Usher Kids UK Family Information Day

10 Oct 2026

Randa Li

Information to help families get the most from their eye clinic appointments

- What do the different healthcare professionals do in an eye-clinic and how often will you see them?
- What do the different terms mean; e.g. acuity, visual field
- What does each test involve (e.g. what is it called e.g. acronyms, or known by the machine used - how long does each take, what does your child have to do)

Different healthcare professionals

- Medical secretary/Genetic admin or associate/Receptionist
- Optometrist
- Orthoptist
- Nurse
- Play specialists
- Ophthalmologists
- Paediatricians
- Genetic counsellors
- Family support
- Medical photographers

Our MDT at MEH

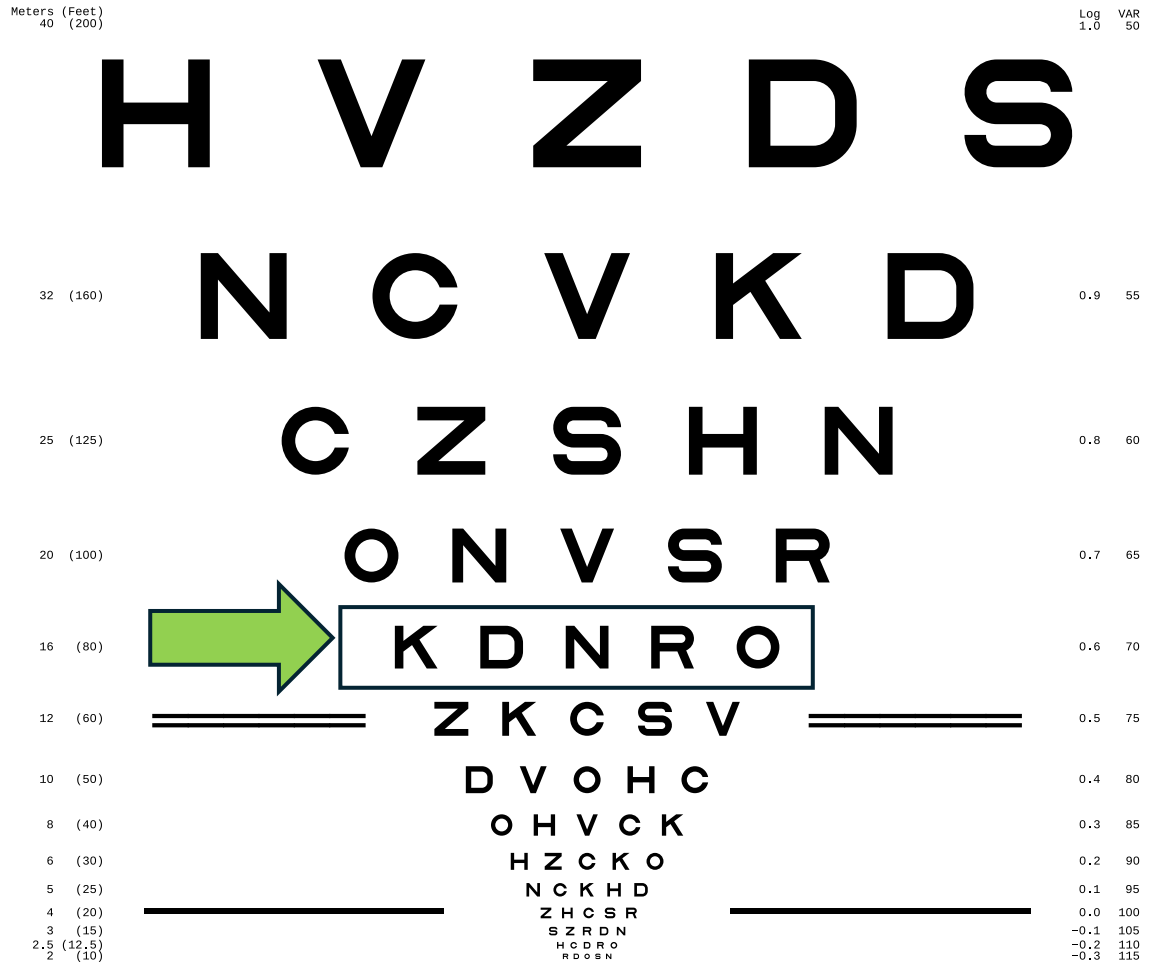


Visual Acuity

- Nurse
- Optometrist +/- refraction
- Orthoptist +/- orthoptic assessments e.g ocular alignment

ETDRS chart: BCVA ≥ 55 letters

- Snellen 6/24
- Snellen 20/80
- LogMAR 0.6



Visual Fields

Medical photographers

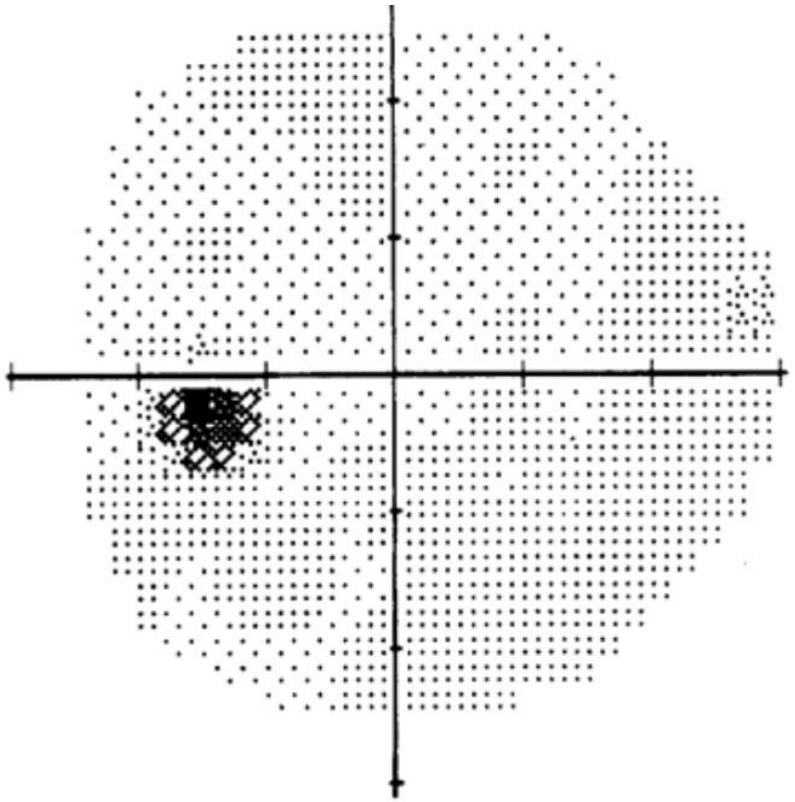
Technicians

Optometrist

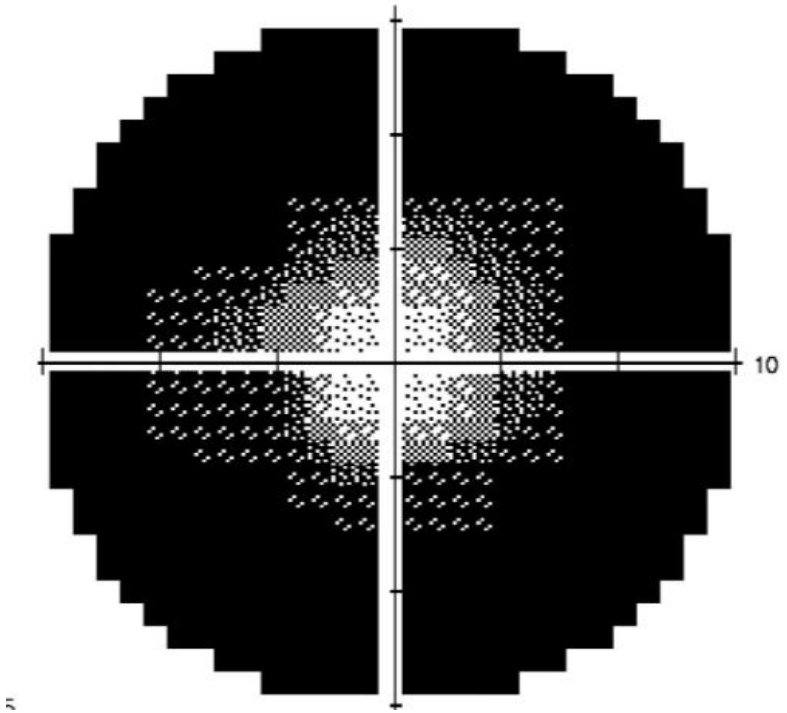
Orthoptist

Sample visual fields

Normal



Retinitis Pigmentosa

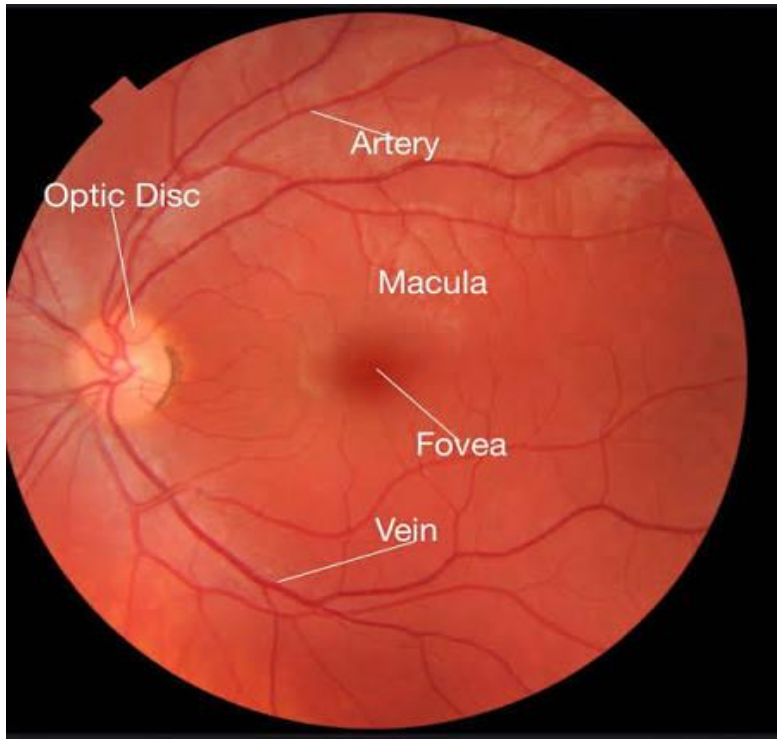


Fundus

Retinitis Pigmentosa



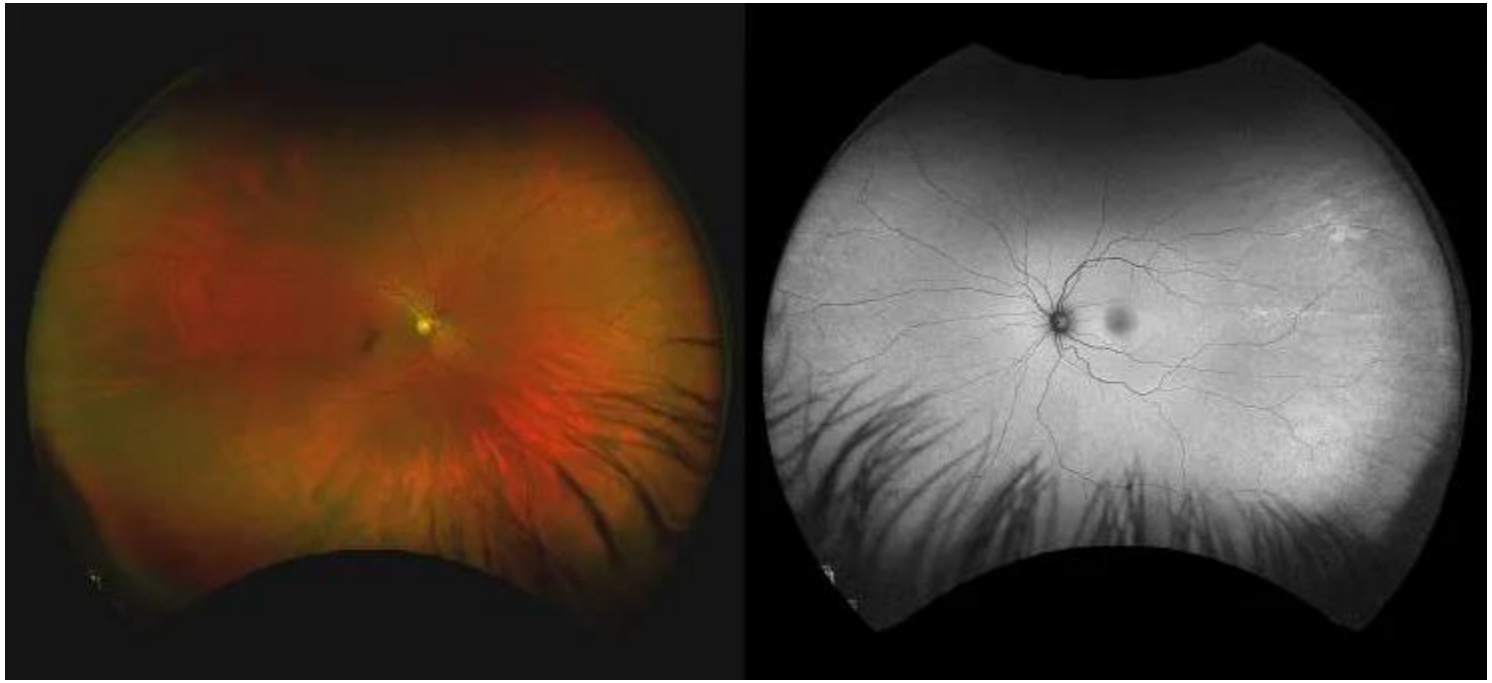
Normal Fundus

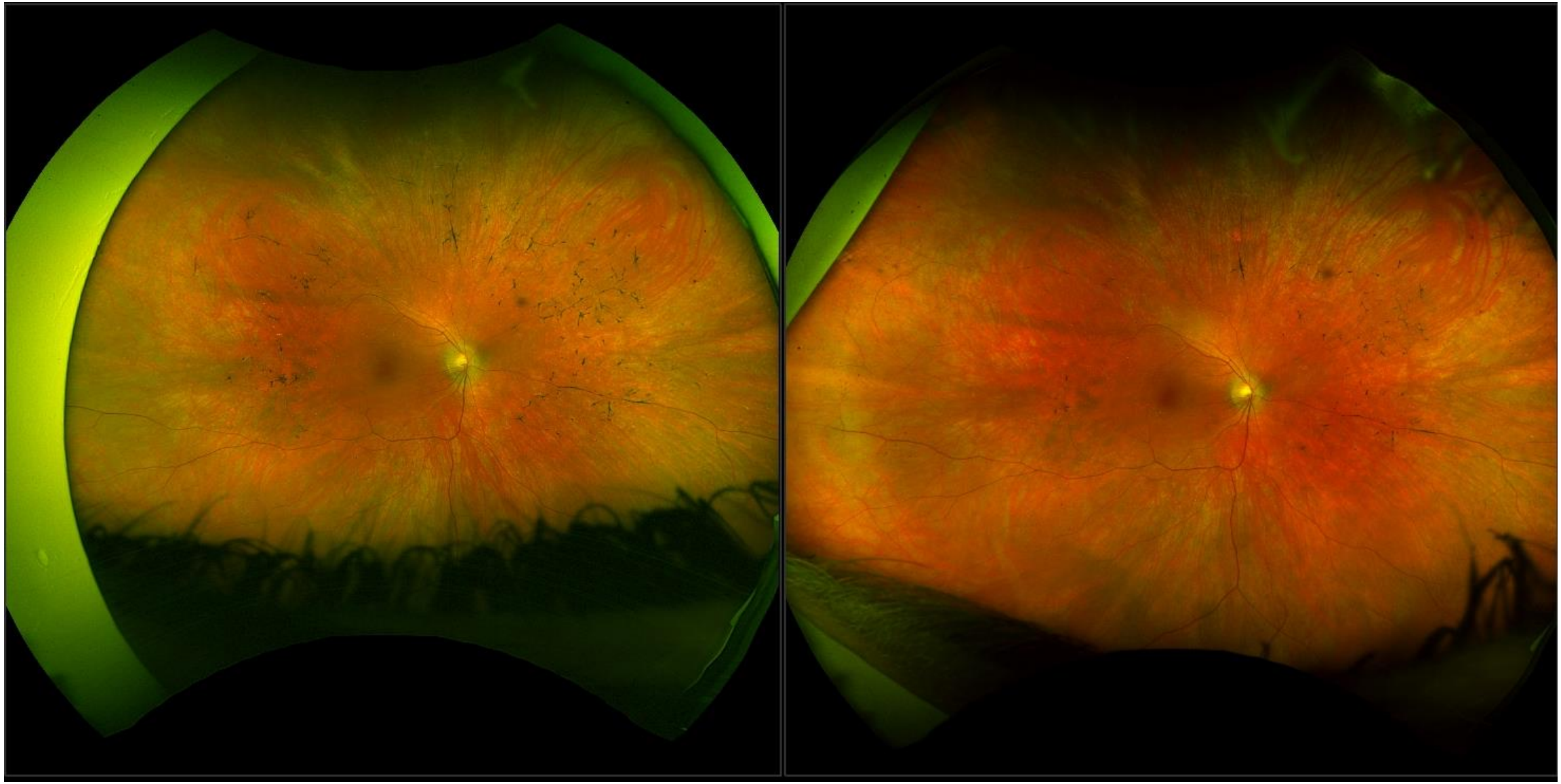


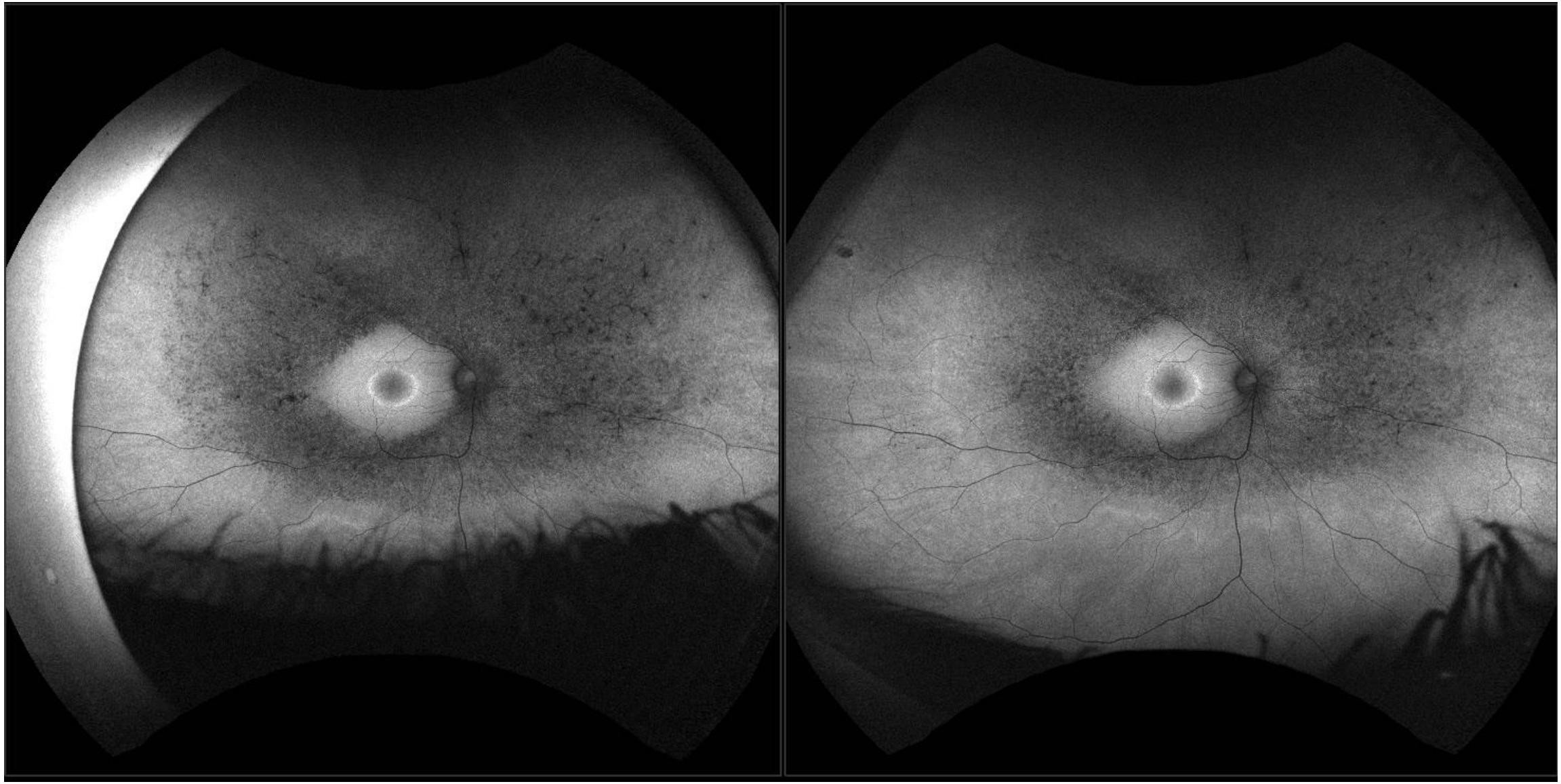
Optos Colour– Ultra Wide View – 200 degrees



Normal Optos Colour and AF







Dilating eyedrops

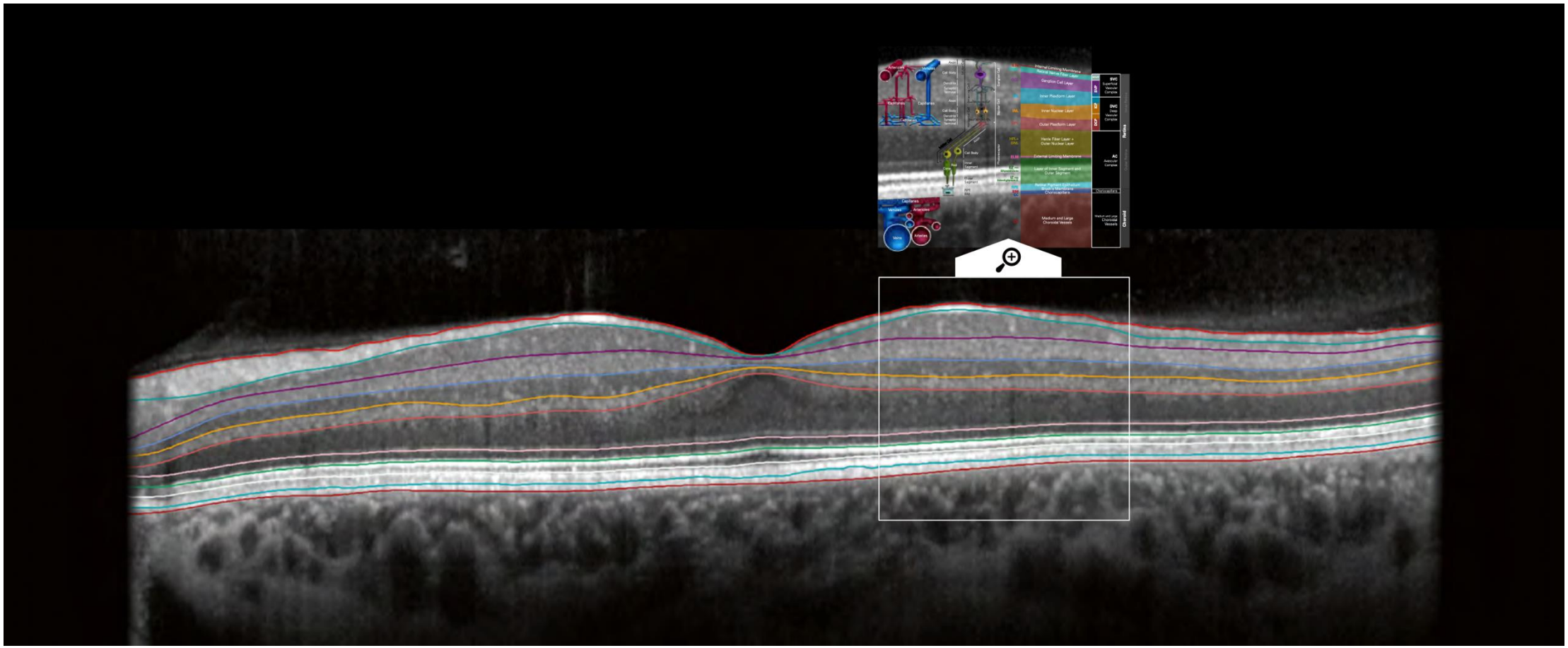
- Stings for 10 secs or so
- Blurred vision for 4-12 hrs
- Difficulty focusing at near

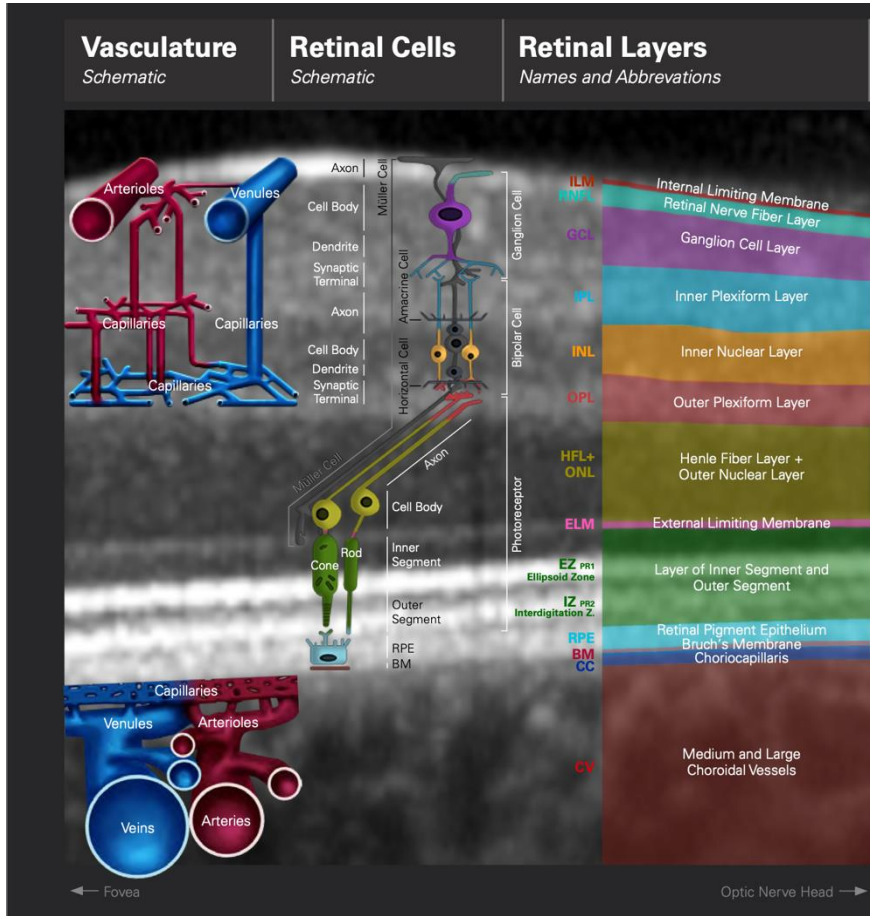


OCT = Optical Coherent Tomography



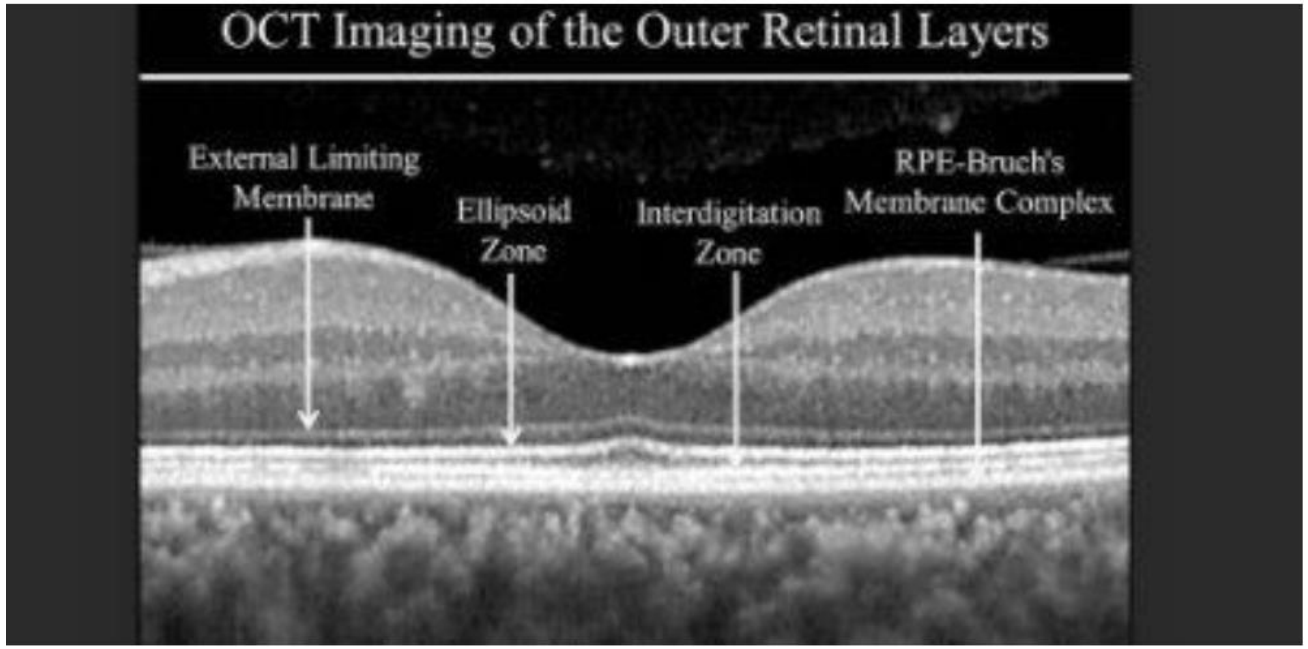
- https://www.academy.heidelbergengineering.com/hedata/e-learning/Totara/Dateien/pdf-tutorials/210250-001_SPECTRALIS_Academy-PDF-Tutorial_Retinal-Layers-Handout_EN.pdf


Internal Limiting Membrane
Retinal Nerve Fiber Layer
Ganglion Cell Layer
Inner Plexiform Layer
Inner Nuclear Layer
Outer Plexiform Layer
Henle Fiber Layer + Outer Nuclear Layer
External Limiting Membrane
Layer of Inner Segment and Outer Segment
Retinal Pigment Epithelium Bruch's Membrane Choriocapillaris
Medium and Large Choroidal Vessels
SVC Superficial Vascular Complex
DVC Deep Vascular Complex
AC Avascular Complex
Choriocapillaris
Choroid
Retina
Capillaries
Arterioles
Venules
Veins
Arteries


Vasculature
Schematic
Retinal Cells
Schematic
Retinal Layers
Names and Abbrevations
Arterioles
Venules
Capillaries
Capillaries
Capillaries
Capillaries
Venules
Arterioles
Veins
Arteries
Axon
Cell Body
Dendrite
Synaptic Terminal
Axon
Cell Body
Dendrite
Synaptic Terminal
Müller Cell
Amacrine Cell
Horizontal Cell
Ganglion Cell
Bipolar Cell
Müller Cell
Axon
Cell Body
Rod
Cone
Inner Segment
Outer Segment
RPE
BM
Photoreceptor
ILM
RNFL
GCL
IPL
INL
OPL
HFL+
ONL
ELM
EZ PR1
Ellipsoid Zone
IZ PR2
Interdigitation Z.
RPE
BM
CC
CV
Internal Limiting Membrane
Retinal Nerve Fiber Layer
Ganglion Cell Layer
Inner Plexiform Layer
Inner Nuclear Layer
Outer Plexiform Layer
Henle Fiber Layer +
Outer Nuclear Layer
External Limiting Membrane
Layer of Inner Segment and
Outer Segment
Retinal Pigment Epithelium
Bruch's Membrane
Choriocapillaris
Medium and Large
Choroidal Vessels
Fovea
Optic Nerve Head

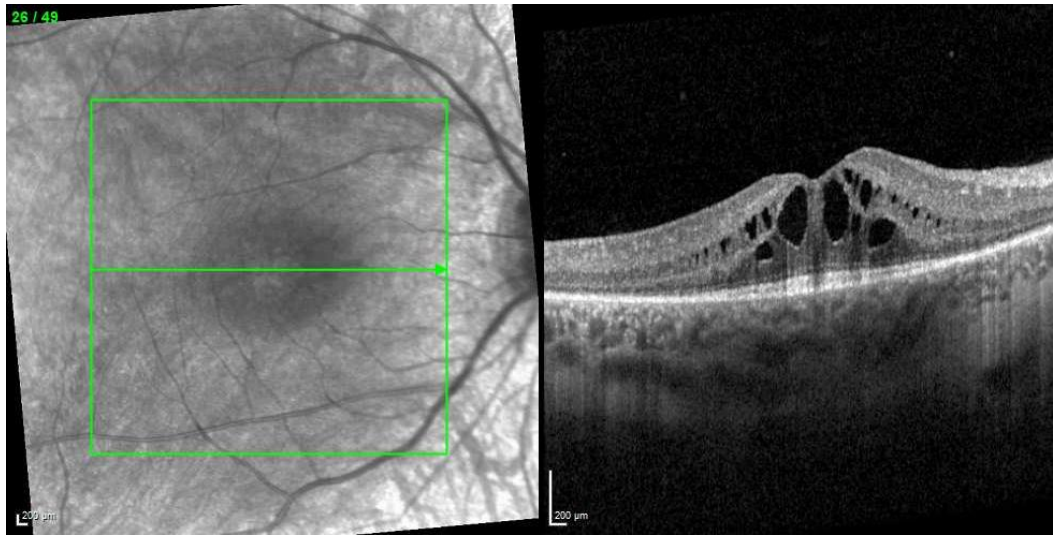
Primary Endpoint: EZ width

- **Hyperreflective** band generated by light scatter of the mitochondria
- Represents a **boundary between healthy and unhealthy PR** and is considered a key marker in disease progression
- **Objective** measure
- **Correlated with BCVA** in maculopathies and **retinal s/s** loss in rod-cone dystrophies

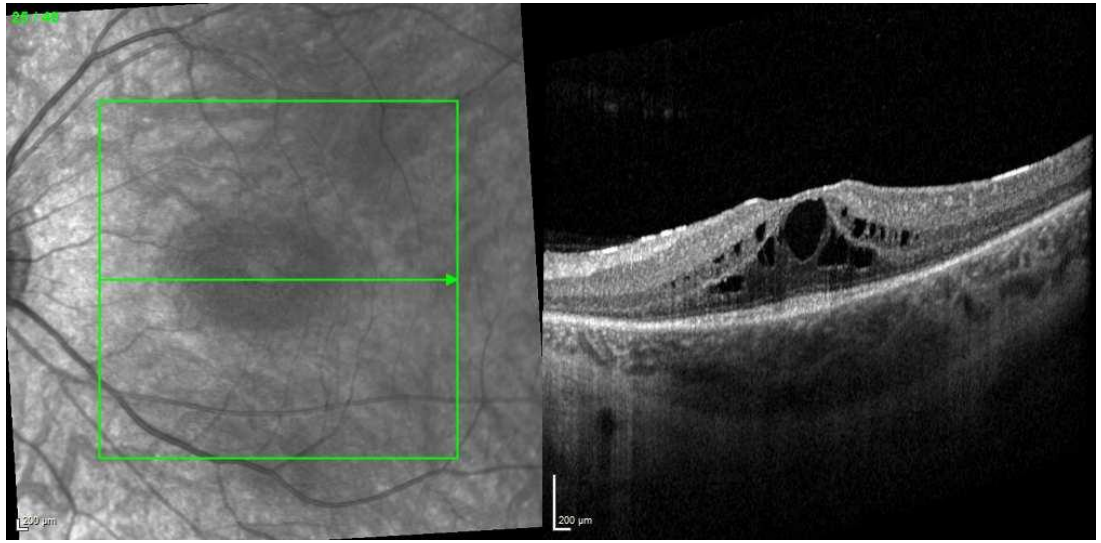


EZ ≥ 2.5mm on Horizontal scans through the fovea

OD

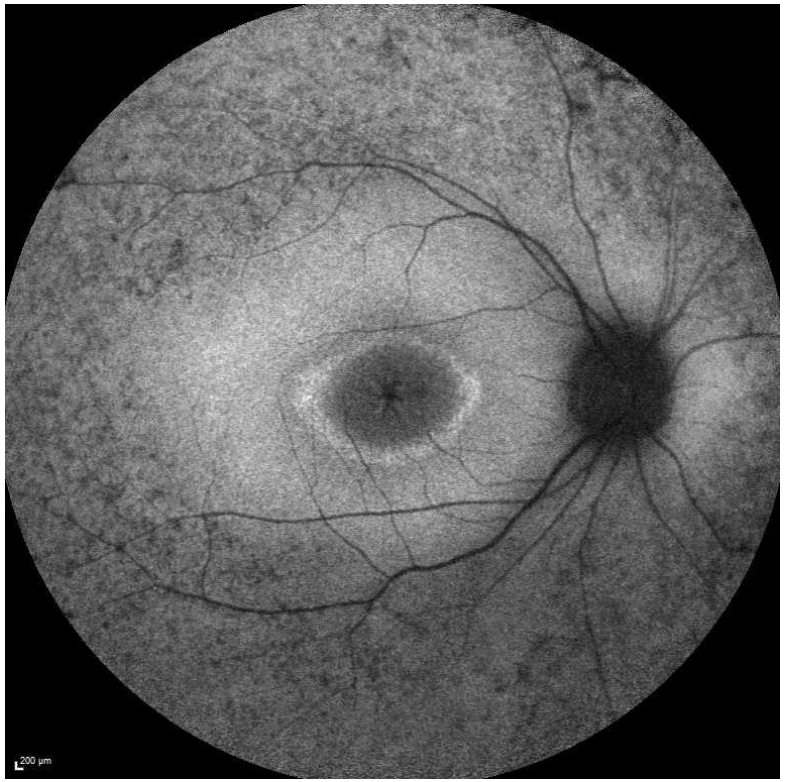


OS

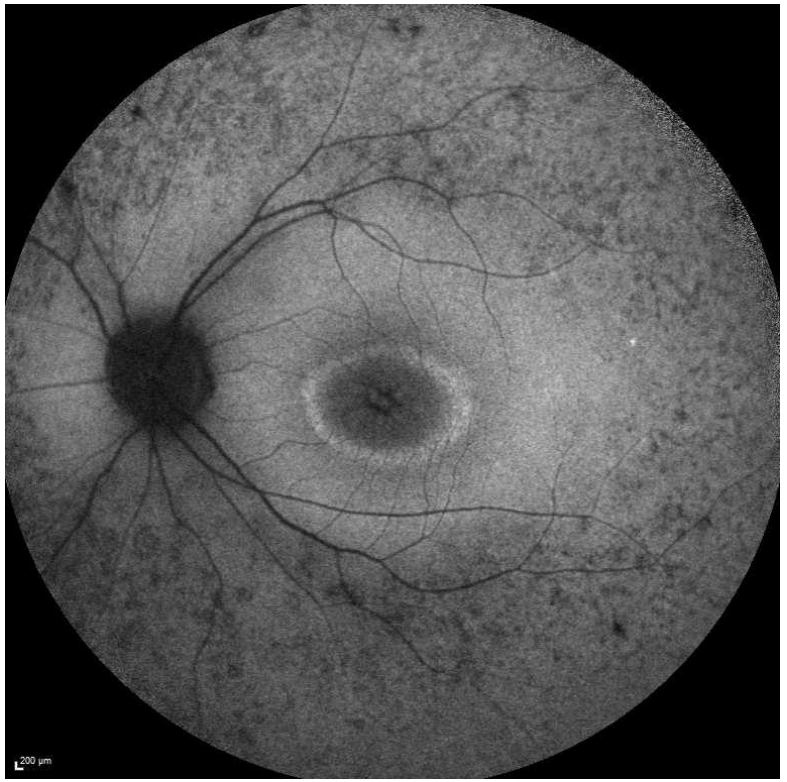


BAF = Blue AutoFluorescence

OD BAF 55 deg



OS BAF 55 deg



Review by an ophthalmologist

- Reason for referral?
- Detailed history including pedigree and birth history
- Ocular exam
- Review of systems
- +/- seen by paediatrician if appropriate

Slit-lamp examination



Fundus Exam

Indirect Ophthalmoscopy



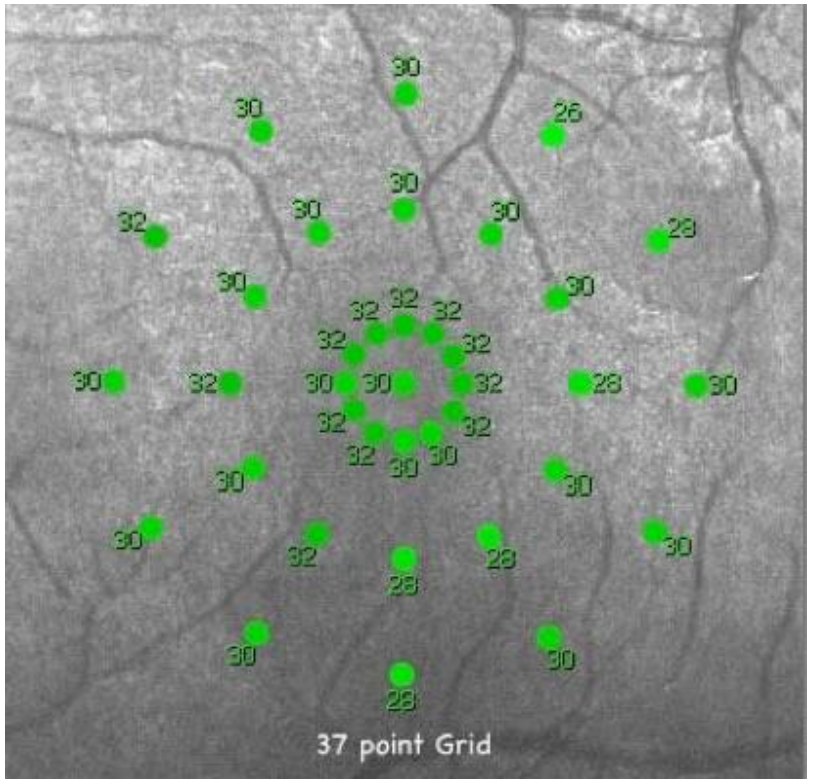
Direct Ophthalmoscopy



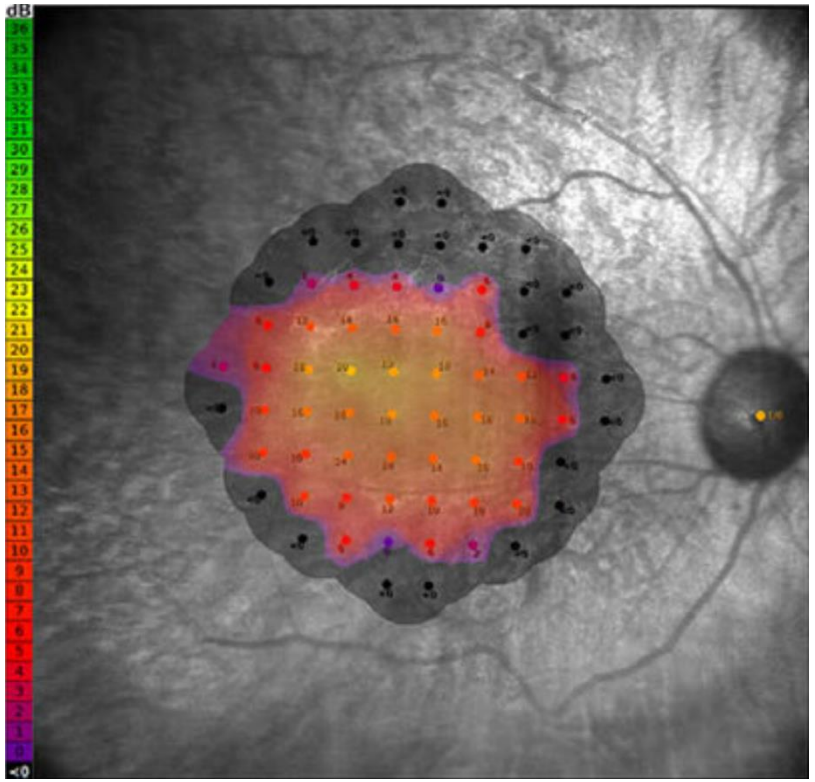
Microperimetry



Normal



Retinitis Pigmentosa



Information to help families understand how their child's vision is affected / changing

- How to interpret the results of each test – what do the results show (e.g. an image, or a measure of functional vision) and what do they not show (e.g. images don't necessarily give us a good idea of a child's functional vision)

- What is an accurate representation of vision for a child at different stages, and how does this relate to the tests discussed above (e.g. at different levels of peripheral vision loss as shown on a field test, here is a likely representation of what that individual sees....)?

- What signs of change should families be looking for in between appointments? e.g. Tasks or scenarios which have become more challenging. Should families wait until their next appointment if there have been changes, or contact in between?

Information to help families know about their rights and options

- Sight loss registration – when should this happen (according to the guidelines, and also in practice - variations between clinicians/hospital) and what are the implications of this (e.g. benefits)

- When and how can families request to attend a different eye clinic? (e.g. what are their rights and options)

Certificate of Vision Impairment (CVI)

How to get registered?

Referral to eye specialist

The ophthalmologist decides if you can be certified

Based on visual acuity and field of vision

If eligible, CVI form is completed

Registered as Severely sight impaired or Sight impaired

Once certified register with your local social services

Types of CVI

SSI

- VA < 3/60 with a full VF
- VA between 3/60 and 6/60 with a severe reduction of field of vision, such as tunnel vision
- VA of 6/60 or above but with a very reduced field of vision, esp if a lot of sight is missing in the lower part of the field

SI

- VA 3/60 to 6/60 with a full field of vision
- VA between 6/60 and 6/24 with a mod reduction of field of vision, cloudiness in parts of your eye, or your lens has been r/o and not replaced
- VA of 6/18 or better if a large pt of your field is missing or a lot of your peripheral vision is missing

Purpose of CVI

- To officially recognise your visual impairment
- Help you access various support services, benefits, and accommodations.
- As evidence to prove your eligibility for certain assistance and benefits
- For example, disability benefits, concessions on public transportation, and specialised education

CVI team at MEH

- https://www.moorfields.nhs.uk/about-us/our-support-network/certificate-of-visual-impairment-cvi-team

When and how can families request to attend a different eye clinic?

- What are their rights and options
- Named consultant e.g. Professor Mariya Moosajee hospital referral by GP or audiologist or local ophthalmologist
- Similarly for other consultants with interest in inherited eye diseases and running clinical trials
- Advantage of being seen at least once by MDT at OGC clinics
- On Database to access current and emerging clinical trials

Acknowledgements



- **Team:**
- Prof Mariya Moosajee- Consultant Ophthalmologist
- Dr Ngozi Oluonye- Consultant Paediatrician
- Dr Elena Schiff and Sakina Rajabali- Genetic Counsellors
- Jean Cavanagh- Family Support
- Julie Broadbent- Senior Optometrist
- Meei Fang Wong- Orthoptist
- Fellows- Dr Nicola Cronbach, Dr Randa Li, Dr Paulina Ocieczek, Dr Sangeetha Rao
- Moorfields Nursing Team- Julietta et al.
- Imaging Technicians- Lawrence Lane