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R2 Referral Refinement Pathway

HC Chen

Clinical Lead

Derbyshire Screening Programme

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Derbyshire Programme

1 programme, 2 teams (north and south)

2 clinical leads

South screening population size: 35 000

Screener-grader model

Most referrals to single hospital

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Criteria for referral to HES

M1: Possible treatment required

R2: Possible unidentified R3

R3A: Treatment likely required

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Southern Derbyshire Referrals

Total ≈ 31 000

M1 ≈ 1000

R2 ≈ 250

R3A ≈ 90

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Referral Refinement Pathways

Eye Clinic: DR 2nd largest group

Objective of referral refinement: identify patients who require treatment

M1 largest group: very large false +ve

OCT based

≈ 90 patients per week

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R2 Refinement Pathway

R2 ≈ 40% of Diabetic Eye Clinic

Since 2016, all new R2 referrals

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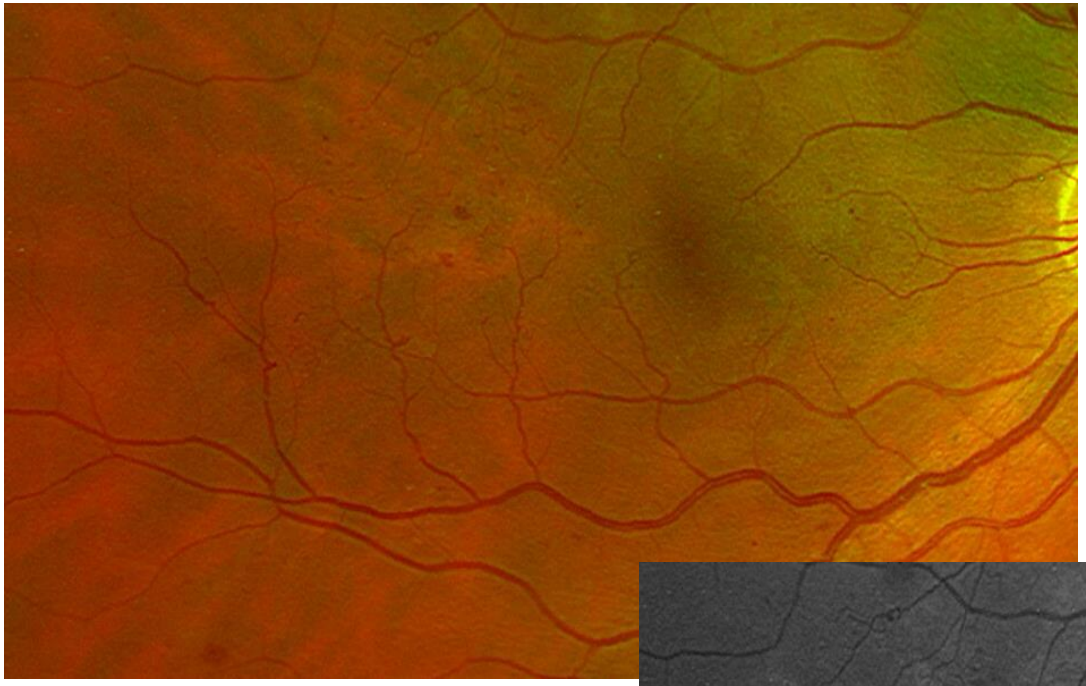
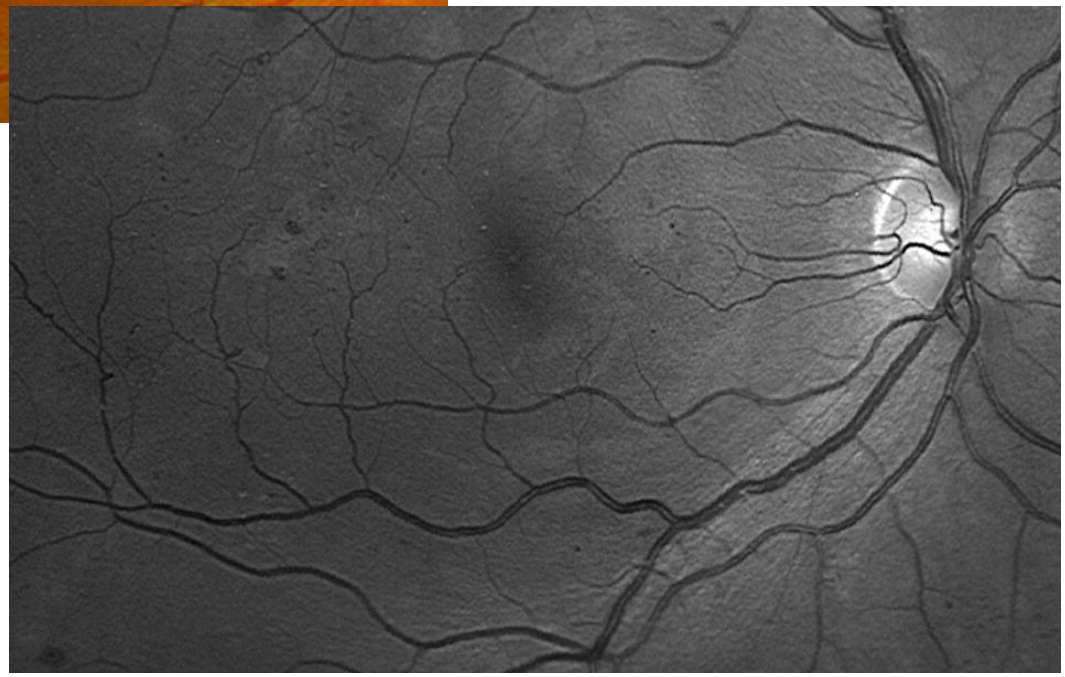
Virtual Clinic

Wide-field photography

- Visual acuity
- Optos wide-field
- Topcon OCT



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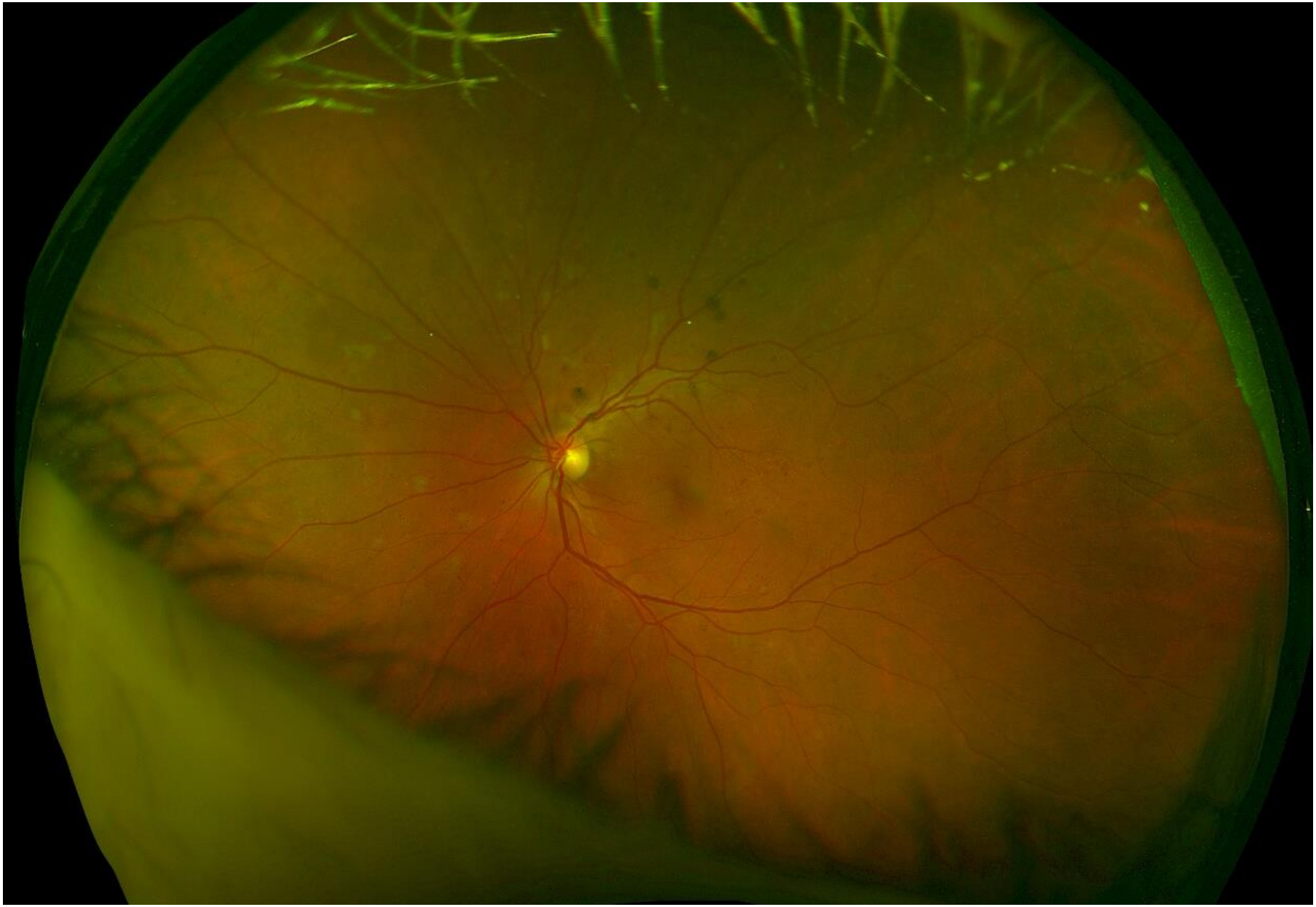

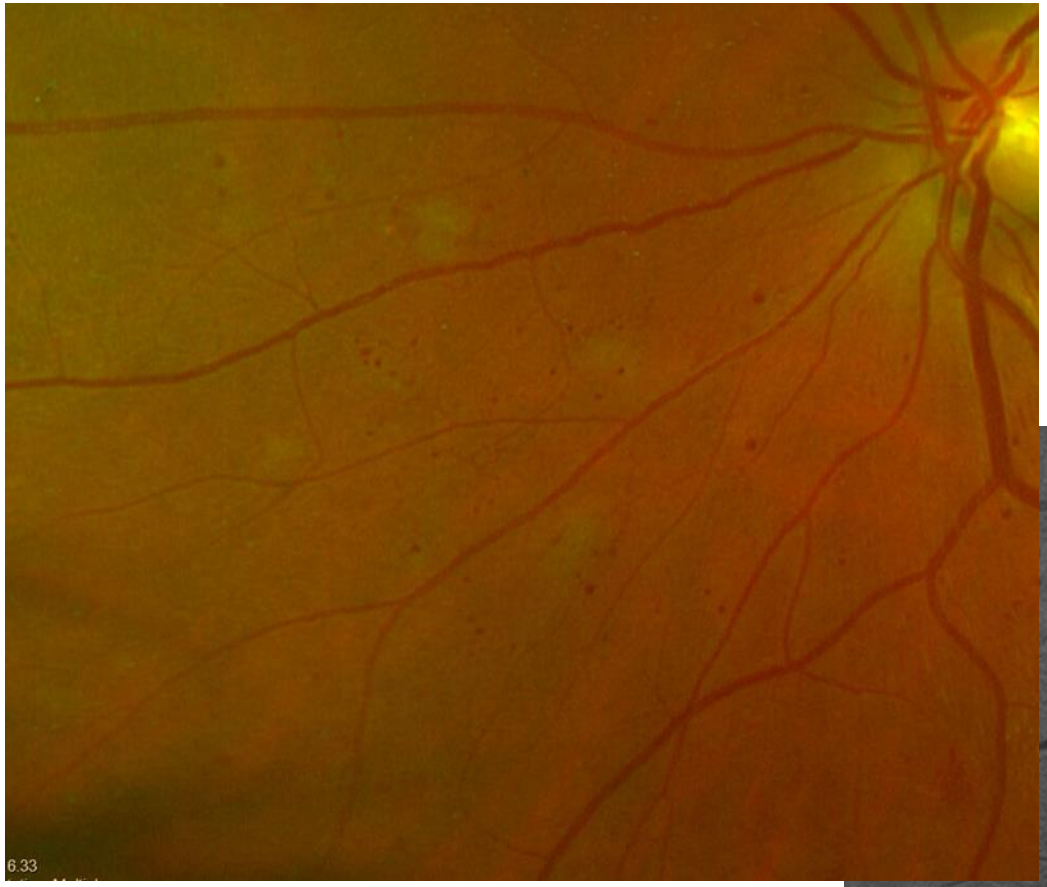
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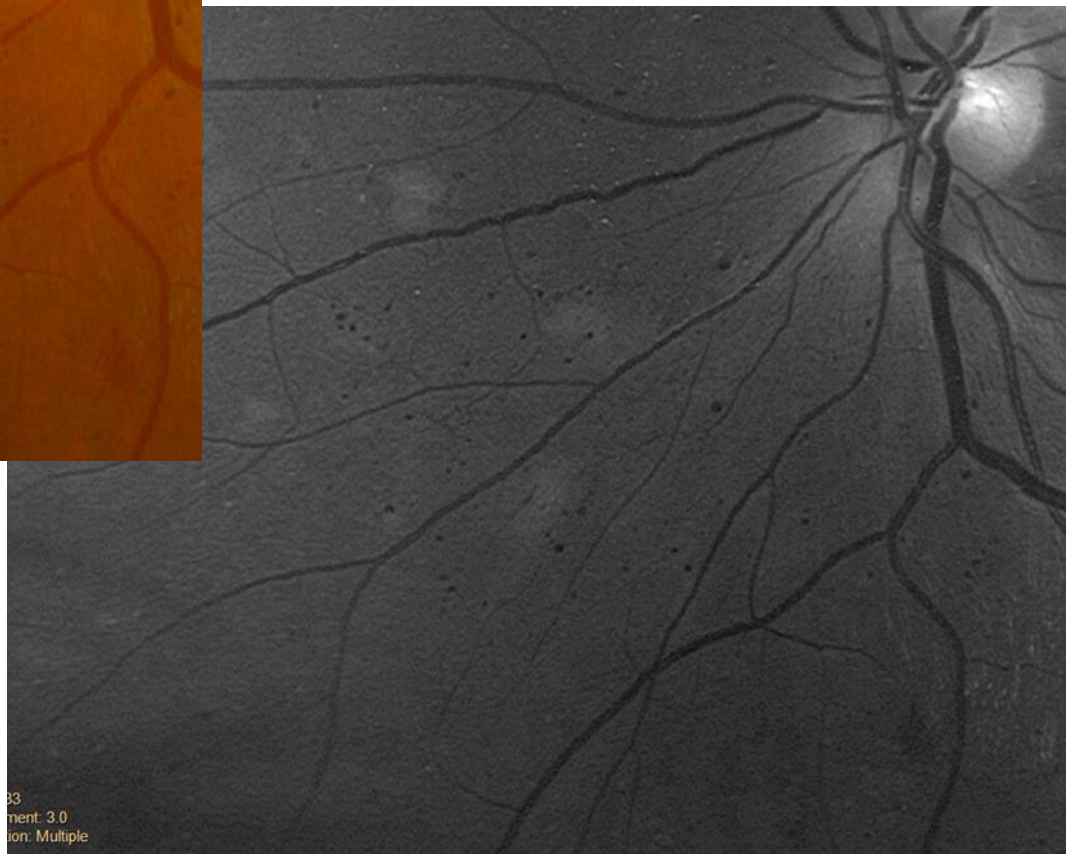
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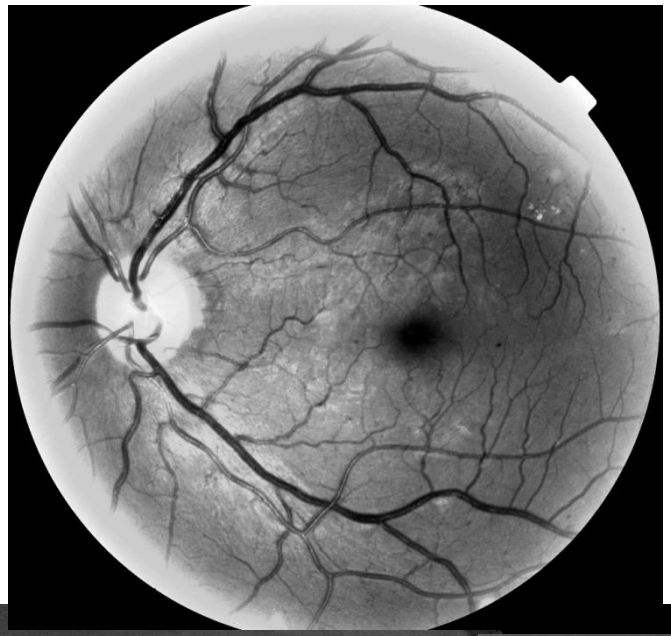

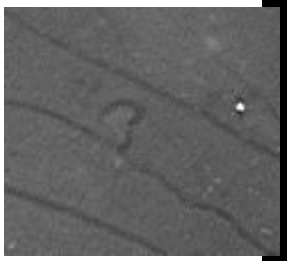

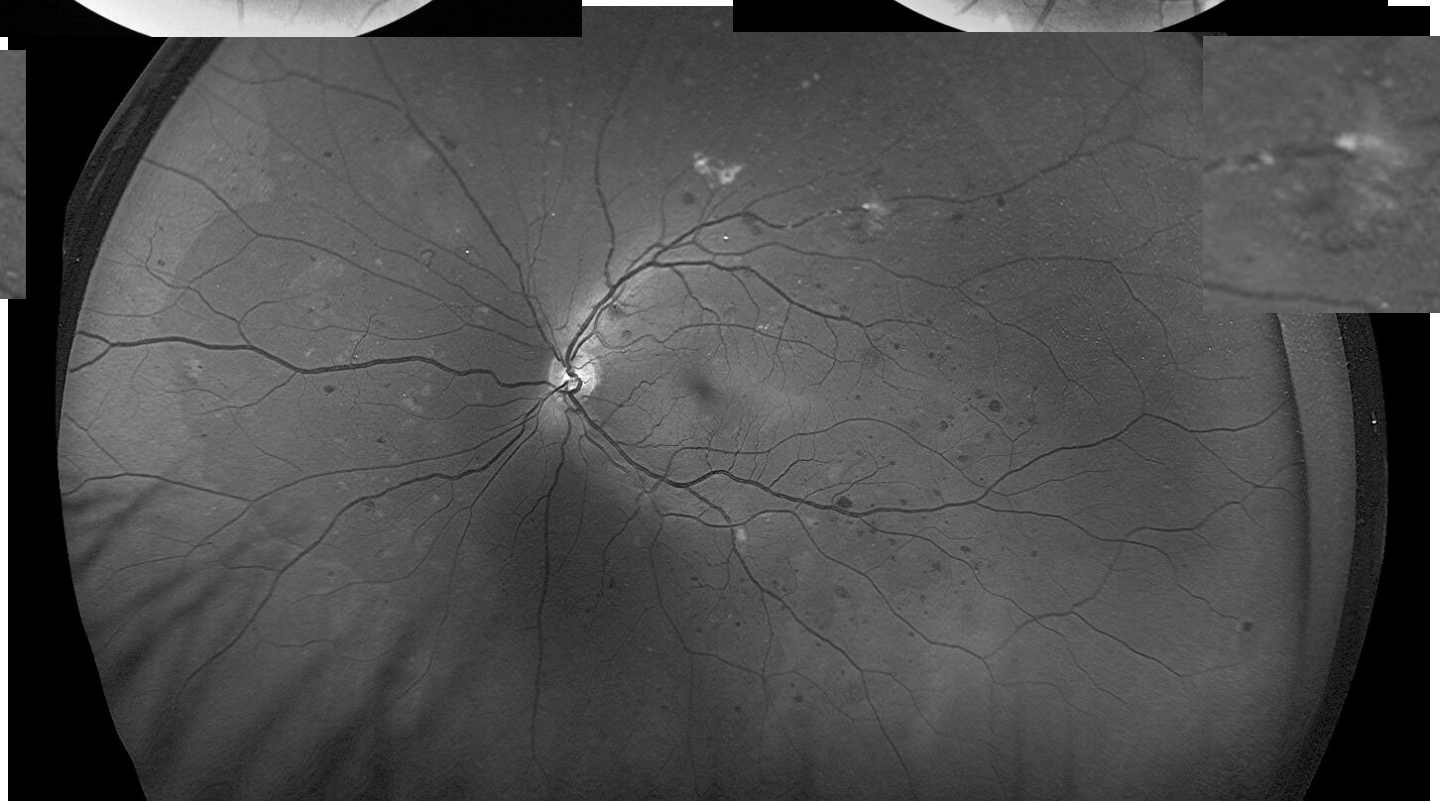

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R2 Refinement Pathway

1 clinic a week

- 12-15 patients
- Images acquired by HCA with visual acuity
- Assessed by ophthalmologist ≈ 6-8 patients/hour

6-9 monthly review

Results communicated to:

- Patient
- GP
- Screening Programme

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R2 Refinement Pathway

Administered by HES

Funded by CCG

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Conventional vs Virtual Clinic

Conventional clinic:

- R1 = 20.1%
- R2 = 75.4%
- R3 = 4.5%
- M0 = 45%
- M1 = 55%

Virtual clinic:

- R1 = 29.5%
- R2 = 64.1%
- R3 = 6.4%
- M0 = 30.8%
- M1 = 69.2%

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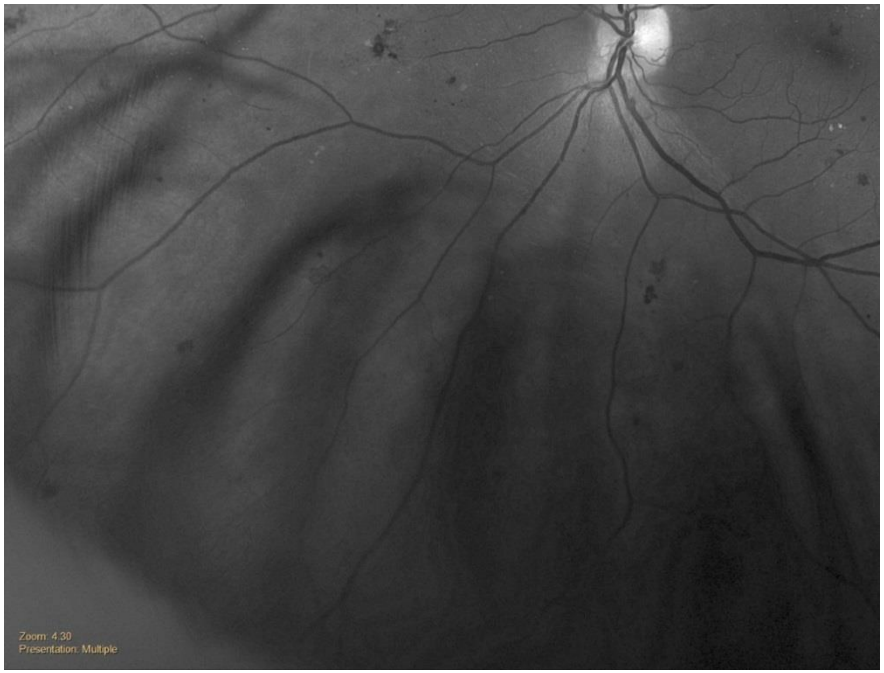
Potential Problems

Optos related:

- Image ‘grainy’
- Difficult to identify M1
- Eye lashes
- Vitreous opacities
- Media opacities

Eyelashes


Zoom: 4.30
Presentation: Multiple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M1 identification

Vitreous Opacities

Potential Problems

Missing NVIs

Slit lamp review for highly ischaemic eyes

Loss of face-face contact

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Benefits

Improved efficiency (24-32 patients per session vs 12)

Reduce pressure on Diabetic Eye Clinic

Easier/speedier process for patient

Photographic record

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Refinements to programme

Current R2 patients within HES

High DNA rate (≈ 20%)

- Access in peripheral screening sites
- Cost

Images grading by grading personnel

Wide field imaging systems

Optos

Eidon

Clarus 500

Montage of 40^{0} field images

Wide field imaging systems

Optos

200^0

Eidon

60^0

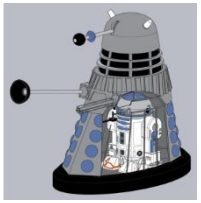
110^0automated montage

150^0manual montage

Clarus 500

113^0

Montage 2 images 200^0



Optos

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Clarus 500

Eidon


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