?

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- ✦ Papel Relevante

a nadie le asombraría que una estructura basalmente alterada y desorganizada no funcionase correctamente...



GRACIAS POR SU ATENCIÓN

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