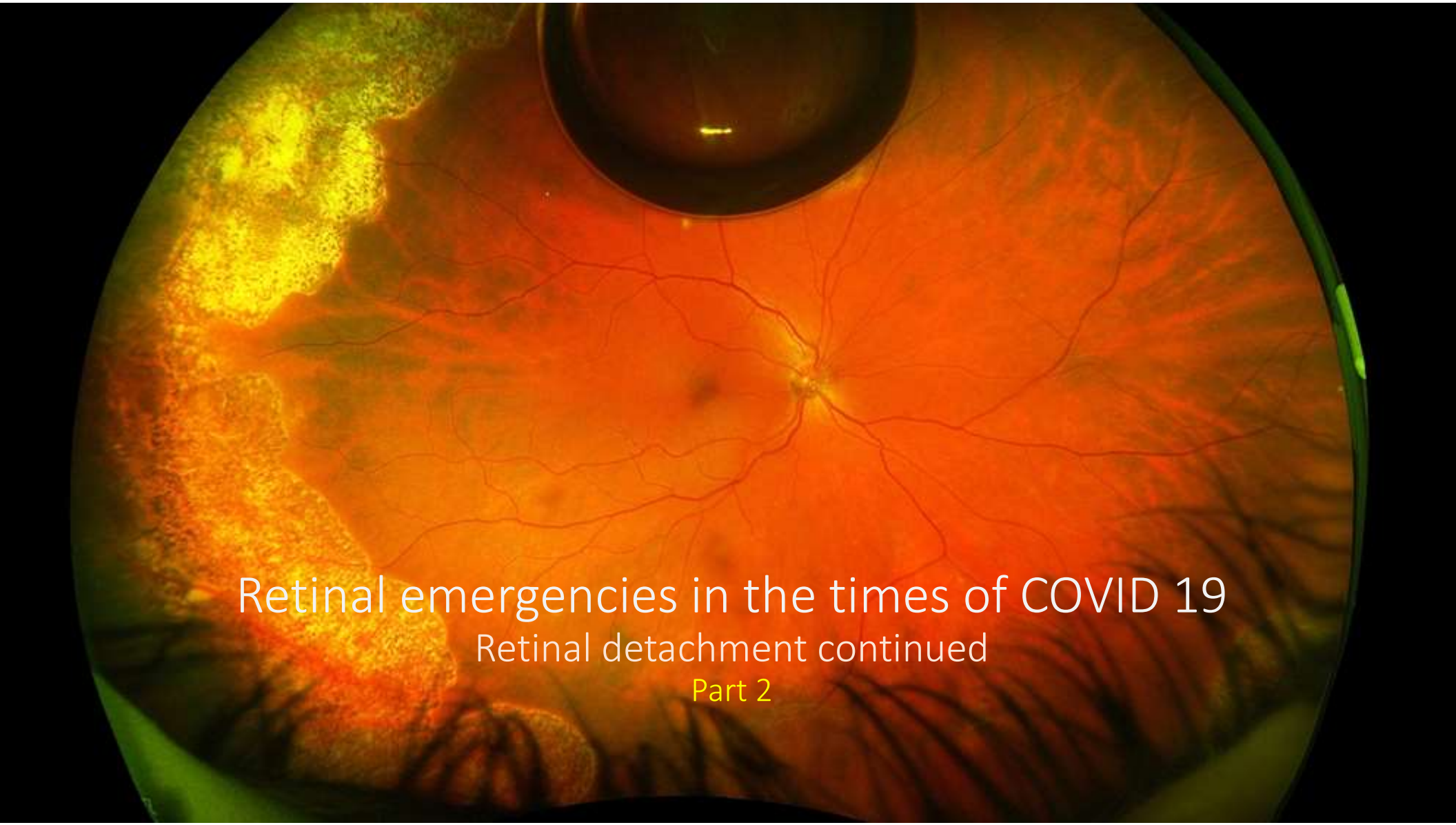


Retinal emergencies in the times of COVID 19

Retinal detachment continued

Part 2

Quiz Vitreal haemorrhage
Which of the following is true?

1 Vitreal haemorrhages will clear on their own accord and are in themselves benign
2 Most vitreal haemorrhages are suspicious of a retinal tear ✓
3 Vitreal haemorrhages are a common sequalae to PVD
4 Current treatment for a Vitreal haemorrhage includes vitrectomy, scleral buckle and cryotherapy

7.5% PVD have associated vitreal haemorrhage

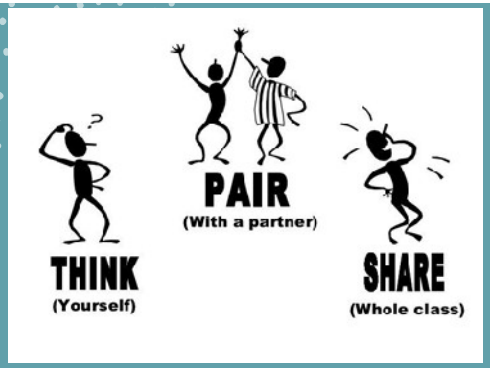
Quiz Which of the following is a false statement regarding peripheral retinal neovascularisation?

1/ It is also known as Eccentric disciform degeneration

2/ It is amenable to Ranibizumab injections

3/ 50% of patients with peripheral retinal neovascularisation also have macular degeneration

4/ It is similar to dry macular degeneration ✓



Quiz Which of the following is less of a risk factor for retinal detatchment

a/ Trauma

b/ female

c/ prior cataract surgery

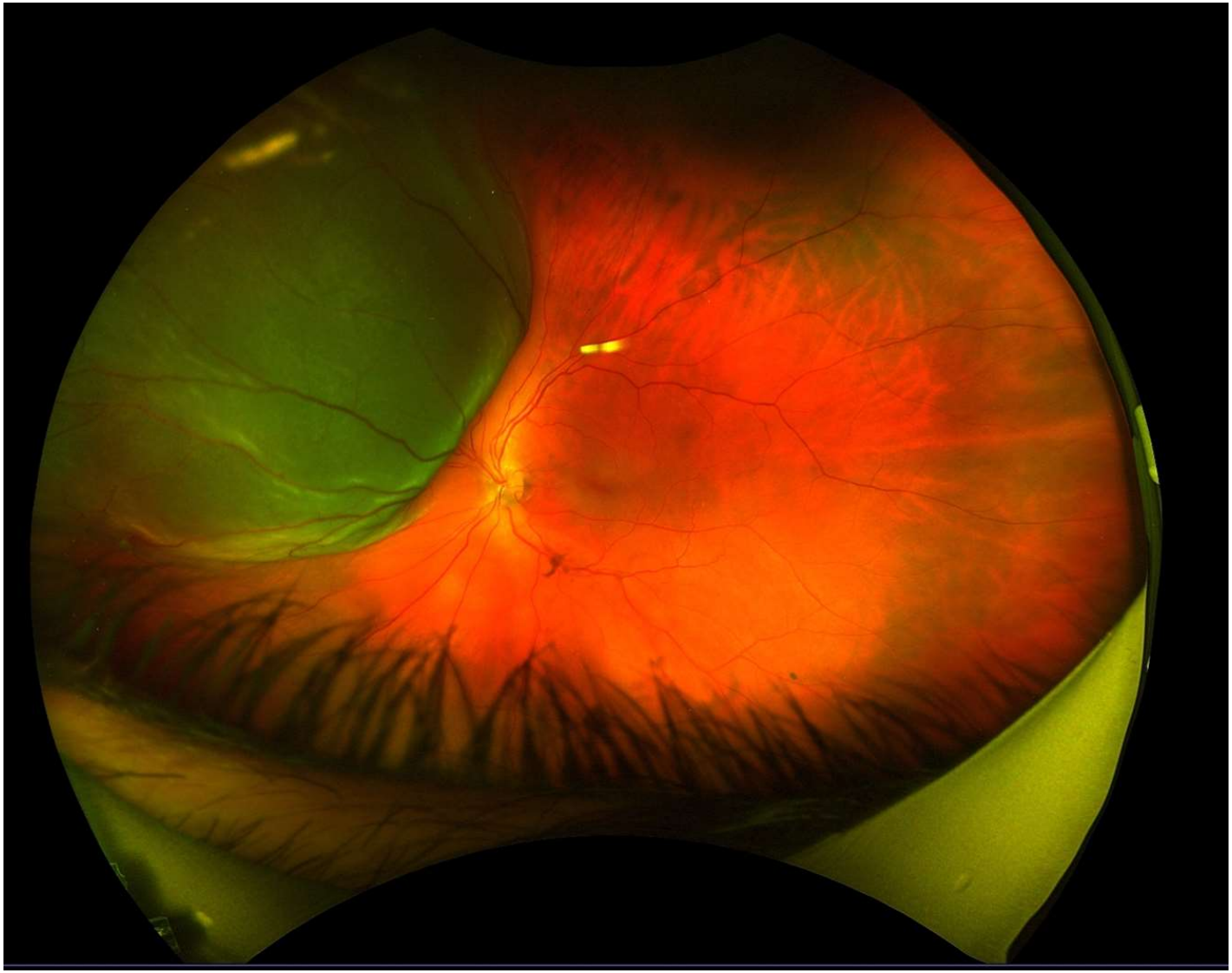
d/ vitreal haemorrhage

Can we apply risk factors to assess the Pts susceptibility to RD?

Do some markers carry more weight?

Pseudophakic	8.5-33%
male	2%
50+	
PVD	10-17%

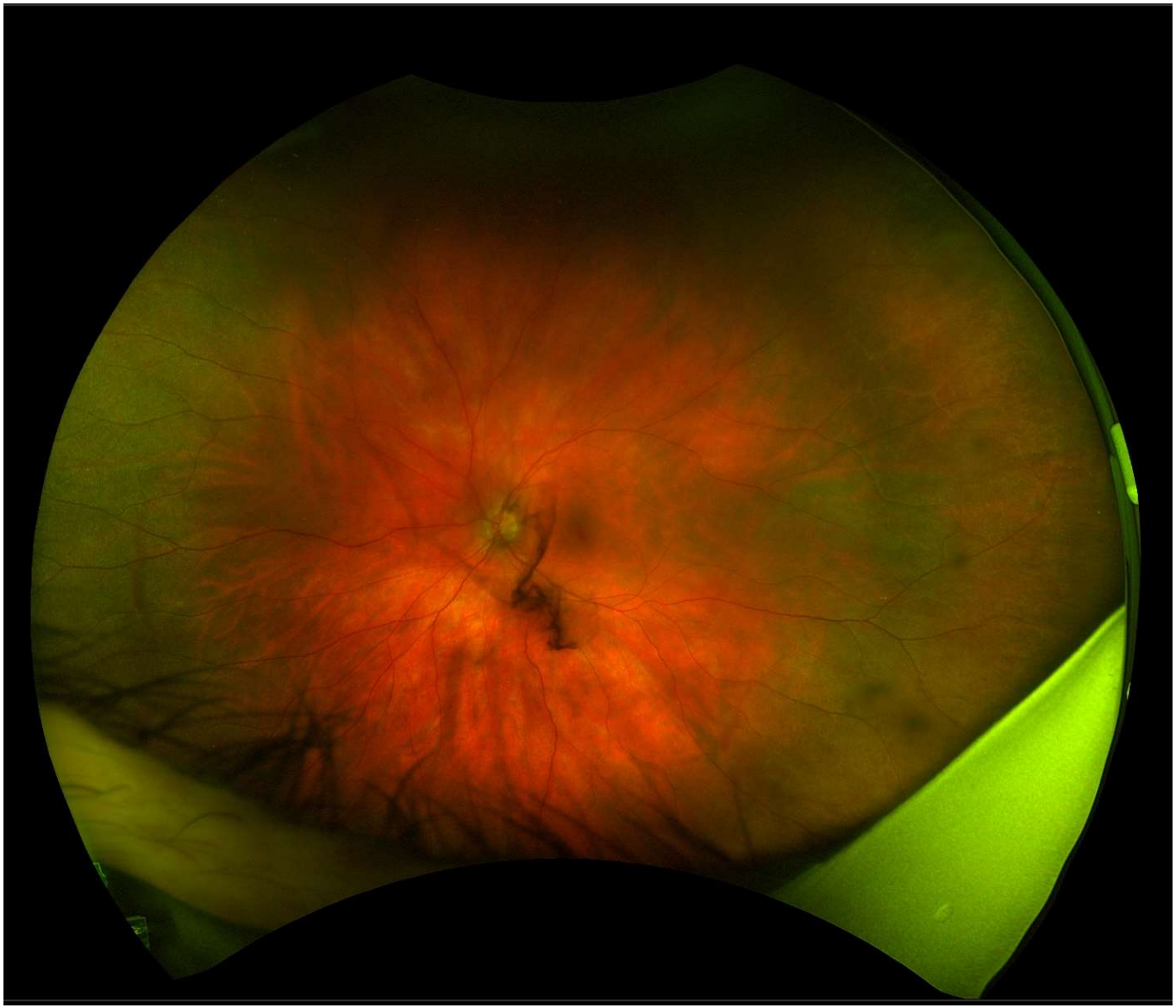
Ring Ophthal sms image and ask to triage at E & E
Nil food
Sip water?
Take pyjamas
Carer overnight in Melbourne
Lost more than half vision on arrival from 10:30 am to 1 pm



Ms. E.J. aet 60

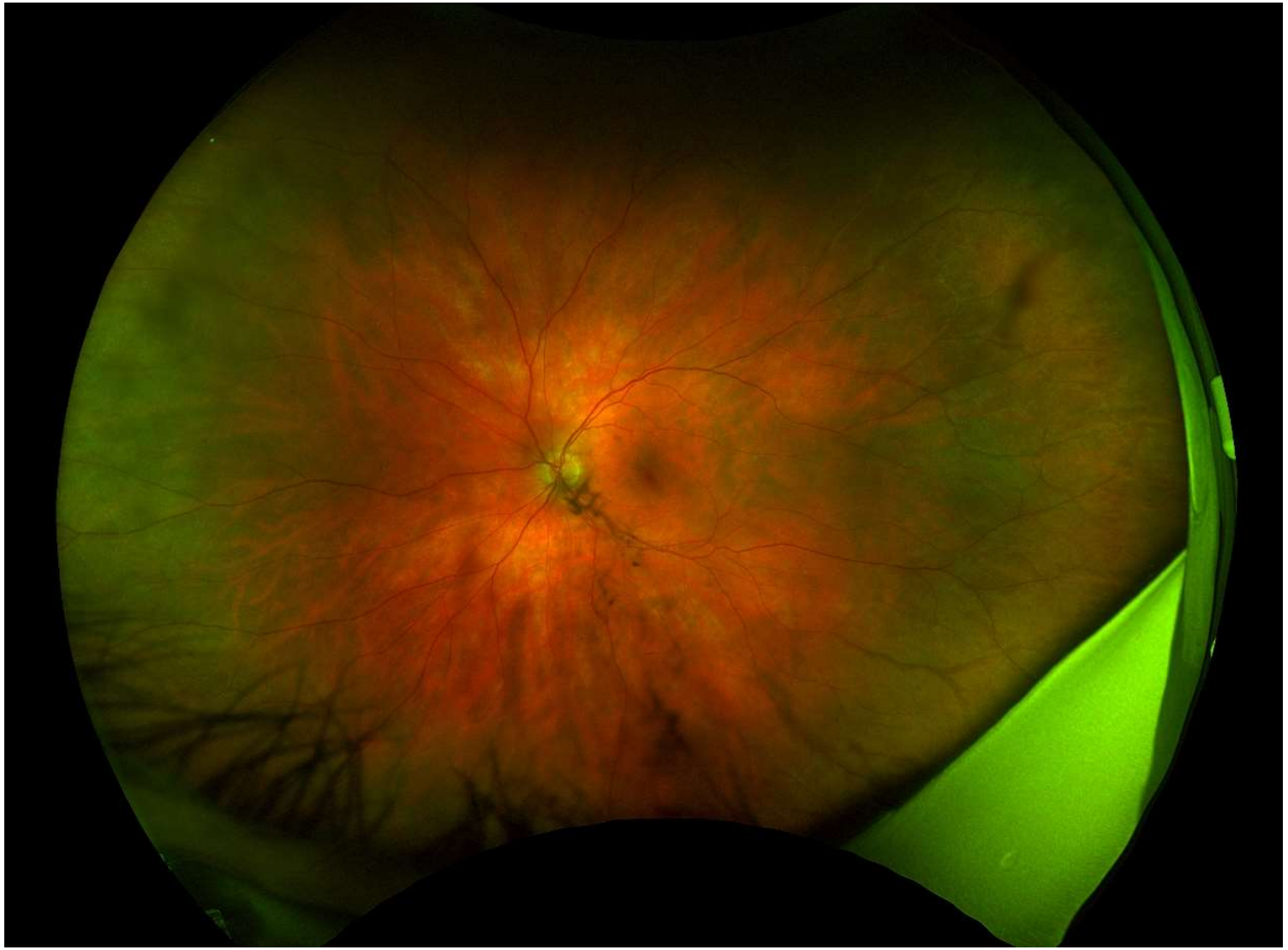
31-1-20
LE black line comes & goes, wavy shadow, flashes
Vision fine
Youngest of 12, all myopic
PRK
2 sisters & mother RD

Weiss ring
action PVD
cautioned RD signs & symptoms



Ms. E.J.

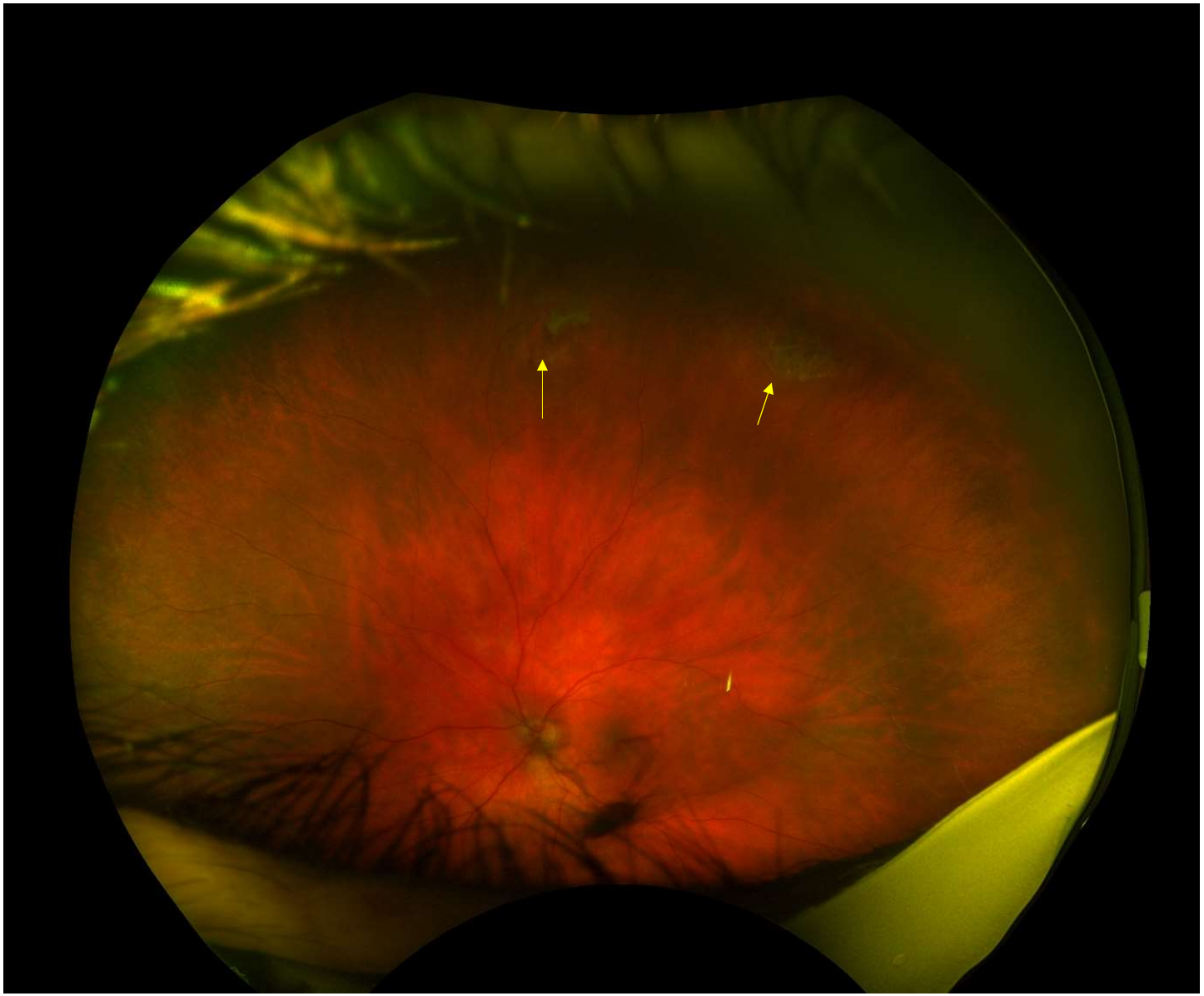
24-2-2020 1/12 later
cobwebs persist
bright lights temporal
vision PVD
amsler NAD
PRK wore Rx since aet 6
High Myope
FOH mother, 2 sisters RD
Hx RD



Ms. E.J.

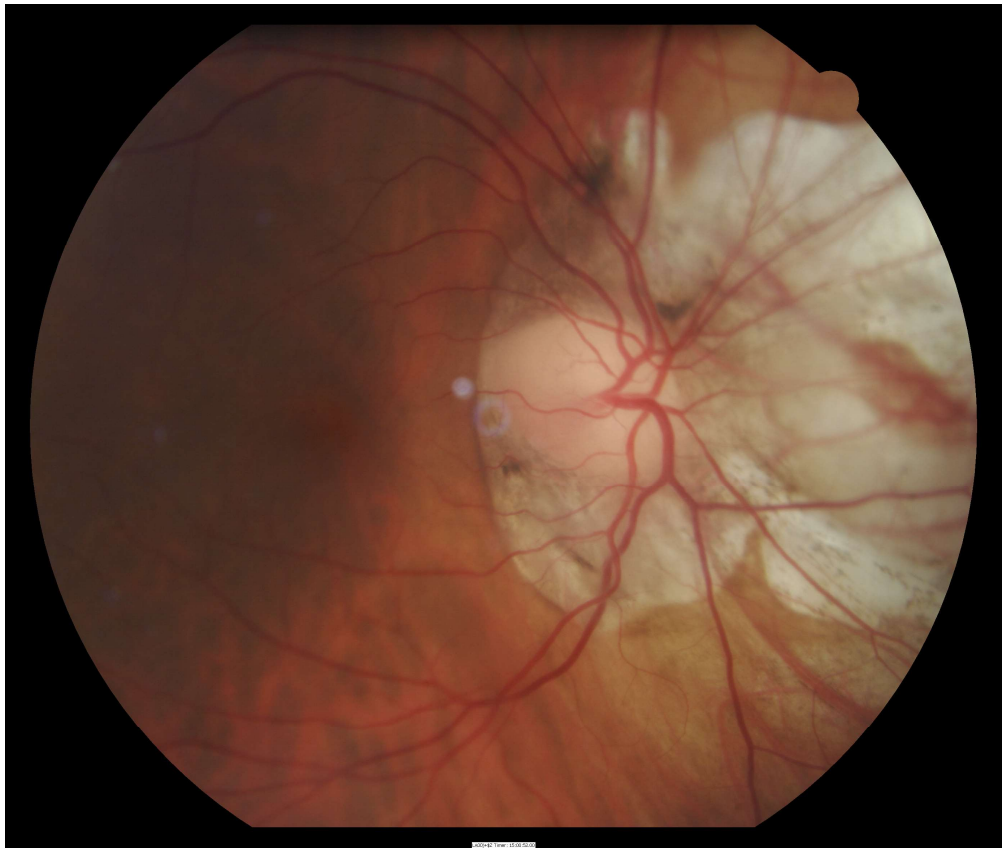
superiorly 2 horseshoe tears

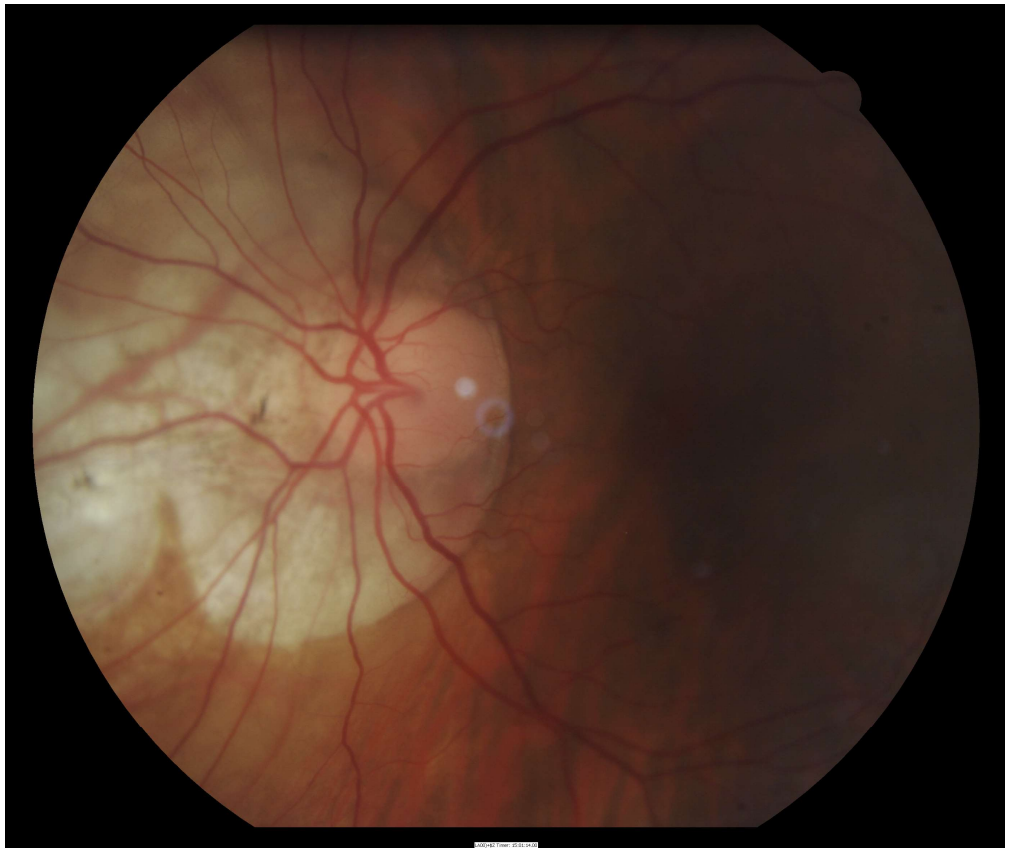
Moral
FOH
Myopia how much?
Wide field scanners vs BIO



Ms L.A. aet 55 13/01/2012 past 3/12 vision unstable D & N OU

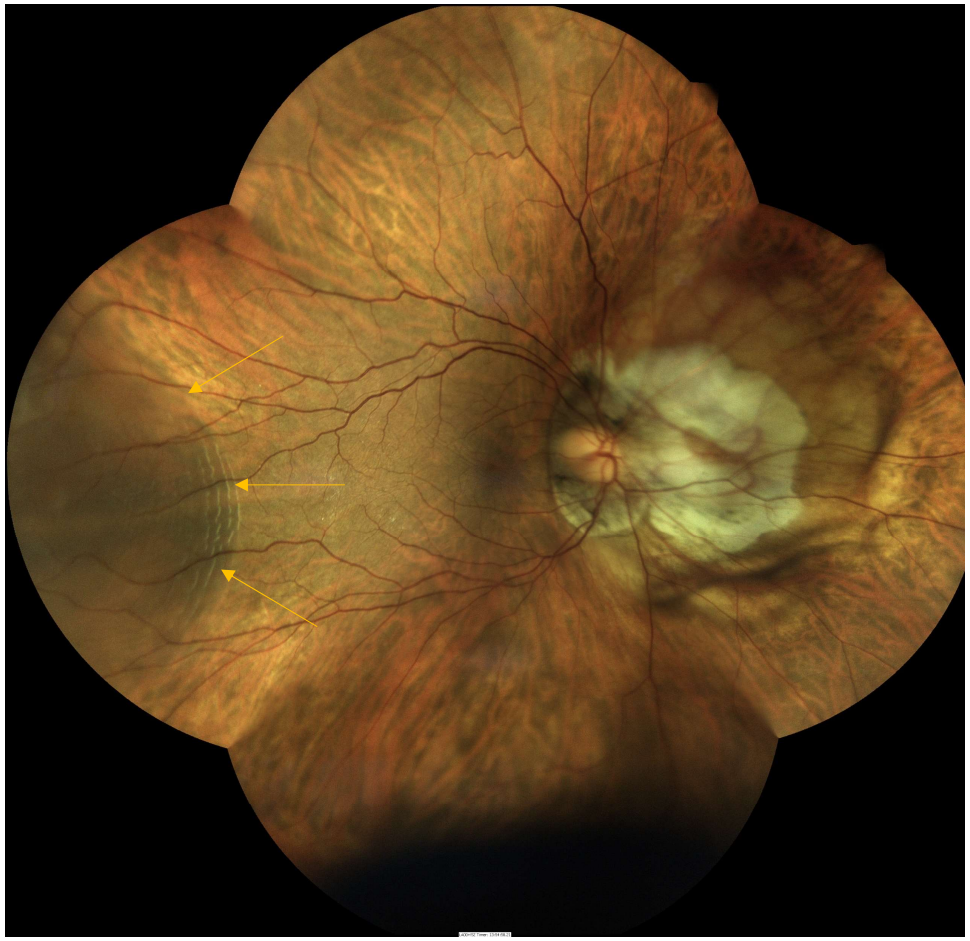
R -6.00/-2.75 x 45 L -6.50/-0.25 x 7.5 6/12 OU
Posterior staphyloma nasal to ONH
No flashes no distortion
Supero nasal RD to edge of staphyloma LE

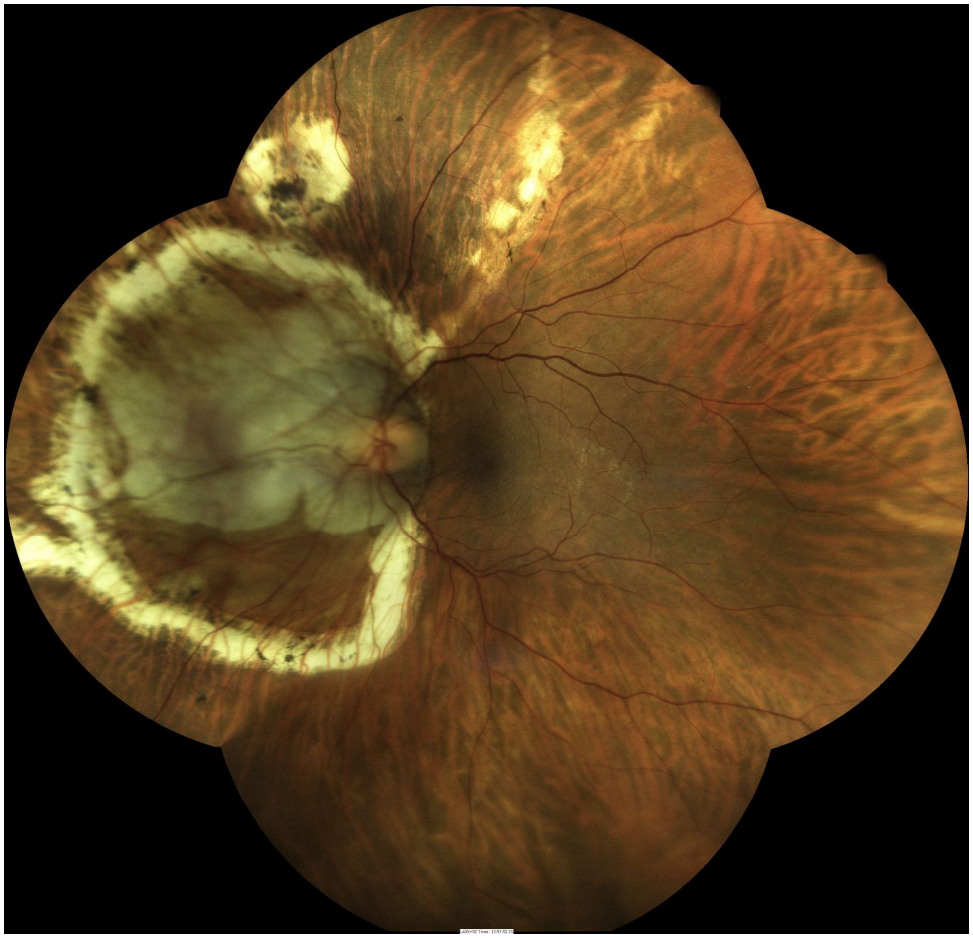




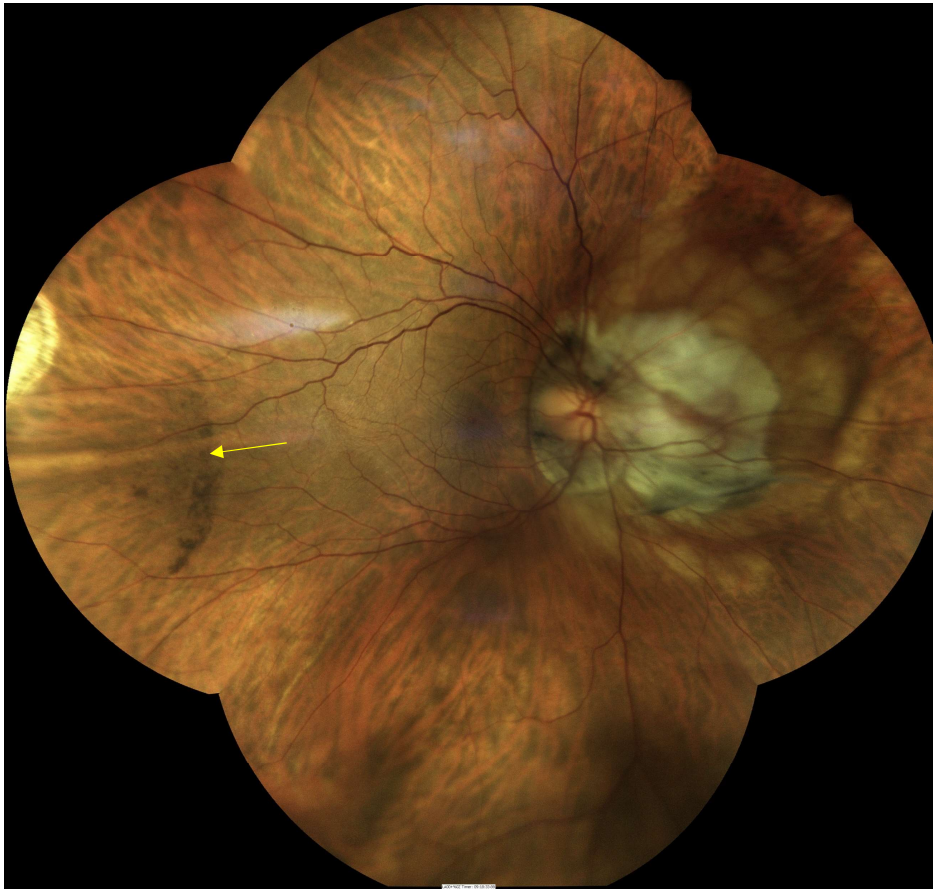
Ms. L.A.

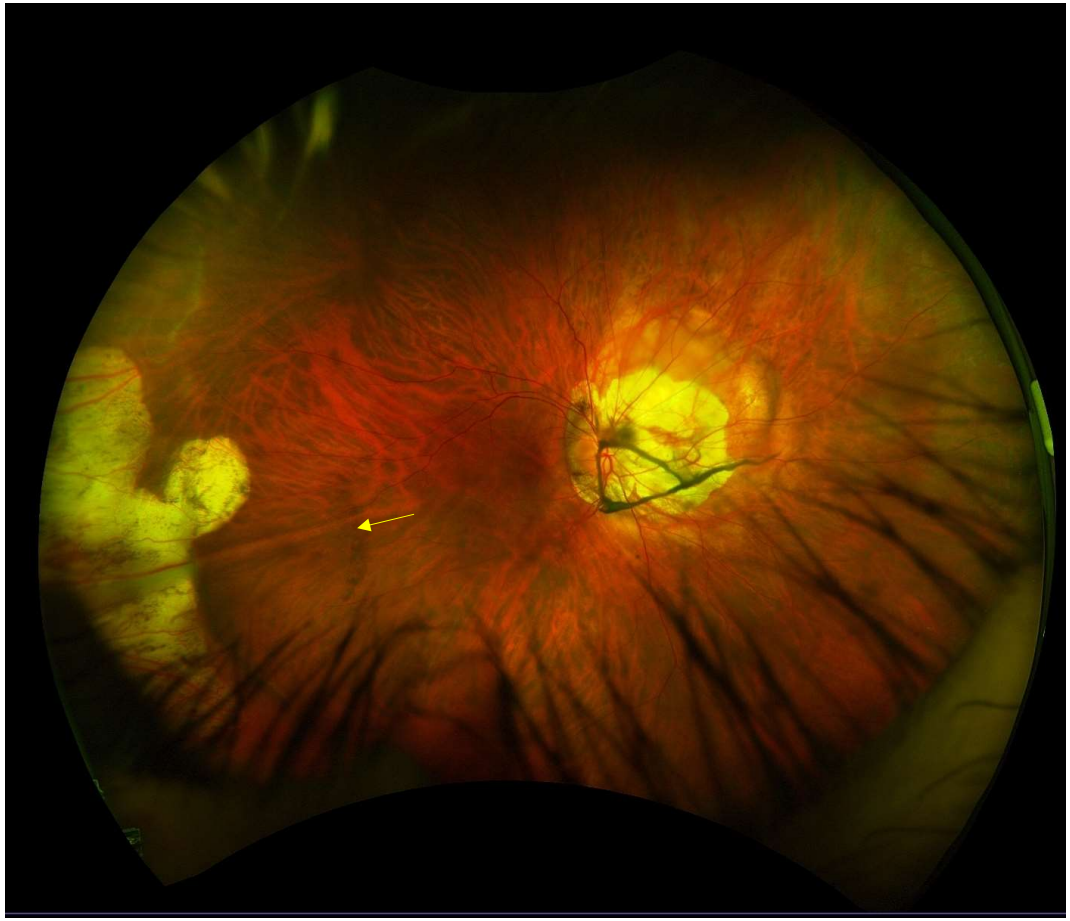
14-12-17 asymptomatic RD LE has had laser & gas
High Myope, Prior RD, 50+
Dx asymptomatic R temporal RD

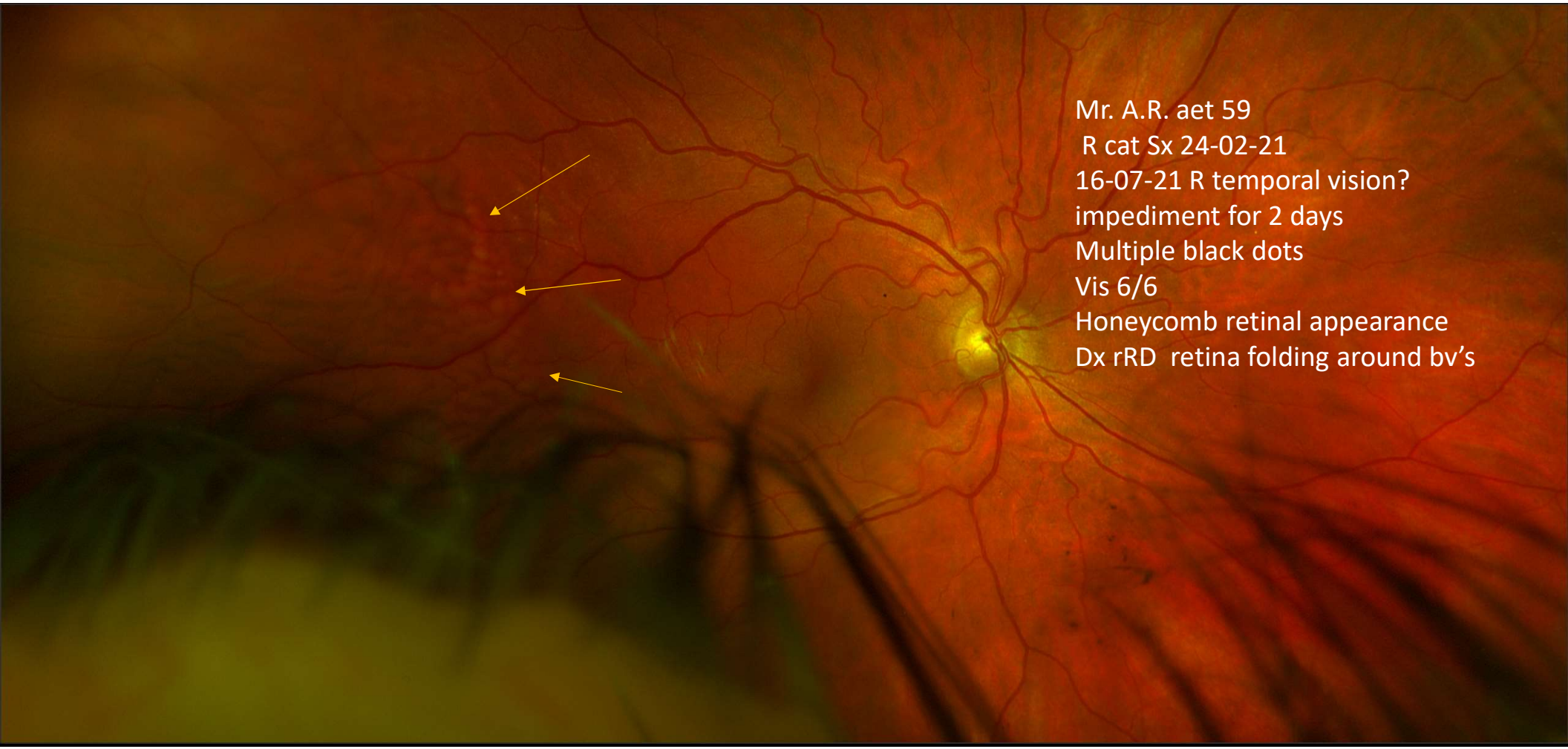




Ms. L.A. RE : Buckle, gas cryo






Mr. A.R. aet 59
R cat Sx 24-02-21
16-07-21 R temporal vision?
impediment for 2 days
Multiple black dots
Vis 6/6
Honeycomb retinal appearance
Dx rRD retina folding around bv's

J Ophthalmol. 2018 Nov 22;2018:9206418. doi: 10.1155/2018/9206418. eCollection 2018.

Peak Occurrence of Retinal Detachment following Cataract Surgery: A Systematic Review and Pooled Analysis with Internal Validation

Rabea Kassem [1], Yoel Greenwald [1], Asaf Achiron [2 3], Idan Hecht [2 3], Vitaly Man [4], Liron Ben Haim [2 3], Amir Bukelman [1]

Affiliations + expand

PMID: 30595913 PMCID: PMC6282121 DOI: 10.1155/2018/9206418

Free PMC article

n = 3,352,094 eyes

Abstract

Introduction: Timing of retinal detachment (RD) following cataract surgery is of importance for both diagnostic and prognostic factors. However, results on RD onset-time following cataract surgery have been conflicting.

Method: A systematic pooled analysis of the literature regarding timing of retinal detachment following cataract surgery. Outcomes were verified against an independent dataset.

Results: Twenty-one studies, reporting on rates of RD in 3,352,094 eyes of 2,458,561 patients, met our inclusion criteria and were included in the analysis. The mean pooled time to RD following surgery was 23.12 months (95% CI: 17.79-28.45 months) with high heterogeneity between studies (I^2=100%, P < 0.00001). Meta-analytic pooling for the risk of retinal detachment revealed a risk of 1.167% (95%

Peak occurrence of Retinal detachment following cataract surgery: A systematic review & pooled analysis with Internal validation R Kassem et al J Ophthalmol . 2018 Nov 22;2018:9206418. doi: 10.1155/2018/9206418. eCollection 2018.

- Reviewed 21 studies reporting rates of RD in 3,352,094 eyes after cataract sx
- 0.7% vs 0.08% in general population ie 8.75 x greater risk
- Generally happened b/n 1.5 and 2.3 years
- Due to changes in Vitreous volume and biochemical changes = PVD
- 40 – 54 yo RD risk increased to 3.64% up to 4 yrs after Cat Sx
- **Moral** = carefully monitor young pseudophakes for RD

PVD

REVIEW of OPHTHALMOLOGY Clinical advice you can trust

Dean Eliott, MD, Detroit

PUBLISHED 15 MARCH 2004

Evaluation and Management of PVD

Firm vitreous attachment Vitreous base 3mm b/n PP & Ora, retinal scars, lattice deg'n & like, ONH & retinal vessels

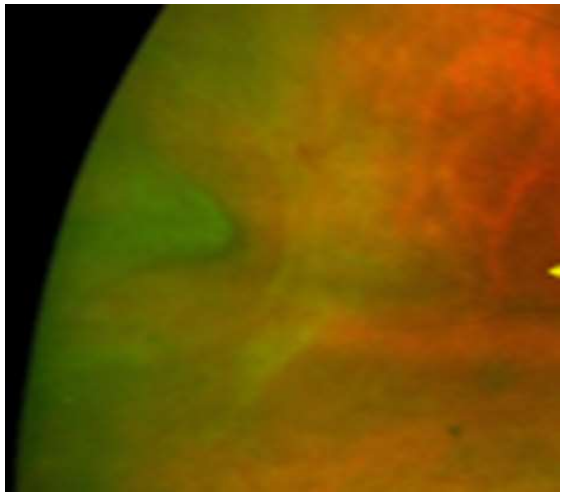
PVD = vitreous syneresis, then liquefied vitreous passes through hyaloid membrane shearing posterior hyaloid from retina

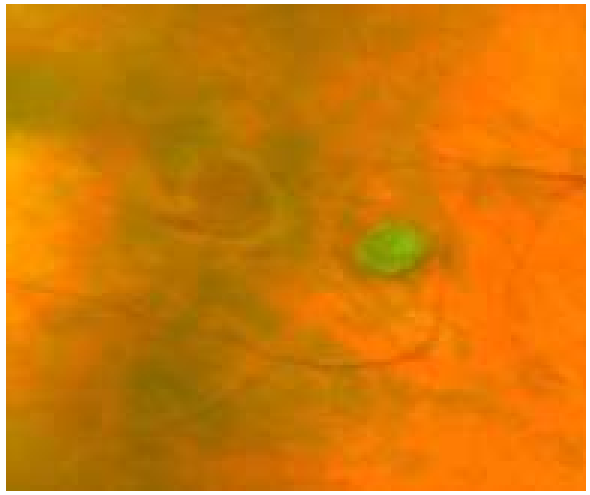
Age 30-59 10% 60-69 27% 70+ 63%

Axial length (myopia 10 yrs earlier), trauma, Cat Sx

Firm vitreal attachment + vitreo retinal traction = HST or hole & operculum
HST = vitreous into sub retinal space = rRD (split sensory retina & RPE)

10 – 15 % acute PVD have retinal tear





RPE pigment cells migrate through tear to vitreous (Shafer's)

Peripheral dot (punctate) haems =VR traction (impending tear?)

Flashes (VR traction) Floaters (Weiss, blood, condensed vitreal collagen)

Review 4/52 as breaks may form after symptoms

Unlikely to have break if not there at 4/52, counsel RD S & S

Laser = CR scar to stop communication b/n vitreous & SRS

Cryo if media Opacities

Shafer's sign

REVIEW of OPTOMETRY Leadership in clinical care

A Sign of Trouble
How to locate and identify a telltale finding that could prevent a near-future retinal detachment.
By Bisant A. Labib, OD 15th March 2018

Shafer's sign refers to the presence of a collection of brown pigmented cells in the anterior vitreous following a PVD
25 to 90% proceed to RD
Absence does not mean retina intact
Red blood cells = 70% correlation retinal tears (vitreal haem)

Acute posterior vitreous detachment: the predictive value of vitreous pigment and symptomatology V Tanner et al
Br J Ophthalmol. 2000 Nov;84(11):1264-8

In 200 eyes presenting with an acute PVD, 25 were found to have an associated retinal break, 23 of which were also Shafer positive

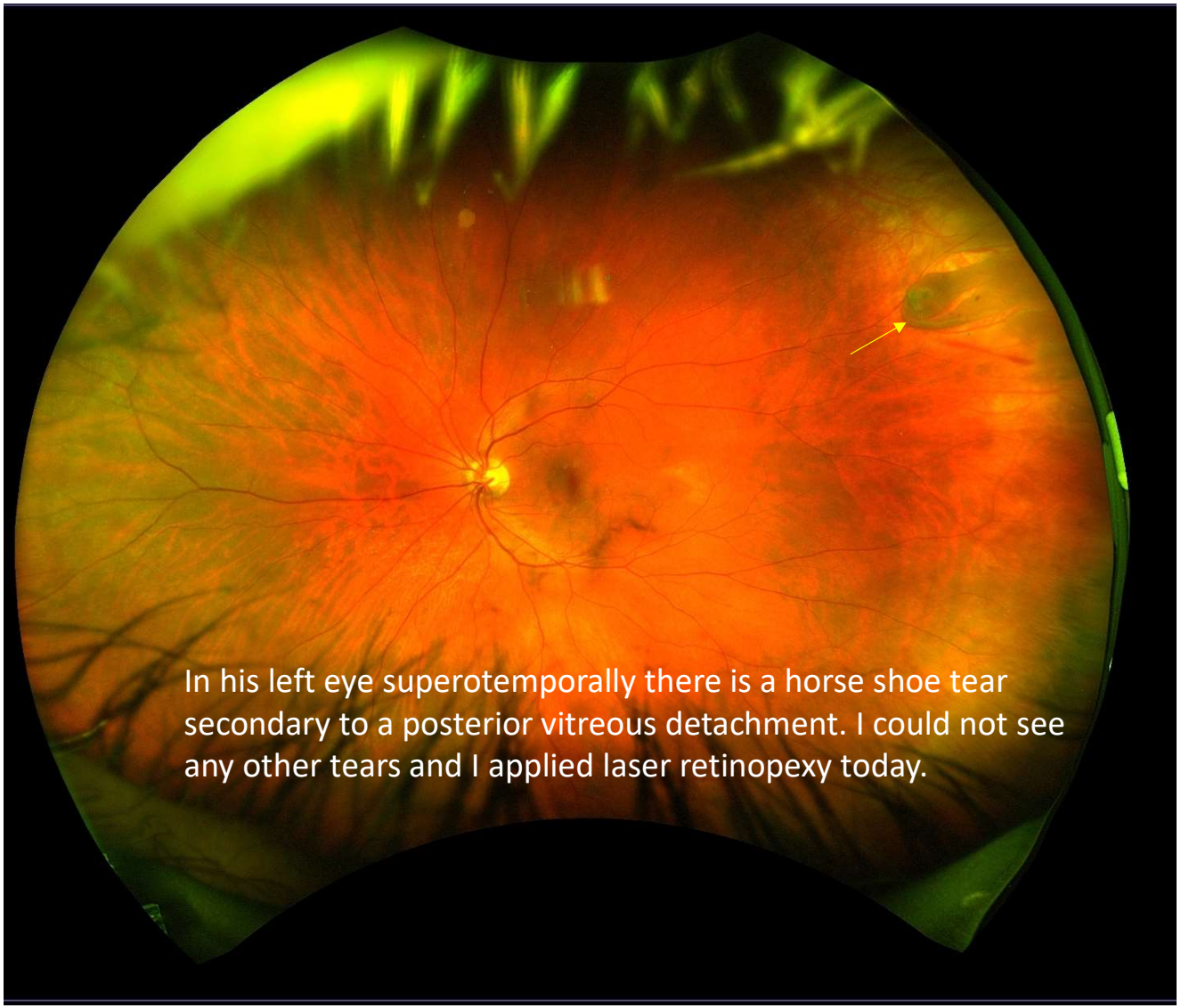
Table 1. Types of Cells Found in the Anterior Vitreous and their Clinical implications

Abnormal Vitreous Cells	Source	Clinical Indication
Brown (Shafer's sign) cells	Pigment from RPE of retina	Retinal break
Red cells	Red blood cells from hemorrhage	Retinal break or proliferative retinal process
White cells	Inflammatory white blood cells	Vitritis, pars planitis

Mr. D.J. aet 63 9/10/19

Farmer & rowing coach
LE 6 days cobwebs & flashes temporally
sl blur unaided VA 6/6 6/6 =
Urgency or emergency?

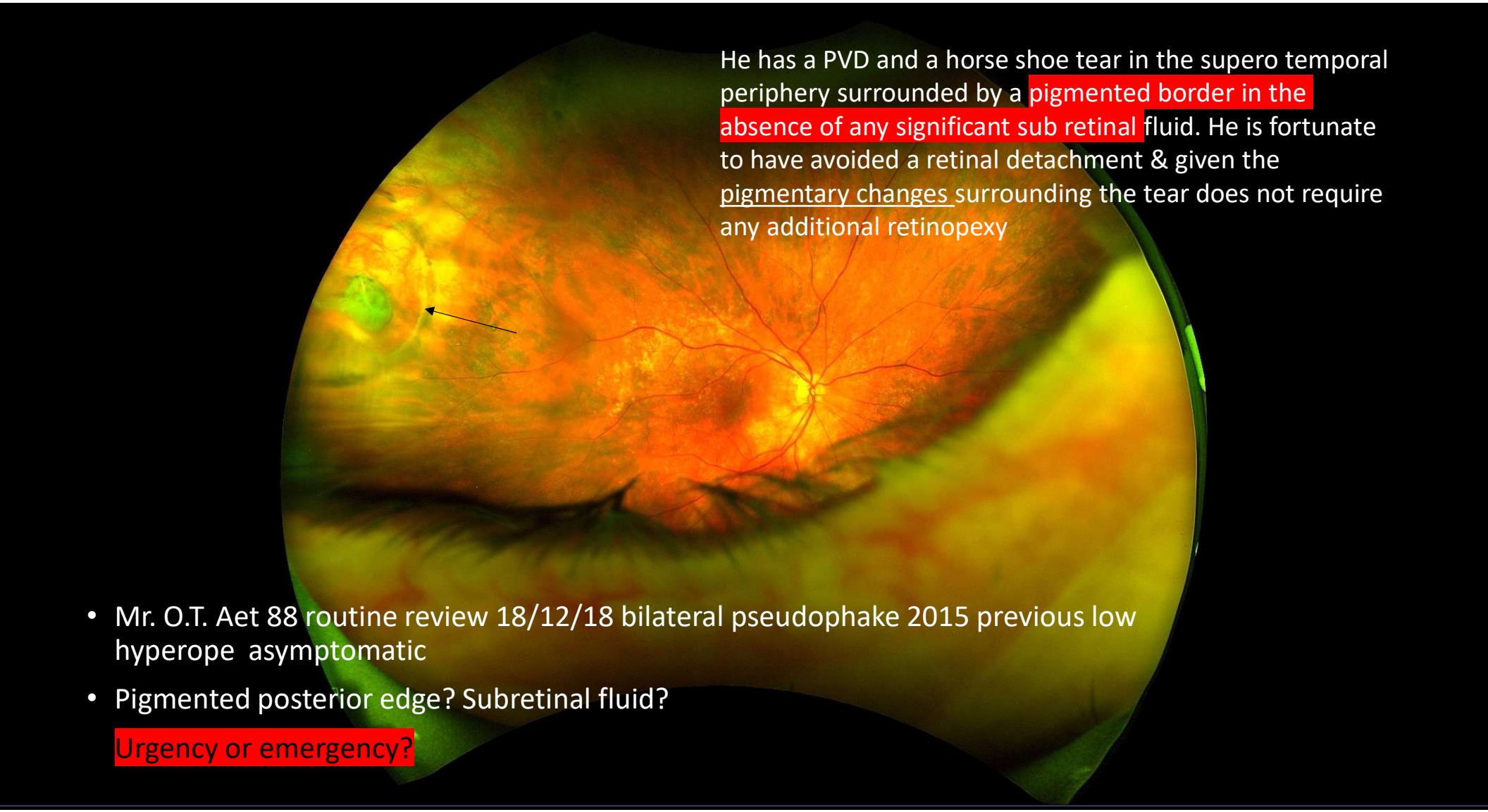
Vitreal haem (under mac)
Horse shoe tear
Preretinal haem
Referred that day



It was a pleasure seeing …. He has dense cataracts OU and an asymptomatic operculated hole temporally LE. I will perform R cataract surgery first followed by left a month later

What if it was a HST?

Mr. R.P. Aet 68 13/10/20 Reduced vision 6/12 -2.75 6/15 -1.75/-1.00 x 70 6/15 dense cataracts can't remember last EE urgency or emergency?



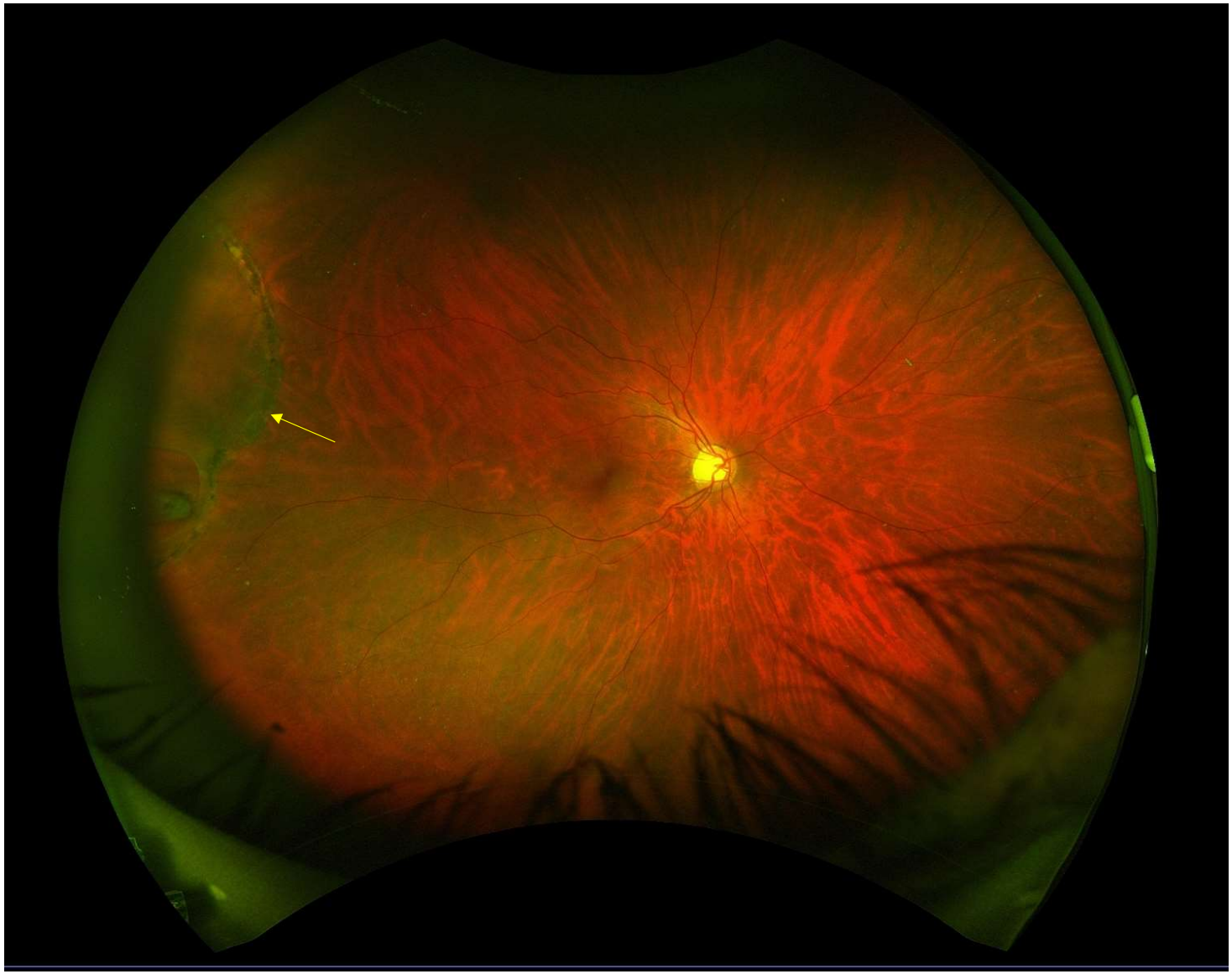
He has a PVD and a horse shoe tear in the supero temporal periphery surrounded by a pigmented border in the absence of any significant sub retinal fluid. He is fortunate to have avoided a retinal detachment & given the pigmentary changes surrounding the tear does not require any additional retinopexy

- Mr. O.T. Aet 88 routine review 18/12/18 bilateral pseudophake 2015 previous low hyperope asymptomatic
- Pigmented posterior edge? Subretinal fluid?

Urgency or emergency?

Mrs.JM aet 70
asymptomatic
Refer or not refer?
When?

Non urgent referral
Vision 6/6 R 6/9.5 L
Bilateral PVD
Horseshoe tear with shallow sub retinal fluid
Pigment hypertrophy =chronicity (like retinal laser)
POAG more issue
Monitor, no active Tx necessary



Ms. M.S. aet 62 4/12/19

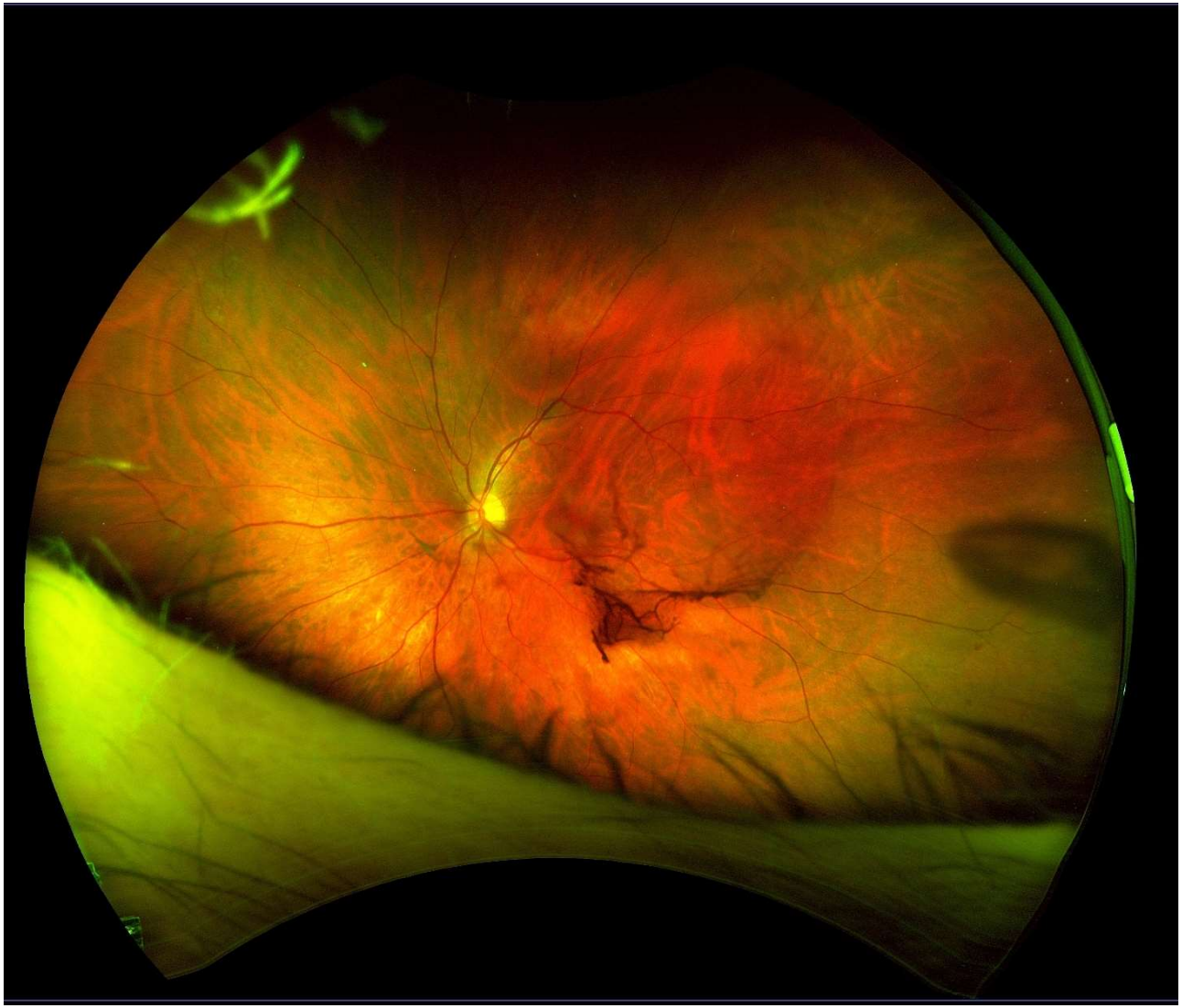
under surveillance for R pigmentary changes since 2011
R -12.00/-2.00 x 62.5 6/9 -10.25/-1.50 x 120 6/6
no flash/floaters, denied trauma
Urgency or emergency?

- Doesn't smell right
- Non urgent referral

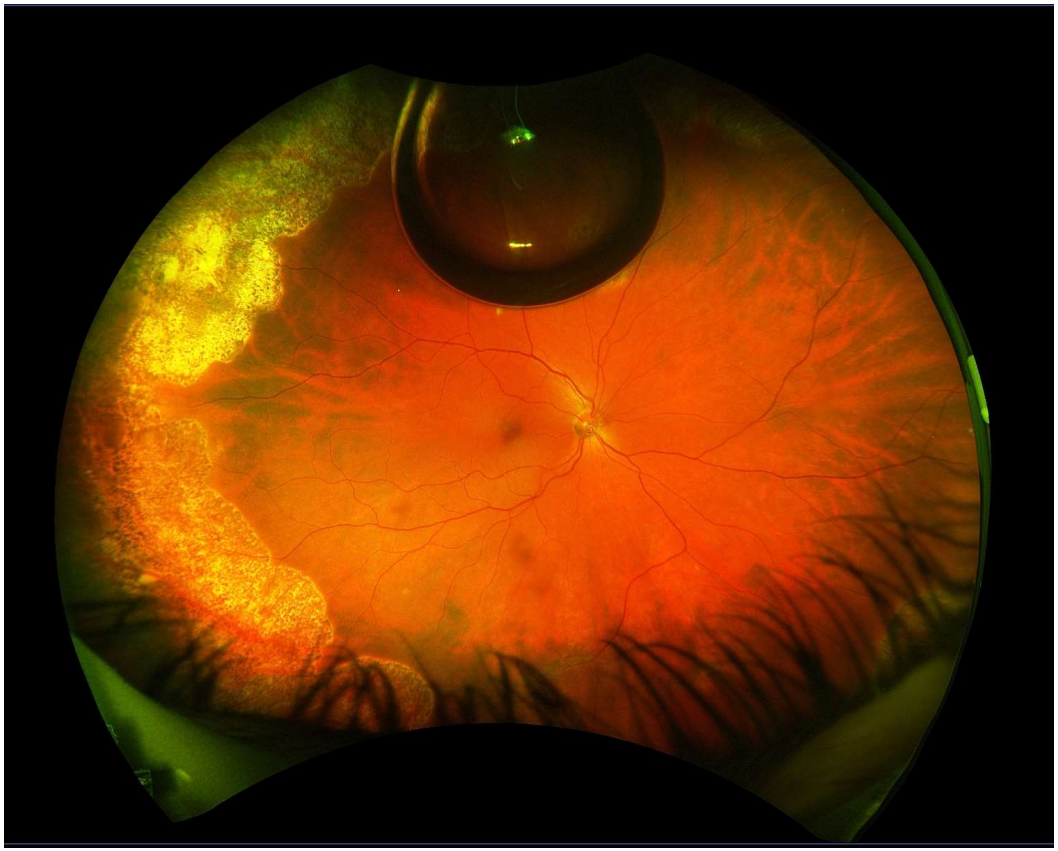
Mrs. J.H. aet 60

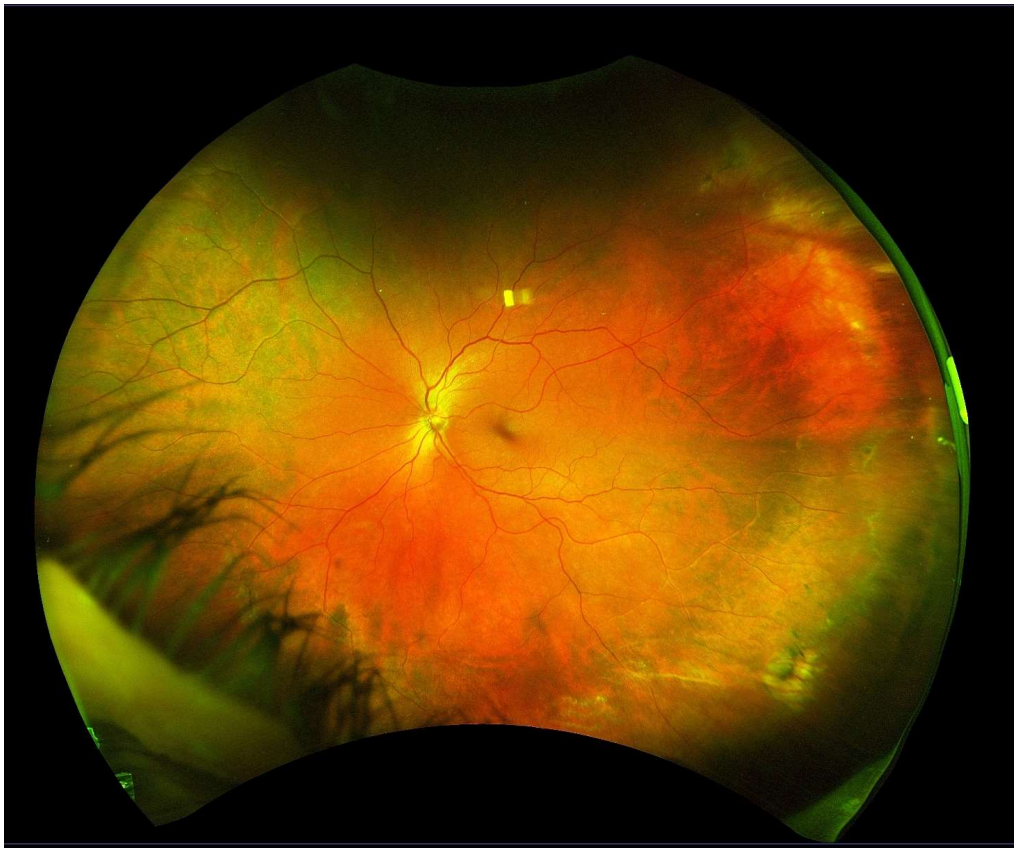
1st presentation to clinic
23-02-21 past couple of days black spot and temporal flashes OS
PVD with white cells only, no Schaeffers sign and temporal blot haems
9/20 ERM peel and vitrectomy RE
Urgency or Emergency?

Ophthal 2 days VR surgeon 2 days after
Left very peripheral superonasal tear
In office barrier laser insufficient?
Dx Theatre and EUA and cryotherapy or indirect laser
'Chance of missing more tears by attempting office based laser is quite high'



Mrs. S.A. aet 60 3-1-19 RD SX RE had 8 tears following blunt trauma (toggle)
angle recession, vossius ring, LD in LE
referred high IOP post Sx Diamox, Lumigan, Cosopt, Eniden, PF





the royal victorian eye and ear hospital

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E info@eyeandear.org.au
W eyeandear.org.au

11/1/19

Dear Colleague

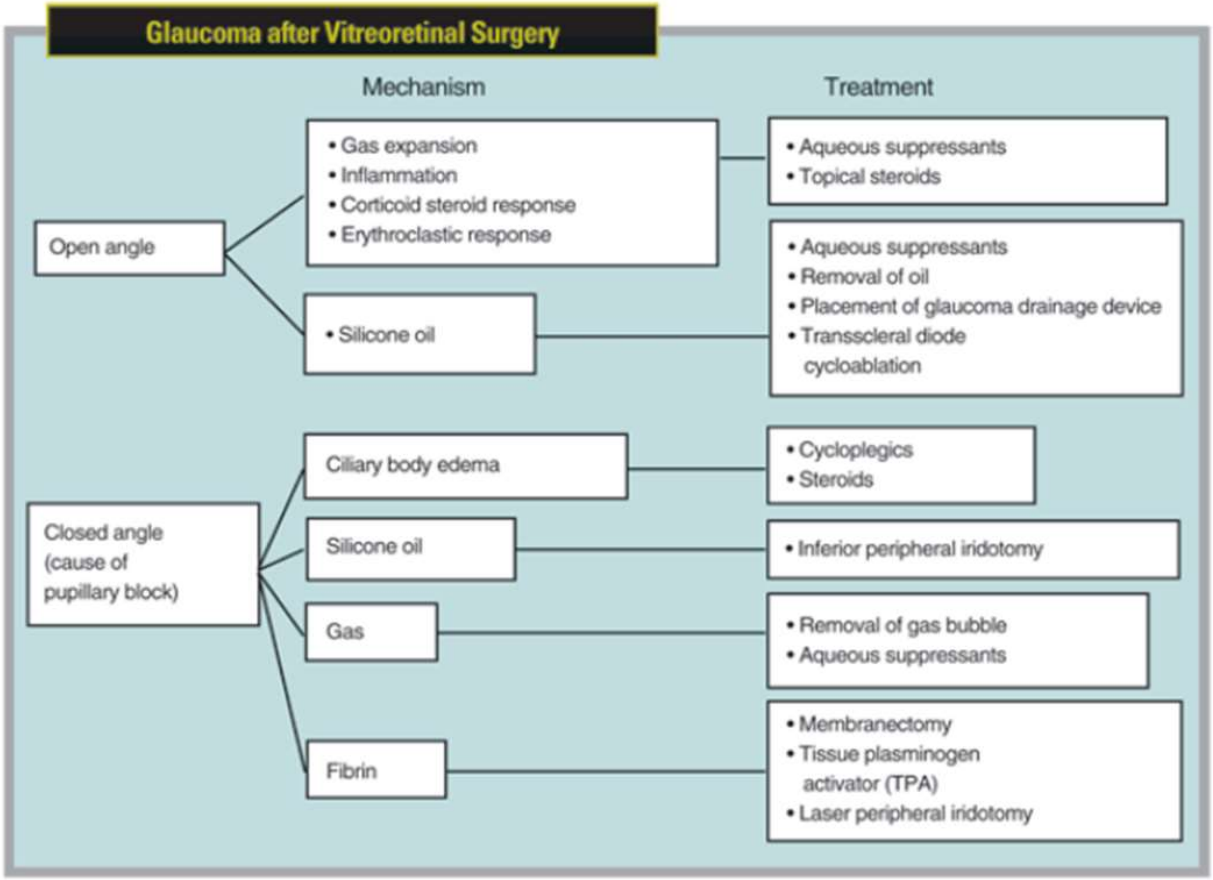
Thank you for seeing [redacted] for an IOP check in the right eye. Following ⓡ Vitx cryo + gas for a mac-on RD the ⓡ IOP ↑ to 44 mm Hg but today on Diamox, Enidin, Cosopt + Valdtan, the IOP has dropped to 8mmHg. I have stopped the Diamox and have made an appt for her to be seen in 2 weeks + would appreciate you seeing [redacted] for a pressure check in 1 week. The retina today

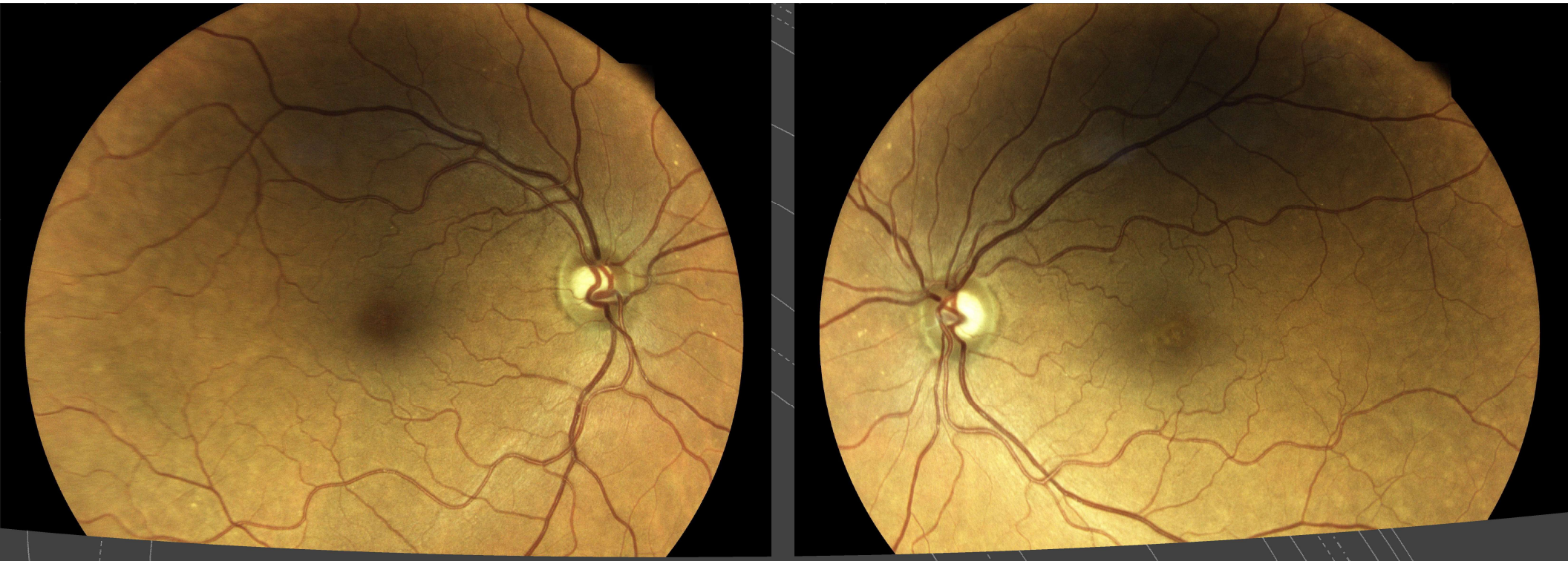
REVIEW of OPHTHALMOLOGY

Annisa L. Jamil, MD, Seattle

PUBLISHED 13 AUGUST 2009

Managing Patients After Retinal Surgery

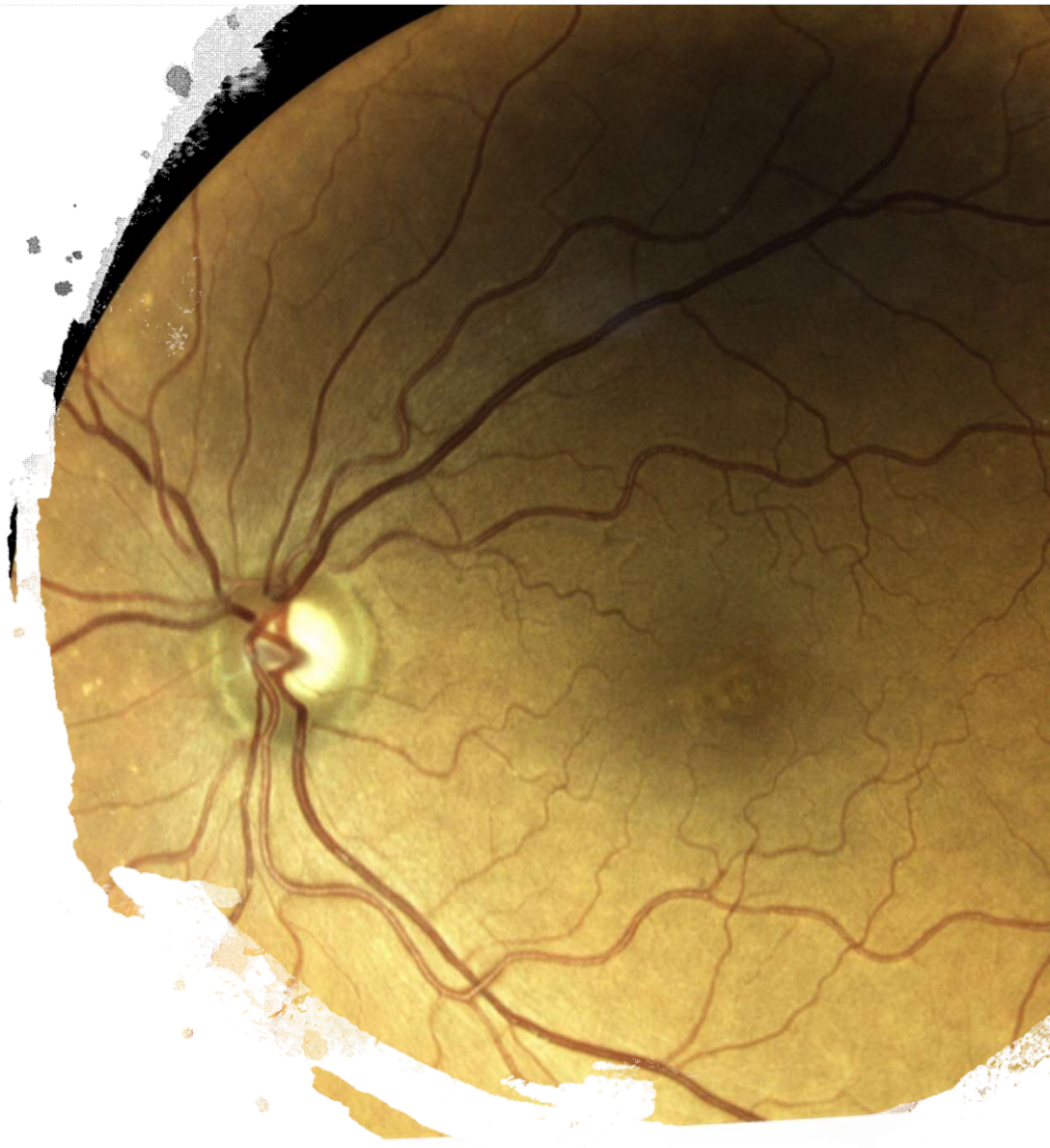




Mrs. S.C.

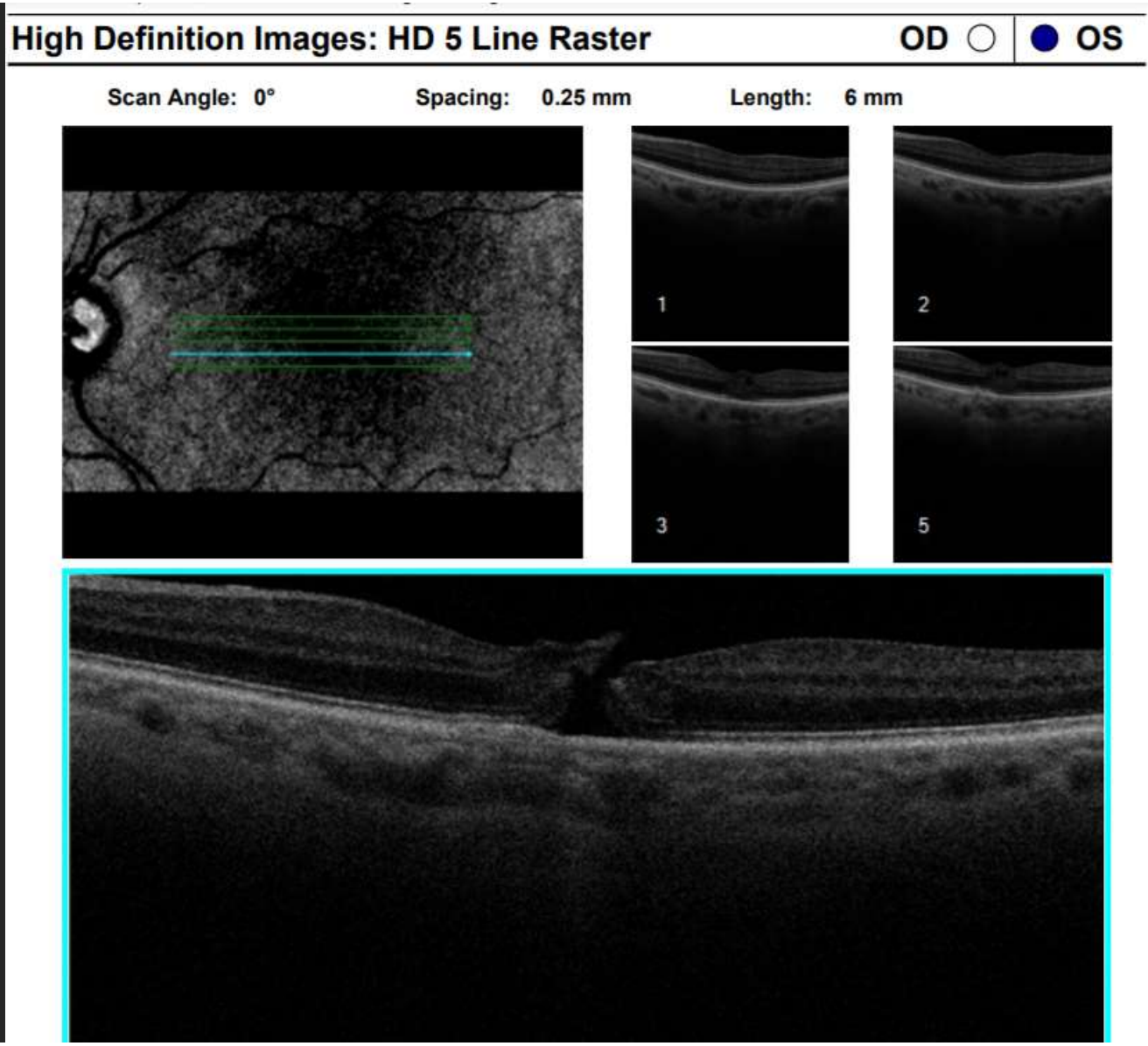
Mrs. S.C. aet 65

- Retired radiographer
- Font larger over last 6/12
- +7.00/-1.25 x 100 6/6 +7.25/-0.75 x 72.5 6/19
- PI OU
- ACLO narrow AC
- L amsler +ve
- IOP 19 R 22 L



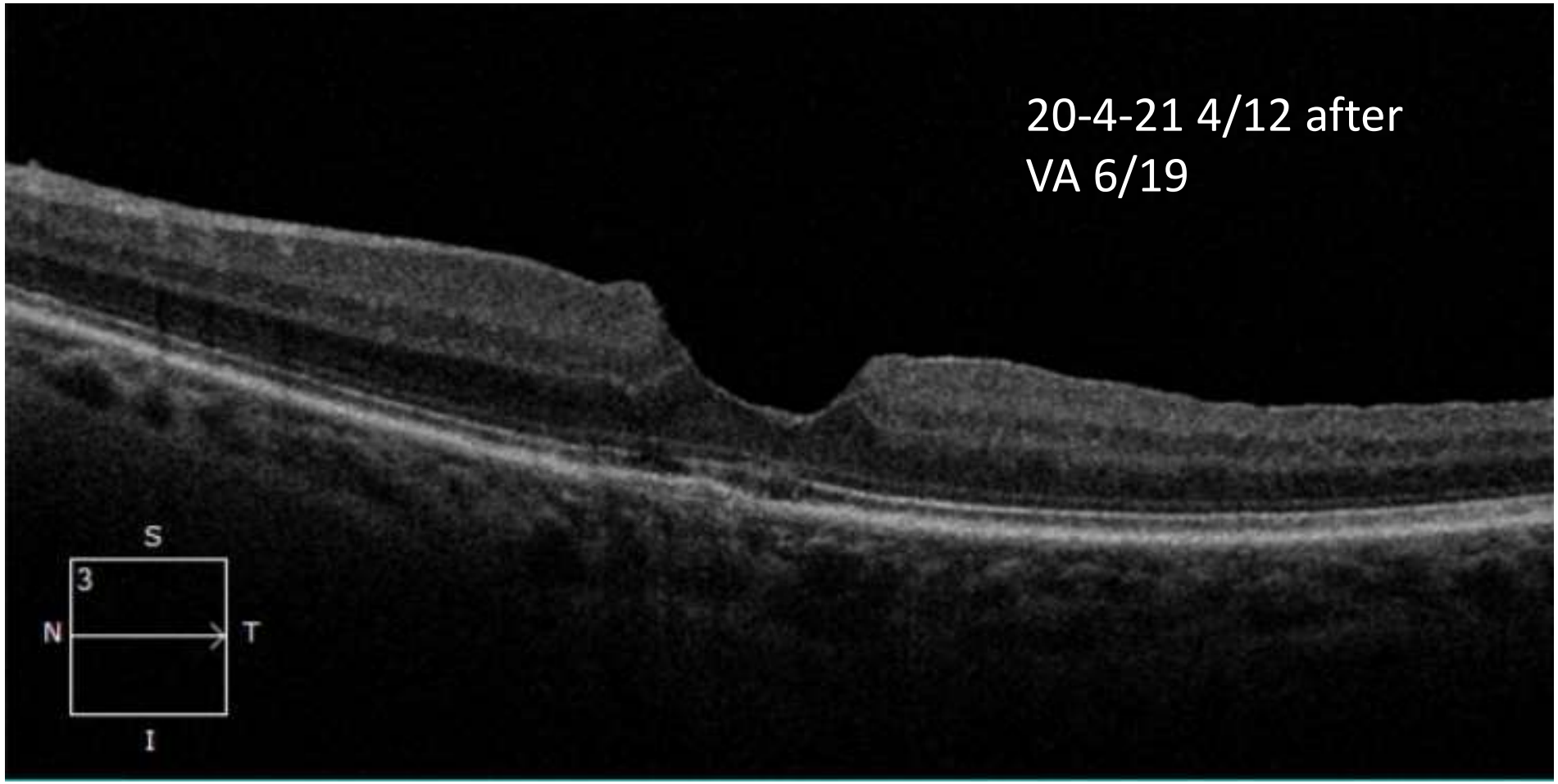
Mrs.S.C.

Urgency Or emergency?



Mrs. S.C. Urgency or emergency?

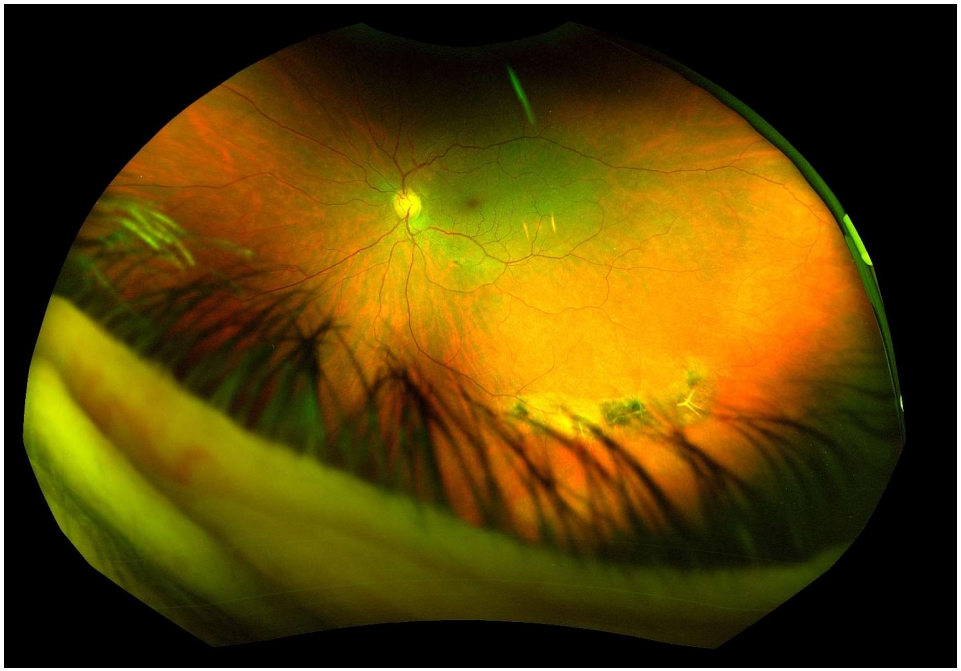
- Sx to repair macular hole scheduled 1/12 later
- High hyperope, shallow AC
- ILM peel, Vitrectomy, gas tamponade = AC closing and high IOP
- Cataract combined procedure
- The bubble acts as an internal, temporary bandage that holds the edge of the macular hole in place as it heals.
- Chin Face down position for 1/52
- Operate within 3/12 if acute or sooner
- PF or maxidex 4/52 and IV triamcinolone if CMO


20-4-21 4/12 after
VA 6/19
S
3
N
T
I

Mrs. A.D. aet 58 17-7-20

Binocular flashing temporal side past 3/12
COVID couldn't attend
Vision fine
Esp in dark & head movement
Prior floaters, none recently
Prior Hx retinal issues

Mrs. A.D.



LD progress to RD?

Sclerosed vessels, irregular pigment, thin retina, atrophic holes

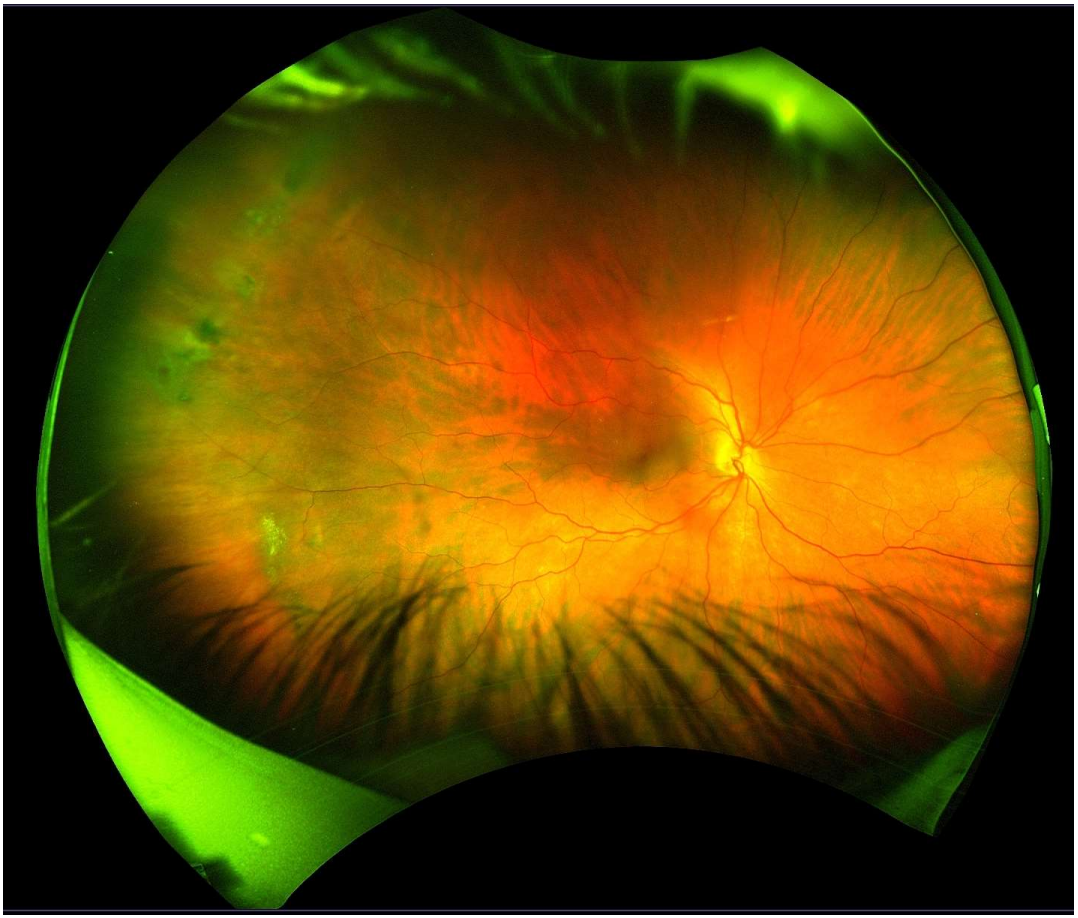
- General population < 10%
- Myopes → 25% including children
- Higher prevalence of LD in high myopes

Lattice most important risk for RD

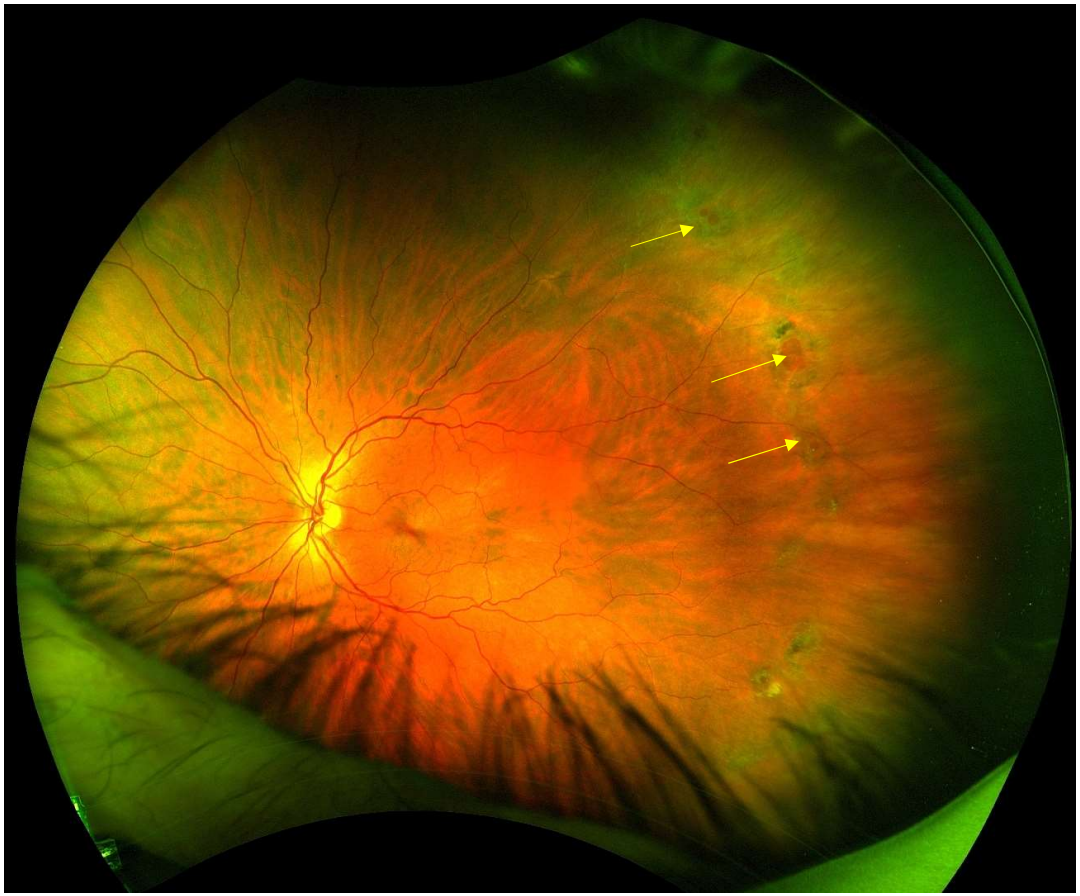
- Up to 60% in cases of rRD have LD via VR traction and stronger vitreal adhesion Sasaki et al 1995; Tilllery et al 1976; Byer 1974
- Search for tears/holes near edge or outside of lattice
- Fellow eye?
- OCT shallow elevation (Silverstone?)

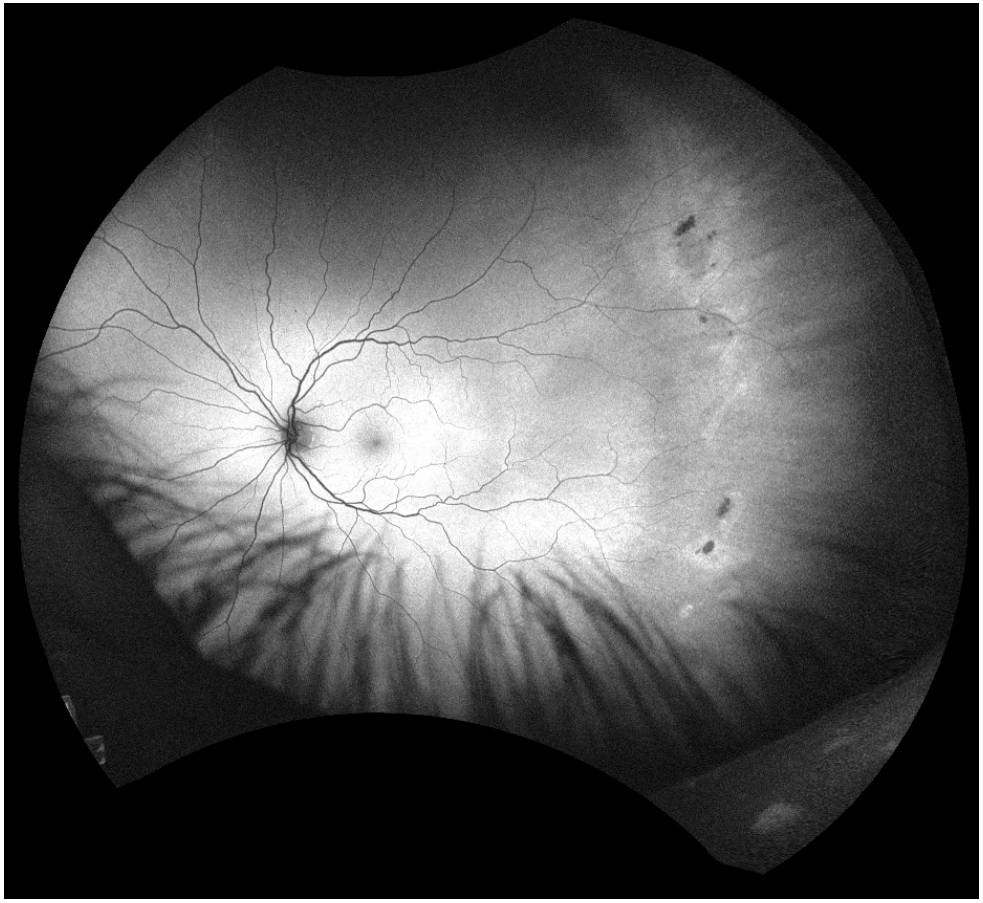
Mr. J.B. aet 63

attending clinic since aet 52 (2009), sister also has lattice and are both emmetropes areas of Hypoautofluoresence



Mr. J.B. aet 63 LE with atrophic holes within lattice and pigment hypertrophy surrounding
note hyperautofluoresence around holes

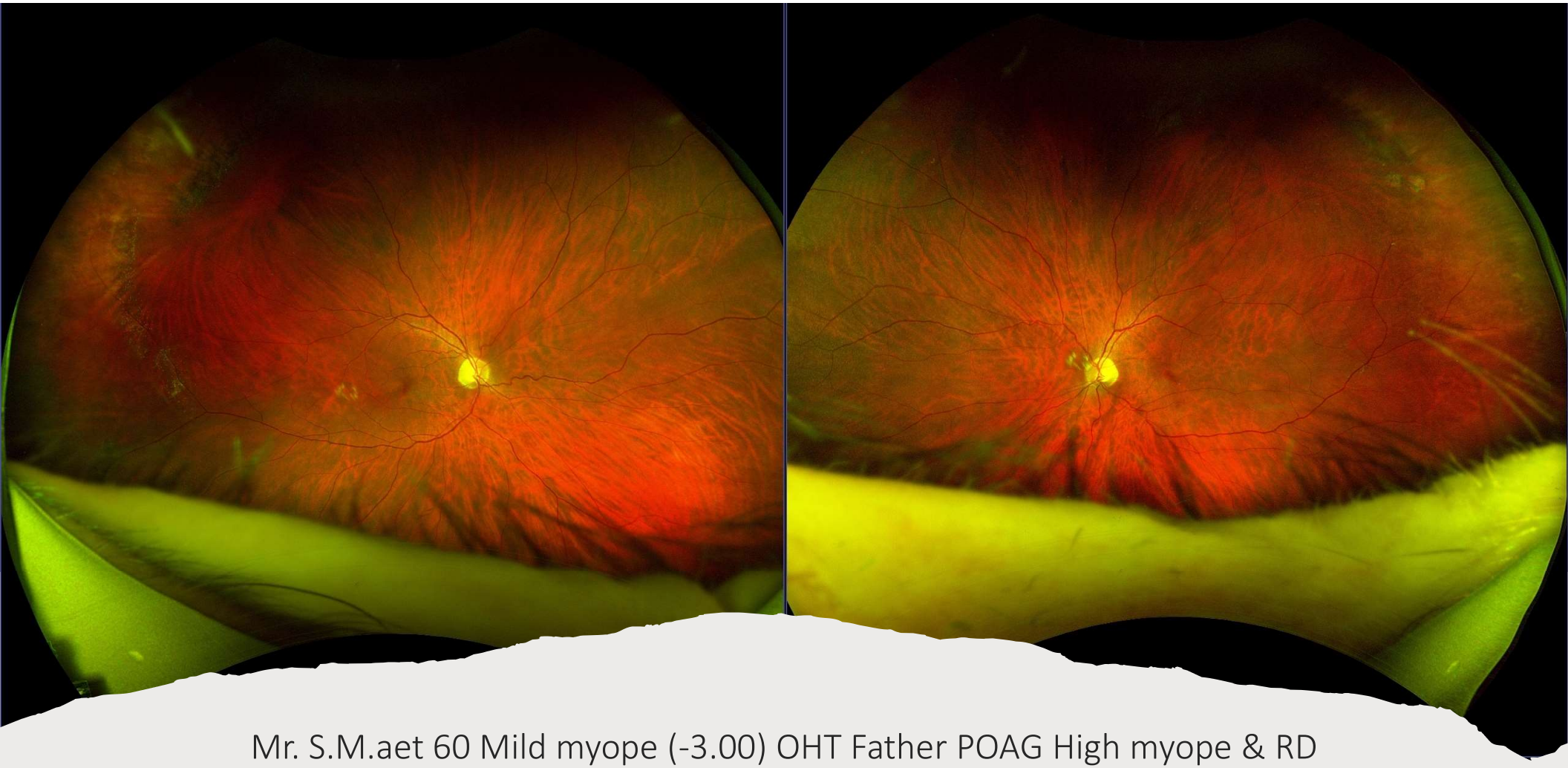




Long-term Natural History of Lattice Degeneration of the Retina

Norman E. Byer, MD AAOVOLUME 96, ISSUE 9, P1396-1402, SEPTEMBER 01, 1989

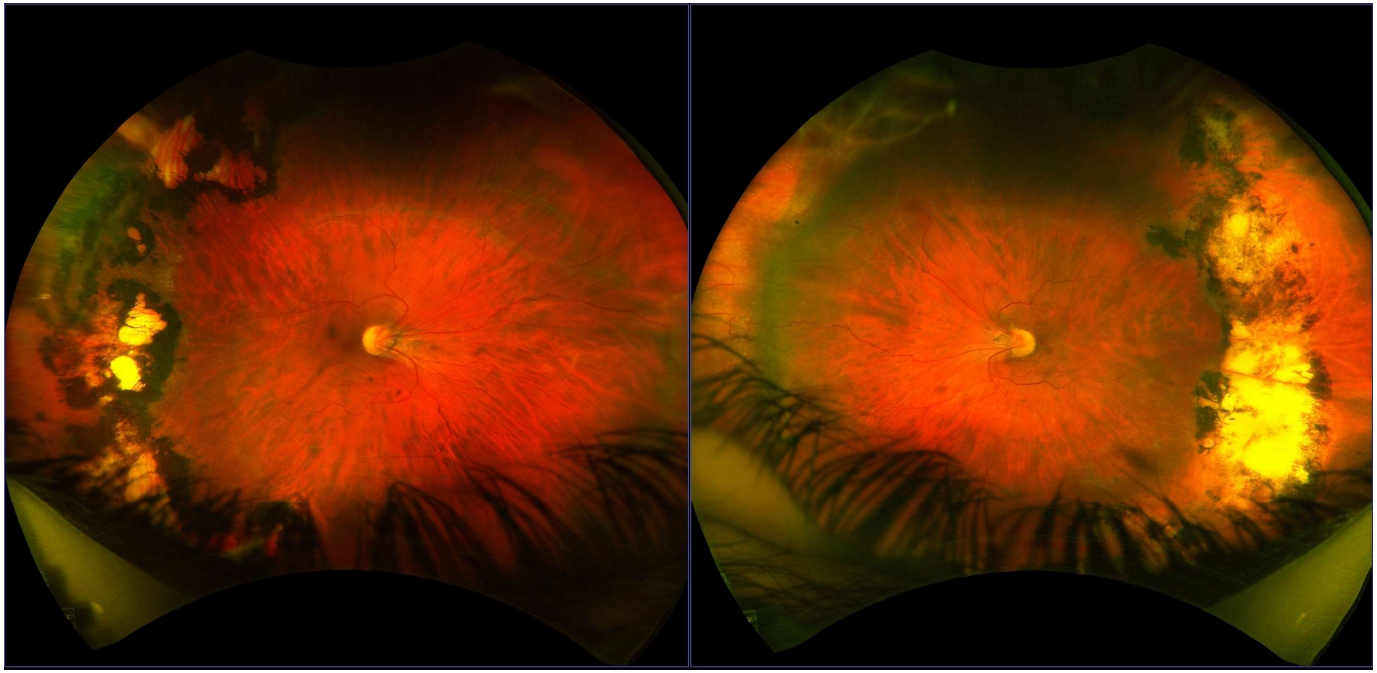
An initial series of patients with lattice degeneration was reported to the Academy in 1964 and a follow-up report given in 1973. A continuing prospective study of 276 consecutive untreated patients (423 eyes) is now reported with follow-up from 1 to 25 years (average, 10.8 years). Clinical retinal detachments (RDs) occurred in 3 (1.08%) of 276 patients and 0.7% of eyes. Tractional retinal tears were seen in eight (2.9%) patients and 1.9% of eyes; one of these led to a clinical RD. Clinical or progressive subclinical RD occurred in 3 (2%) of 150 eyes with atrophic holes. Subclinical RD was seen in 10 (6.7%) of 150 eyes with atrophic holes, involving 9 (7.5%) of 120 patients, and had a much less serious prognosis than clinical detachment. Prophylactic treatment of lattice with or without holes in phakic, nonfellow eyes should be discontinued.



Mr. S.M.aet 60 Mild myope (-3.00) OHT Father POAG High myope & RD
No RD Symptoms or signs, vision good no PVD (yet)
“What can I do to not progress to retinal detachment?”

What can I do to stop LD going to RD?

Olden days
Pt with ROP
-10.50/-1.00 x 32.2.5 -12.00/-0.75 x 45
RD LE and prophylactic cryopexy RE

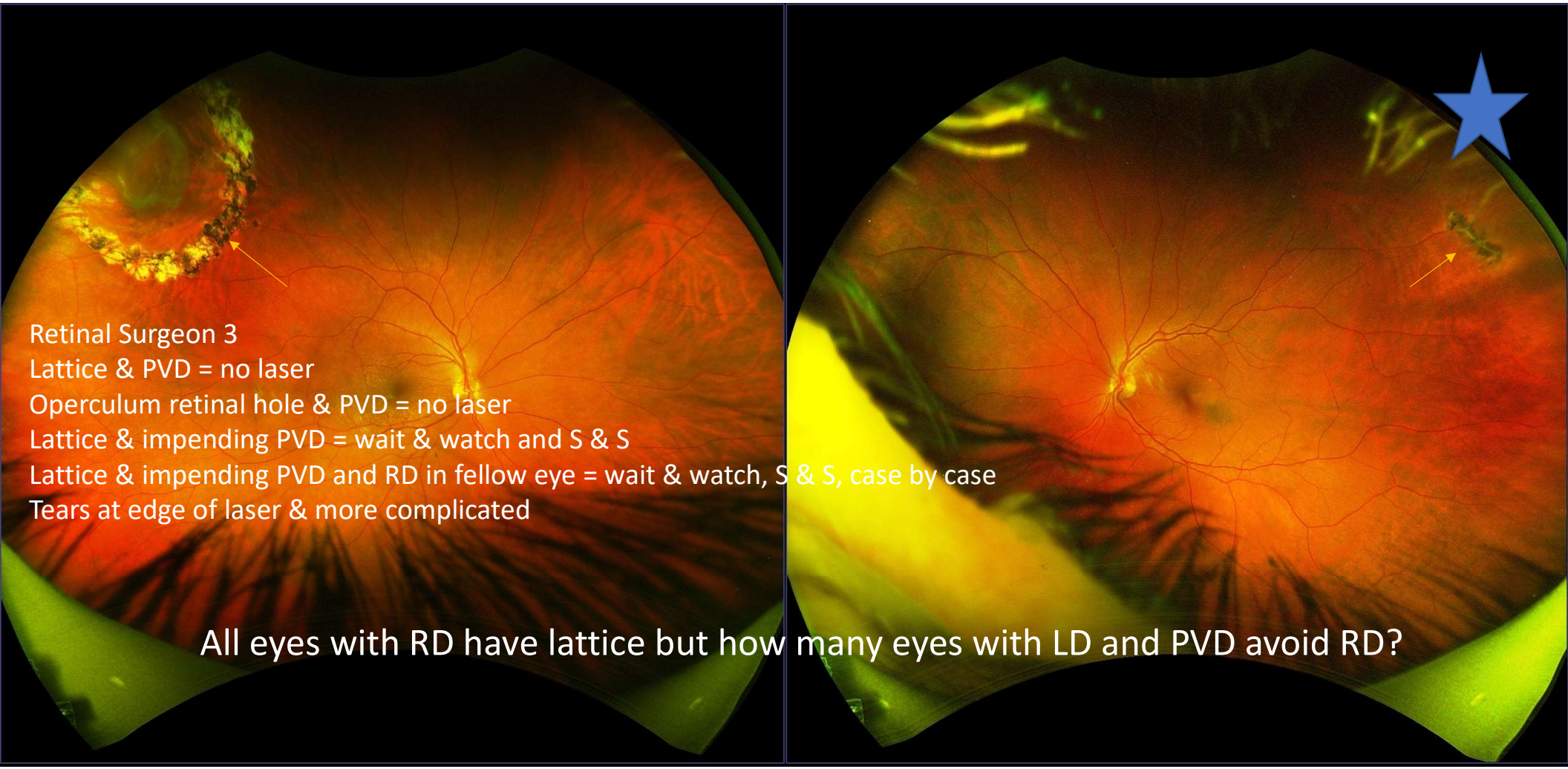


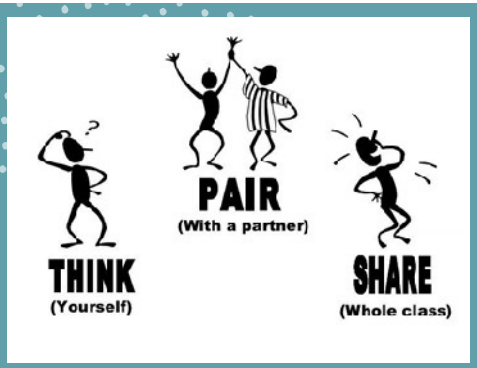
Surgeon 1
No laser unless LD posterior to vitreous base and elevated or horse shoe tear
Widespread prophylactic laser doesn't prevent rRD & can produce more complex ones?

Surgeon 2
Leave lattice alone unless other eye has a rRD, then still no consensus

Warned S & S with PVD & return ASAP (within 48 hrs)
Any other ideas refer?
What if the patient is a great traveller?

Ms A.M. aet 55 incidental HST





Quiz Which of the following are possible sequalae following RD Sx

a/ Diplopia

b/ High IOP

c/ Increased glare intolerance

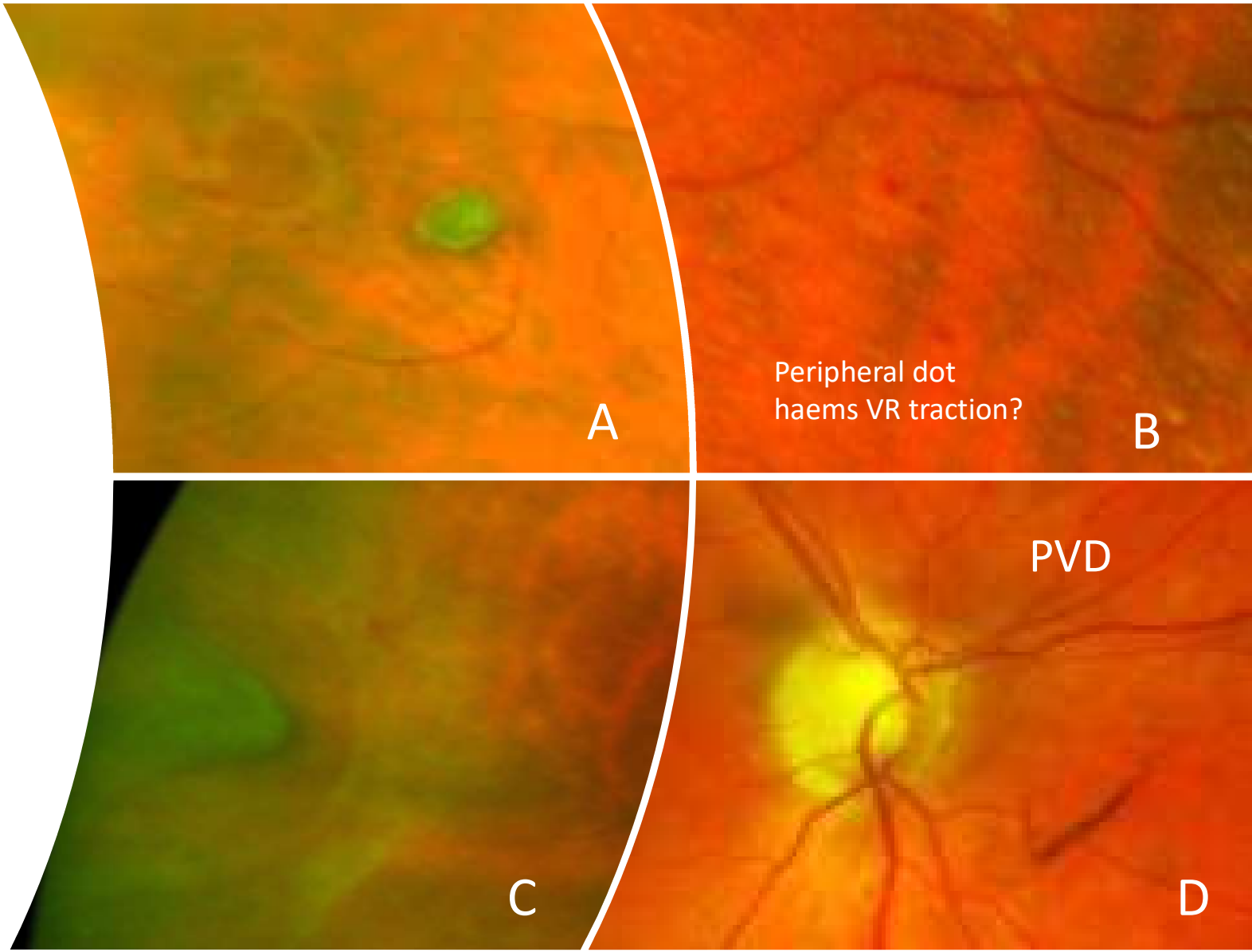
d/ Haloes

e/ Cataracts

f/ all of the above

Quiz Which of the following requires urgent referral?

1 A & D
2 B & D
3 C & D
4 A, B & D



Quiz Which of the following patients needs an emergency referral?

1 asymptomatic high myope with retinal hole with operculum and prior PVD

2 68 yo low hyperope with a temporal horse shoe tear with pigmented posterior edge and no obvious subretinal fluid

3 Low myope with vitreal haze following blunt trauma and occasional flashes

4 High myope with peripheral lattice degeneration, no PVD, good vision and asymptomatic

MCQ Which of these statements about lattice degeneration is false

- 1/ All lattice degenerations should be treated with retinal laser to prevent progression to rRD
- 2/ 60% of eyes with rRD have lattice degeneration
- 3/ Lattice degeneration is more common amongst high myopes
- 4/ Lattice degeneration has stronger adhesion to the vitreal face and are more prone to retinal tears with PVD