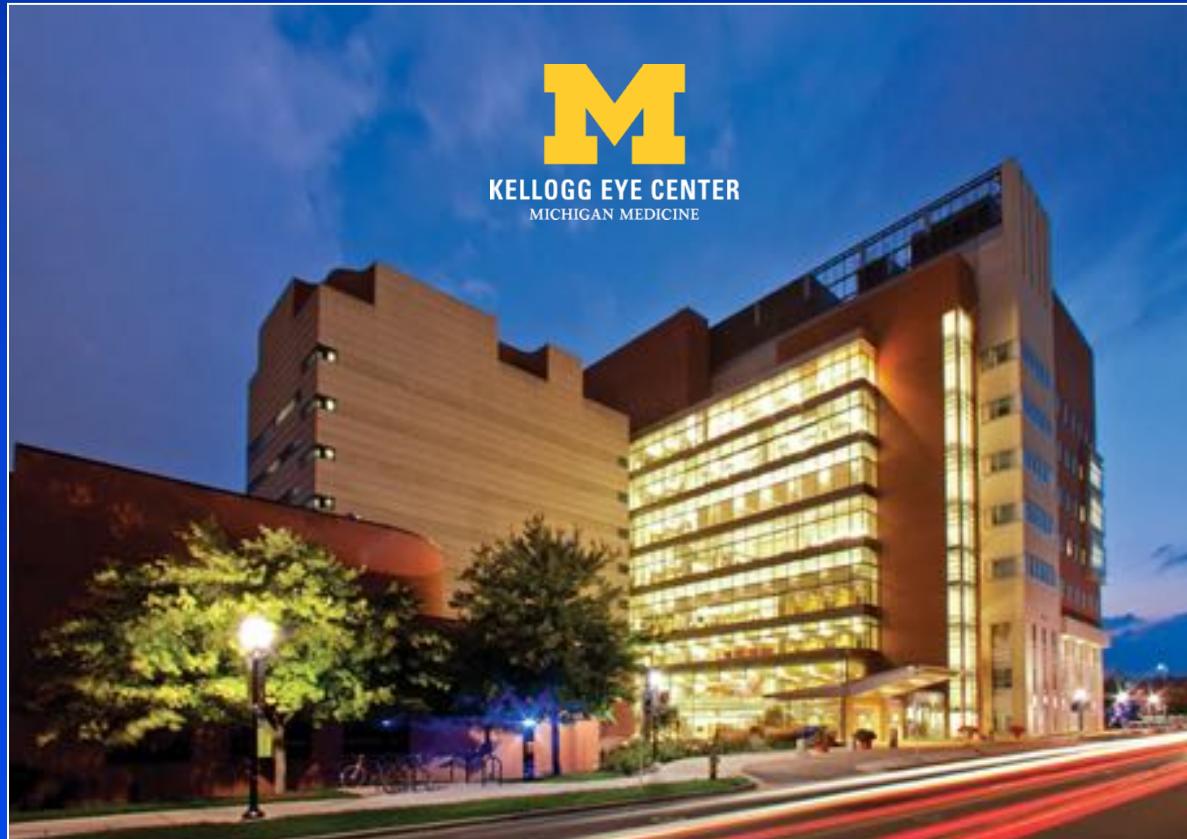


Interesting Case Presentation

Retina Society 2020

Mark W. Johnson, MD



Financial Disclosures

- Data and Safety Monitoring Committee Member
 - Pfizer
 - Amgen
 - Syneos Health
 - Aura Biosciences
- Clinical trial funding
 - Apellis

No financial interests relevant to the content of this presentation

Case TM

57-year-old man reported 3 week history of

- blurry vision OU
- lethargy, weight loss, and altered mental status

Medical History

PMH

- Chronic glomerulonephritis with IgA nephropathy
- IgA mediated leukocytoclastic vasculitis
 - skin and GI involvement
- DM II x 15 years

Medications

- Cyclophosphamide
- Rituximab
- Prednisone 15mg daily
- Trimethoprim-sulfamethoxazole 800mg-160mg 3 times per week
- Insulin

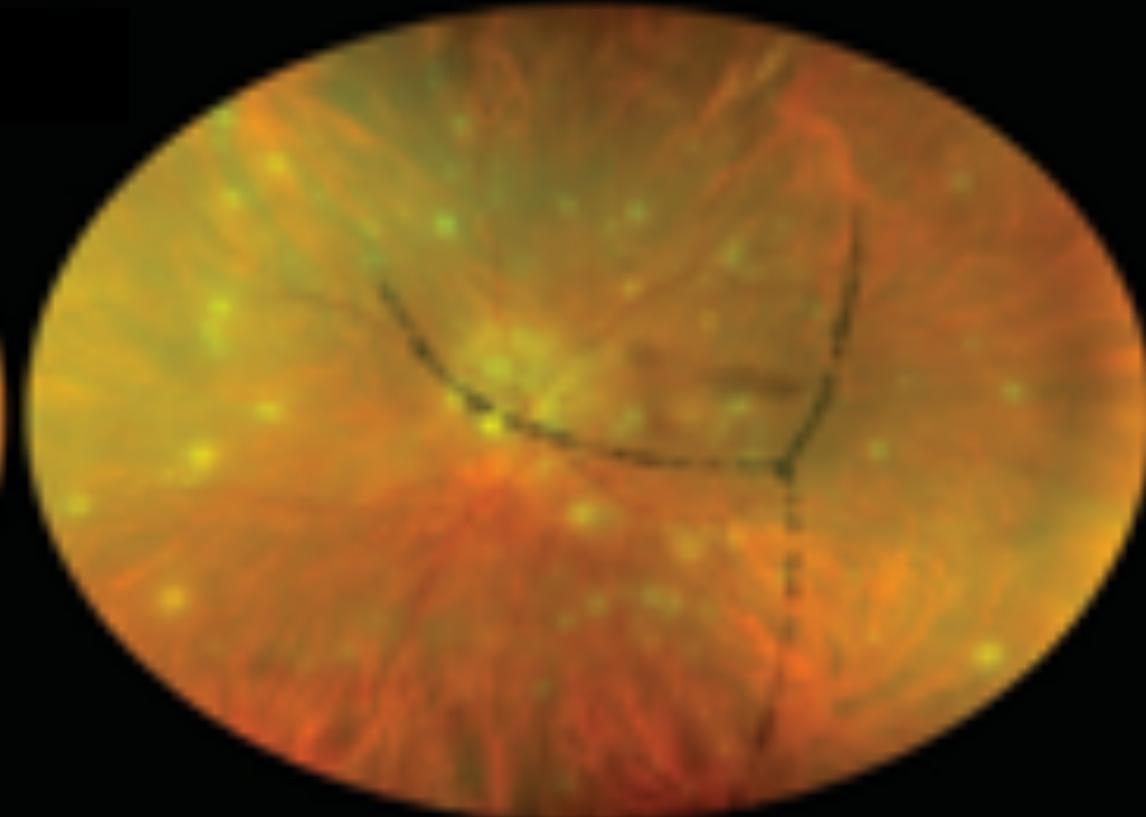
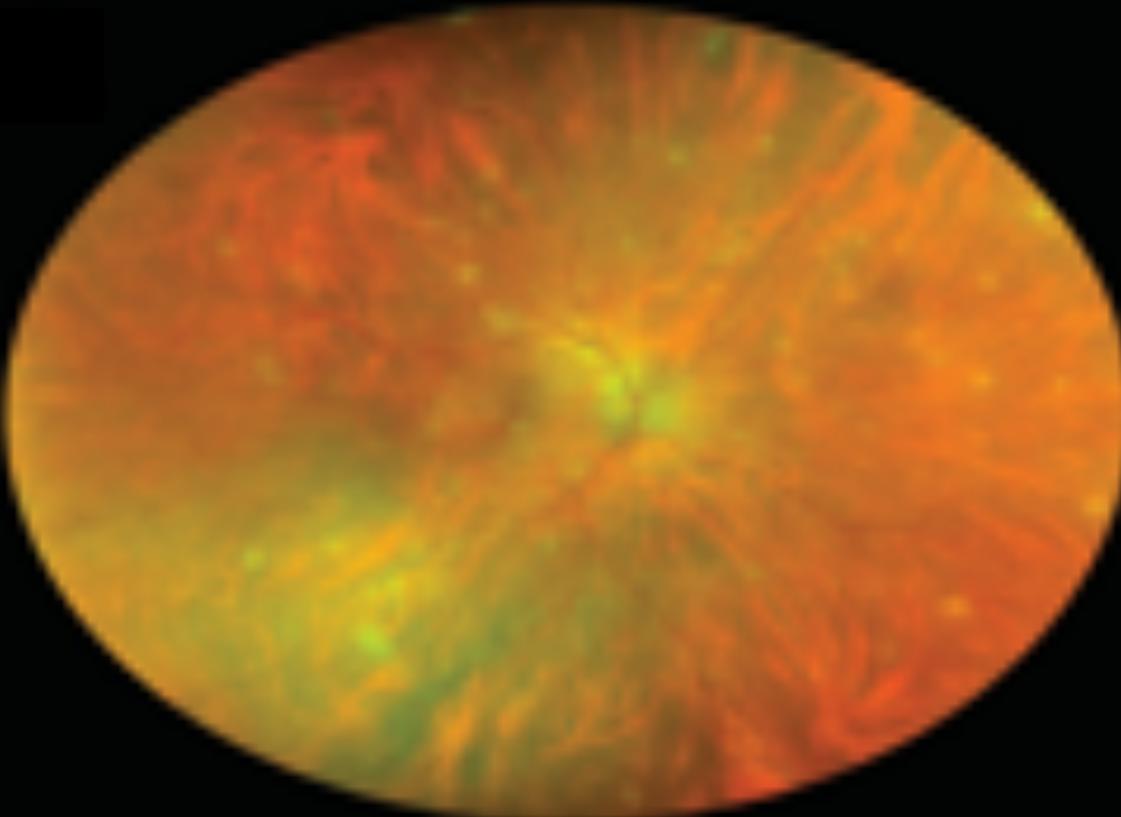
Social history

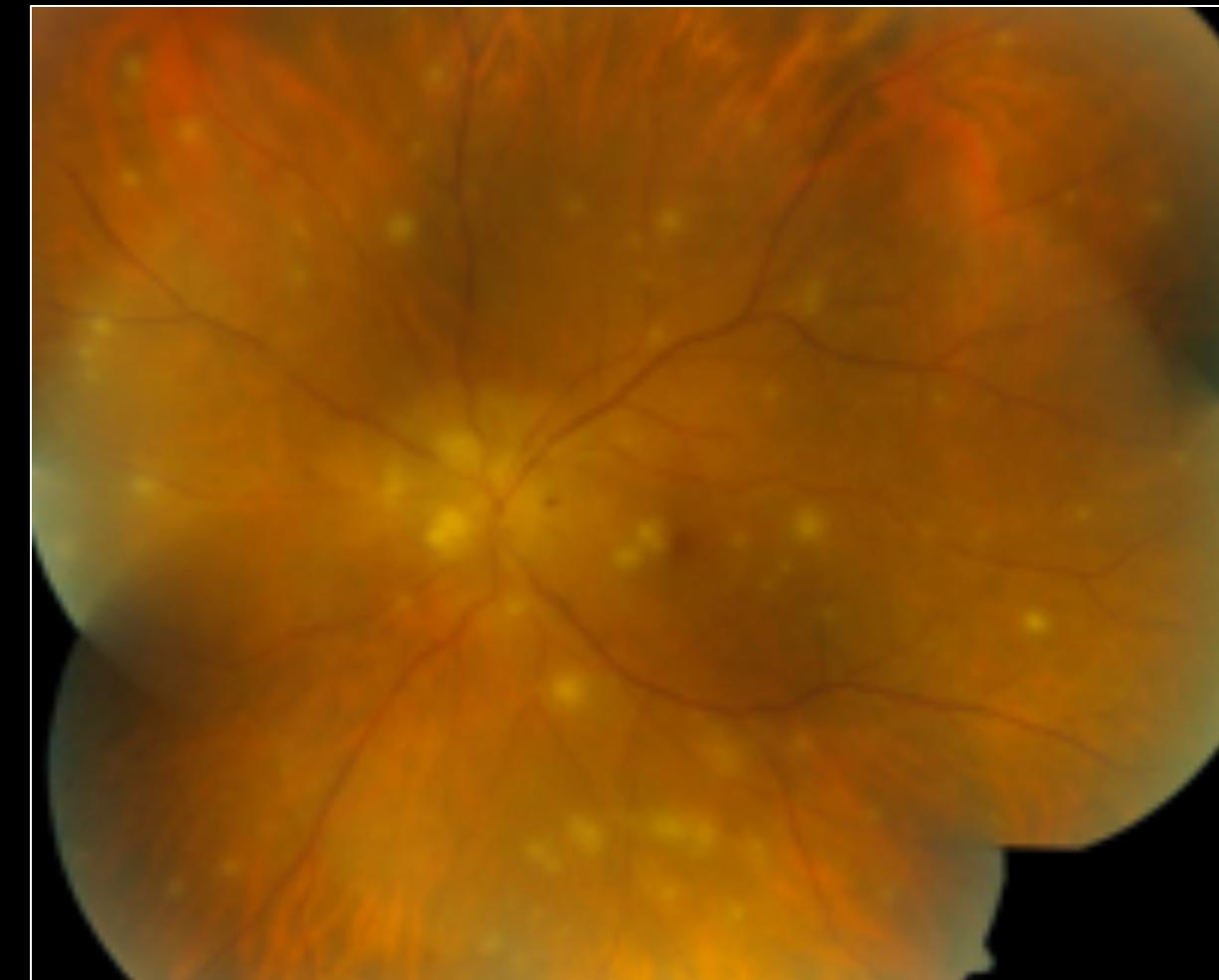
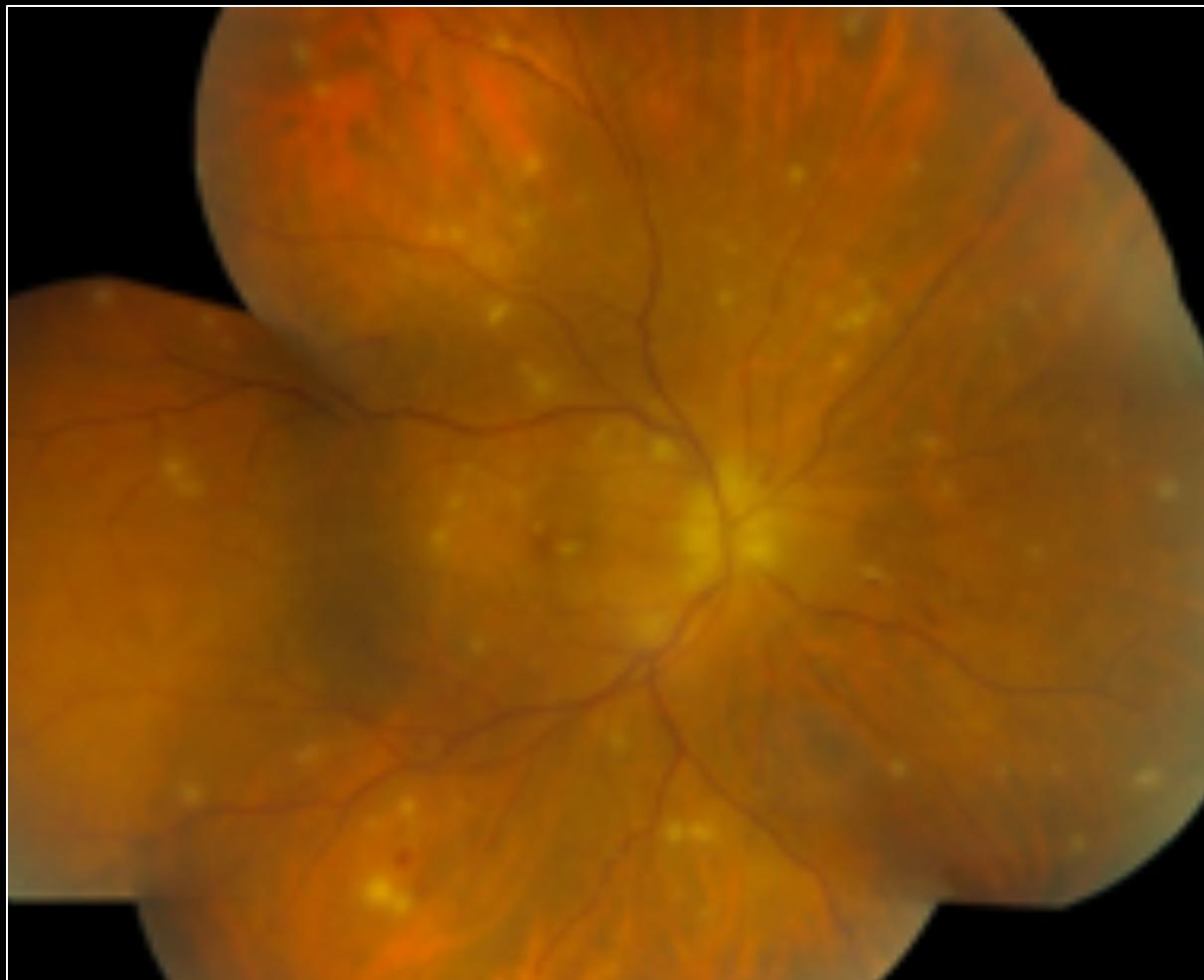
- Forklift operator
- Outdoorsman/hunter (2 cats, 1 dog)

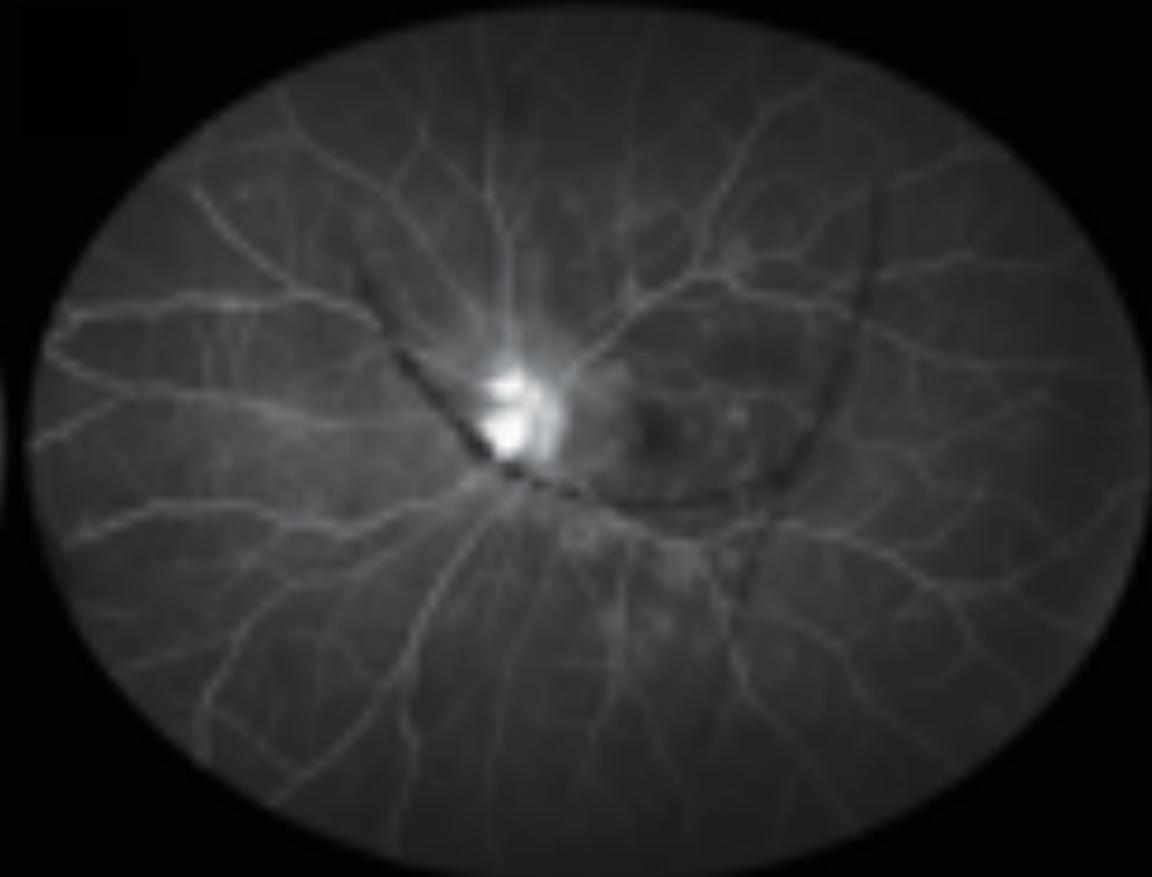
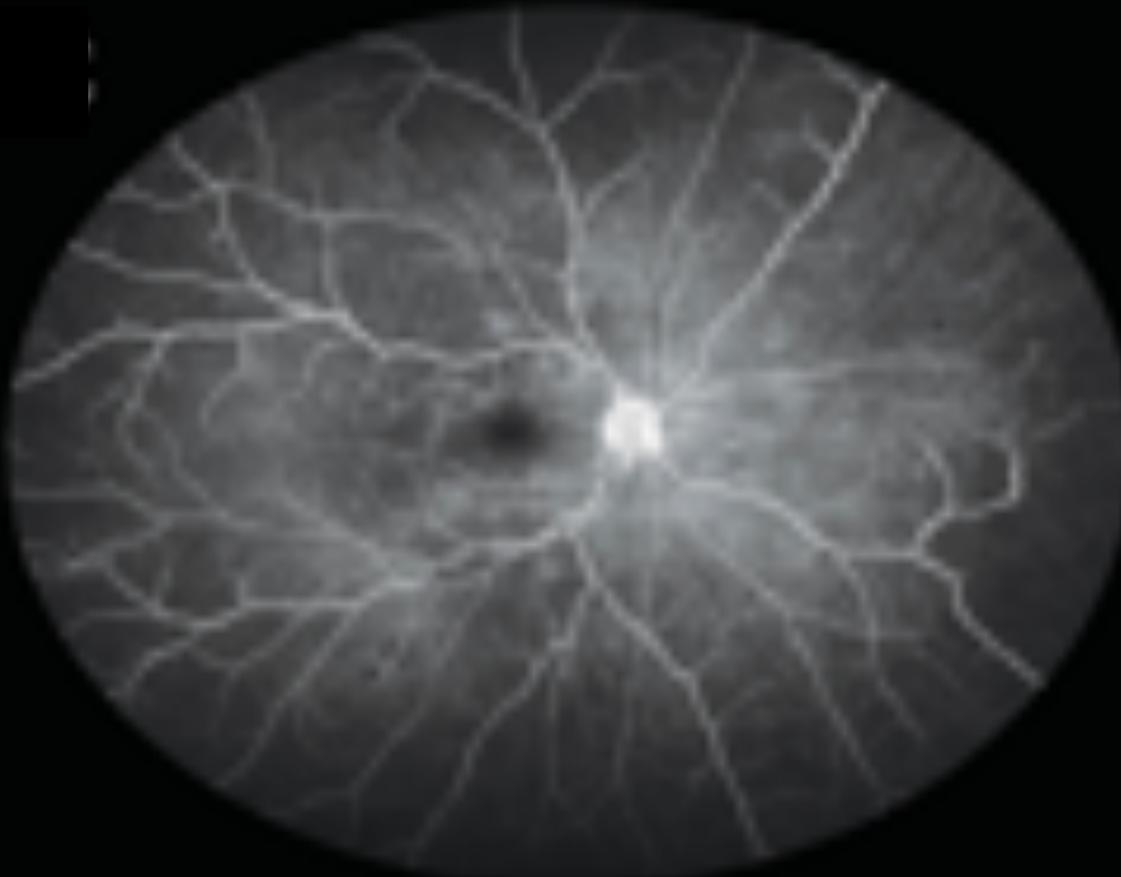
ROS

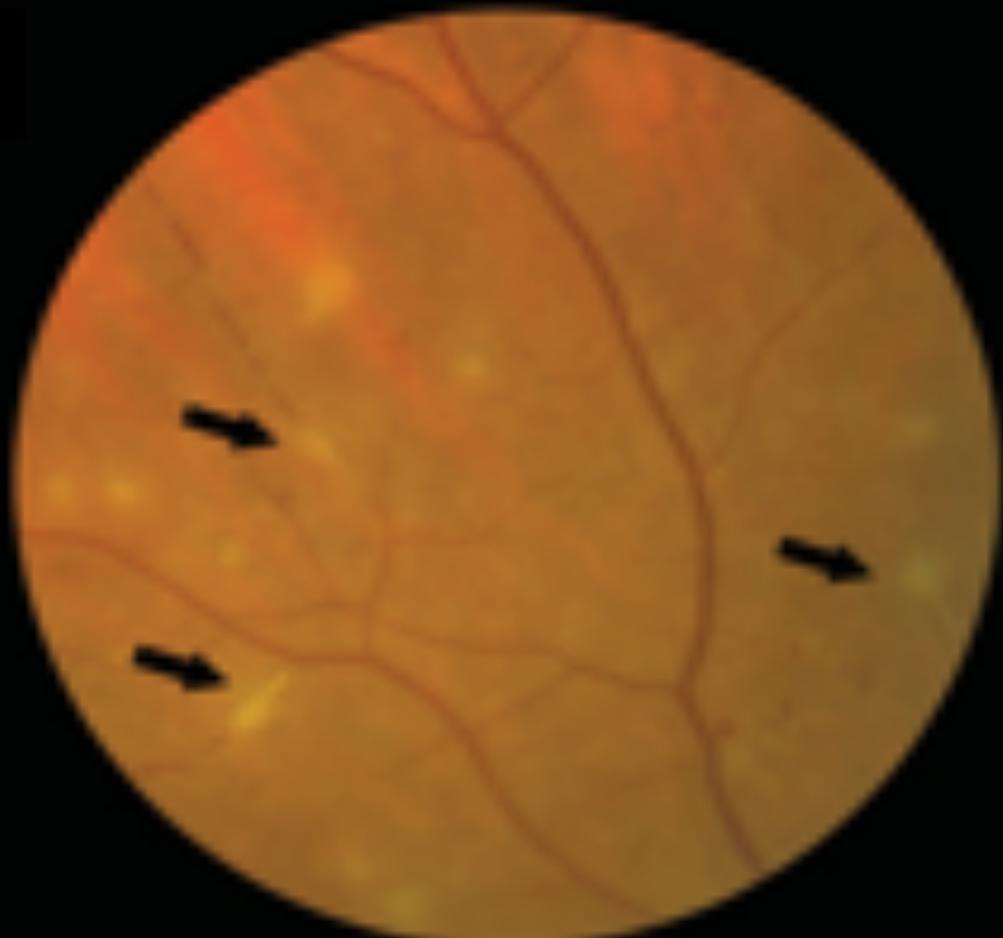
- General
 - *lethargy and decreased appetite*
 - no fever or recent viral illness
- HENT
 - no cold sores
- GI/GU
 - no diarrhea, no genital lesions
- Rheumatologic
 - no swollen or tender joints or skin rashes
- Neurologic
 - *altered mental status*

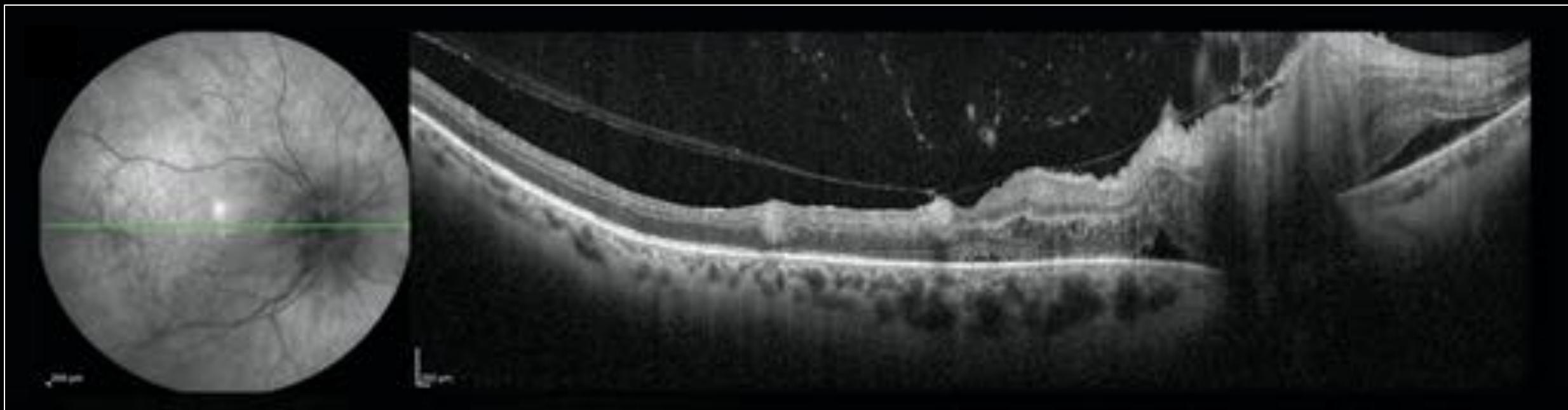
	OD	OS
VA	20/60-1 PH NI	20/70-2 PH NI
Pupils	No RAPD	No RAPD
Visual fields	Superotemporal deficit	Inferior deficit
IOP	15	13
SLE	AC quiet	AC quiet
Vitreous	1+ cells, opacities	2+ cells, opacities











Differential Diagnosis?

Infectious

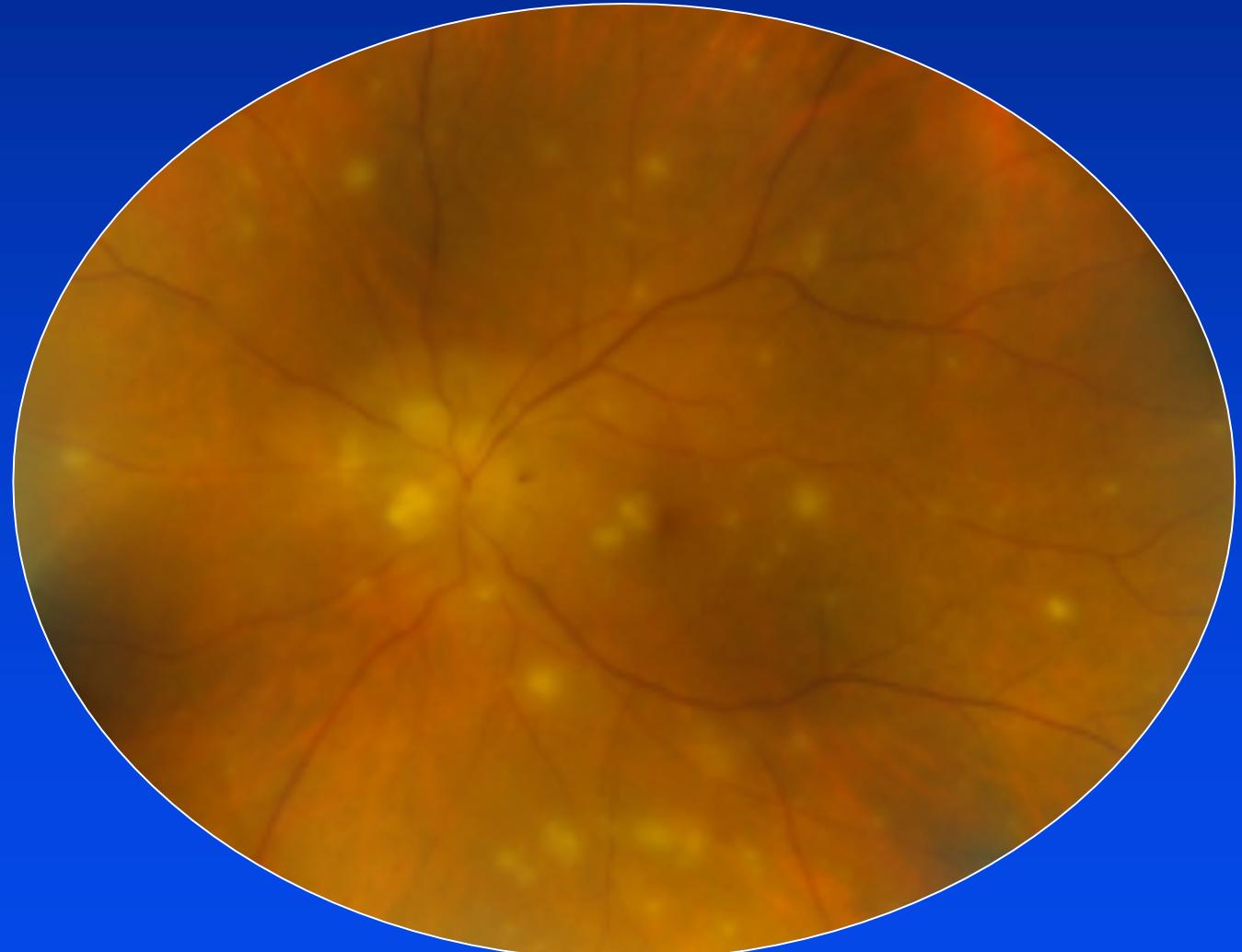
- Bartonellosis
- syphilis
- tuberculosis
- fungal
 - cryptococcus
- viral retinitis
- toxoplasmosis
- Lyme disease

Inflammatory

- IgA vasculitis

Neoplastic

- intraocular lymphoma



Workup

Infectious

- Bartonellosis
- syphilis
- tuberculosis
- fungal
 - cryptococcus
- viral retinitis
- toxoplasmosis
- Lyme disease

Inflammatory

- IgA vasculitis

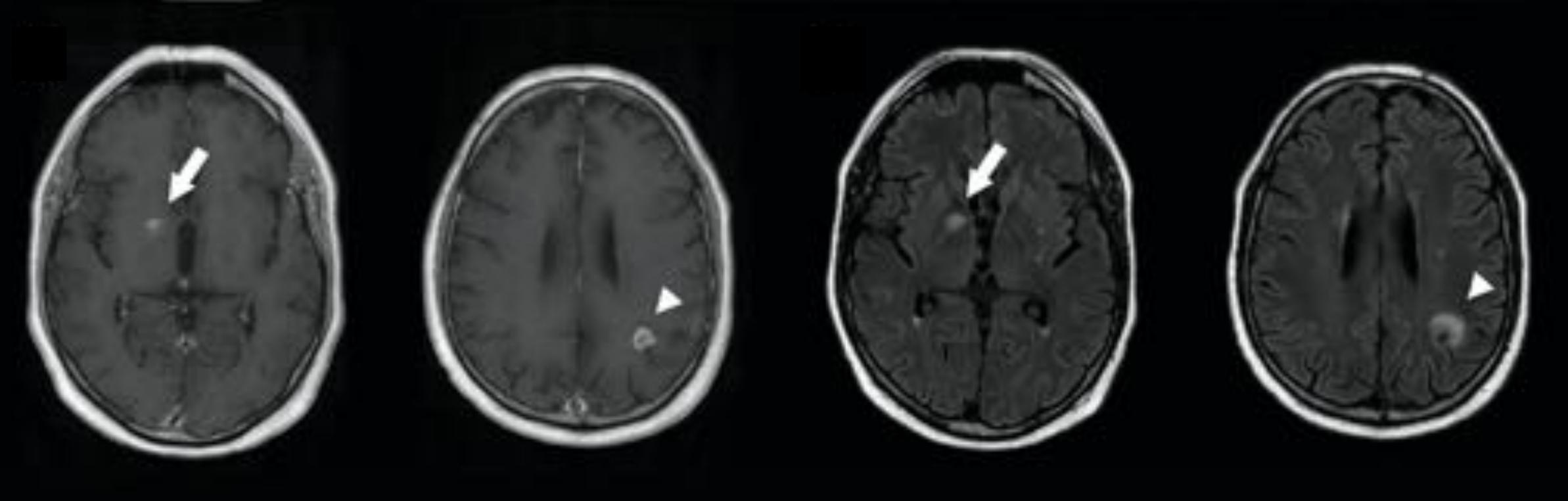
Neoplastic

- intraocular lymphoma

Negative or normal

- Bartonella Ab panel
- RPR, FTA-ABS
- Quantiferon
- blood cultures
- cryptococcus antigen
- HSV/VZV/CMV PCR
- toxoplasmosis PCR
- Lyme IgG





T1 post-contrast

T2 flair

Now What?

Lumbar puncture

- Gram stain: PMNs with no organisms
- Fungal culture: no growth
- Acid-fast bacilli culture: no growth
- PCR for HSV/VZV and toxoplasmosis: negative
- Cryptococcus antigen: negative
- Leukemia/lymphoma immunophenotyping: insufficient cell volume

Diagnostic vitrectomy

- Vitreous cultures: no growth
- Broad range PCR: no bacterial, mycobacterial or fungal DNA
- Cytology
 - chronic inflammatory cell population
 - no evidence for malignancy

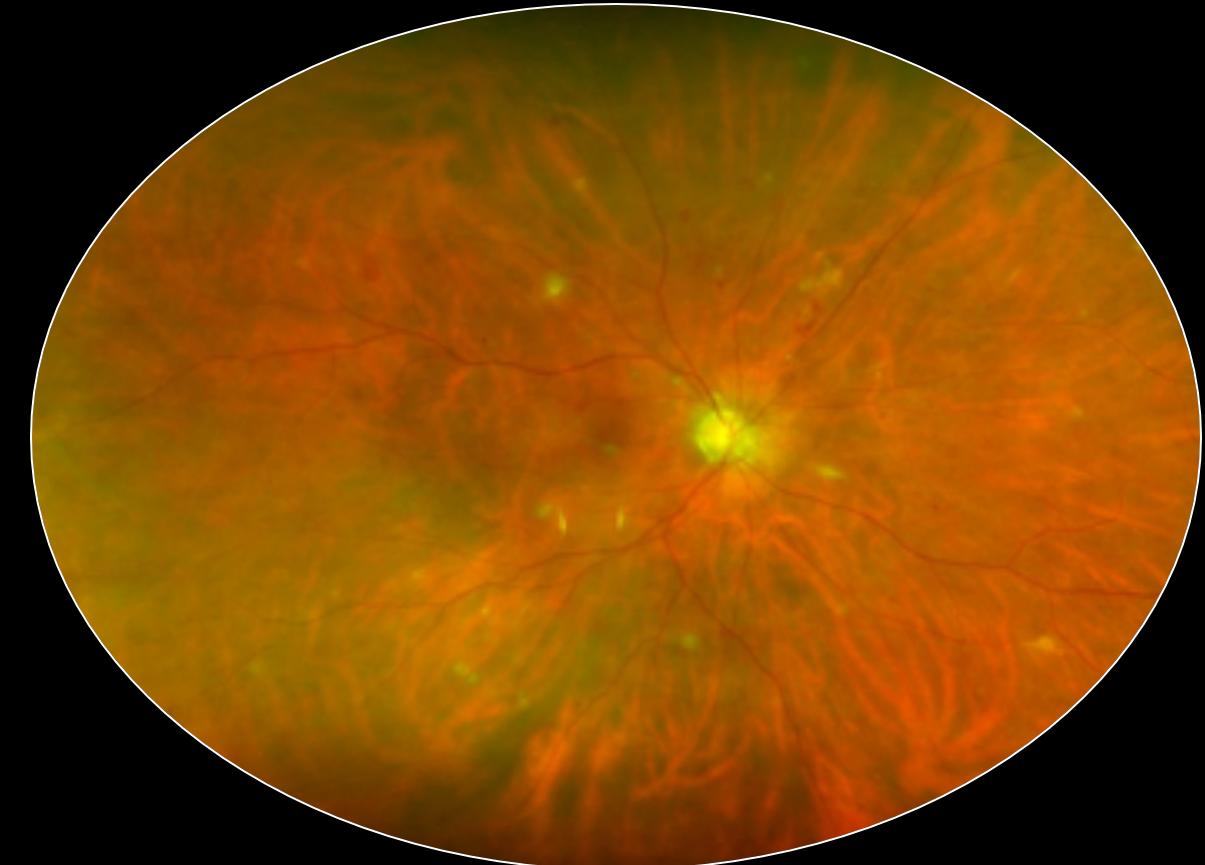
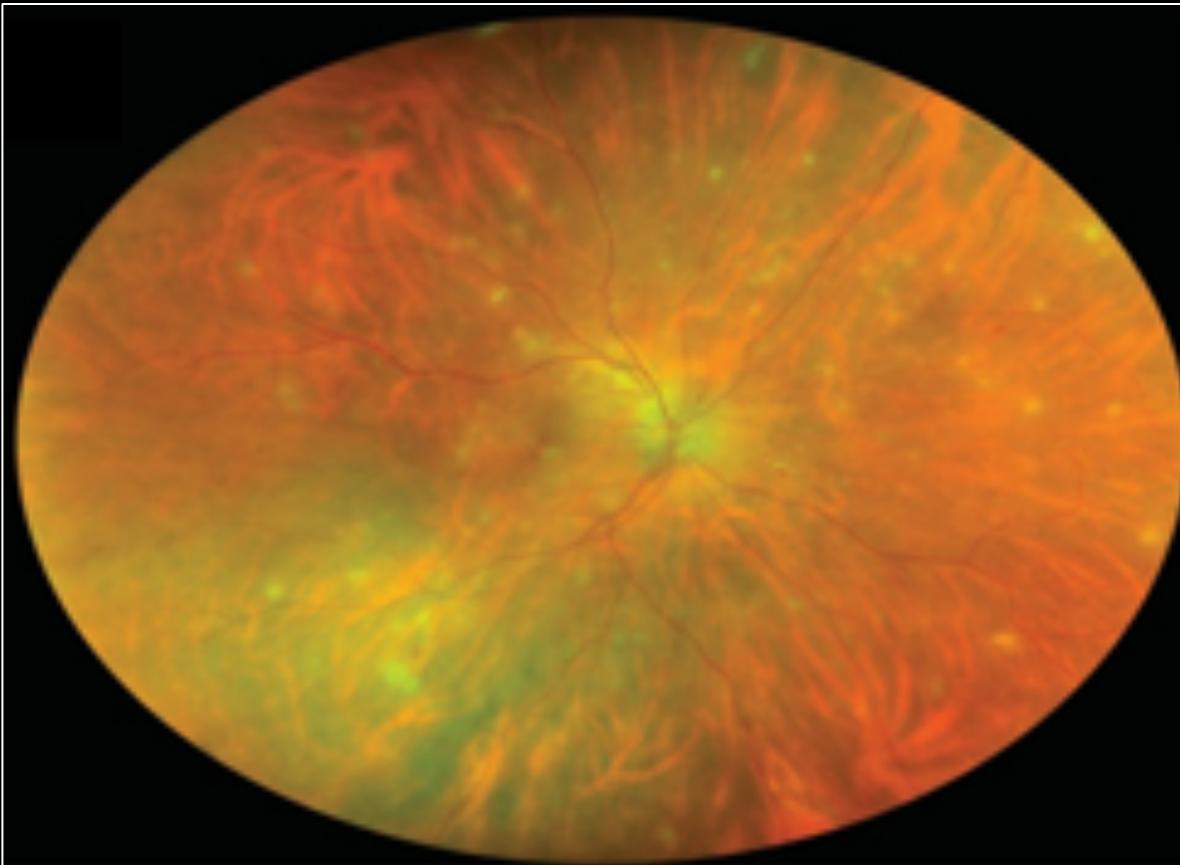
And Now?

Concern for CNS lymphoma per primary service

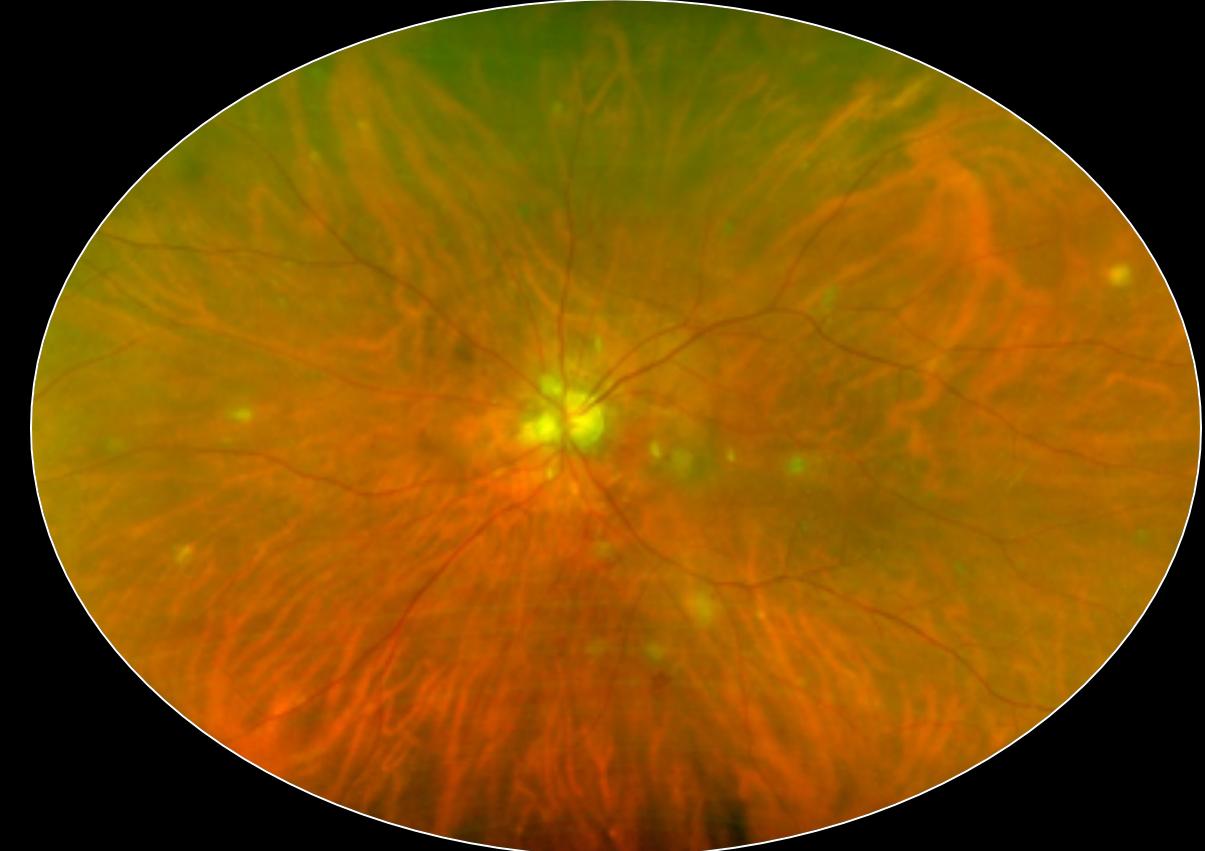
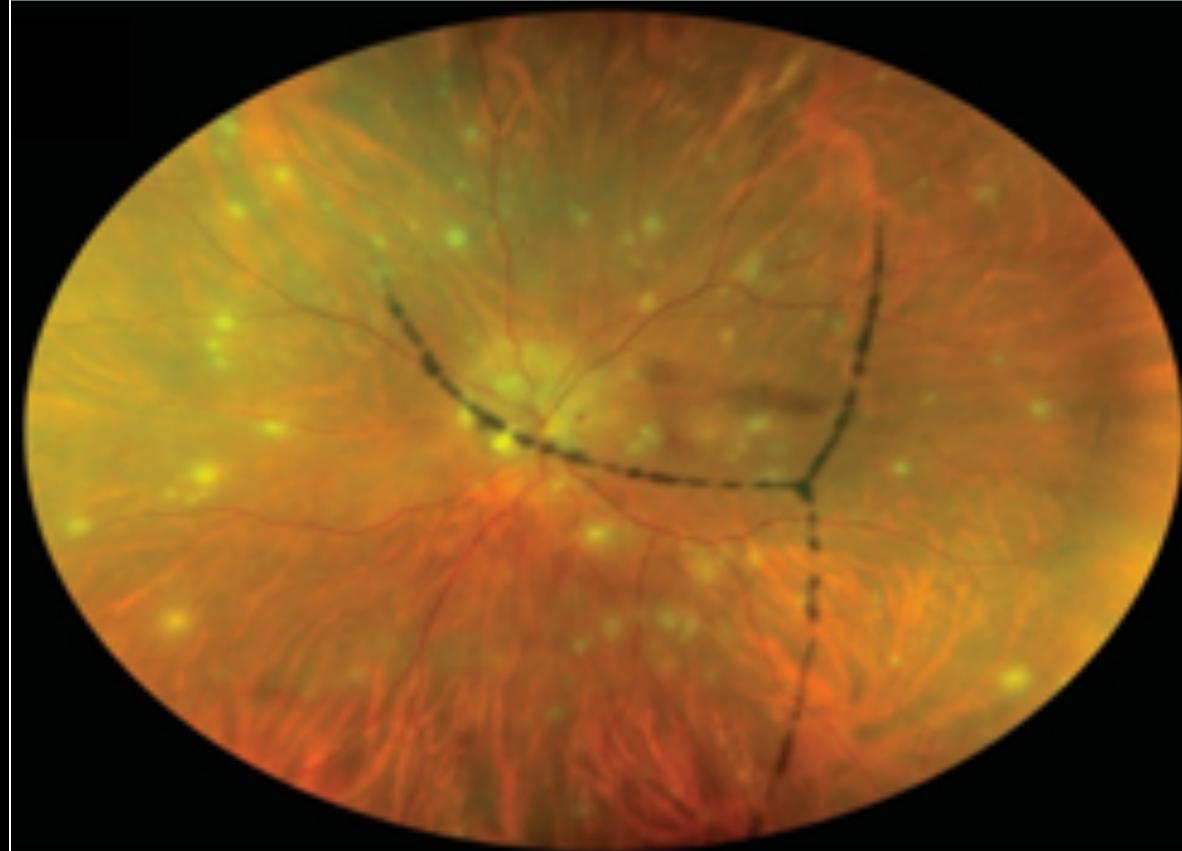
- Brain biopsy
- Tissue sent for PCR
 - Bartonella PCR (16S rRNA): **positive**
 - ***Bartonella henselae*** confirmed by specific primers

Treatment initiated for CNS Bartonellosis

- Rifampin 300mg PO BID
- Doxycycline 100mg PO BID
- IVIG for hypogammaglobulinemia
- Cyclophosphamide and rituximab suspended given active infection



After 5 months of treatment



After 5 months of treatment

Take Home Points

- Clinical clues to *Bartonella* neuroretinitis
 - multifocal discrete retinitis or choroidal lesions
 - especially *inner retinal*
 - disc infiltration/edema
- Vasculitis and vasoproliferative lesions rare but can be seen in immunocompromised patients
- *Bartonella* serology testing has limited sensitivity (~70%) and specificity
 - may be negative in immunosuppressed patients
 - our patient had low IgG and IgM on presentation
 - had seroconversion 12 weeks after presentation
- PCR of biopsy tissue may be diagnostic in difficult cases
- Trust your clinical impression!

Acknowledgements

Robert Hyde, MD, PhD

Thomas Wubben, MD, PhD

Alexander Weiss, MD

Annie Wu, MD

Peter Zhao, MD

Yannis Paulus, MD

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