10th Evolving Practice Of Ophthalmology Middle East Conference
EPOMEC
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THE RETINA CLINIC
LONDON

140 Harley Street
London

New Screening Methodology for the Multimodal Functional and Imaging Diagnosis with Staging of Intermediate and Late Dry Age-Related Macular Degeneration (AMD) Presenting to an Independent AMD Screening Service

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Disclosures

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- Apellis
- EyeBio
- Gyroscope
- Horizon
- Janssen
- Oculis
- Opthea
- Quantel
- RegenxBio
- Genentech
- IvericBio
- Keeler
- Lumithera
- Optos
- Roche
- Zeiss AG

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Introduction

- AMD prevalence is rising and it will increase in the next decades
- Afflicted individuals frequently remain unaware of the disease's presence
- Early identification and continuous monitoring of AMD are the keystones to halting disease progression and preserving vision
- A multimodal assessment approach is needed in order to reach
  - Early diagnosis
  - Better progression monitoring
  - Better evaluation of responses to treatment

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Purpose

To assess the feasibility and efficacy of a new methodology for the multimodal functional and imaging diagnostic approach with staging of dry intermediate to late age-related macular degeneration (AMD) presenting to an independent AMD screening service

Methods

- Retrospective study of 27 eyes from 14 patients
- **Exclusion criteria**: presence of other retinal disease, significant media opacities obstructing clear retinal imaging, ocular surgery < 3 months, <18 years old
- Retina imaging:
  - Best corrected visual acuity (BCVA) in logMAR
  - Dark Adaptation
  - Ultra-widefield (UWF) imaging with central and peripheral swept source OCT (SS-OCT)
  - Posterior pole SS-OCT
  - Handheld full field electroretinography (ERG)
    - 16 Tds flicker → entire cohort
    - 32 Tds flicker → for the 16 phakic eyes
  - Microperimetry Macular Integrity Assessment (MAIA)
  - Adaptive Optics (AO)

AMD screening at TRCL

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Retina: Medical & Surgical

Private Age-Related Macular Degeneration (AMD) Screening Service

Private Diabetic Eye Screening Service

Clinical Studies Currently Recruiting Patients

Vitreous Floaters

Macular Degeneration

Diabetic Retinopathy

Cataracts

WHAT DOES OUR PRIVATE AMD SCREENING INCLUDE AND HOW DOES IT DIFFER WITH AN NHS EYE TEST?

Our Private AMD Screening Service uses the most advanced Non-invasive Functional and Multimodal Imaging Technologies to diagnose the earliest changes associated with AMD up to a cellular level using Adaptive Optics.

This is the **First Private AMD Screening Service** available in the UK.

We **Assess, Diagnose, Stage, Monitor** and offer **Therapy** or participation from ongoing and currently recruiting **Clinical Studies**.

A complete assessment of the Retina requires more than Slit-Lamp examination or Photography of only the Posterior Pole or Central Retina.

We therefore deliver this dedicated **Private AMD Screening Service** through **Prof. Stanga** & his **Retina-Specialist Optometrist**.

We recommend this service as from the age of 50 as we believe early diagnosis has become essential in view of new and upcoming therapies and specially when there is a positive family history for AMD.

We also have the capacity to deliver this service much sooner than the NHS and with no cancellations, at a time that is convenient for yourself. We do our utmost to ensure you are seen in a timely manner and without the need for a referral.

The Retina Clinic London performs in-house all necessary diagnostic testing and treatments, both medical and surgical.

The Retina Clinic London	NHS
Most advanced Non-invasive Functional and Multimodal Imaging Technologies used to diagnose the earliest changes associated with AMD up to a cellular level using Adaptive Optics and even before the patient suffers from symptoms (vision is affected).Multiple Different Ultra Widefield and Widefield Imaging Technologies are used to image the **Retina in detail and in its entirety**. See below Full List and Description. **Results are emailed within 1 week to you and/or your GP/Optician at your request.**	The Macula is assessed as part or NHS Eye Tests. However, using usually only Fundus Photography and Macular OCT scans.If further investigations are required, patients are referred to an NHS Eye Unit.
No GP Referral required. No delay in screening.	Not all Hospital Eye departments have Clinical Studies available to take part.

Private Age-Related Macular Degeneration (AMD) Screening Service

WHAT IS AGE RELATED MACULAR DEGENERATION (AMD)?

Your Macula is the central part of the Retina and is located at the back of your eye. Though it is only about 6mm across, it has a very high concentration of Photoreceptor cells that detect light and capture images. It is responsible for fine and detailed vision tasks such as recognising faces, identifying colours and reading. The remaining of the Retina is responsible for your Peripheral (side) Vision.

Age-related macular degeneration (AMD) is common after the age of 50, though it can happen earlier. The risk of developing AMD increases with age. The prevalence goes up from 1/ 200 at 60 to 1/5 at 90.

We expect AMD to become increasingly common as people tend to live longer.

There are two forms of AMD: Dry and Wet.

In Dry AMD, there is a gradual and usually slow deterioration of the macula as the photoreceptor cells die off and are not renewed.

In Wet AMD, abnormal blood vessels grow under the macula and leaking blood or fluid which leads to scarring and rapid loss of central vision.

We can classify **AMD** as **Early**, **Intermediate** and **Late**: **Dry**, **Wet or Disciform Scar**.

As we age, it is normal to see changes in our organs, including our eyes. For example, the appearance of Drusen. Drusen are yellowish clumps of protein, lipids and pigment, amongst others, that sit under the Retina, either in the Macula or the Peripheral Retina.

There are different types of Drusen and they can vary over time in the same person and from person to person in number, size and pigmentation. Few and small Drusen are frequently seen in those 50 and older and can represent an epiphenomenon of aging and not AMD.

People with **Early AMD** not always develop sight loss, as the speed and extent of changes can vary from person to person.

In **Intermediate AMD**, Drusen increase in number and size. Therefore, these changes are more specific for AMD. Geographic Atrophy (see Late AMD) not affecting the centre of the Macula may also be present.

Late AMD includes one or more of the following in one eye:

- **Geographic atrophy (GA)** is a well-defined area of loss of photoreceptor cells that expands over time and leads to loss of Central Vision.
- **Wet AMD** with abnormal blood vessels called **Choroidal Neovascularisation (CNV)**.
- **Disciform Scar** (end-stage scarring of the Macula as a consequence of Wet AMD).

Find out more

WHY IS IT IMPORTANT TO BE PERIODICALLY SCREENED FOR AMD?

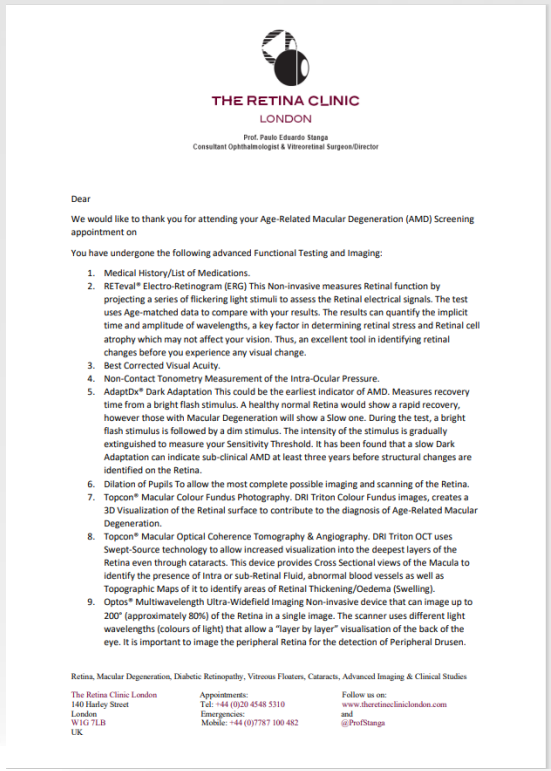
People with **Early AMD** may not experience any symptoms. It is therefore ideal for people over the age of 50 to be routinely screened for AMD.

Some examples of changes in vision that need looking into are difficulty in recovering vision when moving between dark and well illuminated environments, gaps, blurred areas or dark spots in your central vision, distortion of straight lines or images, any change in the perception of colours.

As with all medical conditions, early detection and prompt treatment are key to a better response to therapy.

Though there are currently no approved treatments for GA in Dry AMD, several studies are now available, and it may therefore be advantageous for GA to be diagnosed at the earliest stage called **Nascent GA**, so that you become aware of the status of your Maculas and can be offered participation in our ongoing and currently recruiting **Clinical Studies** or treatments as soon as they become available.

AMD screening at TRCL



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Prof. Paulo Eduardo Stanga
Consultant Ophthalmologist & Vitreoretinal Surgeon/Director

Dear

We would like to thank you for attending your Age-Related Macular Degeneration (AMD) Screening appointment on

You have undergone the following advanced Functional Testing and Imaging:

1. Medical History/List of Medications.
2. RETeval® Electro-Retinogram (ERG) This Non-invasive measures Retinal function by projecting a series of flickering light stimuli to assess the Retinal electrical signals. The test uses Age-matched data to compare with your results. The results can quantify the implicit time and amplitude of wavelengths, a key factor in determining retinal stress and Retinal cell atrophy which may not affect your vision. Thus, an excellent tool in identifying retinal changes before you experience any visual change.
3. Best Corrected Visual Acuity.
4. Non-Contact Tonometry Measurement of the Intra-Ocular Pressure.
5. AdaptDx® Dark Adaptation This could be the earliest indicator of AMD. Measures recovery time from a bright flash stimulus. A healthy normal Retina would show a rapid recovery, however those with Macular Degeneration will show a Slow one. During the test, a bright flash stimulus is followed by a dim stimulus. The intensity of the stimulus is gradually extinguished to measure your Sensitivity Threshold. It has been found that a slow Dark Adaptation can indicate sub-clinical AMD at least three years before structural changes are identified on the Retina.
6. Dilation of Pupils To allow the most complete possible imaging and scanning of the Retina.
7. Topcon® Macular Colour Fundus Photography. DRI Triton Colour Fundus images, creates a 3D Visualization of the Retinal surface to contribute to the diagnosis of Age-Related Macular Degeneration.
8. Topcon® Macular Optical Coherence Tomography & Angiography. DRI Triton OCT uses Swept-Source technology to allow increased visualization into the deepest layers of the Retina even through cataracts. This device provides Cross Sectional views of the Macula to identify the presence of Intra or sub-Retinal Fluid, abnormal blood vessels as well as Topographic Maps of it to identify areas of Retinal Thickening/Oedema (Swelling).
9. Optos® Multiwavelength Ultra-Widefield Imaging Non-invasive device that can image up to 200° (approximately 80%) of the Retina in a single image. The scanner uses different light wavelengths (colours of light) that allow a "layer by layer" visualisation of the back of the eye. It is important to image the peripheral Retina for the detection of Peripheral Drusen.

Retina, Macular Degeneration, Diabetic Retinopathy, Vitreous Floaters, Cataracts, Advanced Imaging & Clinical Studies

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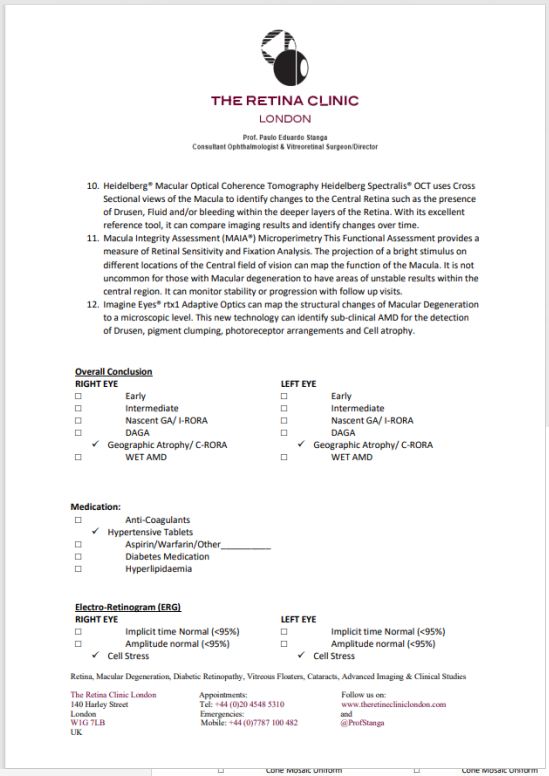

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10. Heidelberg® Macular Optical Coherence Tomography Heidelberg Spectralis® OCT uses Cross Sectional views of the Macula to identify changes to the Central Retina such as the presence of Drusen, Fluid and/or bleeding within the deeper layers of the Retina. With its excellent reference tool, it can compare imaging results and identify changes over time.
11. Macula Integrity Assessment (MAIA®) Microperimetry This Functional Assessment provides a measure of Retinal Sensitivity and Fixation Analysis. The projection of a bright stimulus on different locations of the Central field of vision can map the function of the Macula. It is not uncommon for those with Macular degeneration to have areas of unstable results within the central region. It can monitor stability or progression with follow up visits.
12. Imagine Eyes® rtx1 Adaptive Optics can map the structural changes of Macular Degeneration to a microscopic level. This new technology can identify sub-clinical AMD for the detection of Drusen, pigment clumping, photoreceptor arrangements and Cell atrophy.

Overall Conclusion

RIGHT EYE	LEFT EYE
☐ Early	☐ Early
☐ Intermediate	☐ Intermediate
☐ Nascent GA/ I-RORA	☐ Nascent GA/ I-RORA
☐ DAGA	☐ DAGA
✓ Geographic Atrophy/ C-RORA	✓ Geographic Atrophy/ C-RORA
☐ WET AMD	☐ WET AMD

Medication:

- ☐ Anti-Coagulants
- ✓ Hypertensive Tablets
- ☐ Aspirin/Warfarin/Other_____
- ☐ Diabetes Medication
- ☐ Hyperlipidaemia

Electro-Retinogram (ERG)

RIGHT EYE	LEFT EYE
☐ Implicit time Normal (<95%)	☐ Implicit time Normal (<95%)
☐ Amplitude normal (<95%)	☐ Amplitude normal (<95%)
✓ Cell Stress	✓ Cell Stress

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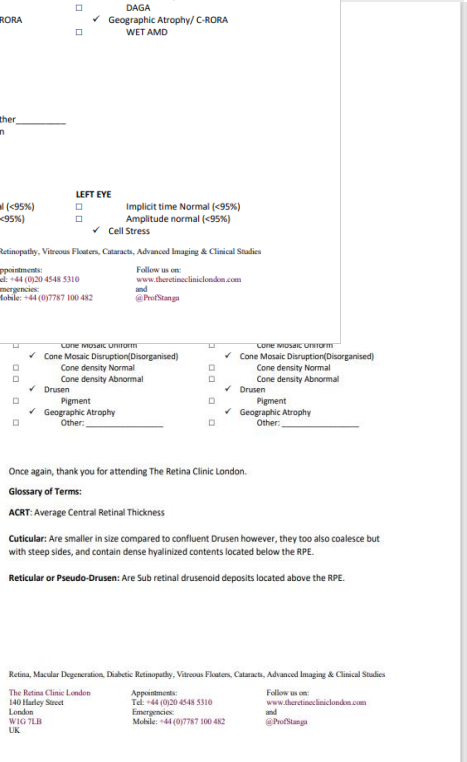

✓ Cone Mosaic Disruption(Disorganised)	✓ Cone Mosaic Disruption(Disorganised)
☐ Cone density Normal	☐ Cone density Normal
☐ Cone density Abnormal	☐ Cone density Abnormal
✓ Drusen	✓ Drusen
☐ Pigment	☐ Pigment
✓ Geographic Atrophy	✓ Geographic Atrophy
☐ Other: _____	☐ Other: _____

Once again, thank you for attending The Retina Clinic London.

Glossary of Terms:

ACRT: Average Central Retinal Thickness

Cuticular: Are smaller in size compared to confluent Drusen however, they too also coalesce but with steep sides, and contain dense hyalinized contents located below the RPE.

Reticular or Pseudo-Drusen: Are Sub retinal drusenoid deposits located above the RPE.

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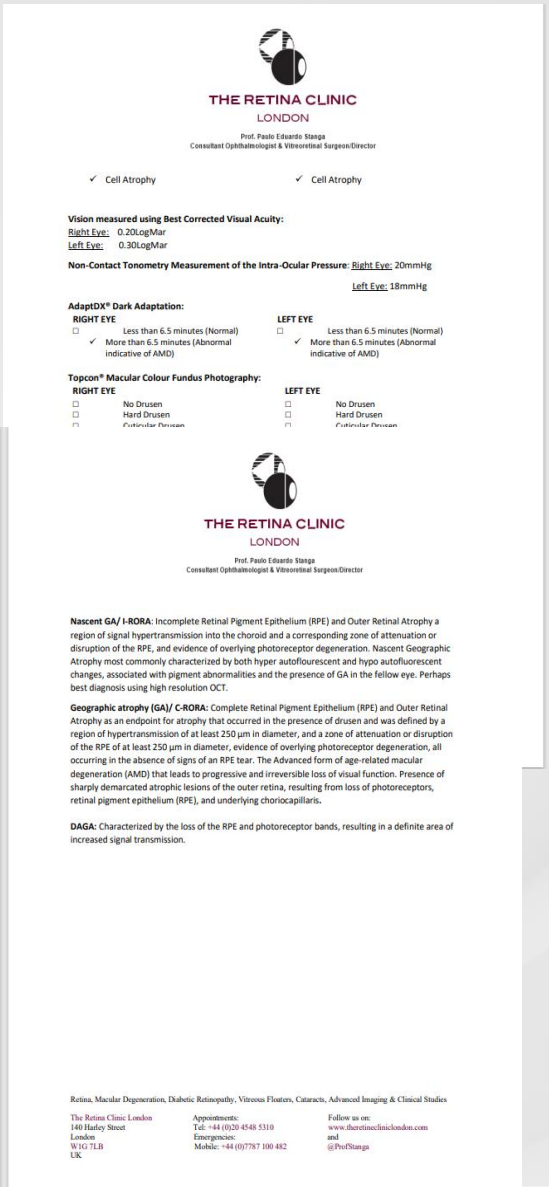

✓ Cell Atrophy	✓ Cell Atrophy

Vision measured using Best Corrected Visual Acuity:
Right Eye: 0.20LogMar
Left Eye: 0.30LogMar

Non-Contact Tonometry Measurement of the Intra-Ocular Pressure: Right Eye: 20mmHg
Left Eye: 18mmHg

AdaptDX® Dark Adaptation:

RIGHT EYE	LEFT EYE
☐ Less than 6.5 minutes (Normal)	☐ Less than 6.5 minutes (Normal)
✓ More than 6.5 minutes (Abnormal indicative of AMD)	✓ More than 6.5 minutes (Abnormal indicative of AMD)

Topcon® Macular Colour Fundus Photography:

RIGHT EYE	LEFT EYE
☐ No Drusen	☐ No Drusen
☐ Hard Drusen	☐ Hard Drusen
☐ Cuticular Drusen	☐ Cuticular Drusen

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Nascent GA/ I-RORA: Incomplete Retinal Pigment Epithelium (RPE) and Outer Retinal Atrophy a region of signal hypertransmission into the choroid and a corresponding zone of attenuation or disruption of the RPE, and evidence of overlying photoreceptor degeneration. Nascent Geographic Atrophy most commonly characterized by both hyper autofluorescent and hypo autofluorescent changes, associated with pigment abnormalities and the presence of GA in the fellow eye. Perhaps best diagnosis using high resolution OCT.

Geographic atrophy (GA)/ C-RORA: Complete Retinal Pigment Epithelium (RPE) and Outer Retinal Atrophy as an endpoint for atrophy that occurred in the presence of drusen and was defined by a region of hypertransmission of at least 250 µm in diameter, and a zone of attenuation or disruption of the RPE of at least 250 µm in diameter, evidence of overlying photoreceptor degeneration, all occurring in the absence of signs of an RPE tear. The Advanced form of age-related macular degeneration (AMD) that leads to progressive and irreversible loss of visual function. Presence of sharply demarcated atrophic lesions of the outer retina, resulting from loss of photoreceptors, retinal pigment epithelium (RPE), and underlying choriocapillaris.

DAGA: Characterized by the loss of the RPE and photoreceptor bands, resulting in a definite area of increased signal transmission.

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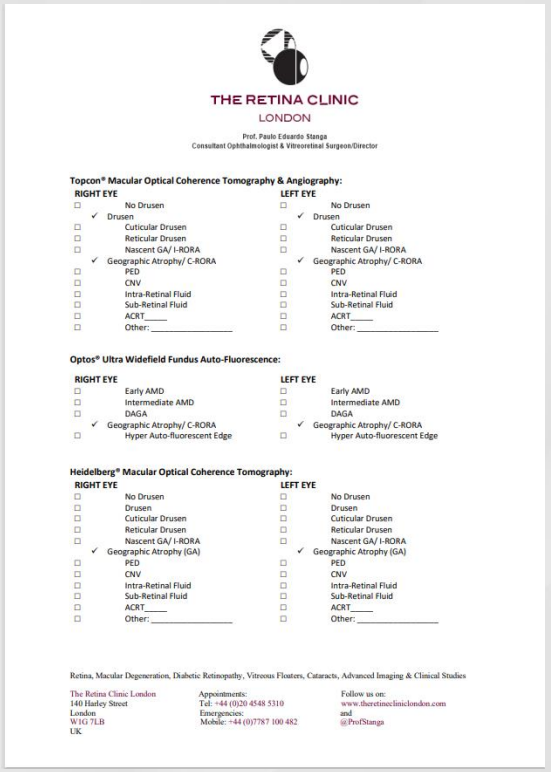

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Topcon® Macular Optical Coherence Tomography & Angiography:

RIGHT EYE	LEFT EYE
☐ No Drusen	☐ No Drusen
✓ Drusen	✓ Drusen
☐ Cuticular Drusen	☐ Cuticular Drusen
☐ Reticular Drusen	☐ Reticular Drusen
☐ Nascent GA/ I-RORA	☐ Nascent GA/ I-RORA
✓ Geographic Atrophy/ C-RORA	✓ Geographic Atrophy/ C-RORA
☐ PED	☐ PED
☐ CNV	☐ CNV
☐ Intra-Retinal Fluid	☐ Intra-Retinal Fluid
☐ Sub-Retinal Fluid	☐ Sub-Retinal Fluid
☐ ACRT_____	☐ ACRT_____
☐ Other: _____	☐ Other: _____

Optos® Ultra Widefield Fundus Auto-Fluorescence:

RIGHT EYE	LEFT EYE
☐ Early AMD	☐ Early AMD
☐ Intermediate AMD	☐ Intermediate AMD
☐ DAGA	☐ DAGA
✓ Geographic Atrophy/ C-RORA	✓ Geographic Atrophy/ C-RORA
☐ Hyper Auto-fluorescent Edge	☐ Hyper Auto-fluorescent Edge

Heidelberg® Macular Optical Coherence Tomography:

RIGHT EYE	LEFT EYE
☐ No Drusen	☐ No Drusen
☐ Drusen	☐ Drusen
☐ Cuticular Drusen	☐ Cuticular Drusen
☐ Reticular Drusen	☐ Reticular Drusen
☐ Nascent GA/ I-RORA	☐ Nascent GA/ I-RORA
✓ Geographic Atrophy (GA)	✓ Geographic Atrophy (GA)
☐ PED	☐ PED
☐ CNV	☐ CNV
☐ Intra-Retinal Fluid	☐ Intra-Retinal Fluid
☐ Sub-Retinal Fluid	☐ Sub-Retinal Fluid
☐ ACRT_____	☐ ACRT_____
☐ Other: _____	☐ Other: _____

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AMD screening at TRCL

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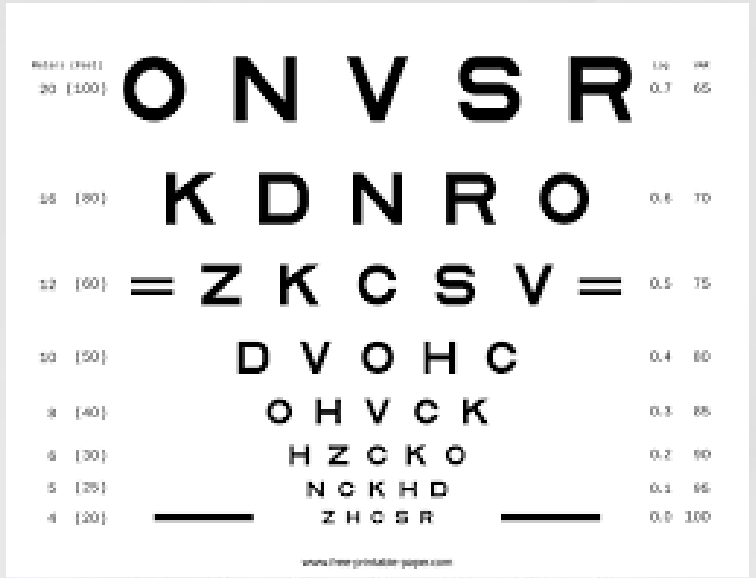
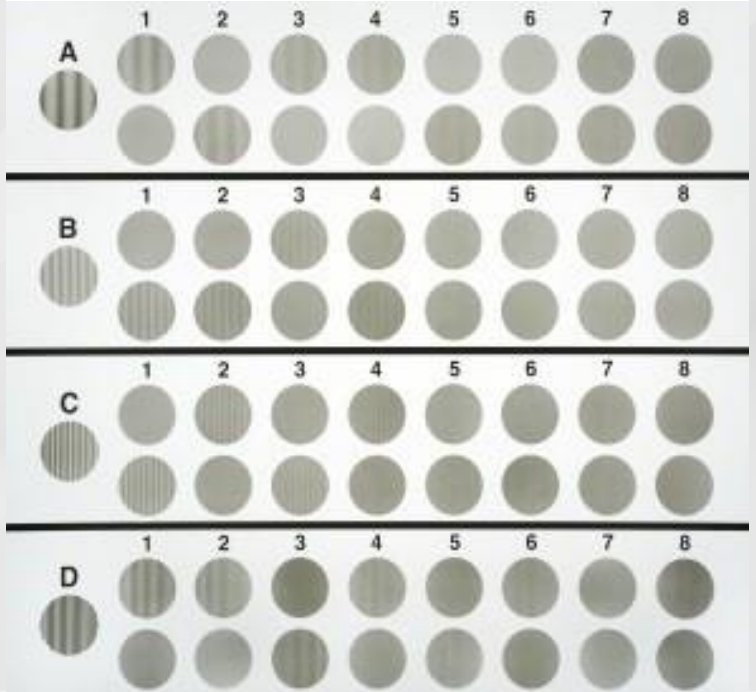
- Medical History
- **Best Corrected Visual Acuity** and **Contrast Sensitivity Function**
- Slit-Lamp Biomicroscopy
- Non-Contact Tonometry
- Dark Adaptation
- ERG Protocol
- Dilation
- UWF imaging (Optos)
- Posterior pole SS-OCT, FA and OCTA
  - Topcon DRI Triton
  - Heidelberg Spectralis
- Adaptive Optics
- MAIA Microperimetry





AMD screening at TRCL

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- Medical History
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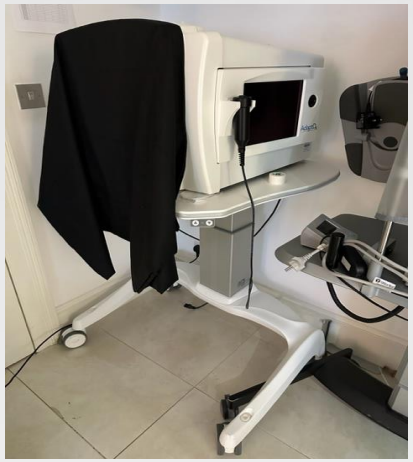
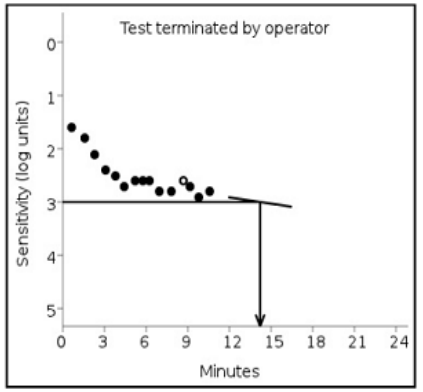


Dark Adaptation Test

Test Eye: Right
Test Date: 09-04-2023 04:49
Age at Test: 76
Protocol: Extended Test
Pupil Size: 3.50 mm
Prescription: +0.00 -0.50 x 125°
Trial Lens: +3.00 +0.00 x 0°

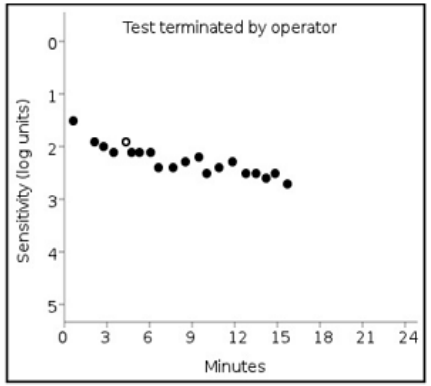


Rod Intercept is 14.19 minutes.
Fixation Error Rate is 6%.

Comments:

Dark Adaptation Test

Test Eye: Left
Test Date: 09-04-2023 05:09
Age at Test: 76
Protocol: Extended Test
Pupil Size: 4.50 mm
Prescription: -0.50 -0.50 x 5°
Trial Lens: +2.50 +0.00 x 0°



Rod Intercept is > 20.0 minutes.
Fixation Error Rate is 5%.

Comments:

AMD screening at TRCL

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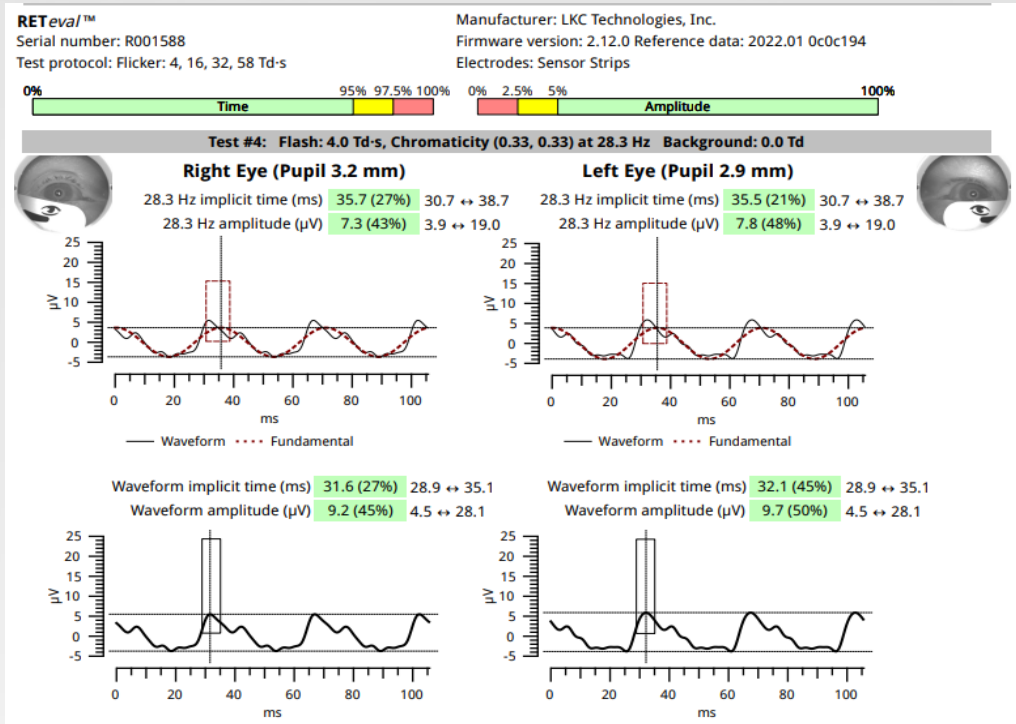


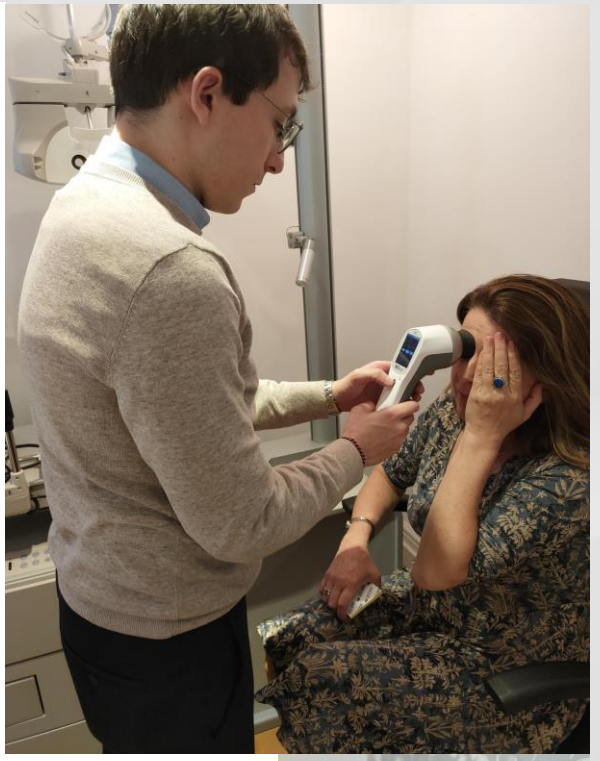
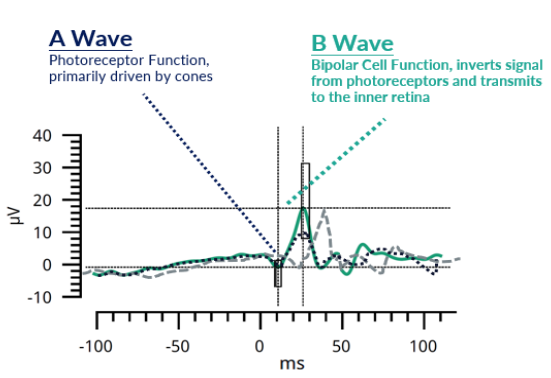


Table 4. Random-effects WMD summary estimates of the light-adapted ffERG responses in eyes with any AMD, early AMD, or late AMD, all in comparison to healthy controls

Study sample	ffERG test	WMD	95% CI	*p* value
Any AMD versus healthy control	a-wave amplitude	−3.59 μV	−9.36 to 2.18 μV	0.2
	a-wave implicit time	0.92 ms	0.12–1.72 ms	**0.02**
	b-wave amplitude	−13.26 μV	−18.64 to −7.88 μV	**<0.0001**
	b-wave implicit time	0.69 ms	0.30–1.08 ms	**0.0006**
Early AMD versus healthy control	a-wave amplitude	−0.76 μV	−5.46 to 3.94 μV	0.8
	a-wave implicit time	0.78 ms	−1.34 to 2.91 ms	0.5
	b-wave amplitude	−10.99 μV	−22.58 to 0.60 μV	0.06
	b-wave implicit time	0.59 ms	−0.28 to 1.46 ms	0.2
Late AMD versus healthy control	a-wave amplitude	−4.66 μV	−12.02 to 2.70 μV	0.2
	a-wave implicit time	0.93 ms	0.21–1.66 ms	**0.01**
	b-wave amplitude	−17.43 μV	−23.50 to −11.35 μV	**<0.0001**
	b-wave implicit time	1.01 ms	0.56–1.47 ms	**<0.0001**

AMD, age-related macular degeneration; 95% CI, 95% confidence interval; ffERG, full-field electroretinography; μV, microvolt; ms, millisecond; WMD, weighted mean difference.



Forshaw TRJ. Full-Field Electroretinography Changes Associated with Age-Related Macular Degeneration: A Systematic Review with Meta-Analyses. 2022

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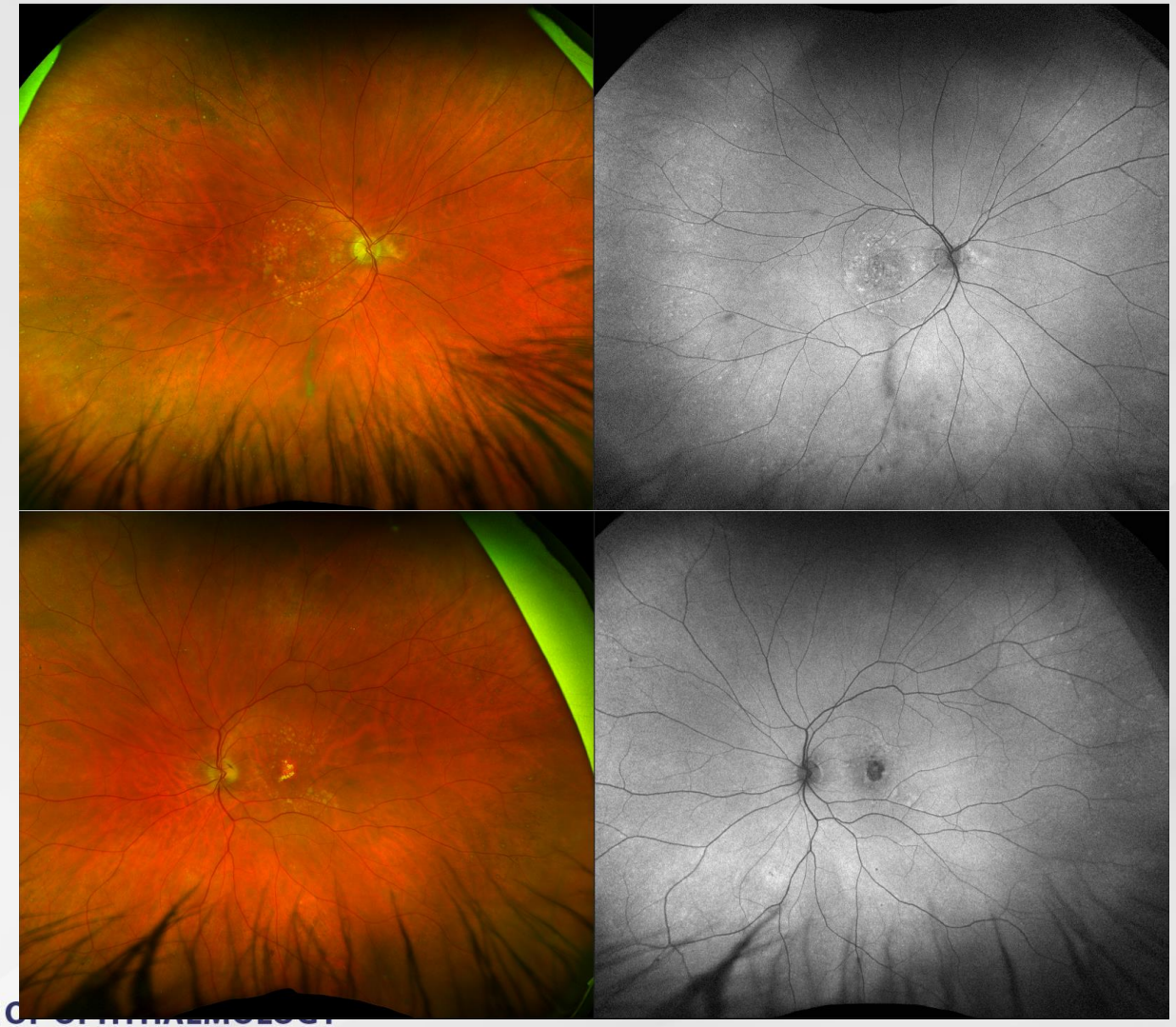
- Medical History
- **Best Corrected Visual Acuity and Contrast Sensitivity Function**
- Slit-Lamp Biomicroscopy
- Non-Contact Tonometry
- **Dark Adaptation**
- **ERG Protocol**
- Dilation
- **UWF imaging (Optos): RGB, AF and navigated central and peripheral OCT and simultaneous FFA/ICG/OCT**
- **Posterior pole SS-OCT, FA and OCTA**
  - **Topcon DRI Triton**
  - **Heidelberg Spectralis**
- **Adaptive Optics**
- **MAIA Microperimetry**



AMD screening at TRCL

THE RETINA CLINIC
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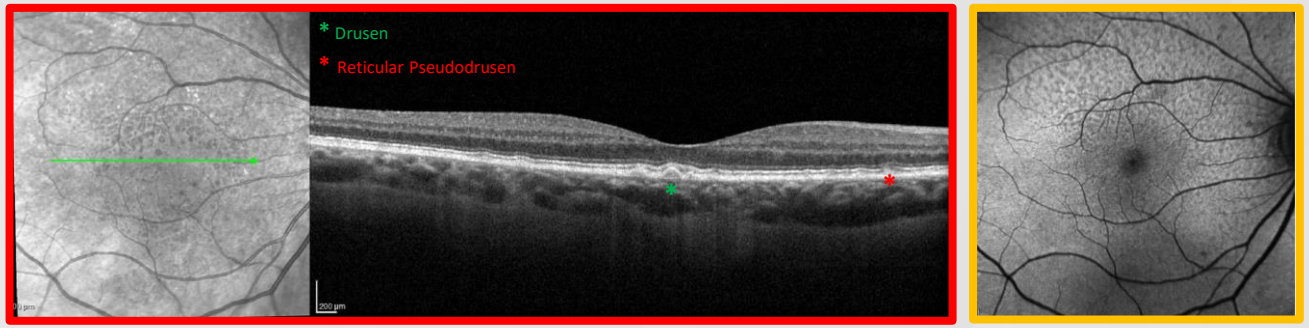

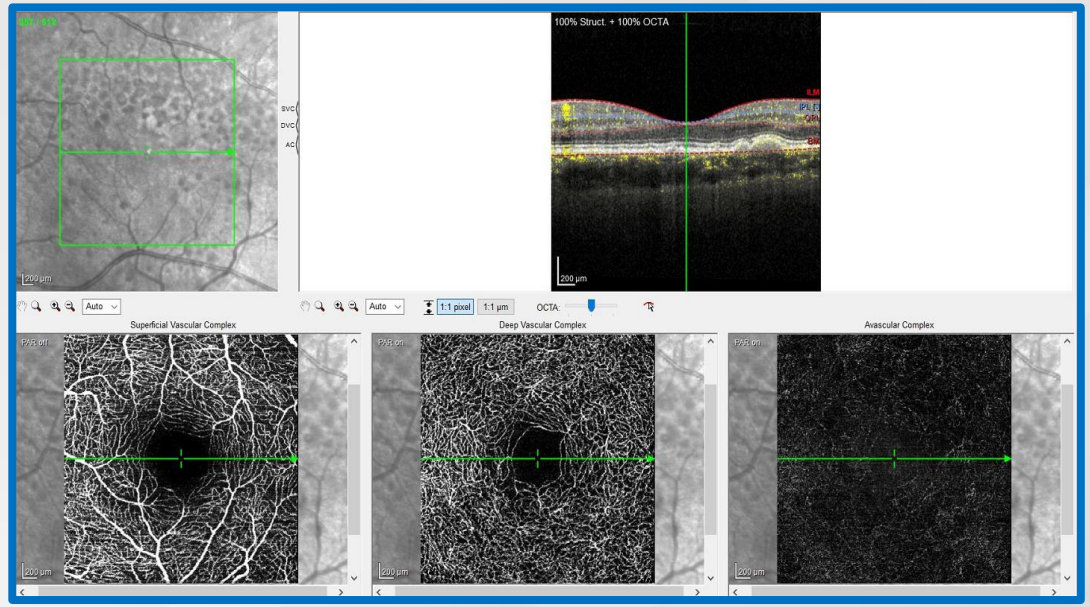

10TH EVOLVING PRACTICE OF OPHTHALMOLOGY MIDDLE EAST CONFERENCE

Retina

Association Between Geographic Atrophy Progression and Reticular Pseudodrusen in Eyes With Dry Age-Related Macular Degeneration

Marcela Marsiglia,[1–4] Sucharita Boddu,[1] Srilaxmi Bearelly,[2] Luna Xu,[5] Barry E. Breaux Jr,[5] K. Bailey Freund,[1–4] Lawrence A. Yannuzzi,[1,5,4] and R. Theodore Smith[1]

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2012

ARNOLD, JENNIFER J. FRACO*; SARKS, SHIRLEY H. FRACO, MD†; KILLINGSWORTH, MURRAY C. PhD‡; SARKS, JOHN P. FRACO†. RETICULAR PSEUDODRUSEN: A Risk Factor in Age-Related Maculopathy. Retina 1995
Marsiglia M, Boddu S, Bearelly S, Xu L, Breaux BE Jr, Freund KB, Yannuzzi LA, Smith RT. Association between geographic atrophy progression and reticular pseudodrusen in eyes with dry age-related macular degeneration. Invest Ophthalmol Vis Sci. 2013

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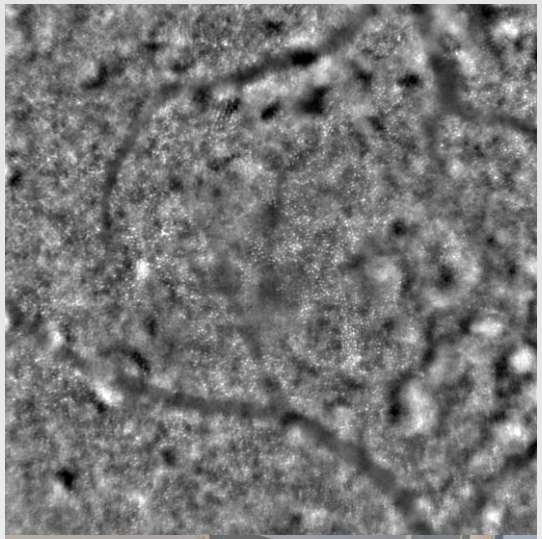

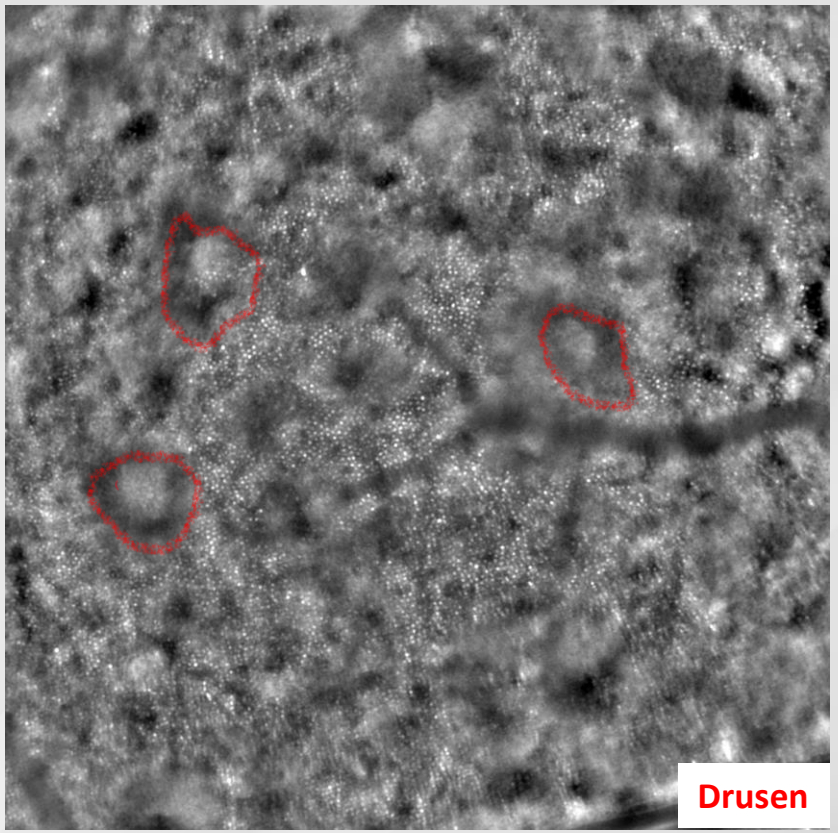

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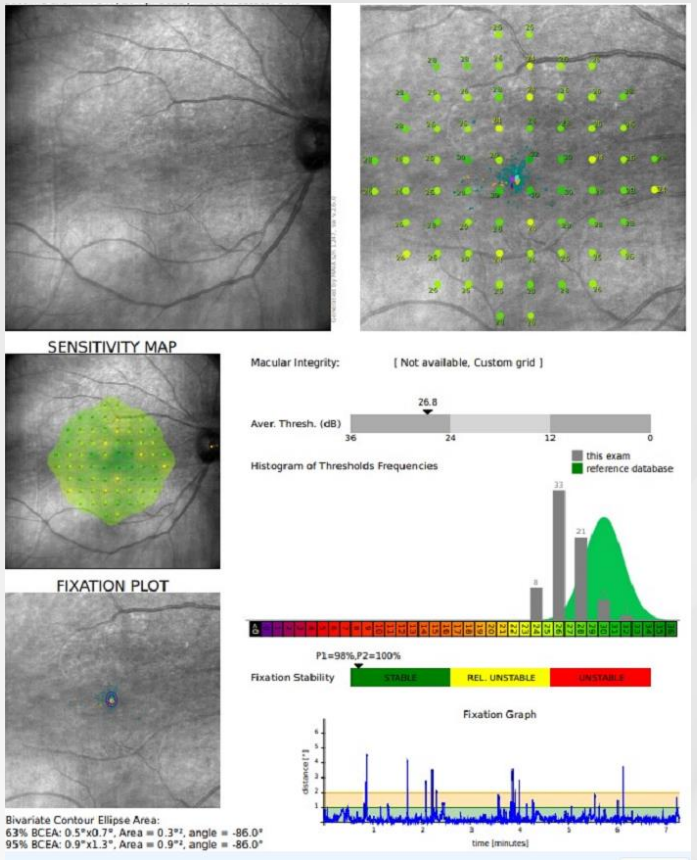
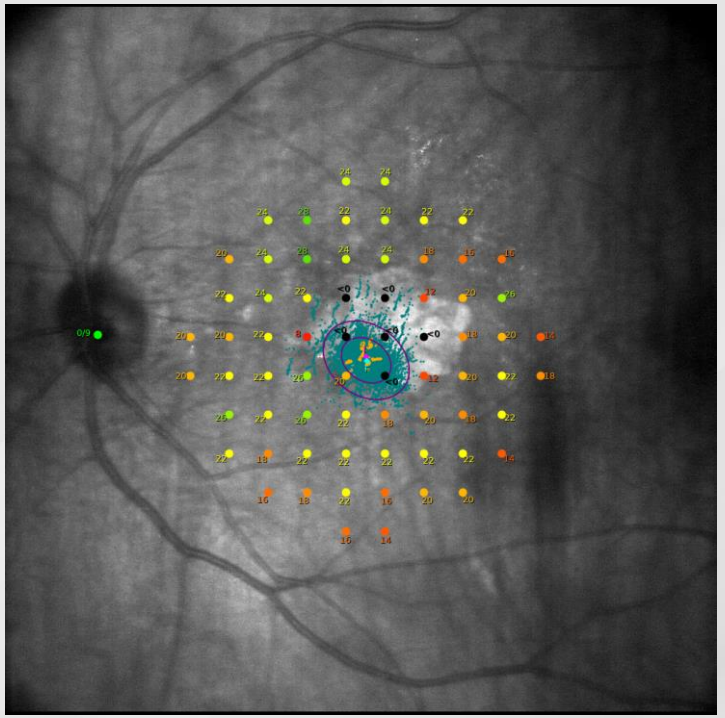
Intermediate AMD



Advanced AMD



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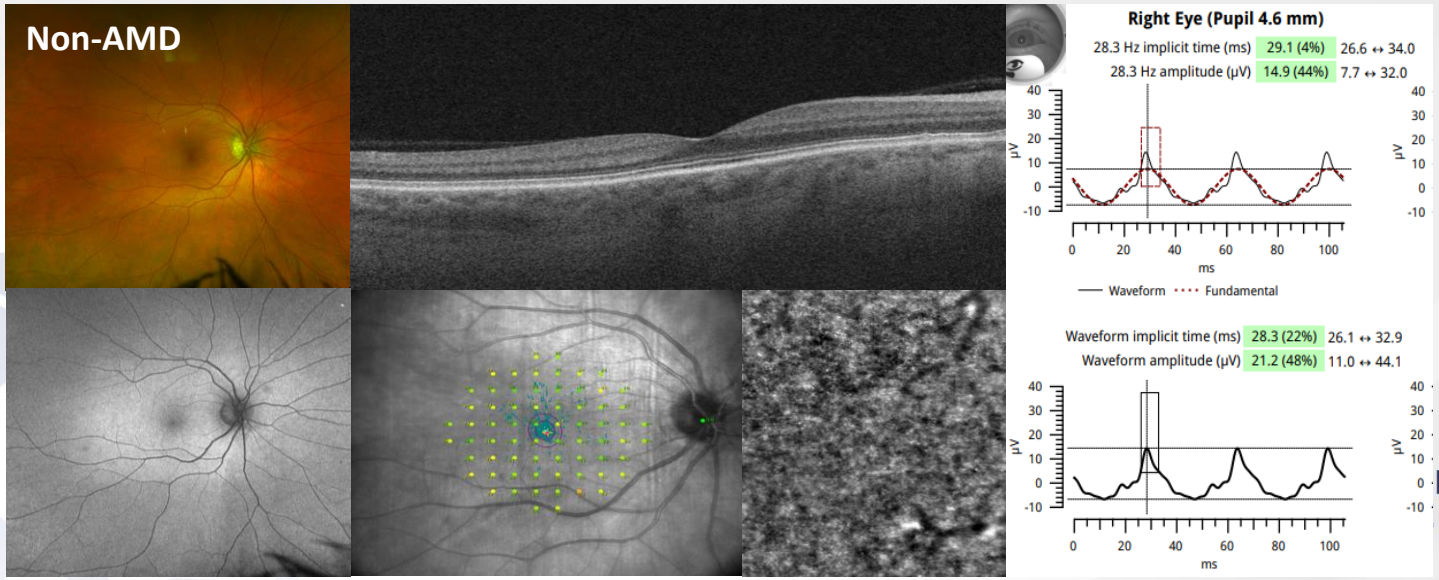
Results

Mean logMAR BCVA across all subjects was 0.29 ± 0.66, with range extending from 1.88 to -0.1

With AMD progression from non-AMD → intermediate AMD → late AMD:

- decreasing MAIA values
- decreasing ERG amplitude
- increasing ERG implicit time

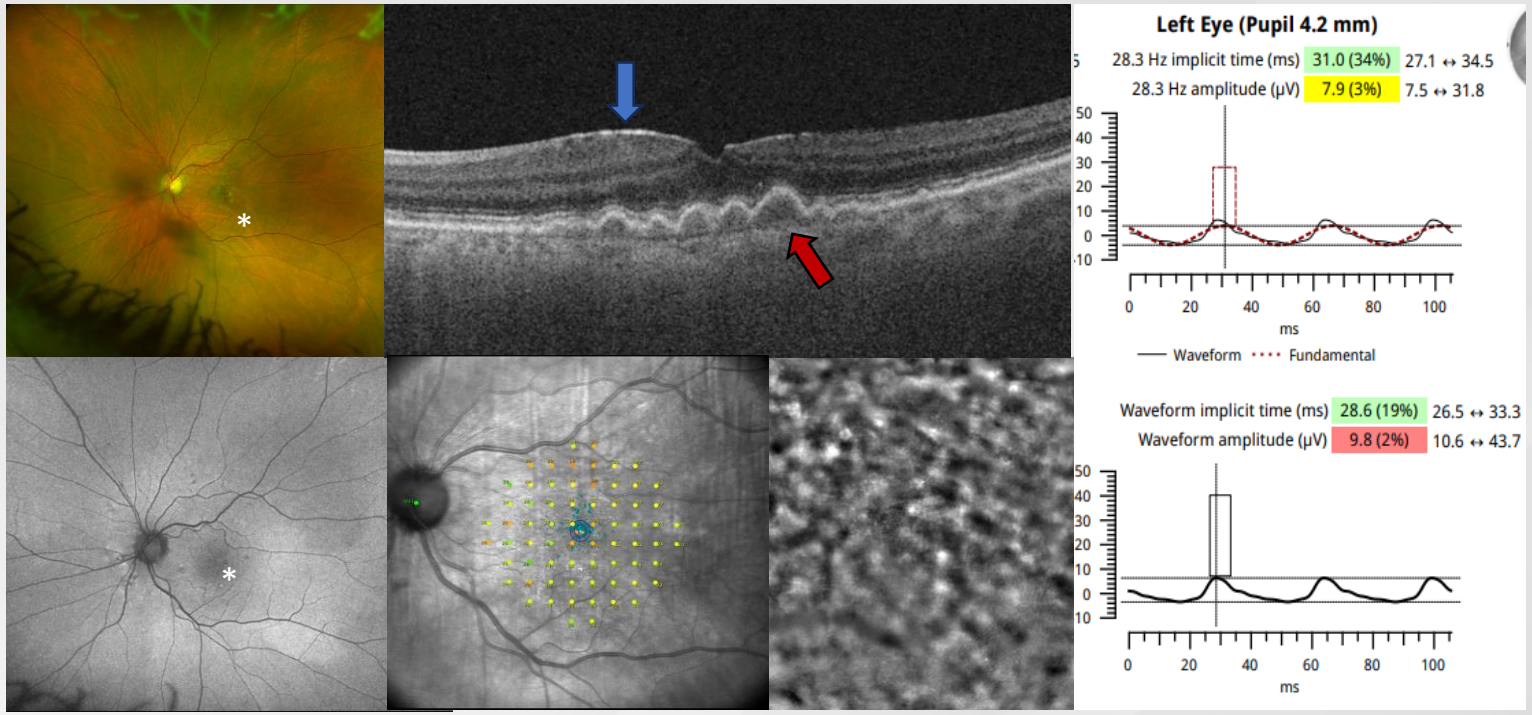
Patients	**14**
Gender (Female/Male)	8/6
Age (years)	74.06 ± 9.1 y.o.
Eyes	27
Phakic/Pseudophakic	16/11
Mean Spherical Equivalent	-0.098
Non-AMD (nº eyes)	**4**
Intermediate AMD (nº eyes)	**8**
Late AMD (nº eyes)	**15**
- **Geographic Atrophy**	**12**
- **Neovascular AMD**	**3**



	MAIA	Amplitude (μV)	Implicit time (ms)
Non-AMD	26.83 ± 1.29	21.3 ± 2.14	30.43 ± 0.97
Intermediate AMD	22.85 ± 4.67	16.88 ± 6.16	31.1 ± 1.88
Late AMD	18.71 ± 8.03	15.21 ± 7.35	33.49 ± 3.22

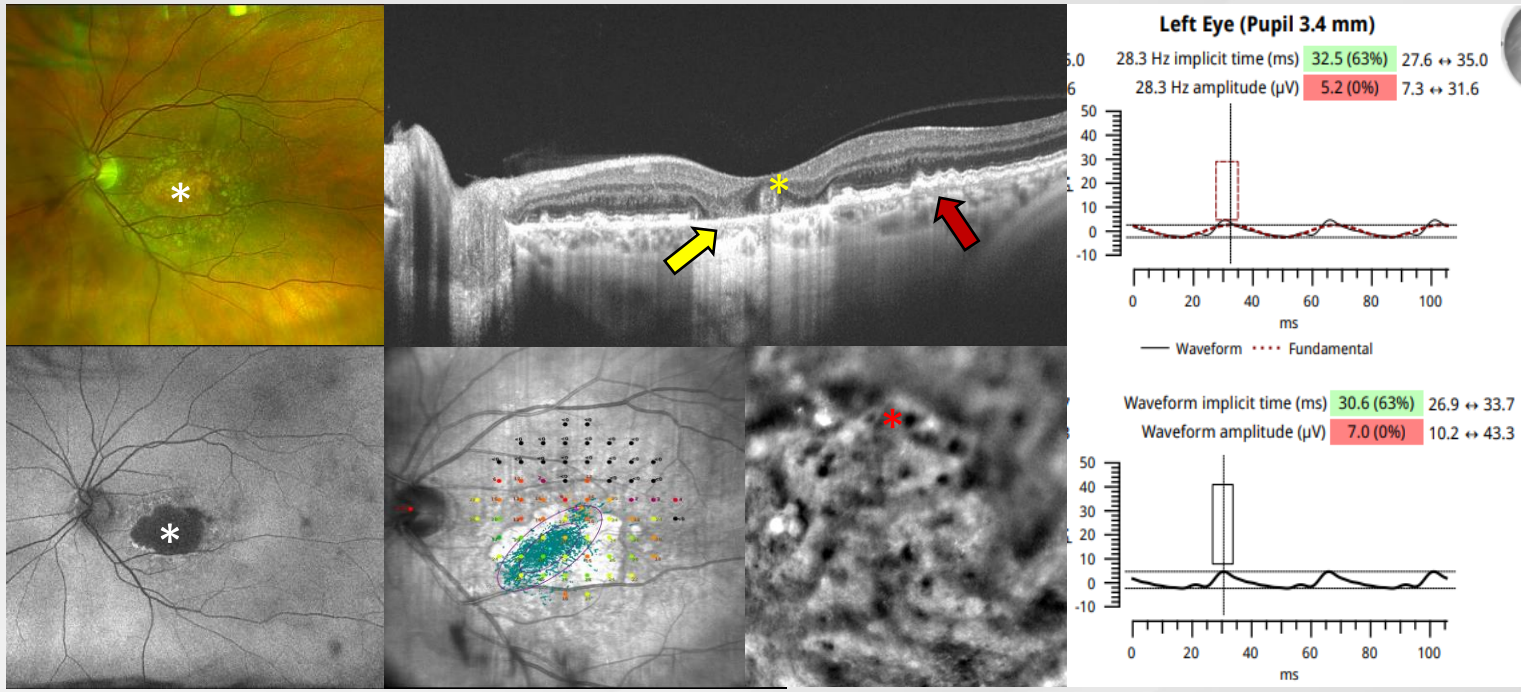
Intermediate AMD

- Drusen in the AO image:
  - Subtle variations in grayscale tones, with variable hyperreflective center
  - Surrounded by continuous or discontinuous hyporeflectivity and sometimes an incomplete dark ring
- Cone loss at macular region



Late AMD-GA

- cRORA (complete RPE and Outer Retina Atrophy) area was circumnavigated with “Draw Region” in the SD-OCT IR image
- Microperimetry associated with worse fixation patterns and retinal sensitivity deterioration
- Severe cone loss mosaic in the AO image and atrophy’s edge (red asterisk)



Multi-wavelength UWF imaging

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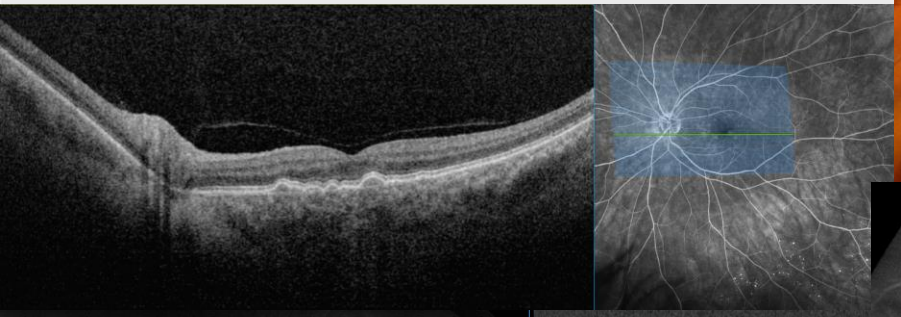
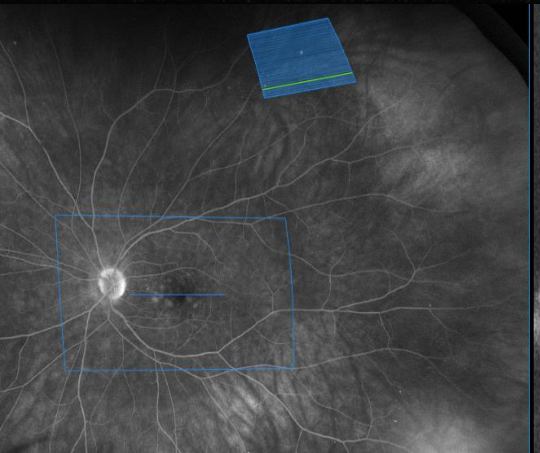
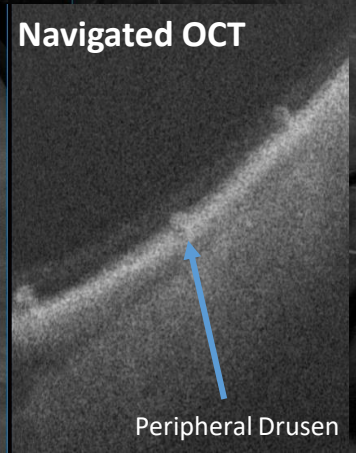
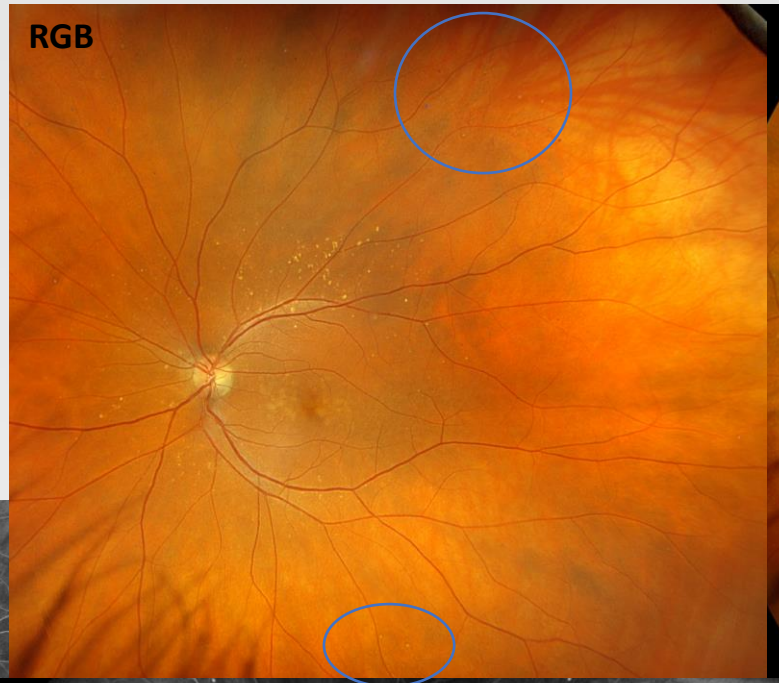
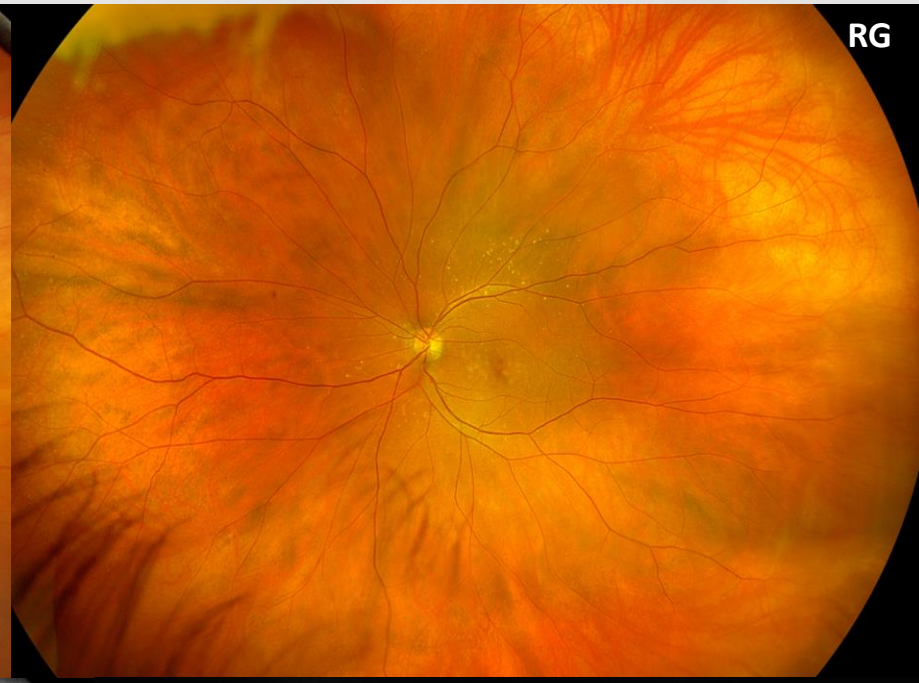
- Central or peripheral abnormalities in 26/27 eyes (96.30 %)
- The distribution of peripheral drusen varied among patients

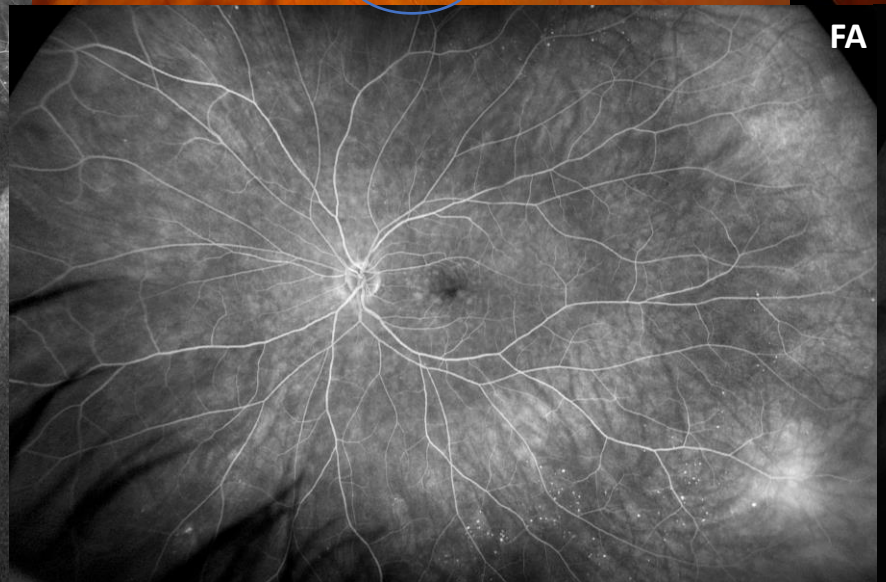


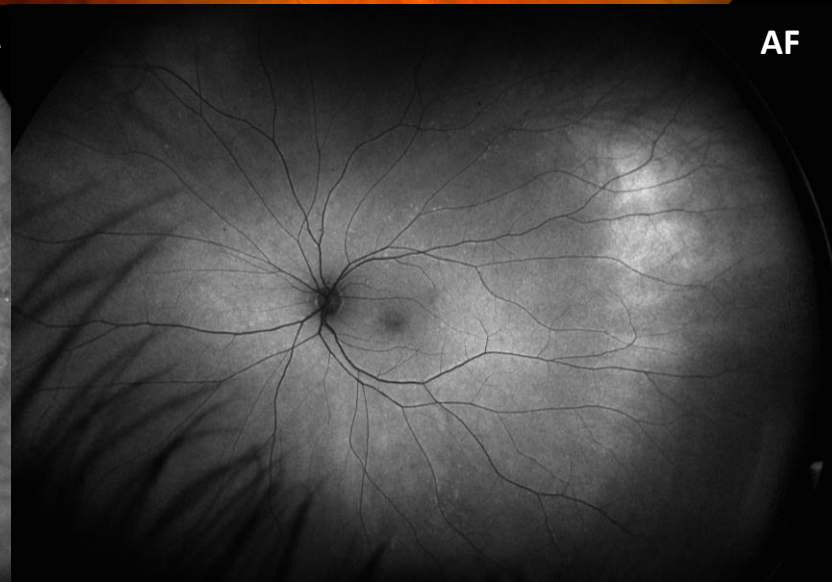












Discussion

- Prevalence of macular OCT biomarkers increases as AMD advances
- Navigated and peripheral SS-OCT may be useful to
  - Detect and characterize peripheral drusen (often in temporal region)
  - Novel biomarkers
  - Classification AMD patients according to drusen presence, size, shape and distribution
- AO (Adaptive Optics):
  - Early diagnosis of the disease, where traditional imaging techniques may fail
  - Selection of specific retinal areas allows to monitor the progression of GA over time

Discussion

- Microperimetry:
  - Progression of AMD was associated with worse fixation patterns and retinal sensitivity deterioration
  - Deterioration precedes fundus visible changes
- **Portable ERG** was a valuable, rapid tool to detect the different stages of AMD:
  - Implicit time increased, and the amplitude decreased as the disease progressed to late AMD
  - Provides information of the whole retina rather than specific areas
  - Anticipate structural damage
  - Can be useful to personalize AMD treatment for photobiomodulation or gene therapy

Conclusion

- As AMD prevalence is increasing, a standardized screening for early diagnosis is necessary
- Multimodal imaging approach may help in improve the monitoring of AMD progression
- Better understanding of AMD thanks to UWF imaging, AO, Microperimetry and ERG may lead to
  - Better understanding of the pathophysiology
  - Biomarkers for disease progression in AMD classification
  - Personalize treatment

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  Clinic Administrator
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  Clinic Administrator
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  Technology Manager
- Florencia Villar
  Clinic Manager
- Prof. Will Ayliffe
  Inflammatory Diseases
- Prof. Susan Downes
  Inherited Retinal Diseases

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