



The young side of
LYMPHOMA

gli under 40 a confronto

Milano, 14-15 aprile 2023

**Linfoma Vitreoretinico:
il punto di vista dell'oculista**

Matteo Menean

*IRCCS Ospedale San Raffaele
Ophthalmology Department, Chairman Prof. F. Bandello*

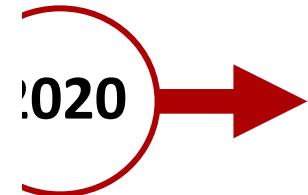
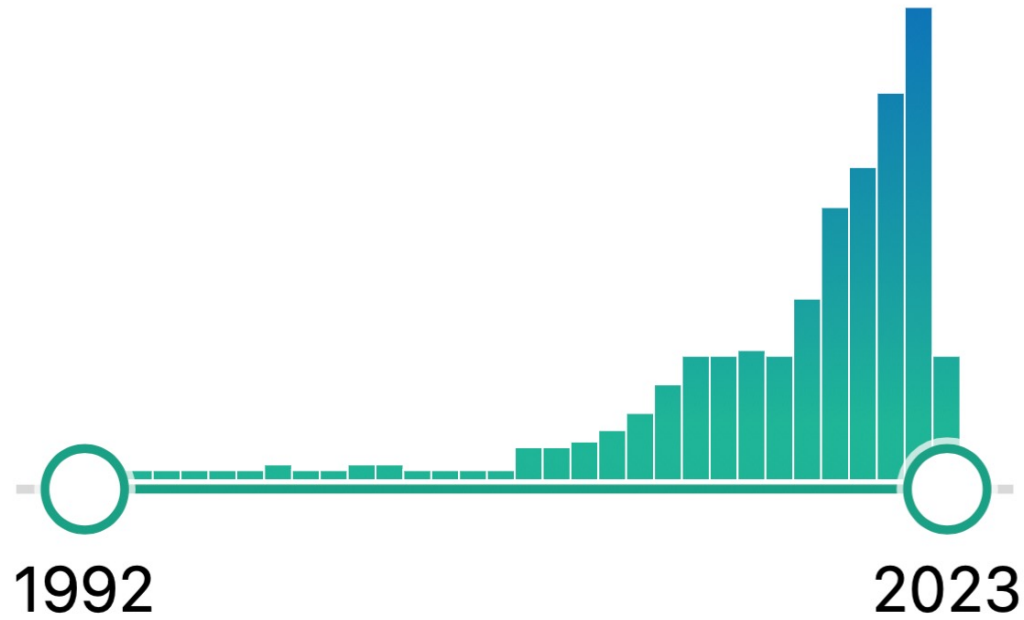


Disclosures of Name Surname

NO RELEVANT FINANCIAL DISCLOSURES

Vitreoretinal Lymphoma

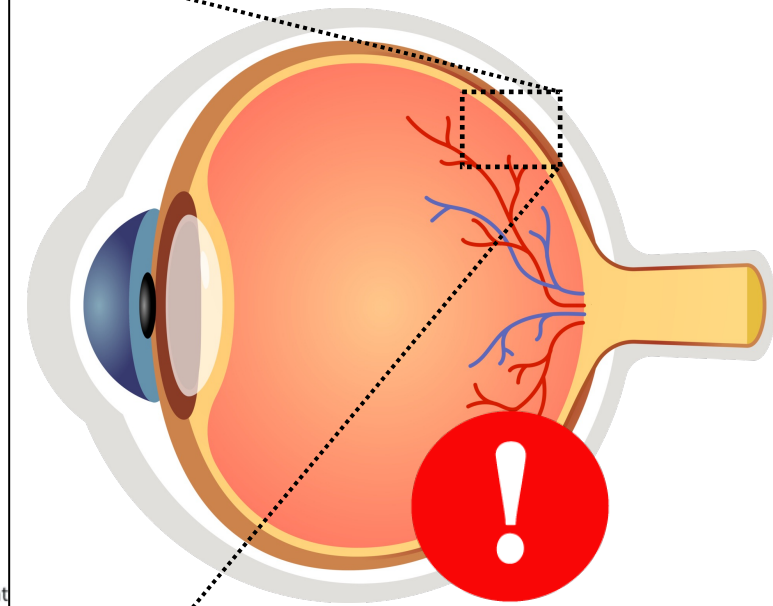
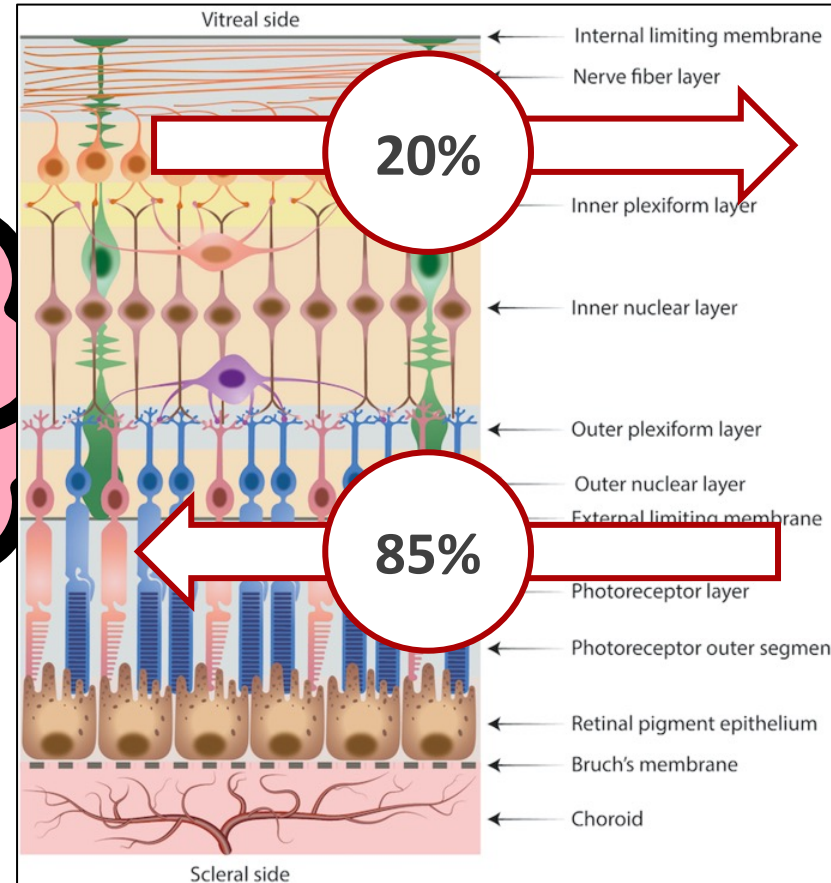
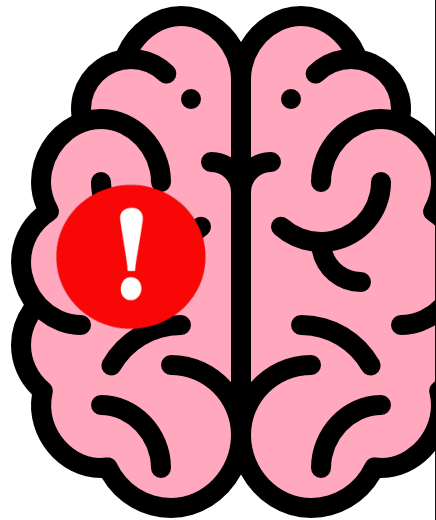
High grade
Clinical
lymphoma

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ma is a **variant of PCNSL**
a and/or the vitreous.

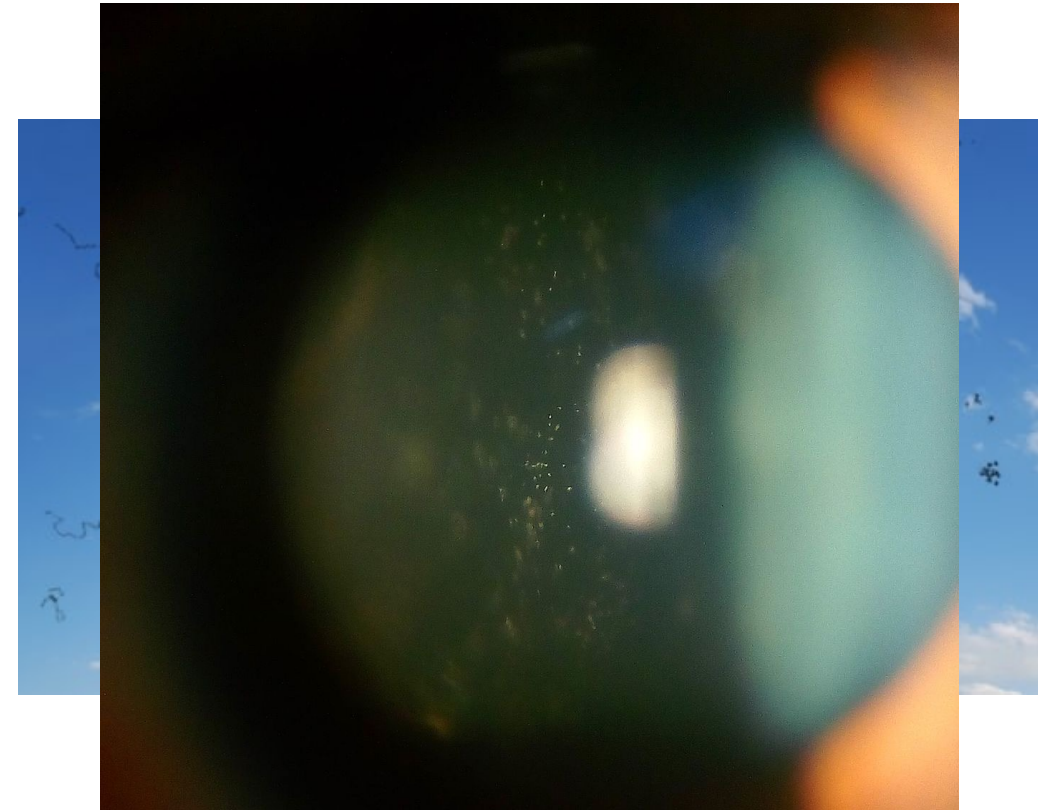
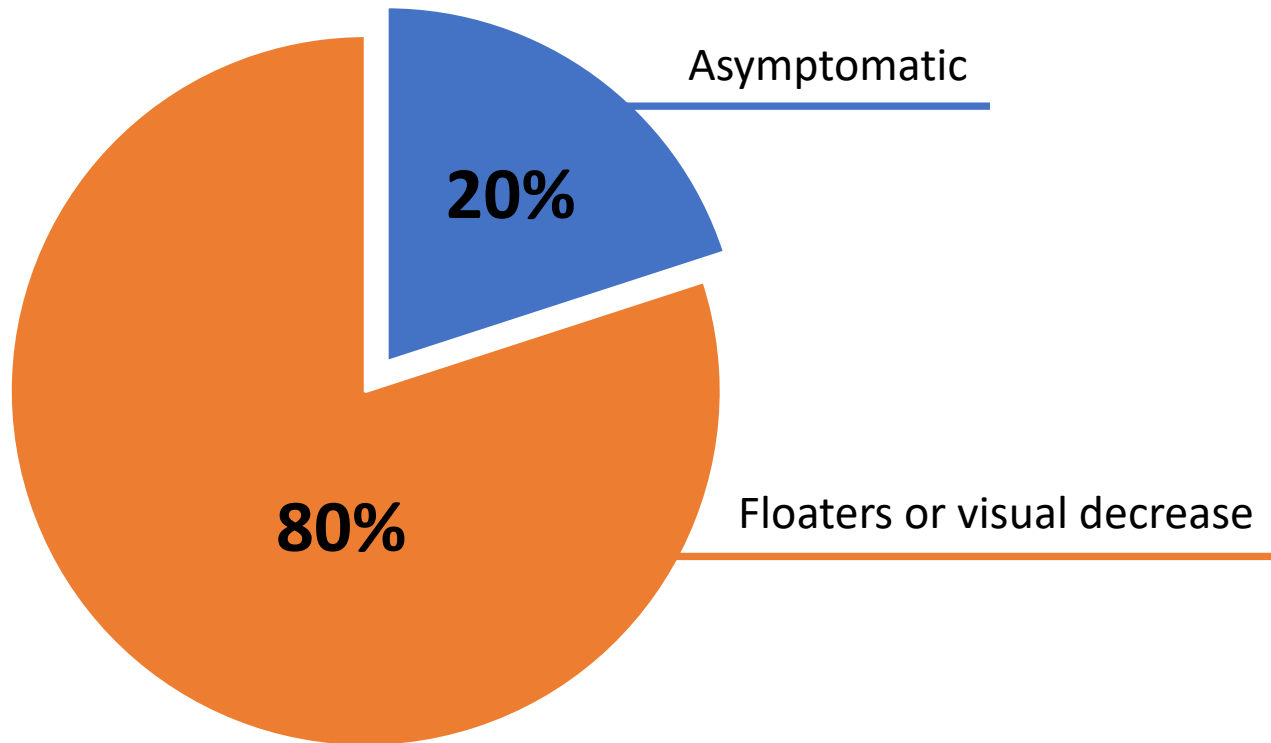
Vitreoretinal Lymphoma. Cancers (Basel). 2021

Vitreoretinal Lymphoma



Visual Symptoms

95% BILATERAL



The background of the slide is a close-up photograph of a human eye, showing the iris and pupil. The image is overlaid with a semi-transparent green and yellow color gradient, which is more prominent on the right side. The text is centered in the middle of the image.

VITREORETINAL LYMPHOMA (VRL)
PRESENTS AS UVEITIS
(MASQUERADE SYNDROME)

Ocular Features

Uveitis Masquerade Syndromes

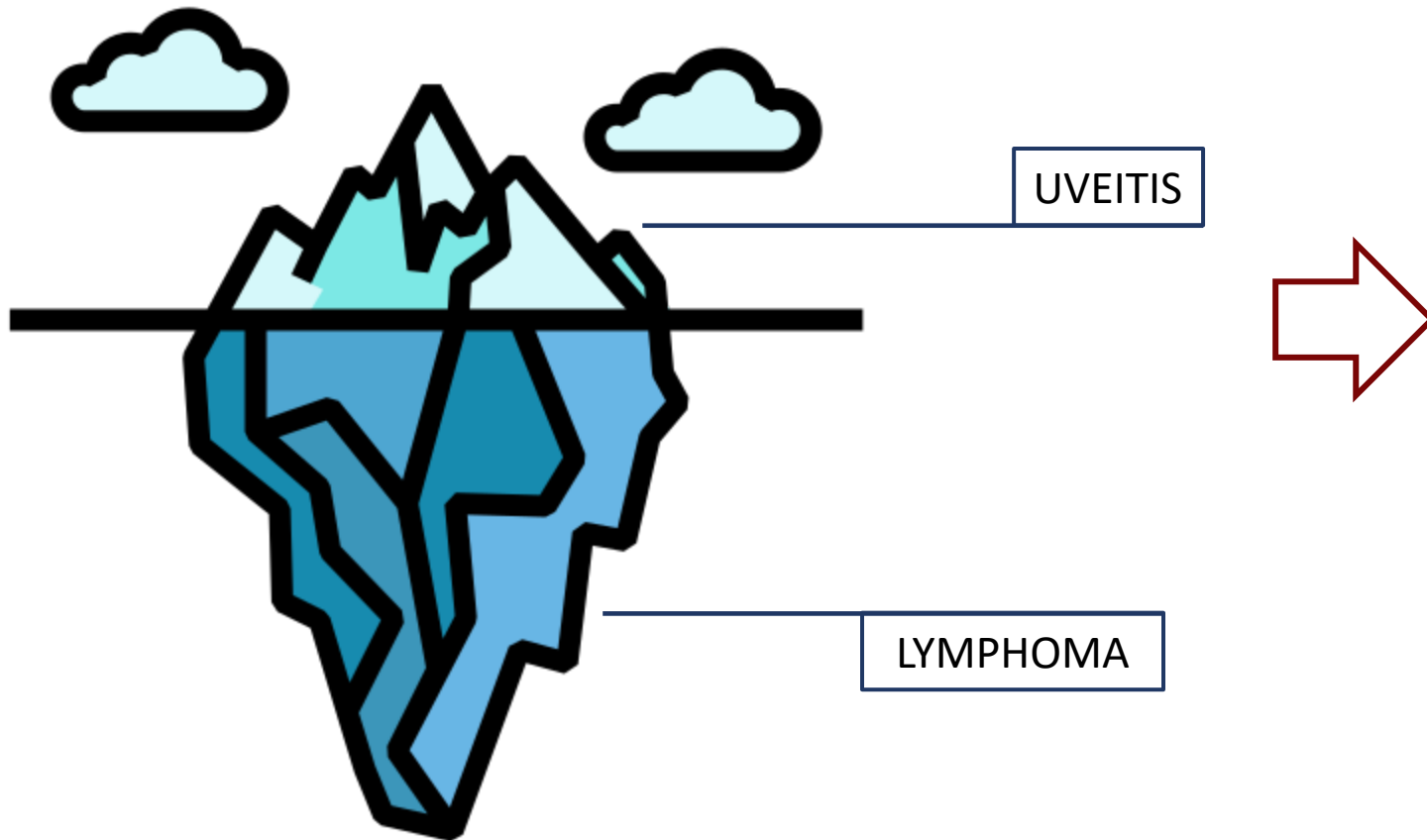
Aniki Rothova, MD, PhD, Francien Ooijman, MD, Frank Kerkhoff, MD, Allegonda Van der Lelij, MD, PhD, Henk M. Lokhorst, MD, PhD

Ophthalmology 2001;108:386–399 © 2001 by the American Academy of Ophthalmology.

- 828 consecutive cases of uveitis
- 5.0% Masquerade Syndrome
- 2.5% Neoplastic Masquerade Syndrome

Ocular Features

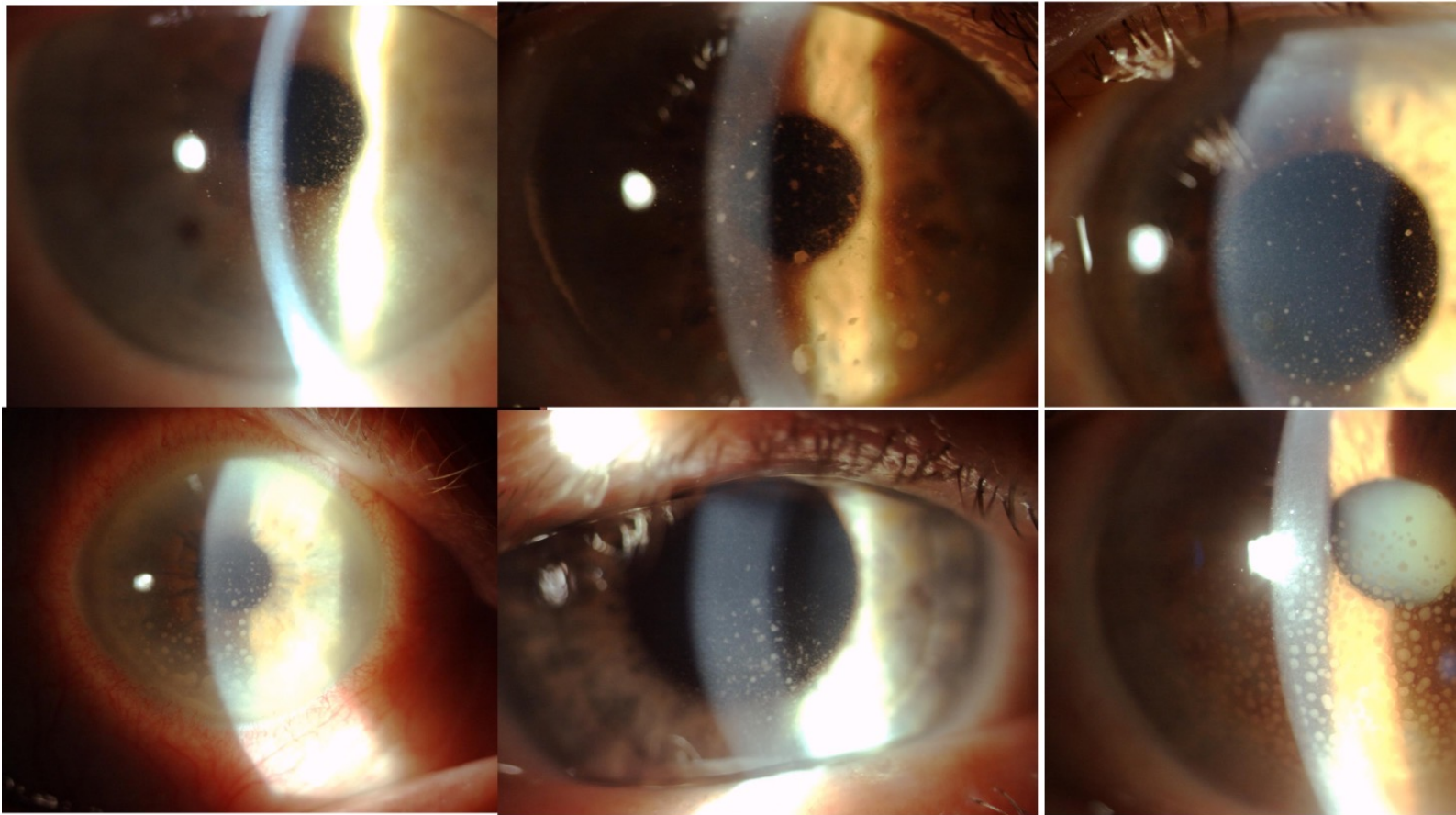
MASQUERADE SYNDROME



- Diagnostic Challenge
- Diagnostic Delay
- Referral Centers

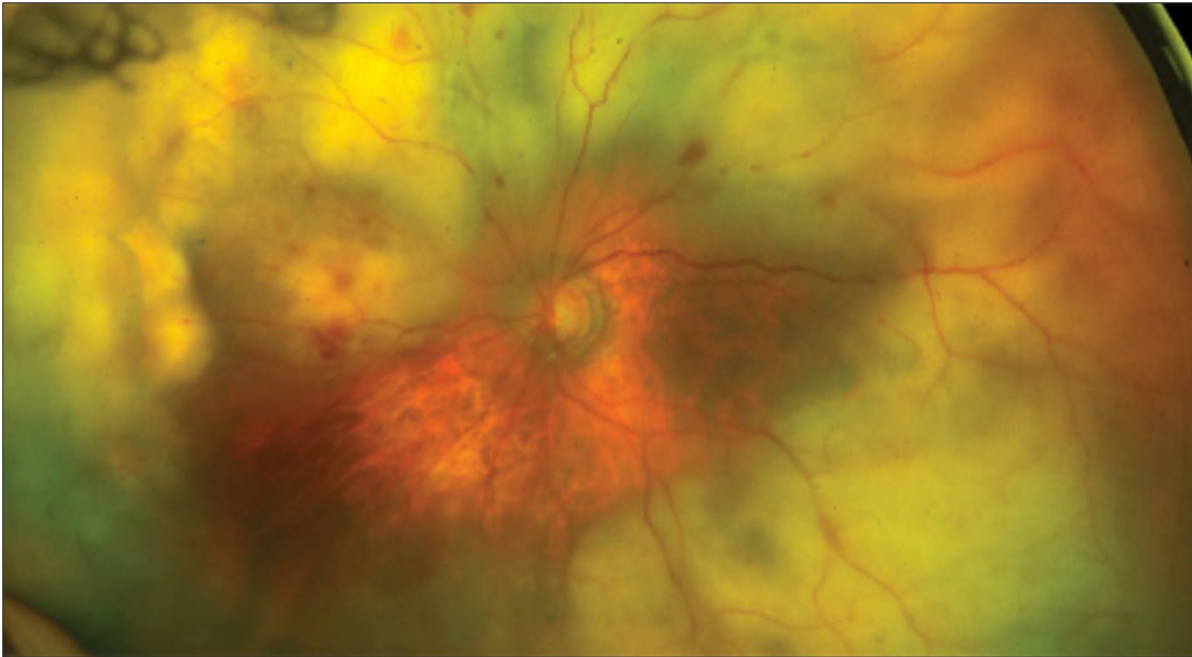
Anterior Segment

Anterior Uveitis

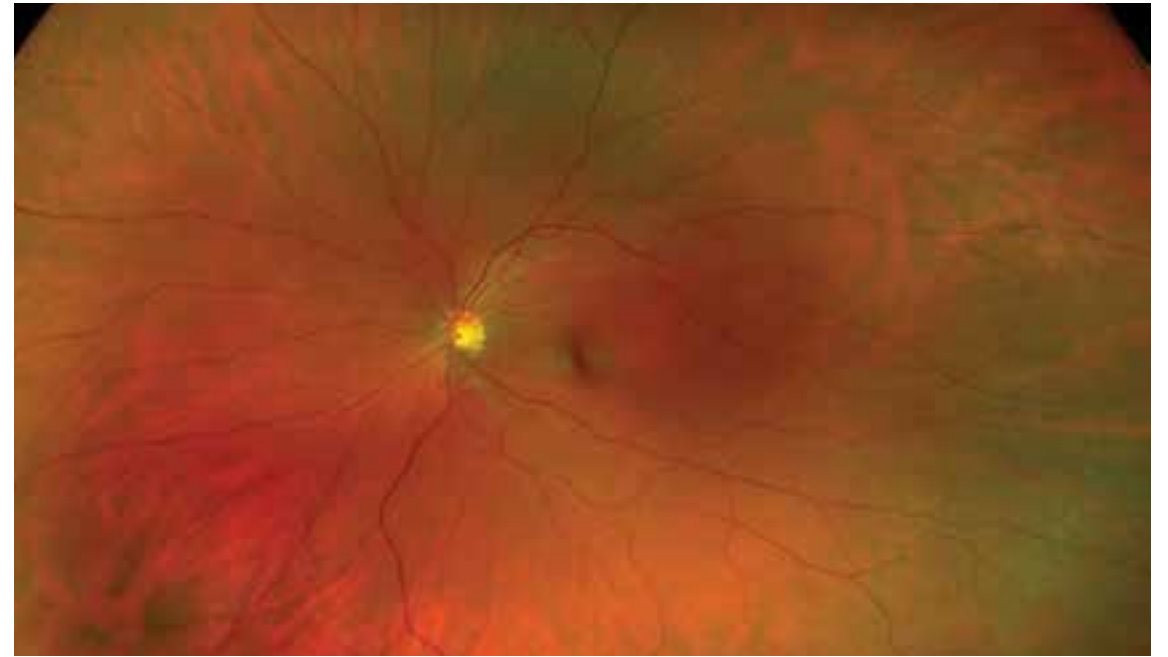


Ocular Features

Pathologic

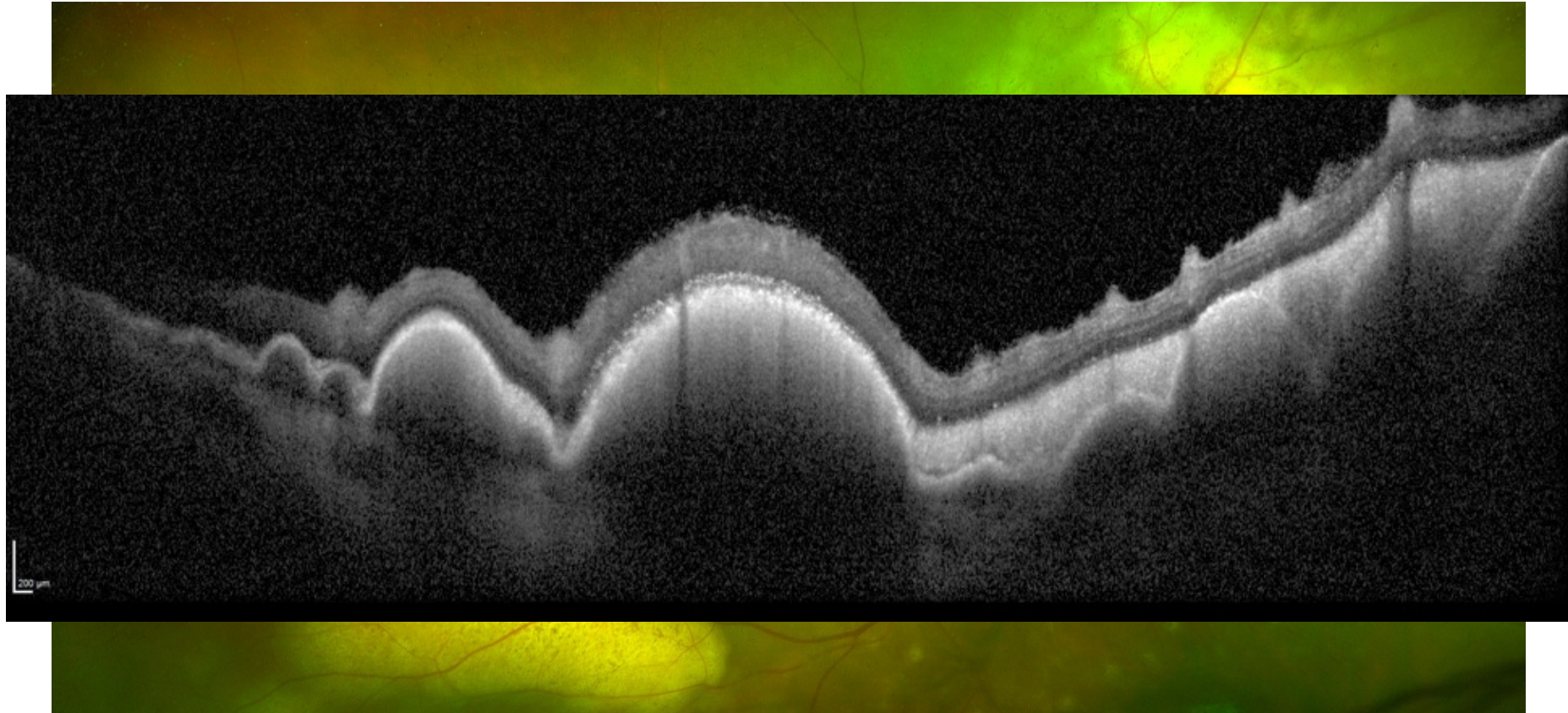


Normal



Retinal Infiltration

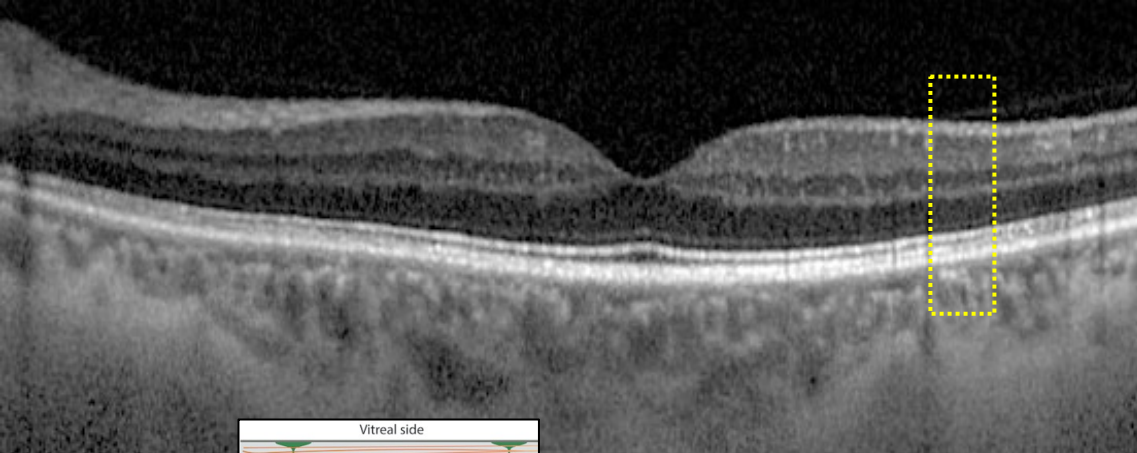
Ocular Features



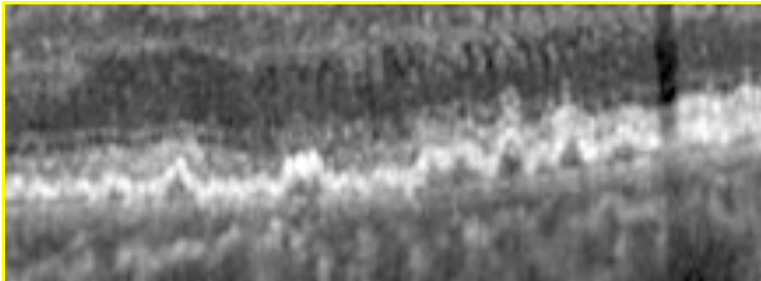
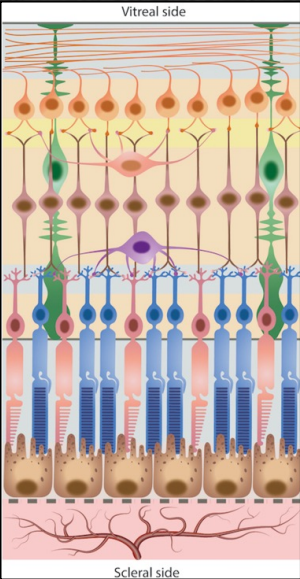
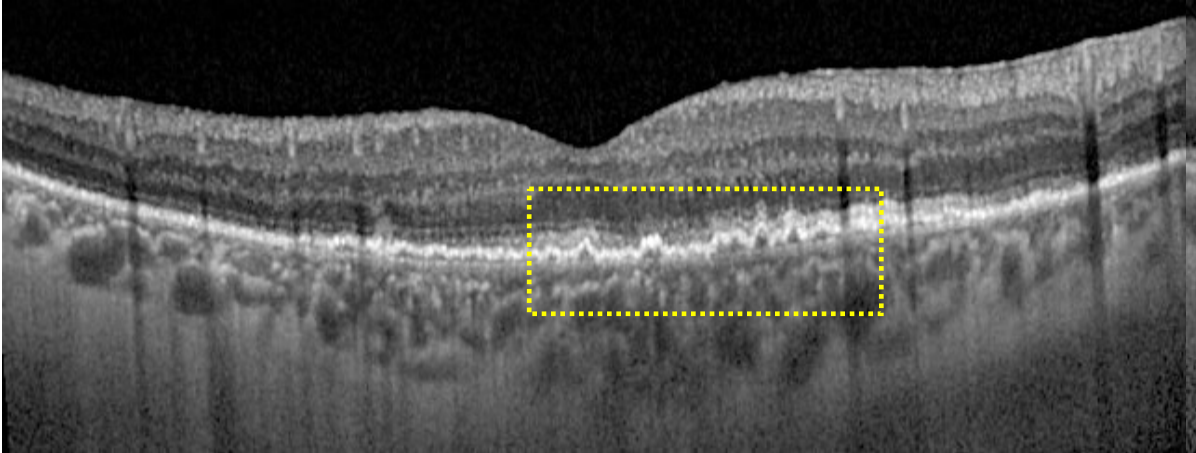
Multiple Pigment Epithelium
Detachments

Ocular Features

Normal



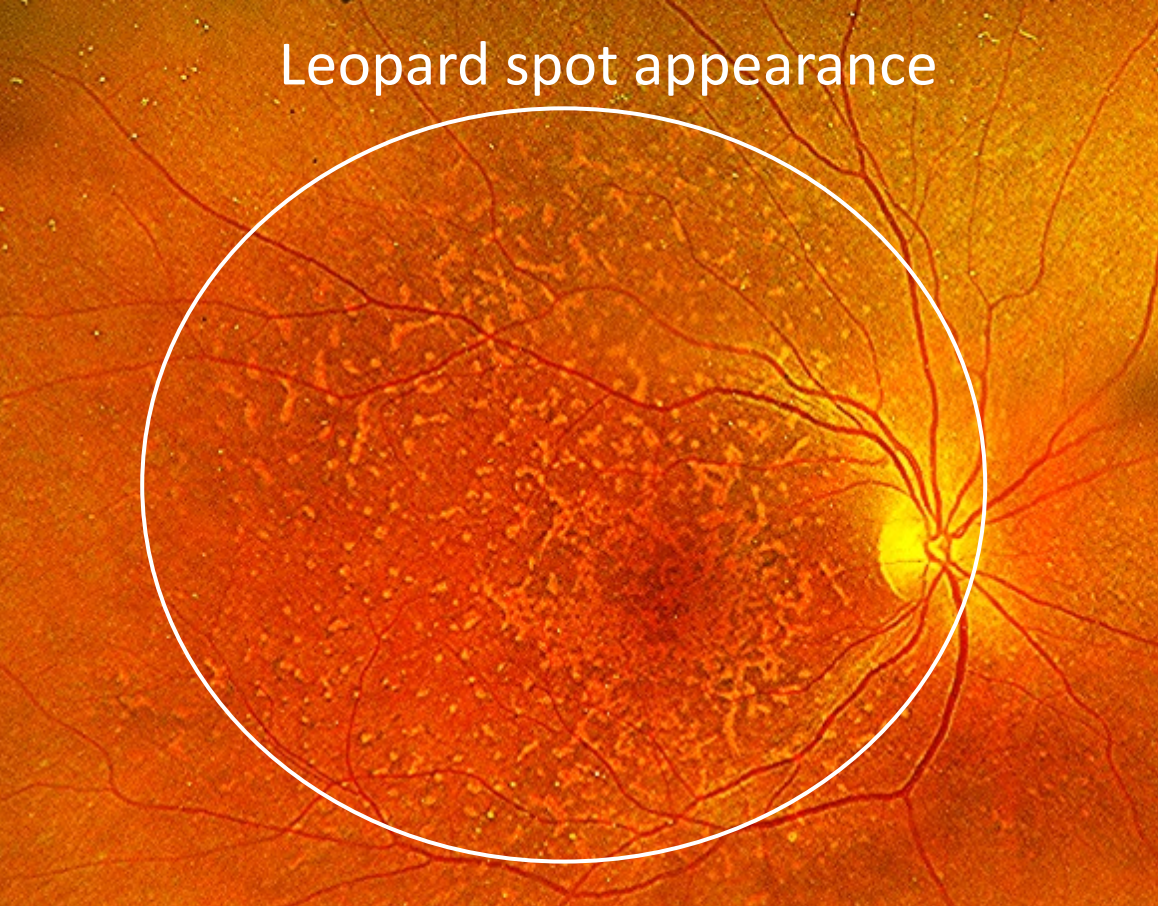
Pathologic



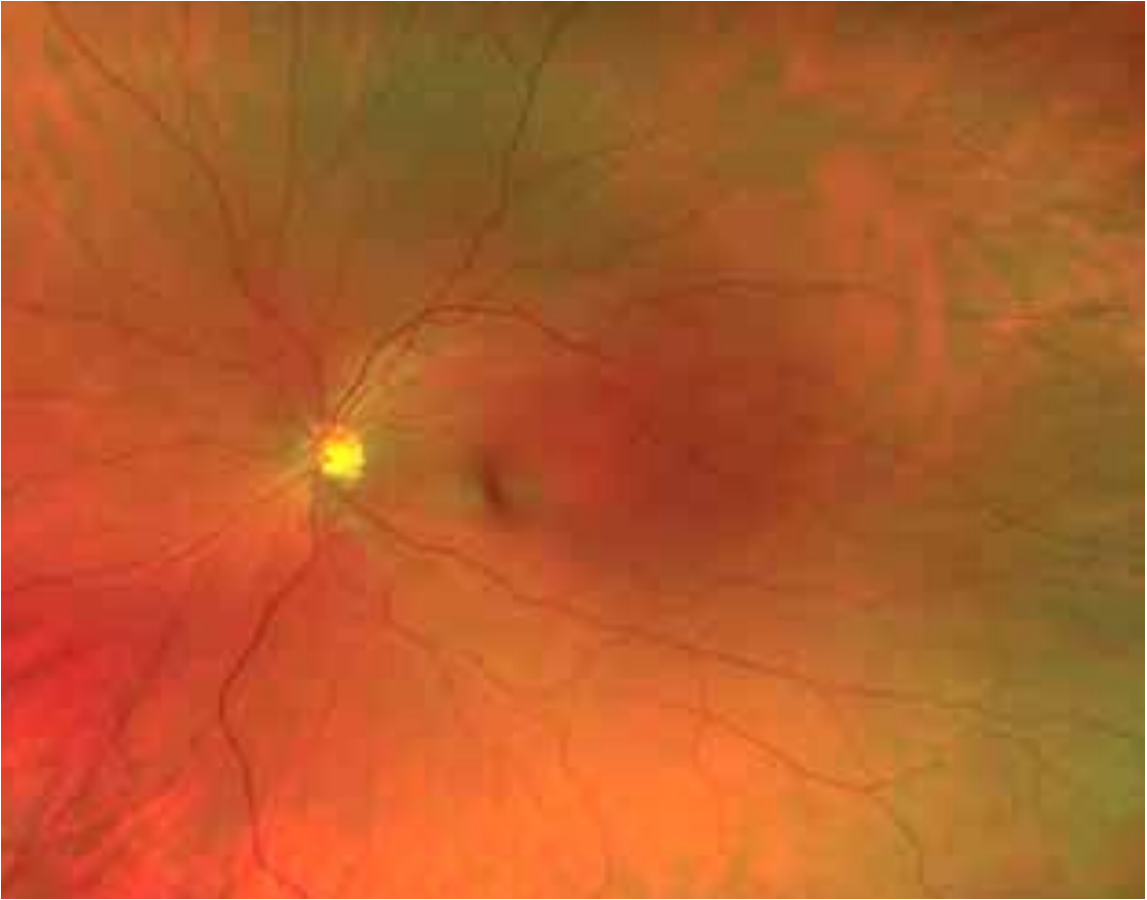
Maculopathy like

Ocular Features

Pathologic

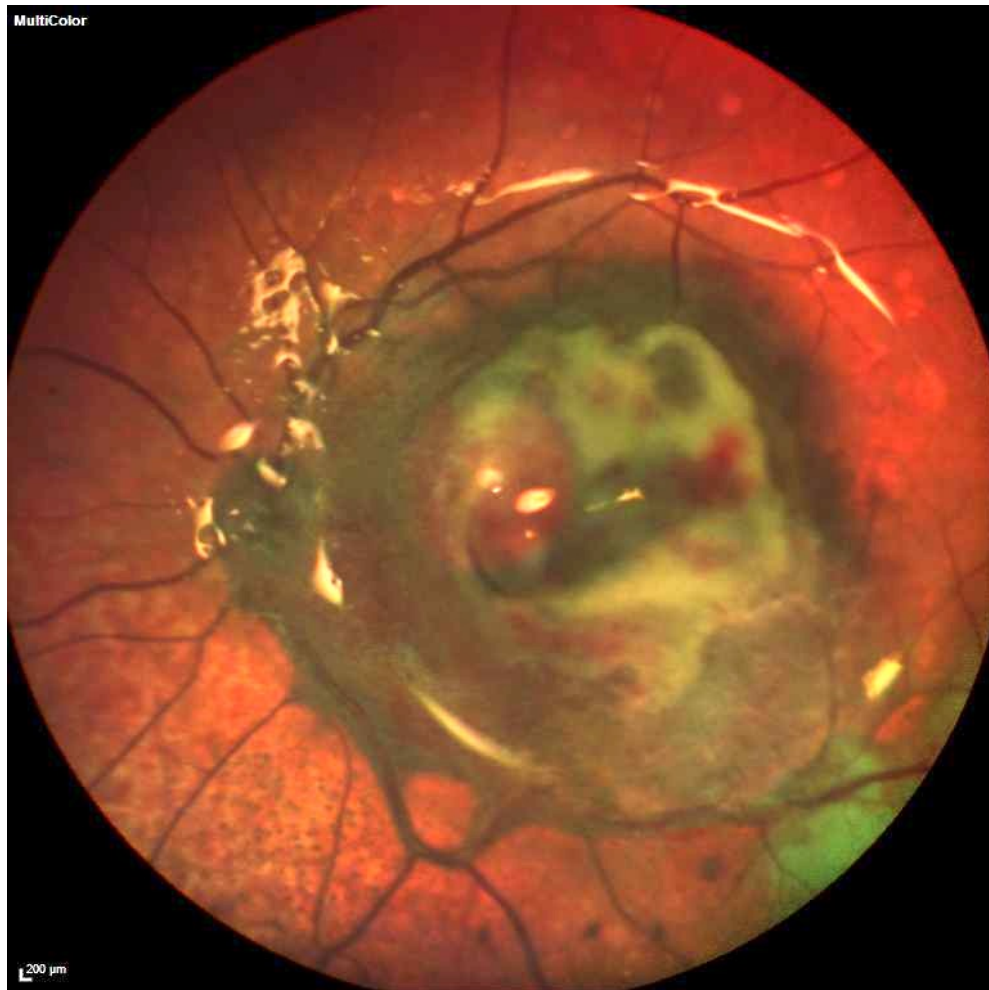


Normal



Ocular Features

Pathologic



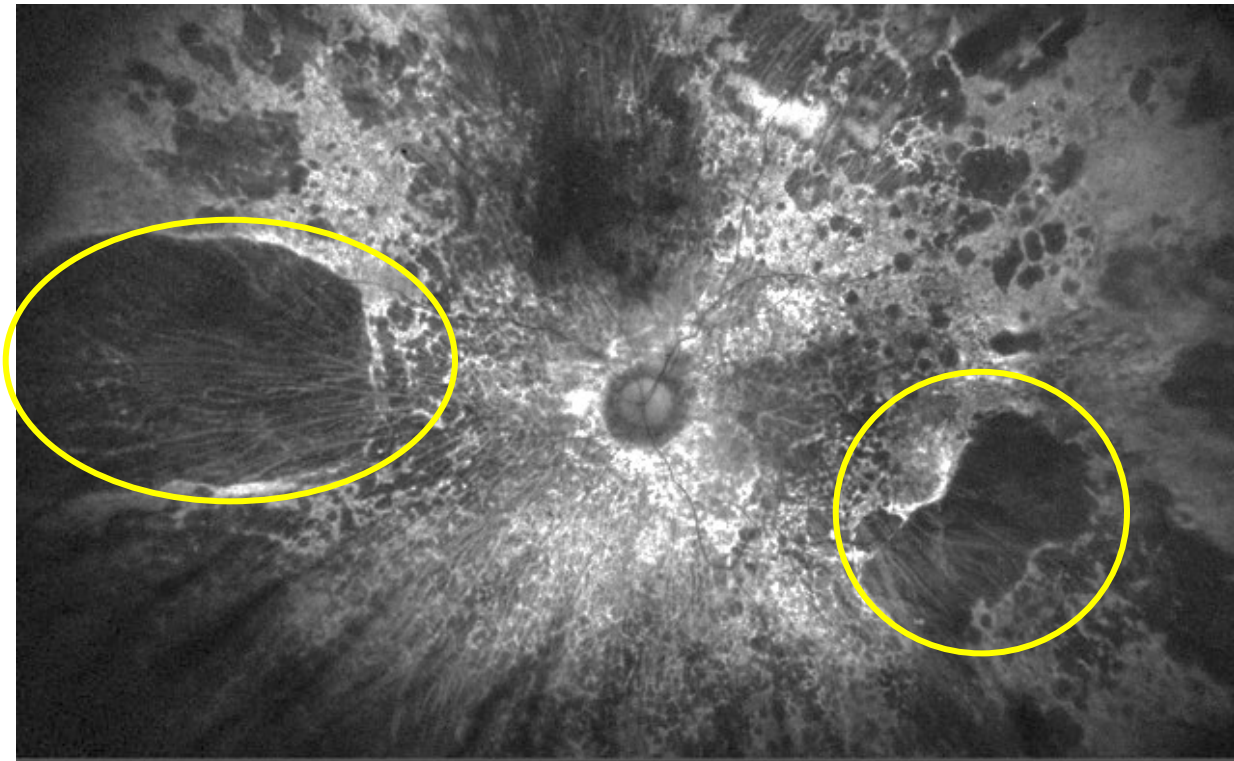
Normal



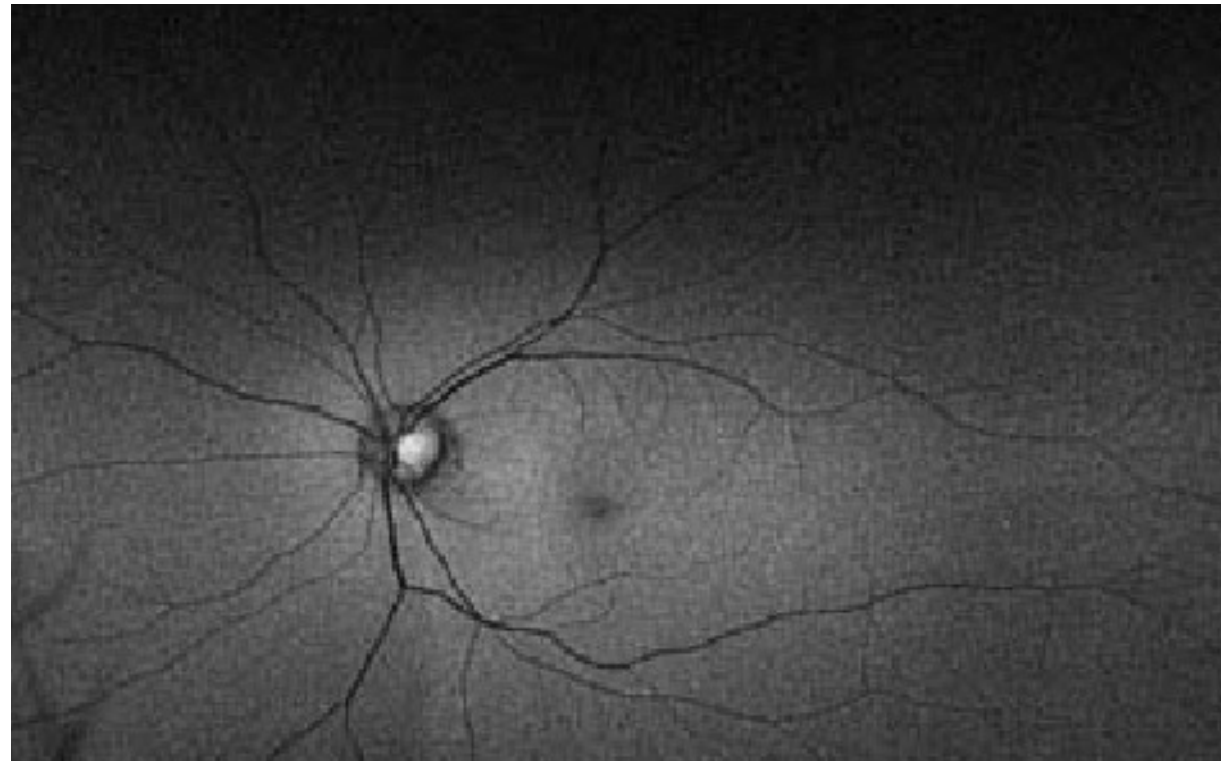
Hemorrhagic mass-like
appearance

Ocular Features

Pathologic



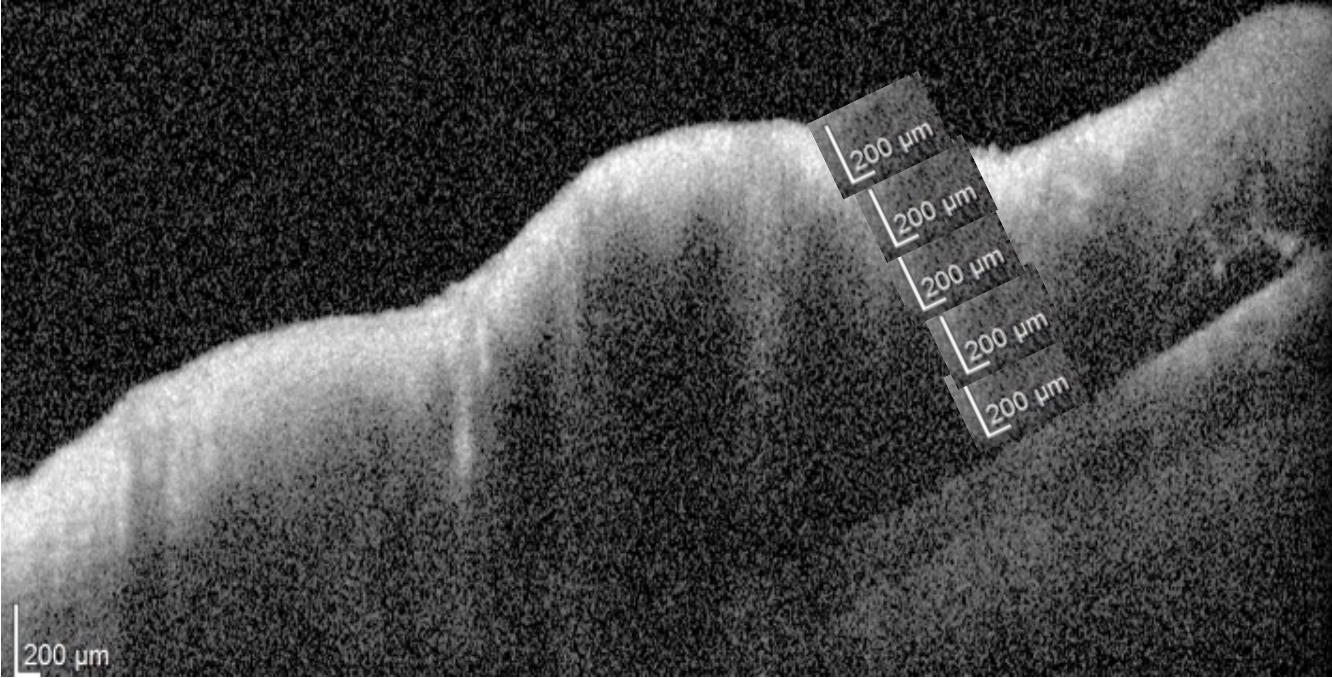
Normal



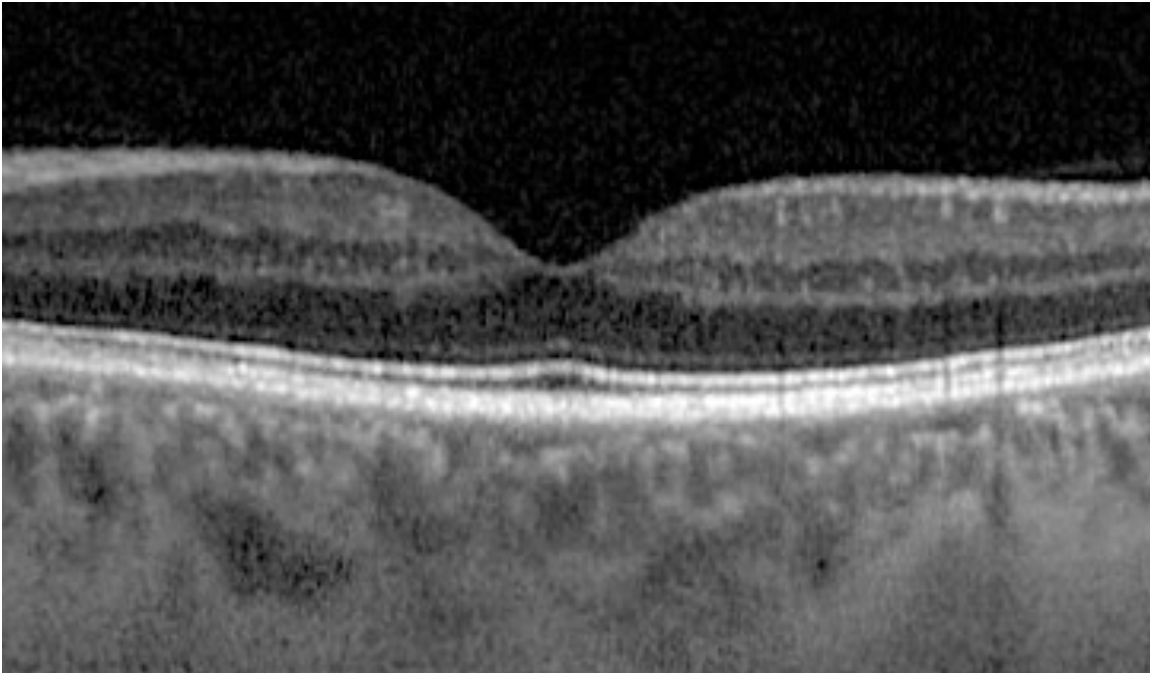
Wide-spread Atrophy

Ocular Features

Pathologic



Normal



Retinitis-like Appearance

WHEN SUSPECT E VITREORETINAL LYMPHOMA?

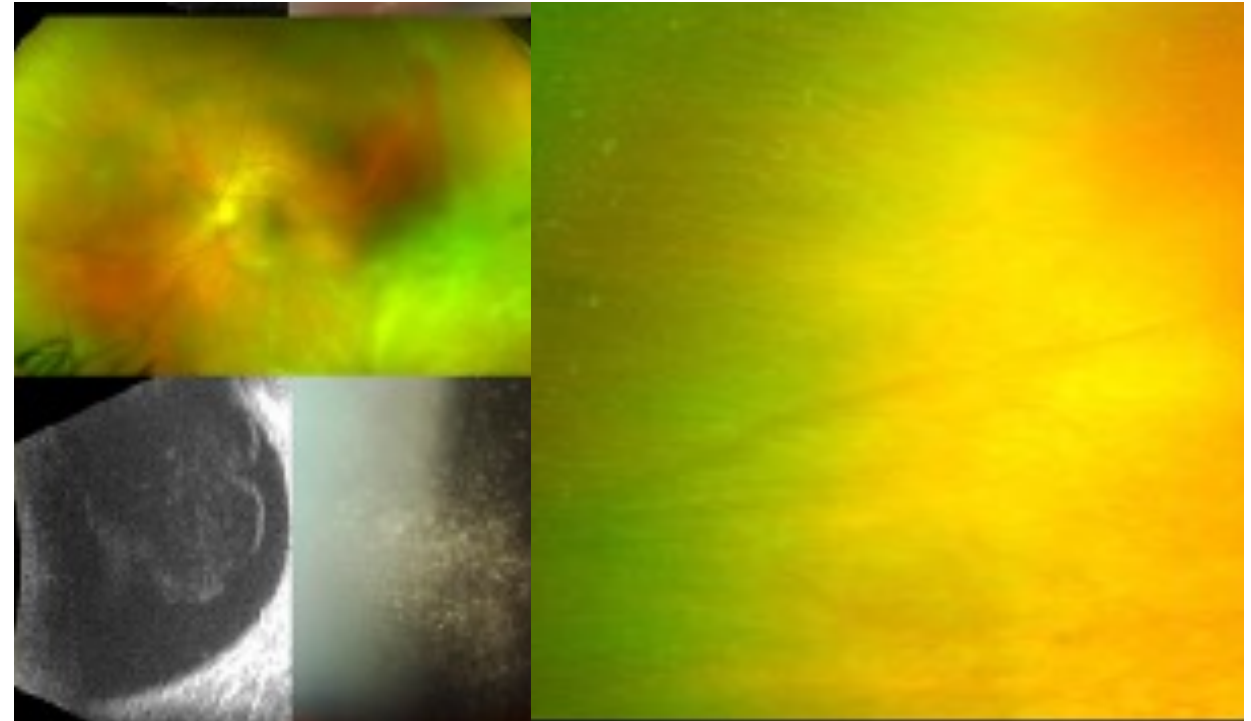
Age > 60 yrs-old

Chronic uveitis

Bilateral in 85%

Poor response to steroids

Suggestive ocular manifestations



Takhar JS et al. Primary vitreoretinal lymphoma: empowering our clinical suspicion.

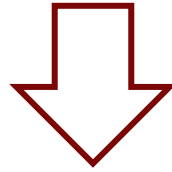
Curr Opin Ophthalmol 2019, 30:491 – 499

Kase S et al. Cancer diagnosis & prognosis 1: 69-75 (2021)

Diagnosis



CLINICAL SUSPICION



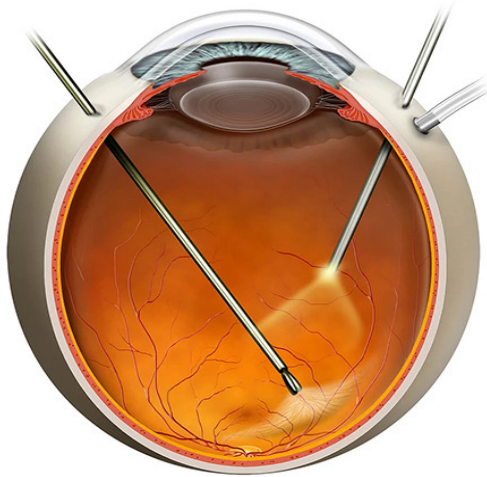
GOLD STANDARD

- **Vitreous** Cytopathology
- **Retinal** Histopathology



Low sensitivity (60-70%)

VITRECTOMY



Diagnosis

MOLECULAR ANALYSIS

A

MYD88 L265P MUTATION

MYD88 L265P MUTATION DETECTION IN THE AQUEOUS HUMOR OF PATIENTS WITH VITREORETINAL LYMPHOMA

ELISABETTA MISEROCCHI, MD,* ANDRÉS J. M. FERRERI, MD,† CHIARA GIUFFRÈ, MD,*
MARIA G. CANGI, PhD,‡ ILARIA FRANCAVIGLIA, MS,‡ TERESA CALIMERI, MD,†
MAURILIO PONZONI, MD,‡ LORENZA PECCIARINI, MS,‡ FRANCESCO M. BANDELLO, MD,*
GIULIO M. MODORATI, MD*

B

IL-6 AND IL-10 ANALYSIS

USE OF A THRESHOLD OF INTERLEUKIN-10 AND IL-10/IL-6 RATIO IN OCULAR SAMPLES FOR THE SCREENING OF VITREORETINAL LYMPHOMA

CELINE POCHAT-COTILLOUX, MD,* JACQUES BIENVENU, PhD,† ANH-MINH NGUYEN, MD,*
ROBIN OHANESSIAN, MD,‡ HERVÉ GHESQUIÈRES, PhD,§ PASCAL SÈVE, PhD,¶
LORNA GARNIER, PhD,† LAURENT KODJIKIAN, MD, PhD, FEBO***

Diagnosis

MOLECULAR ANALYSIS

A


MYD88 L265P MUTATION

- **Both aqueous and vitreous**
- **Additional Analysis**

B

IL-6 AND IL-10 ANALYSIS

 **IL-10**

 **IL-6**

Diagnosis

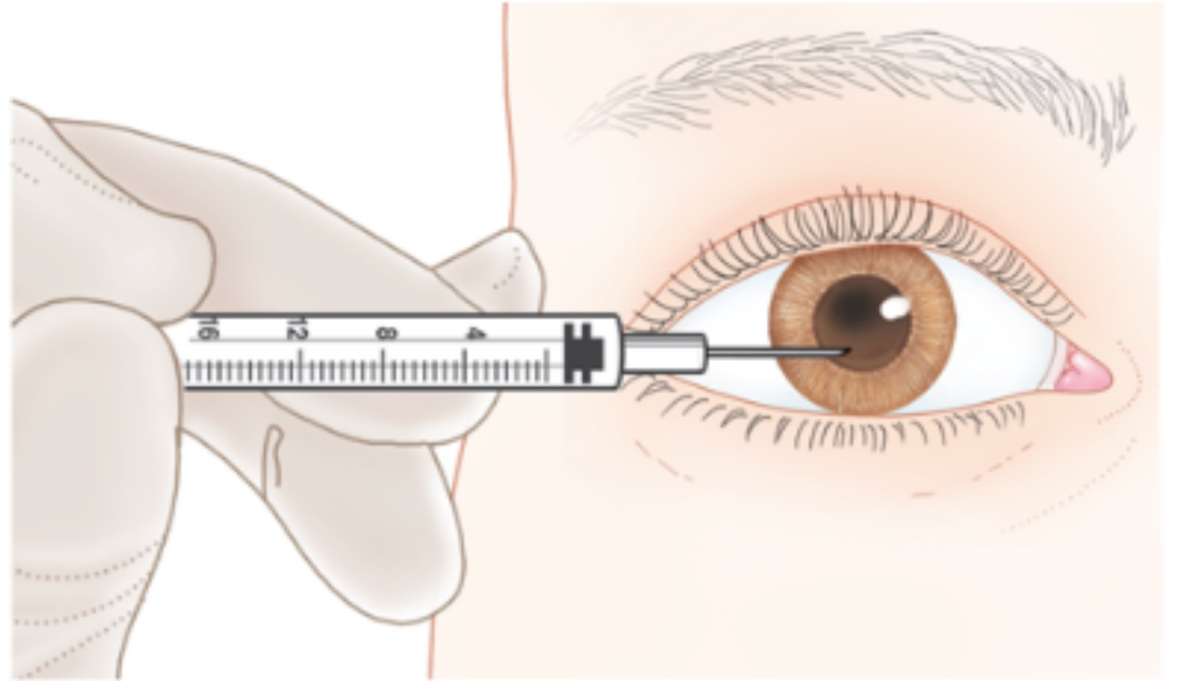
MOLECULAR ANALYSIS

A

MYD88 L265P MUTATION

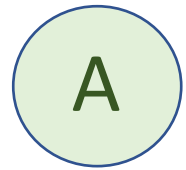
B

IL-6 AND IL-10 ANALYSIS



Diagnosis

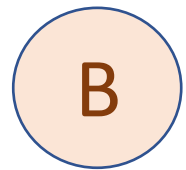
MOLECULAR ANALYSIS



MYD88 L265P MUTATION

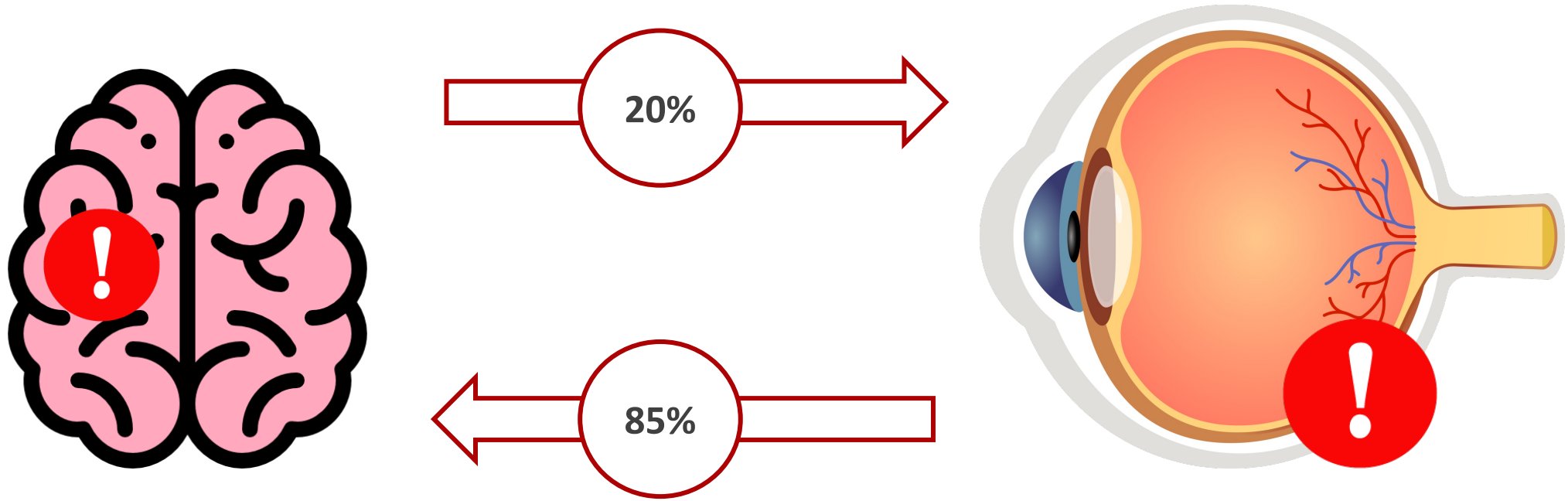


ADDITIONAL TESTS



IL-6 AND IL-10 ANALYSIS

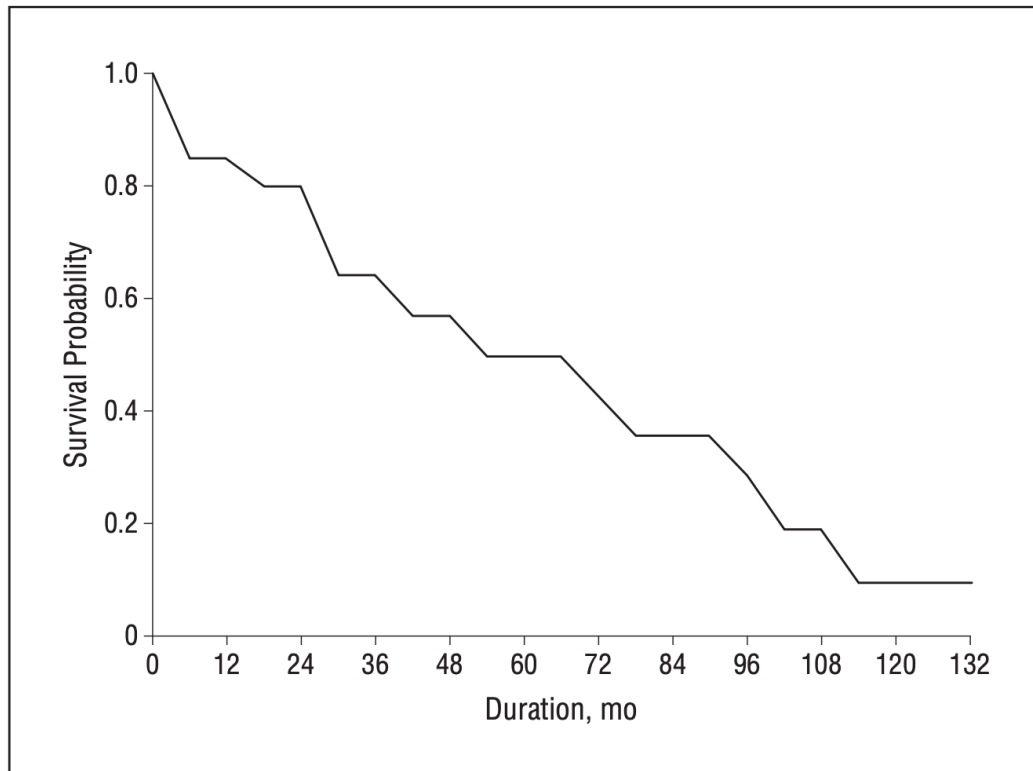
Prognosis



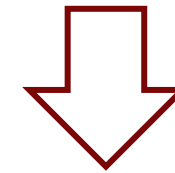
Sight and life threatening disease

Prognosis

Sight and life threatening disease



CNS INVOLVEMENT



Median survival time: **33 months**

Figure. Kaplan-Meier overall survival curve for 21 patients with vitreoretinal lymphoma.

Therapy

1

Intravitreal Injections (RTX or MTX)

2

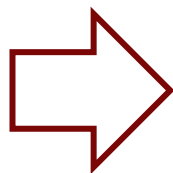
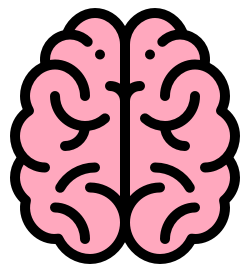
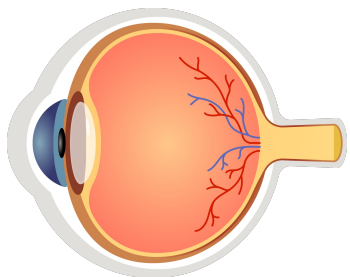
Systemic Treatment

3

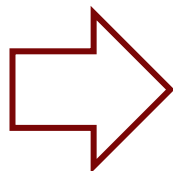
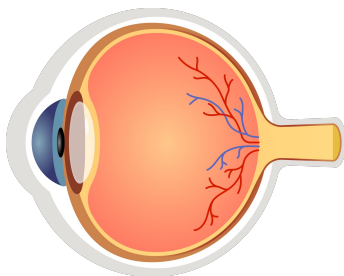
Radiation Therapy



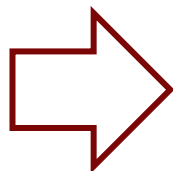
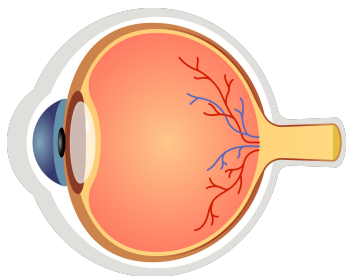
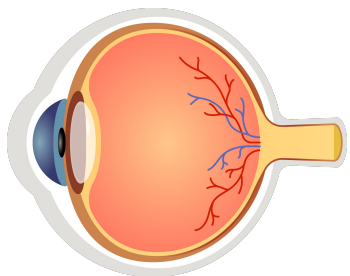
Therapy



Systemic Treatment (HD-MTX) + IVT



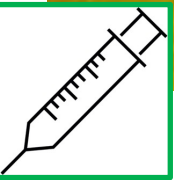
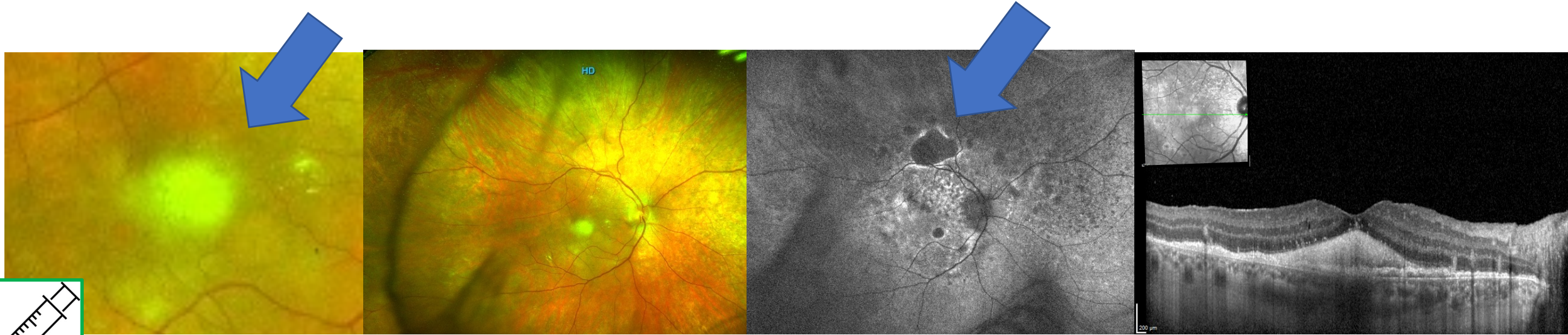
IVT or radiation therapy



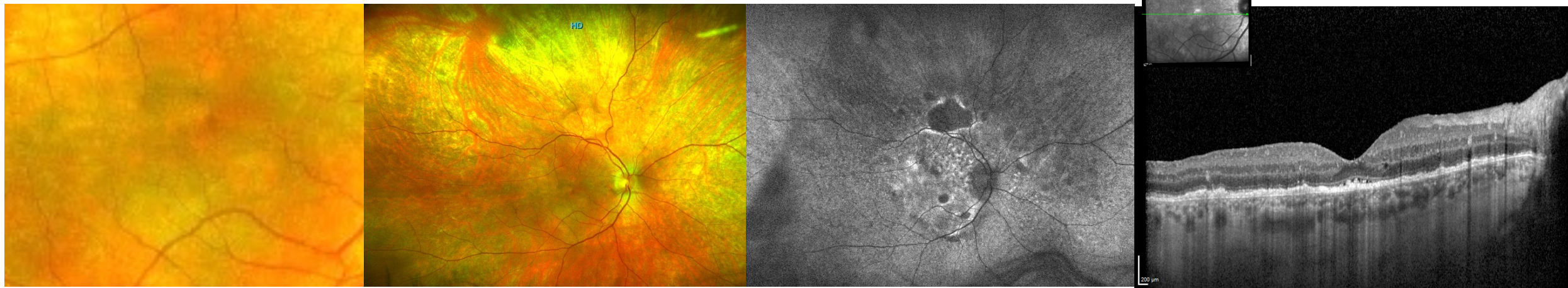
Systemic Treatment (HD-MTX) + IVT



Intravitreal Therapy

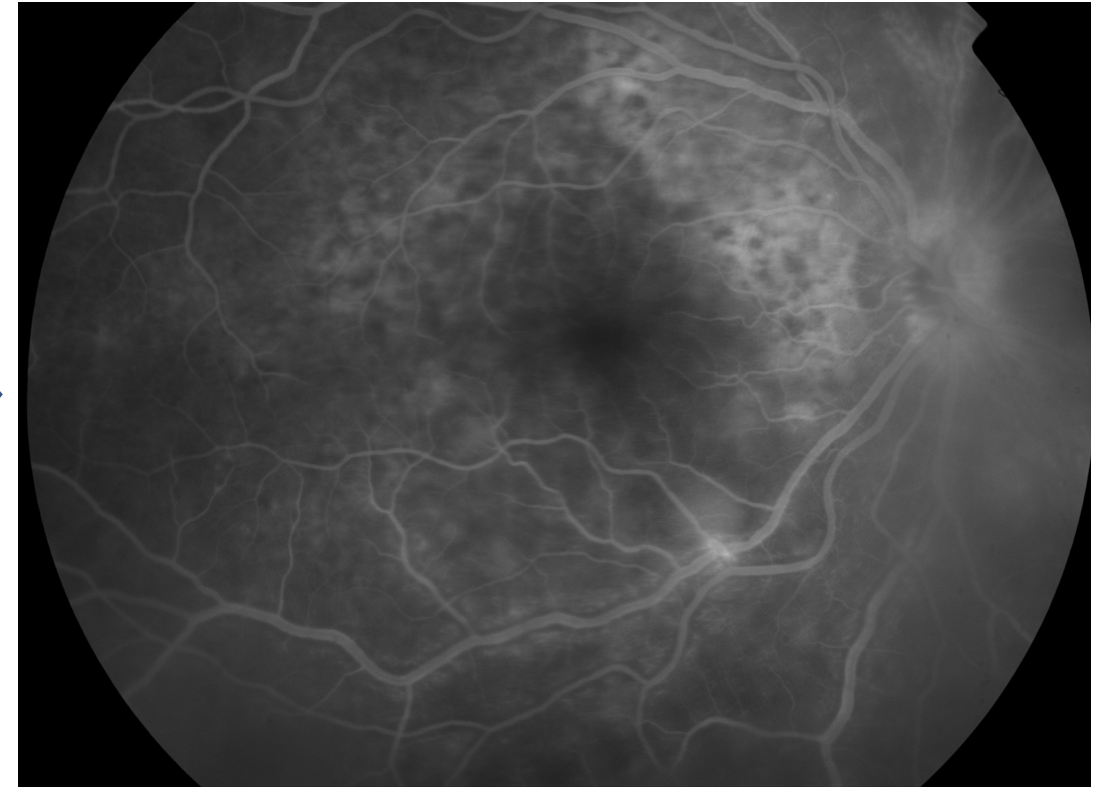
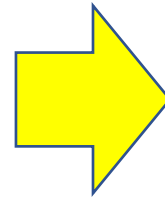
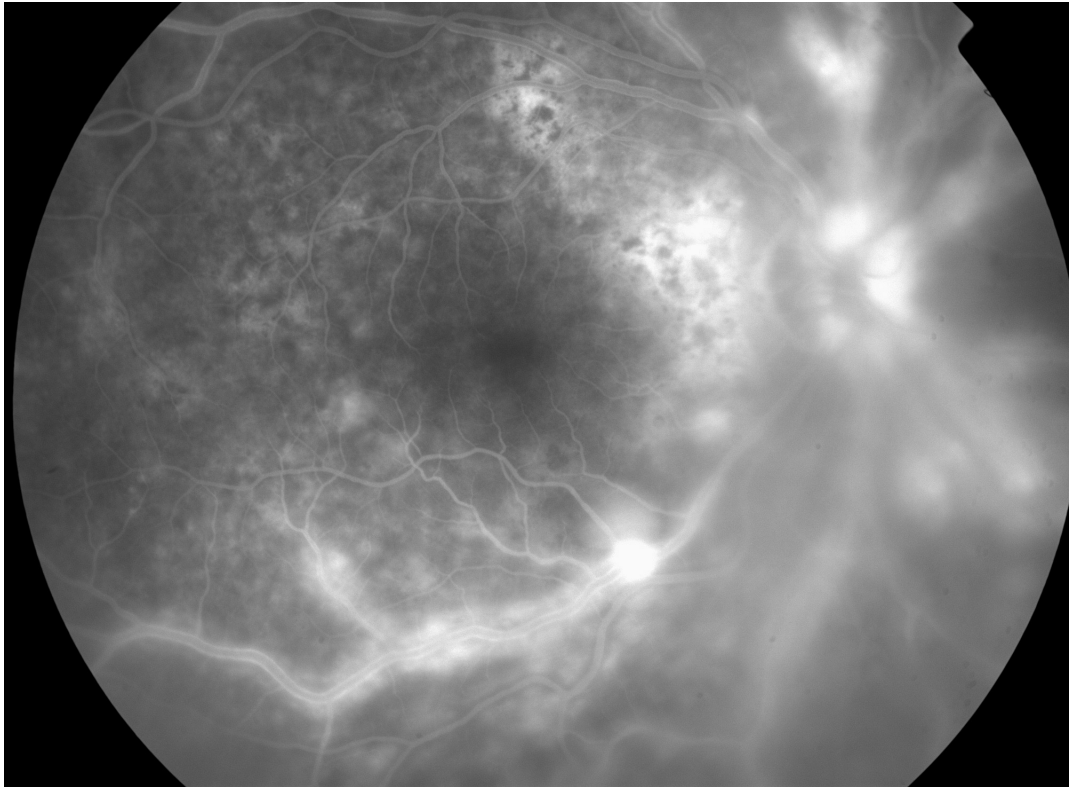


4 WEEKLY INTRAVITREAL RITUXIMAB INJECTIONS



Intravitreal Therapy

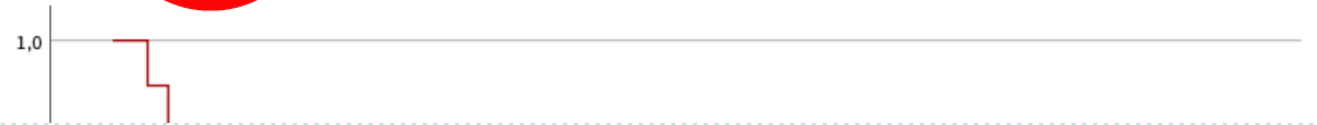
4 WEEKLY IVT RTX



Intravitreal Therapy



DO NOT PREVENT CNS INVOLVEMENT



Clinical features predictive of vision loss in patients with vitreoretinal lymphoma: a single tertiary center experience

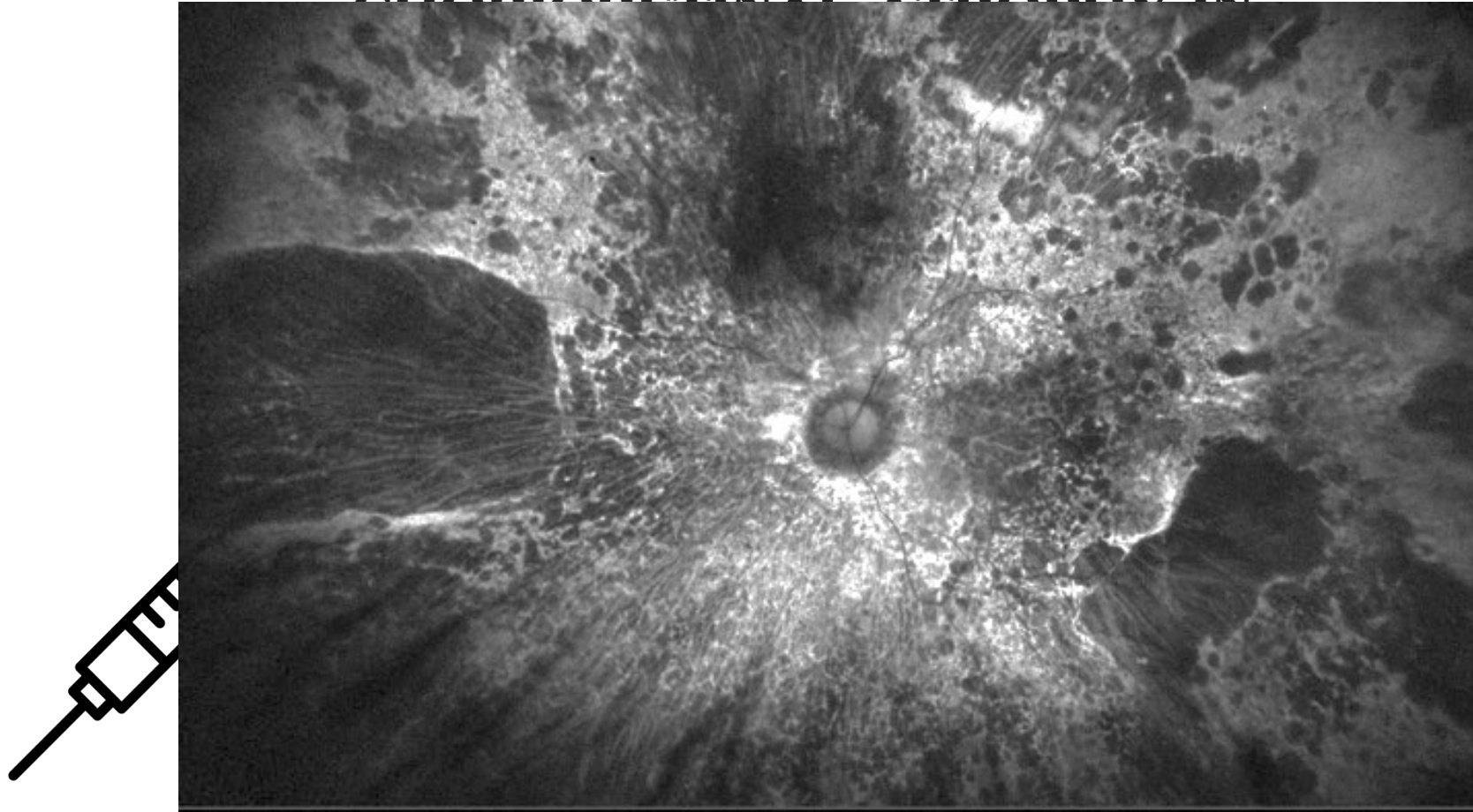
Mirinae Kim^{1,2}, Hyun Suh^{1,2}, Young Gun Park^{1,2} & Young-Hoon Park^{1,2}✉



- Improve visual prognosis
- 0.44 ± 0.28 logMAR vs 0.33 ± 0.29 logMAR

Intravitreal Therapy

GLUCOCORTICOID THERAPY IN



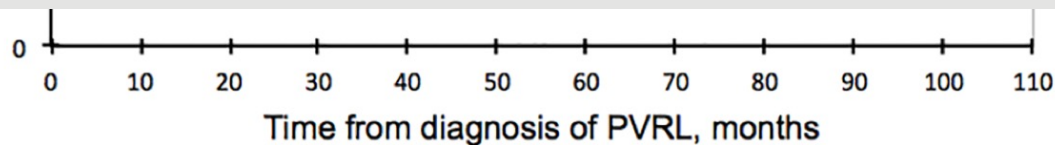
Systemic Therapy

care is essential for the management and better prognosis of VLR. In 2011, the International PCNSL Collaborative Group published therapeutic principles for VRL [39]. According to the group, no optimal therapy for VRL without detectable CNS lesions has been defined, but systemic therapy is required if lymphoma lesions occur in the CNS and local therapy may be used if the disease is limited to the eye.

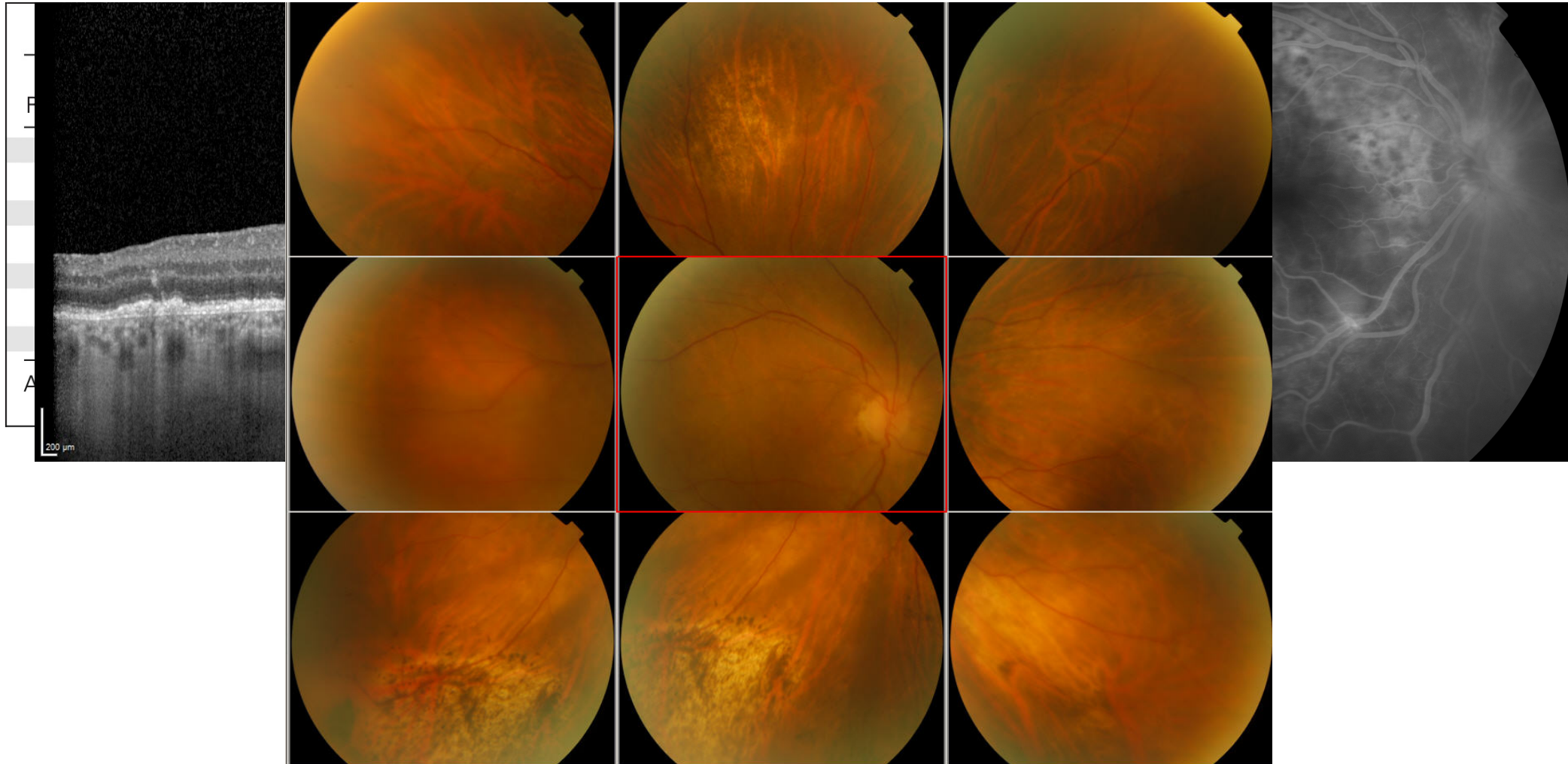
Brain-free survival



respectively. IV HD-MTX based systemic therapy as a first-line treatment for isolated PVRL is feasible, with acceptable toxicity, even in an elderly population. This strategy seems efficient to prevent brain relapse with prolonged overall survival. However, the ocular relapse rate remains high. New approaches are needed to improve local control of this disease, and ocular assessment could be completed by monitoring AH IL-10.



Treatment Response Assessment

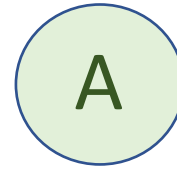


Abrey LE et al; International Primary CNS Lymphoma Collaborative Group. Report of an international workshop to standardize baseline evaluation and response criteria for primary CNS lymphoma. J Clin Oncol. 2005

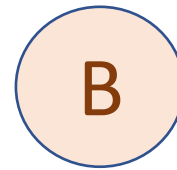
Conclusions



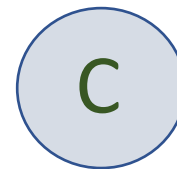
VITREORETINAL
LYMPHOMA IS STILL
A CHALLENGE



DIAGNOSIS

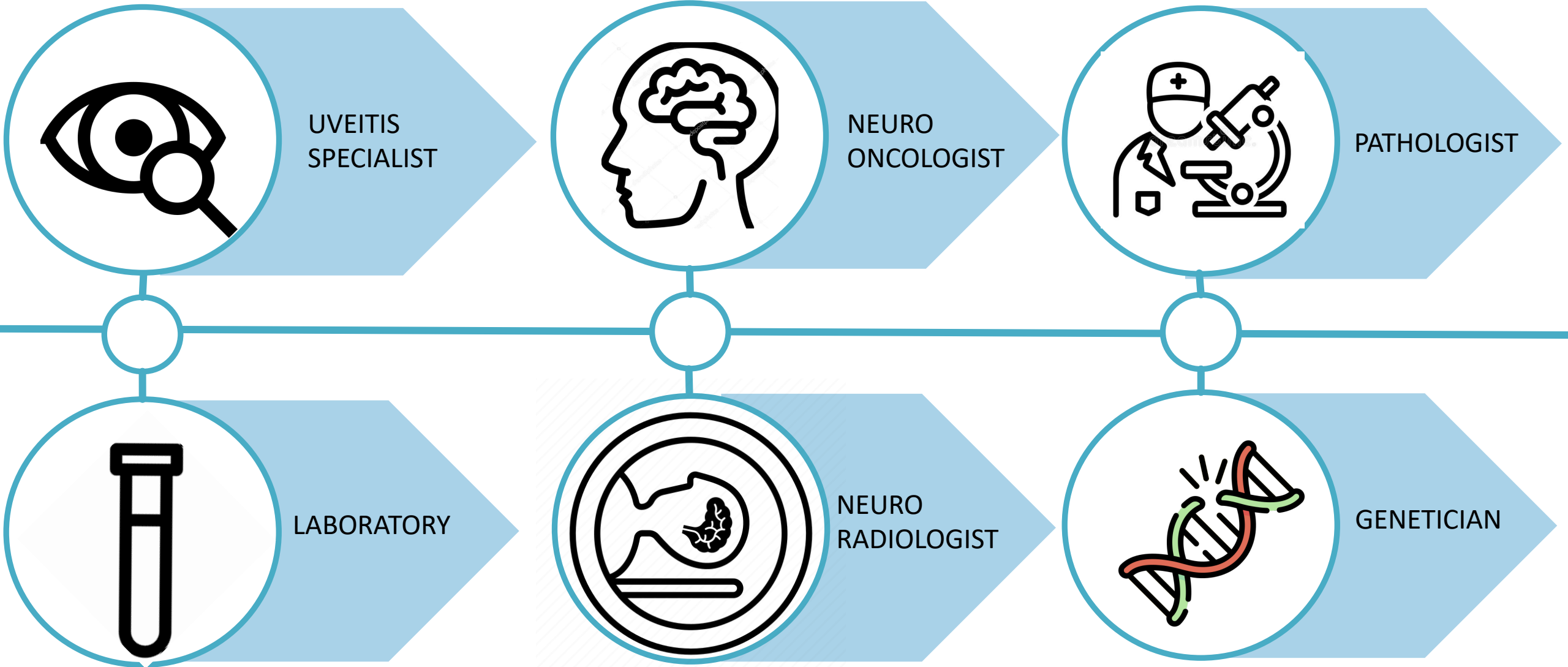


TREATMENT



TREATMENT RESPONSE ASSESSMENT

Conclusions



Thank you for attention

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