

## Financial Disclosure

- Consultant/Advisory Board: Bausch and Lomb, Allergan, Alimera, Clearside, Regeneron, Eleven, Santen, Sanofi, Zeiss
- Research Grants: Bausch and Lomb, Allergan, Novartis, Clearside, Zeiss, Sanofi
- Licensing Royalty Bioptigen, Synergetics
- I will be discussing the off-label use of immunosuppressive agents to treat chronic uveitis

## Purpose of this talk Show you a few cases that display a range of pathologies How to handle management of complex patients Highlight mistakes and how we can learn from them

# A. I order the same battery of tests on each patient B. I tailor my tests based on the patient and clinical situation C. I do not order tests, I just treat D. I order everything on the sheet E. I throw darts at my lab sheet and pick the ones I hit

### Case Presentation

- 62-year-old white male referred for scleritis
- 5-month history of red painful left eye
- History of CK OU, no other ocular history
- ROS positive for arthritis
- Seen by rheumatologist
- W/U positive for markedly positive ANA, positive ANCA

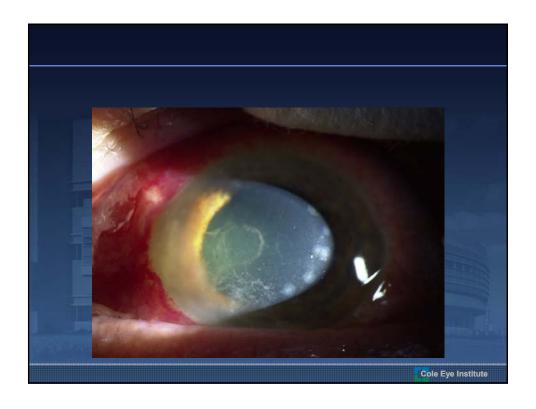
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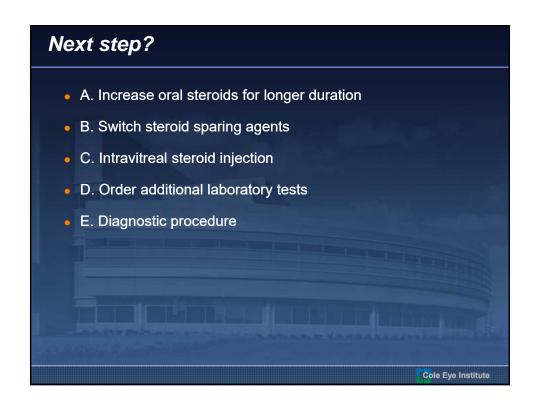
## Case Presentation

- Treated with topical steroids no relief
- Prednisone bad side effects
- MTX up to 20 mg q week no improvement
- Cyclophosphamide added no improvement
- Subconj steroids (after hearing a lecture on it) no improvement
- Both rheumatologist and ophthalmologist confused why patient with mixed connective tissue disease is not responding – and looks worse?

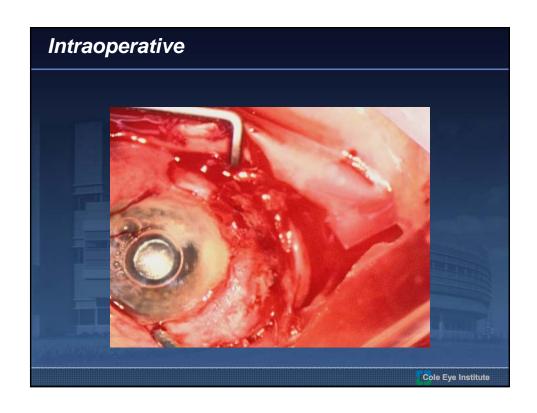


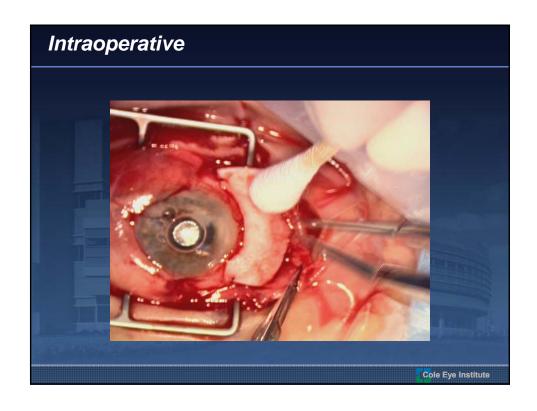


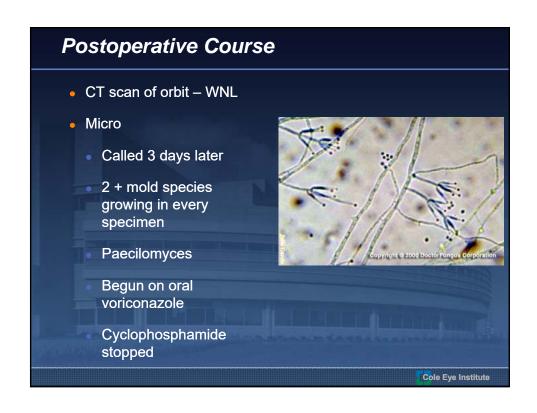


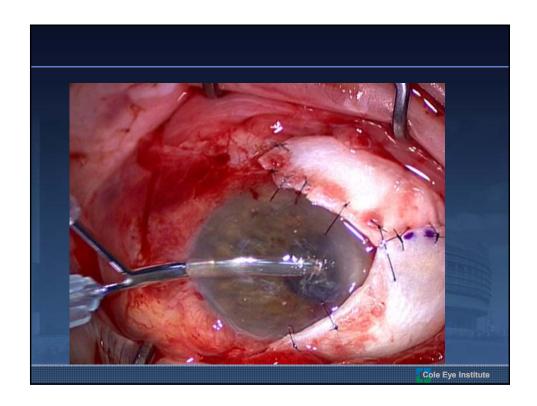


# Case Presentation: Treatment Plan Diagnostic AC tap Friday afternoon Leaving for Vegas at 6

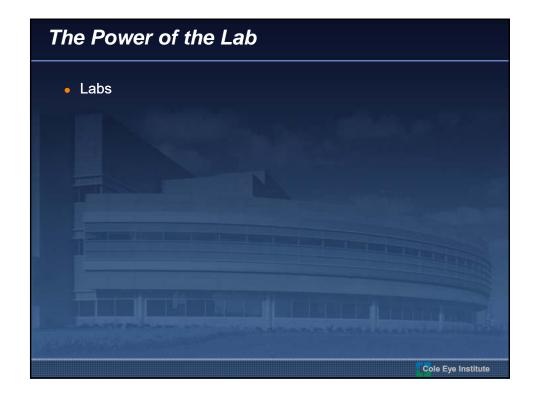


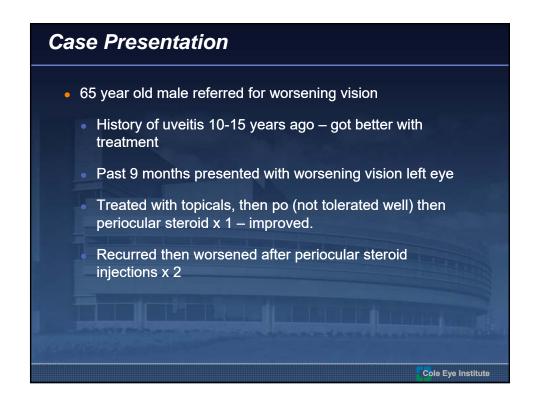


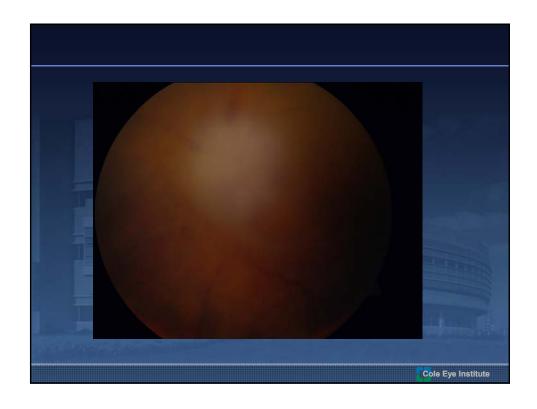






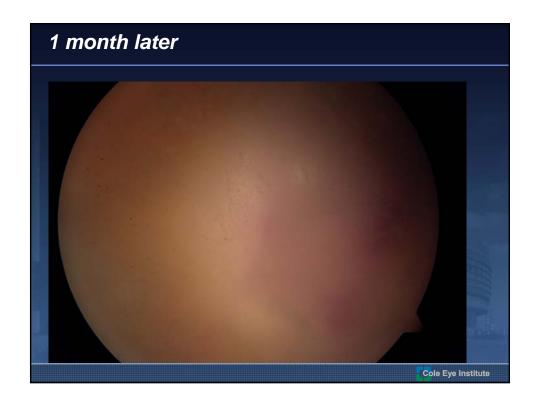






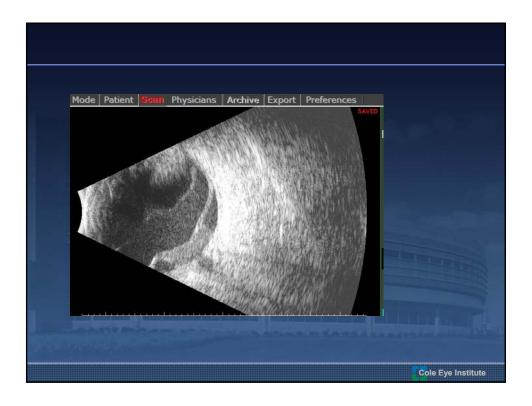


# Provided Pro



# Options? Treated with additional clindamycin AC tap negative for toxo PCR RPR, Bartonella, ACE negative Unchanged Biopsy planned A few days prior – falls and develops subdural hematoma Surgery delayed



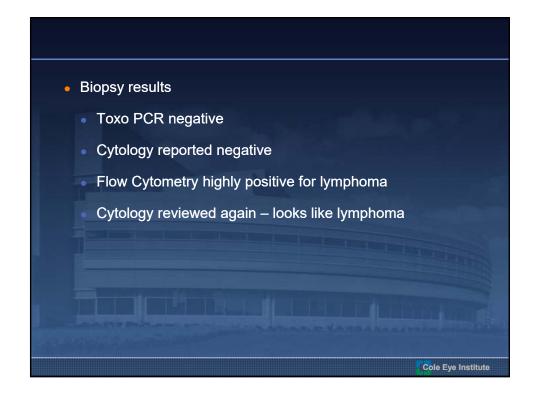








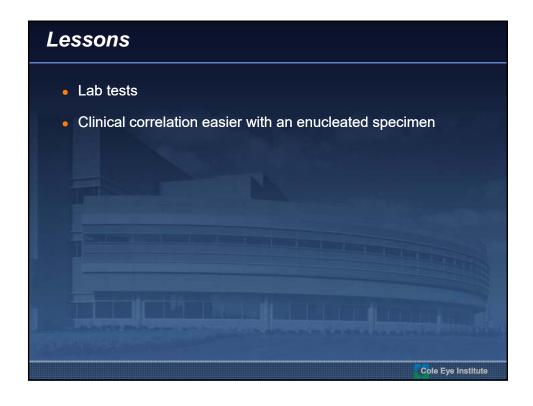
## No, I am not winning.... Vitreous hemorrhage Subretinal hemorrhage Exudative RD Ischemic appearing eye My fellow (Dilsher Dhoot) states: "Looks like endstage toxo to me, never seen lymphoma do this"

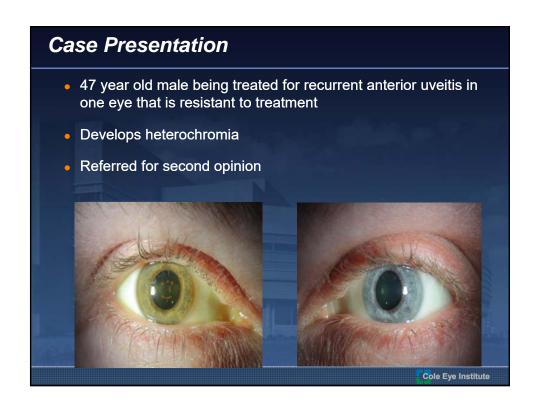




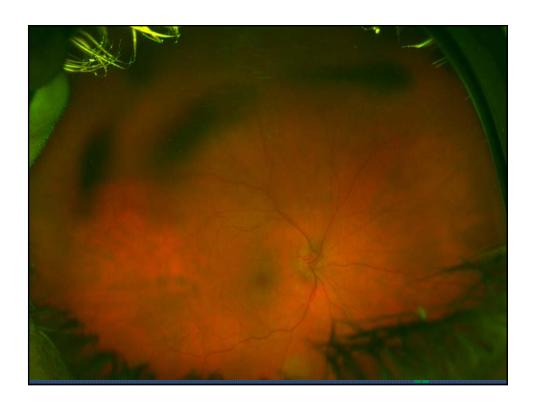
## Enucleation Specimen

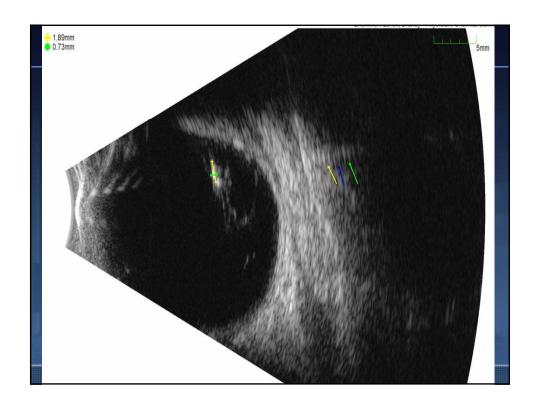
- infiltration predominantly within and expanding the retina by diffuse sheets of atypical mononuclear cells with vesicular chromatin, scant to moderate amounts of eosinophilic cytoplasm and apoptotic bodies. The optic disc is involved and tumor is also seen within a central retinal vessel and focally in the choroid and vitreous.
- Overall, the findings are consistent with diffuse large B-cell lymphoma of germinal center phenotype.
- Correlation with the clinical findings is suggested.

















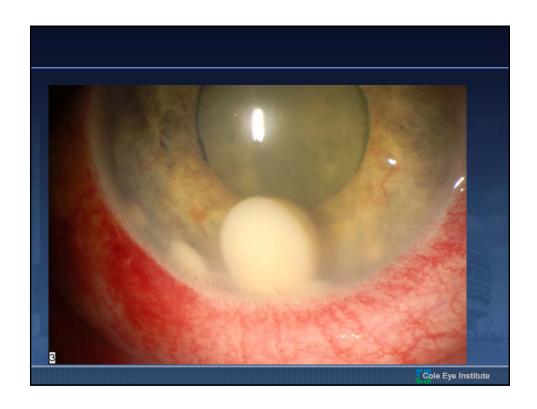


## Case Presentation

- 62 yo Caucasian woman with pseudo-exfoliative glaucoma was referred 5 months following trabeculectomy for intractable postoperative inflammation
  - Initially treated for post-op inflammation topicals then low dose po prednisone then subtenon kenalog.
  - Had second opinion Uveitis workup revealed HLA-B27 positive, otherwise negative ROS.
  - A/C washout with vanc neg cx. Bleb biopsy performed negative on Gram stain and culture including fungus.
    Inflammation noted on biopsy
  - Now on high dose steroids and received a course of high-dose IV methylpred

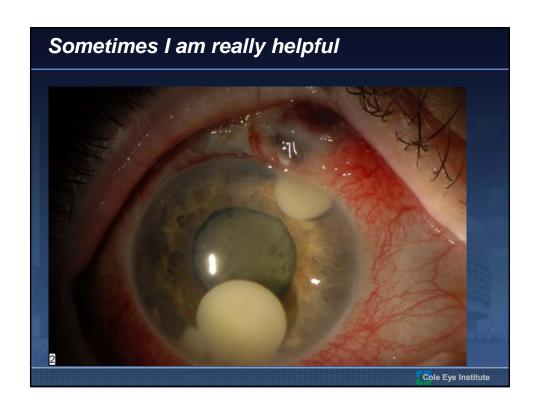




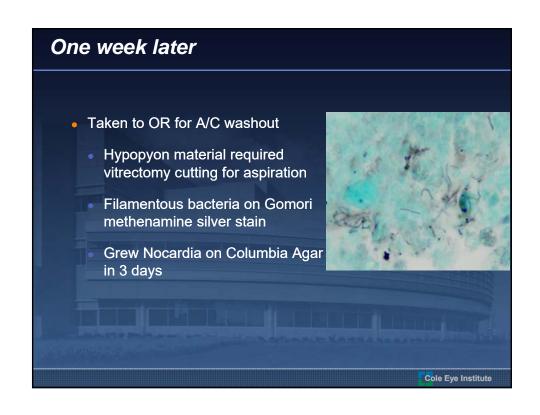




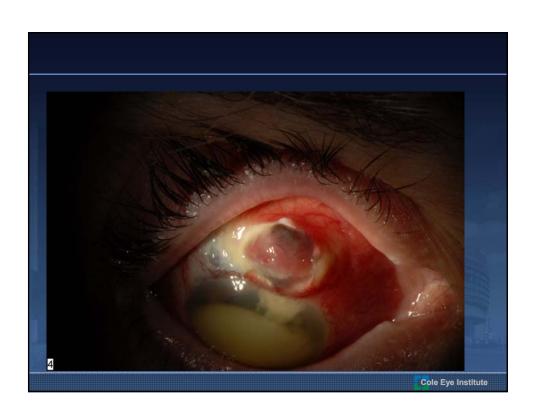
# Our initial visit – POM #5 Vitreous tap and inject Given intravitreal Vancomycin, Ceftazidime, Amphotericin A/C, vitreous tap negative on Gram stain and culture Cole Eye Institute





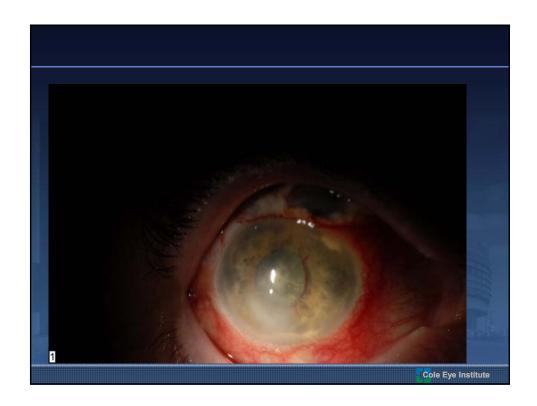


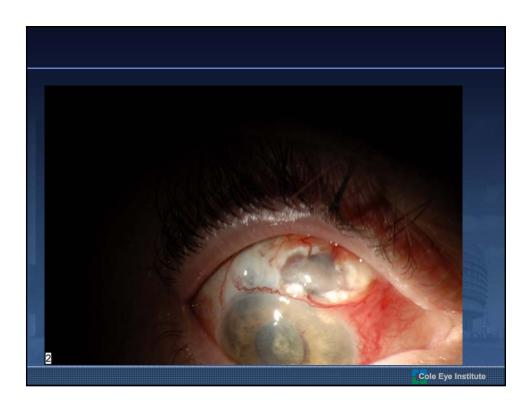




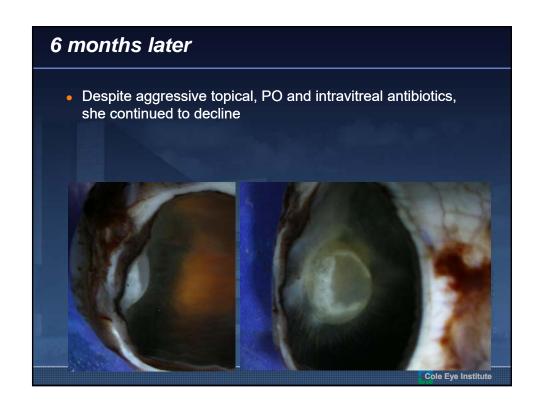












## Great tool for the treatment of uveitis patients Be careful when you use it Can't take it back Consider trying a course of po steroids to assess response prior to steroid injections You could unknowingly unmask an infectious agent



## Case Presentation

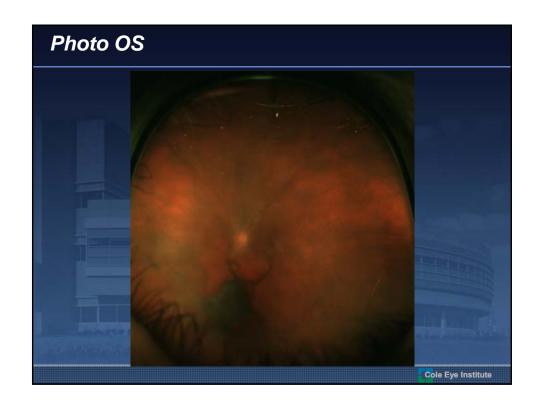
- 58 year old female with vision loss after attacked by a cow
- Owns a farm, attacked by cow hospitalized in ICU
- Develops blurry vision OS, but not seen
- 1 month later develops pain
- Told she has Purtscher's like retinopathy, has a laser for blood in the eye
- 2 months later develops panuveitis, has periocular steroid with worsening.

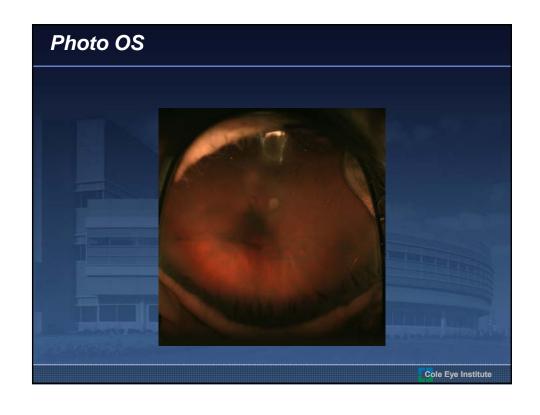
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### **Exam**

- Vision: 20/40 OD, 20/200 OS
- 2-3+ NS OU
- 4+ AC cell OS, 3+ vit haze OS, 3+ vit cell OS

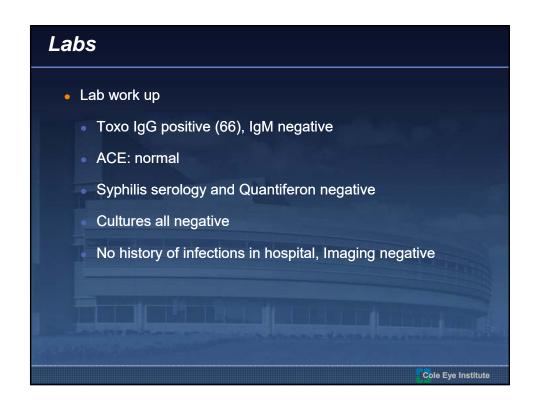






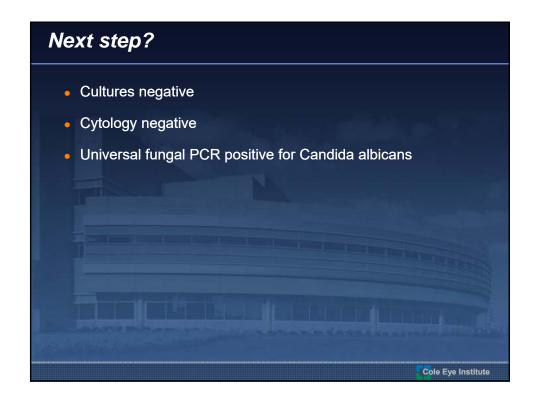


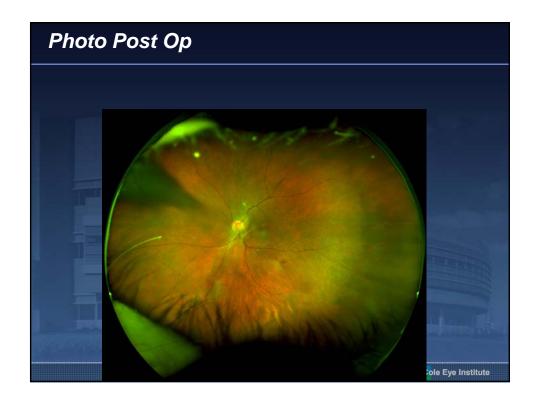
# Plan Tap and inject with Vanc/Ceftaz/Ampho Started PF q 1 hour OS Started Cyclogyl BID OS Labs drawn



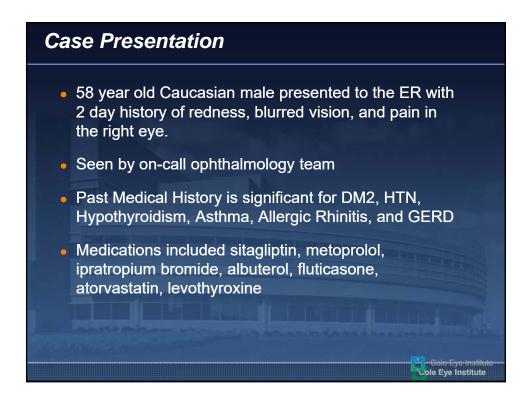








## • Being a lounge singer can be hazardous to your health.



### Exam and Treatment

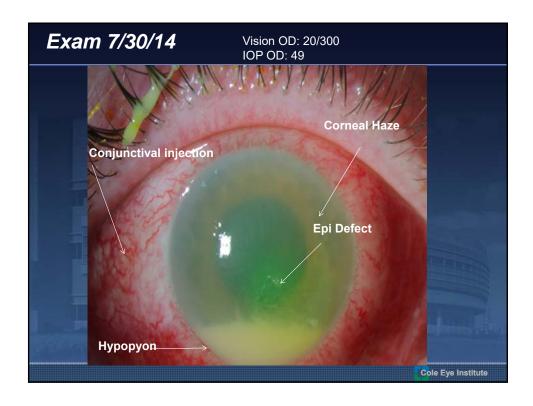
- Vision 20/ 400 OD, 20/20 OS
- IOP 51 OD 17 OS
- Unremarkable exam OS
- OD with 3+ injection, + corneal edema, difficult view into AC but likely cell, no hypopyon, no DFE or B scan performed
- No response to IOP treatment, AC tap performed, sample discarded → sent home on diamox, cosopt and brimonidine

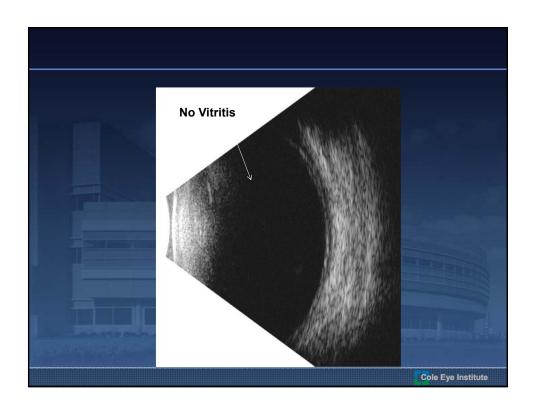


### Follow-Up

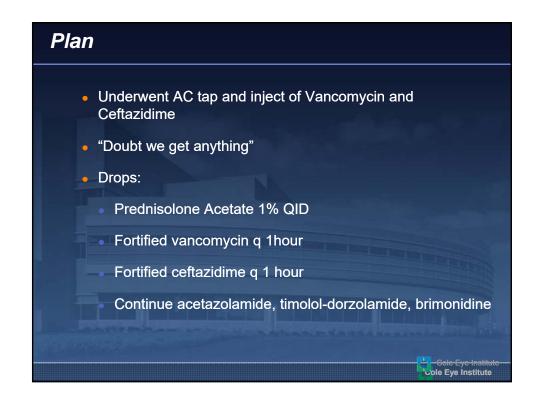
- Seen by glaucoma service
- Exam unchanged, but IOP improved to 43
- Continued on IOP meds and started on Valtrex
- Referred to Uveitis Service for follow-up the next day

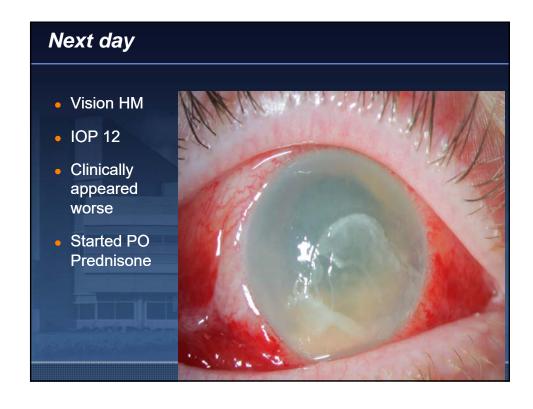


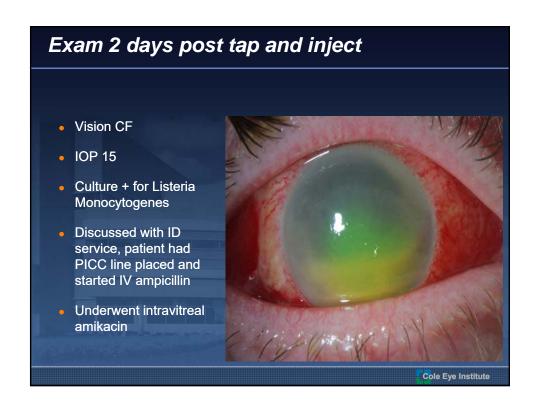




### Why? Working dx – viral associated uveitis Rare to have large hypopyon Endophthalmitis from AC tap? Really rare – but fellow may have breathed on the needle Not really responding Concerned about infection

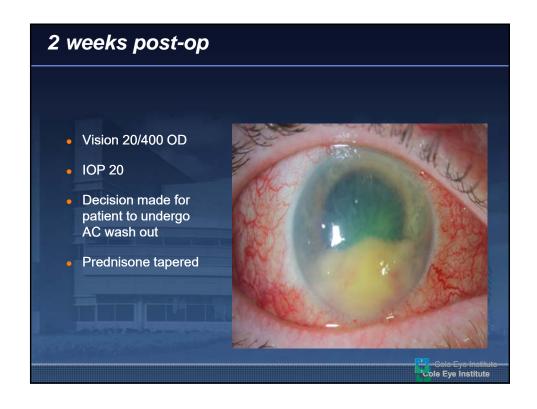


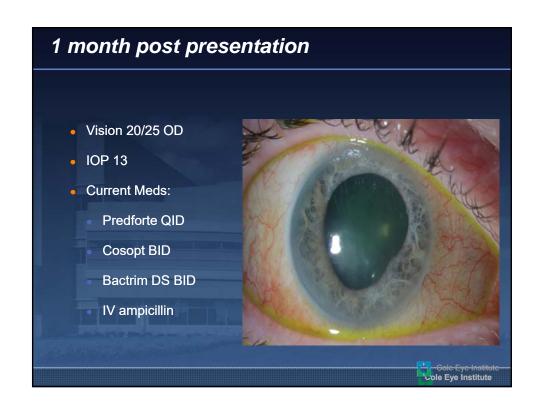




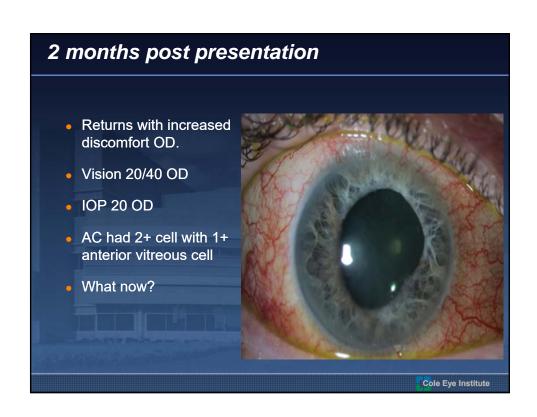
### Listeria?? Have you ever seen Listeria? Careen Lowder – "in 30 years never seen it" Dan Martin – "incredible, never seen it in 25 years" VR fellow – "wow, in my vast experience I have never seen this before, and you know I trained a really busy program before coming here and I am pretty sure I have seen everything, and if I haven't seen it before, well it must be reportable" Me – audible eye roll

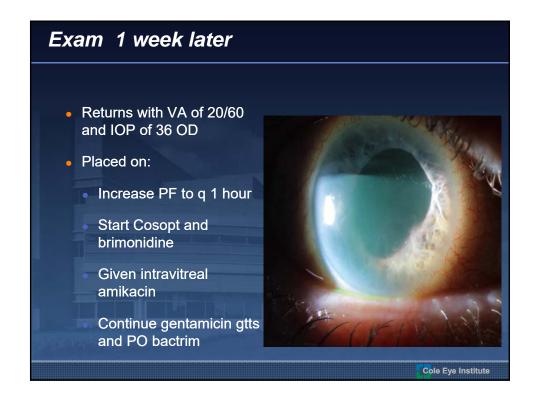


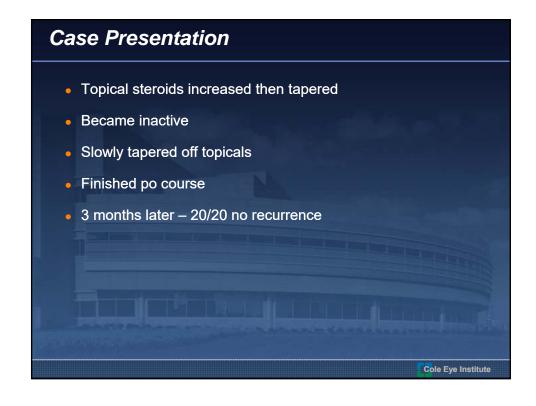












### Where did the Listeria come from? Patient is a lounge singer ID believed patient ingested infected cheese Patient now does not eat during performances Only drinks beer Flew to Hollywood to film his first movie – plays a lounge singer

### 

### Listeria Endophthalmitis

- Thought that the infection likely enters through the gastrointestinal tract.
- Stool cultures not useful
- Thought Listeria may be able to penetrate an intact intestinal tract
- Treatment
  - Ampicillin and Gentamicin
  - Ciprofloxacin and Bactrim have activity against listeria

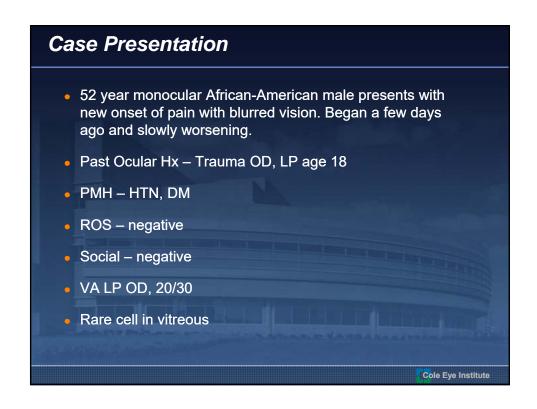


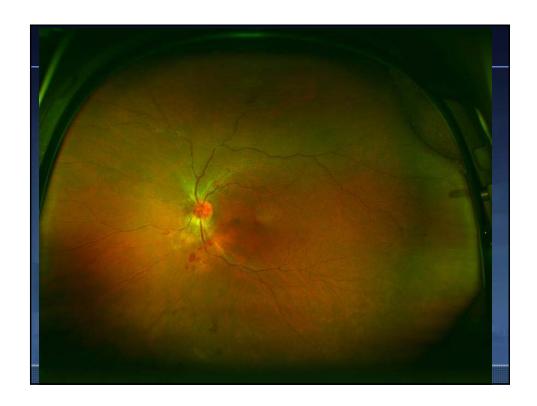
### Lesson

- Diagnosis
  - Acute IOP rise
    - HSV keratouveitis
  - Infectious endophthalmitis from AC tap
  - Infectious endophthalmitis from endogenous source (from a rare bug)
- Sometimes as experienced as you are you really have not seen everything
- Multi-team approach
- Watch for rebound inflammation

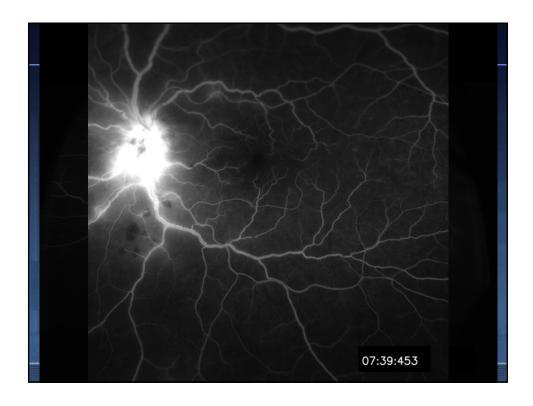
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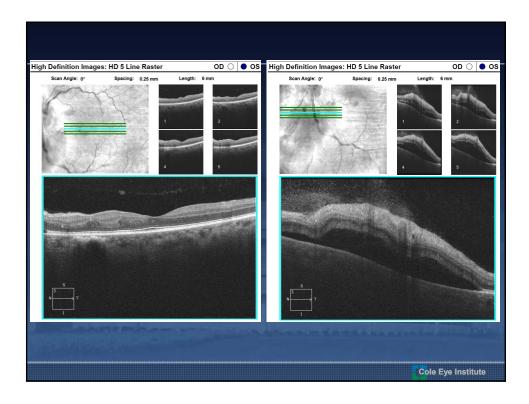


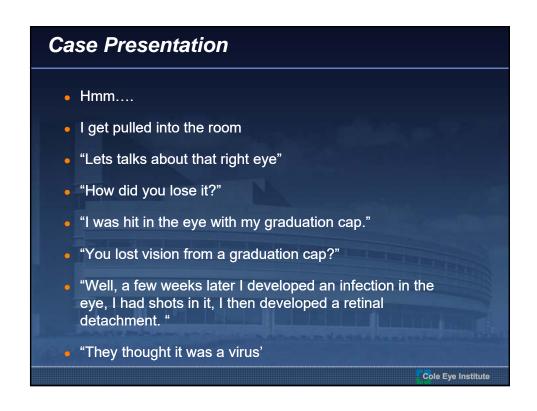




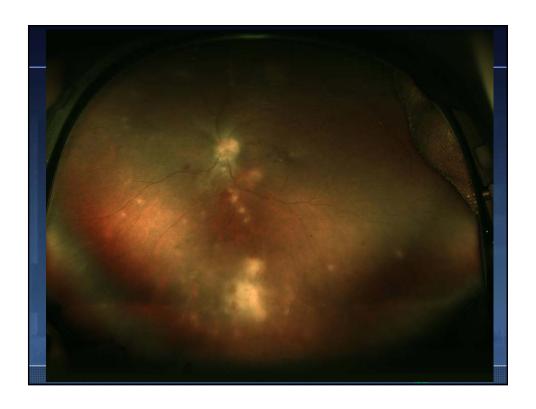




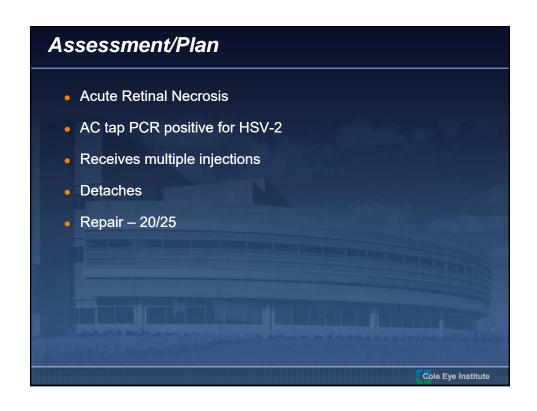




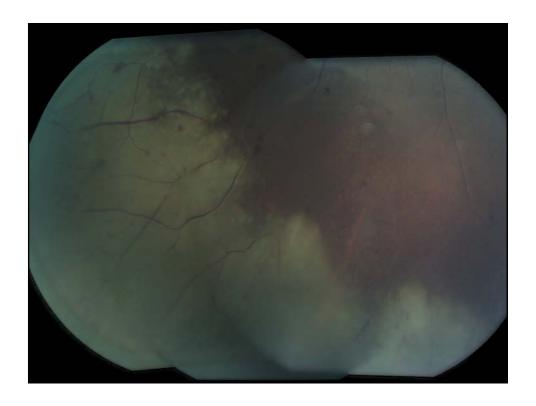


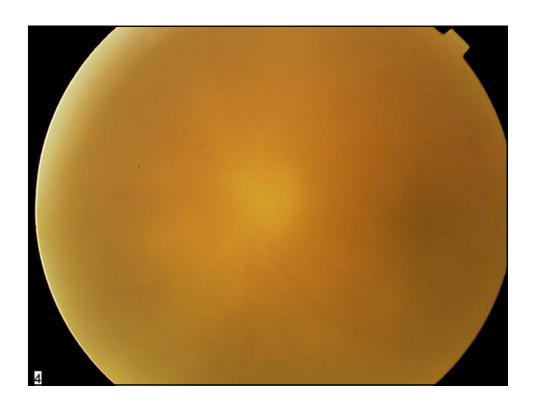






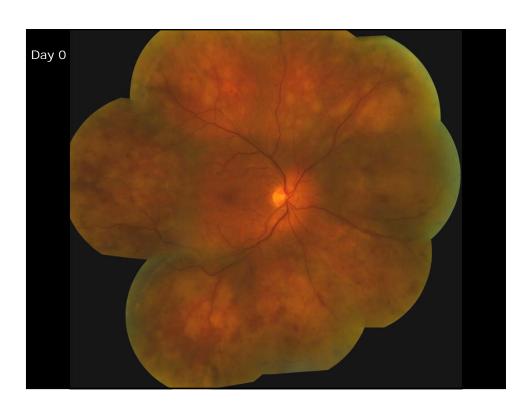
# Acute Retinal Necrosis Progressive Outer Retinal Necrosis What we know... Viral associated retinitis Most often HSV or VZV infection Represent a continuum of disease Acute retinal necrosis (ARN) in the immunocompetent Progressive outer retinal necrosis (PORN) in the immunosuppressed Historically poor visual outcomes Limited long term follow-up



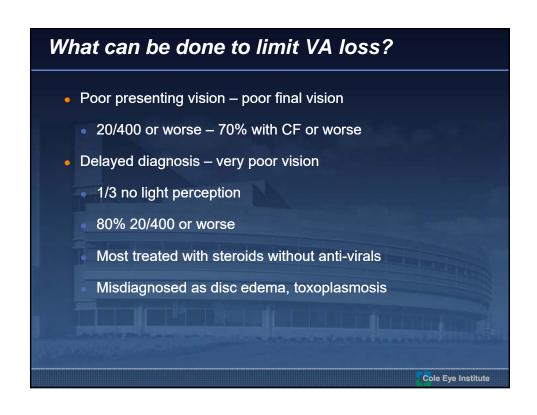












### Recommendations

- Prompt anti-viral therapy
- Low threshold for initiation of oral val-acyclovir therapy/intravitreal injection of anti-viral
- Accurate diagnosis
  - Aqueous/vitreous PCR
  - Diagnostic vitrectomy
- I don't laser

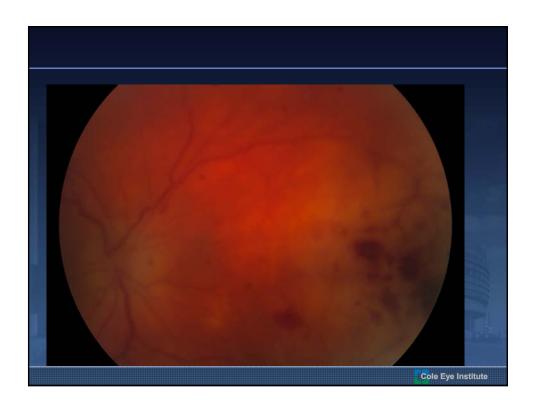
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### **Case Presentation**

- 53 year old male with vision loss OS 3 months prior.
   Saw local optom diagnosed with probable CRAO.
- Sent to internist admitted. Cardiac w/u neg, temp artery bx – negative
- Started on po pred tapered
- 2 months later sees retina
- OD WNL, OS extensive heme infectious w/u neg. OS enucleated for pain. Path negative for infection
- Now with changes OD. 20/60 2 + cell

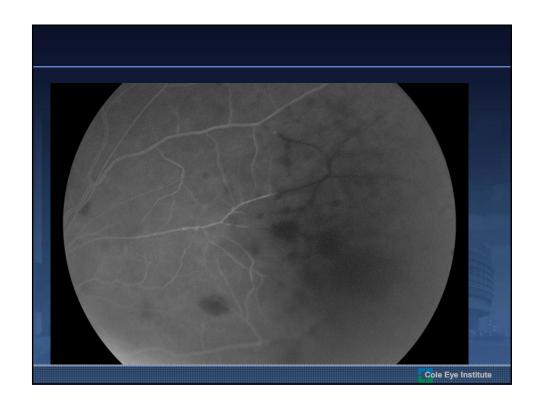
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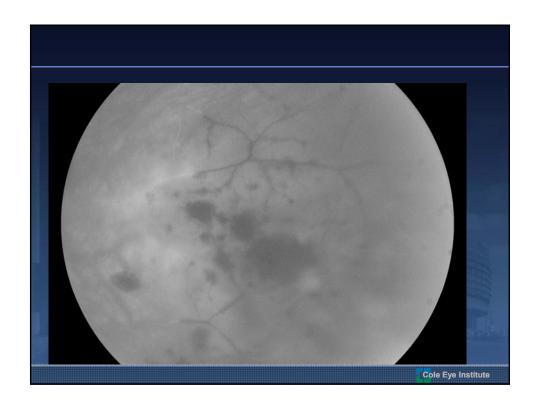




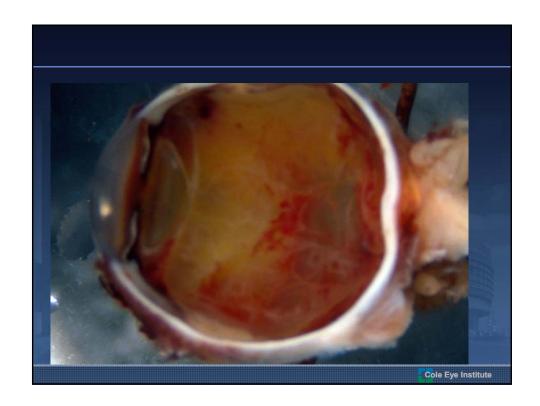


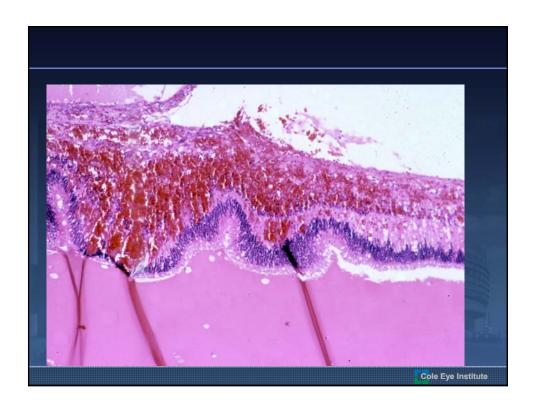


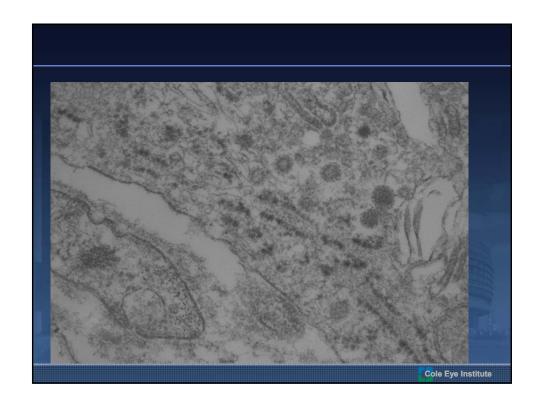


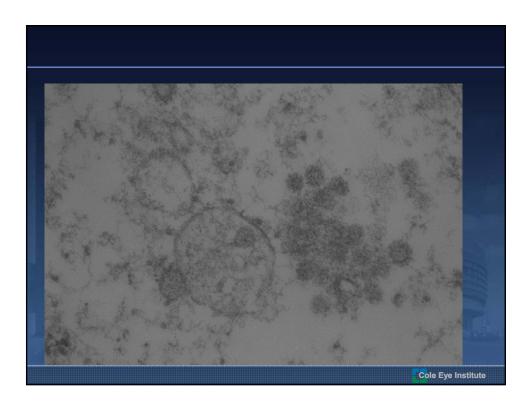


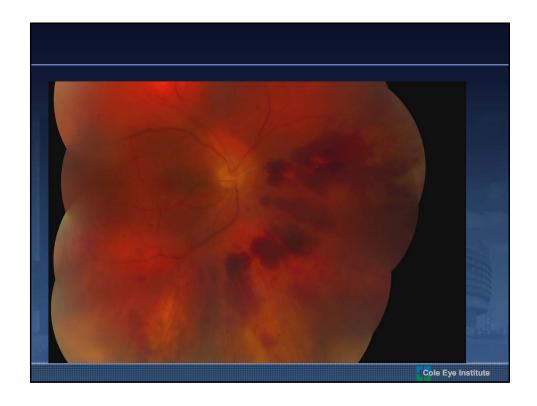




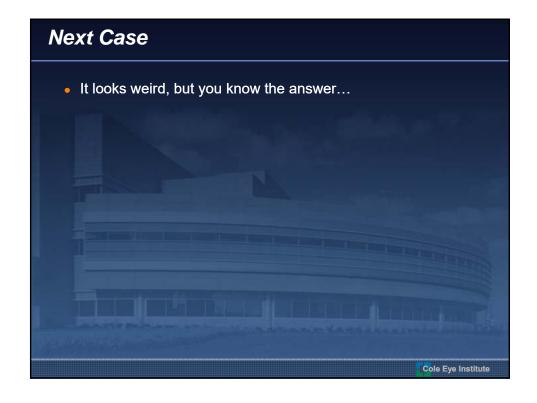


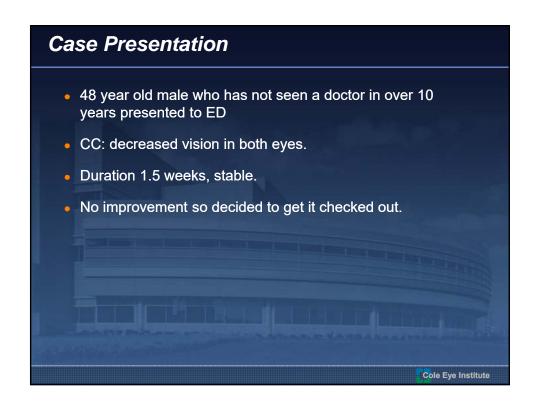






# Recommendations Oral val-acyclovir therapy for at least 3 months. Immunocompromised patient – maintain anti-viral therapy until recovery Long term anti-viral therapy Significant number of patients with recurrence or delayed bilateral involvement Potential for breeding resistance





PMH: heart murmur when young
PSH: none
Meds: None
Pets: two cats, two dogs and a turtle at home
Social History:

not currently sexually active, women only
occasional marijuana use
works as a laundry attendant at a hotel

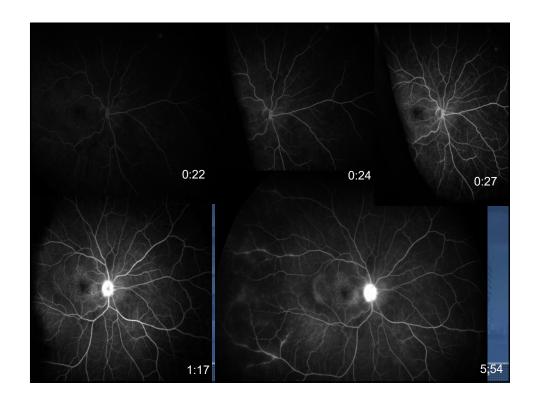
### Systemic ROS:

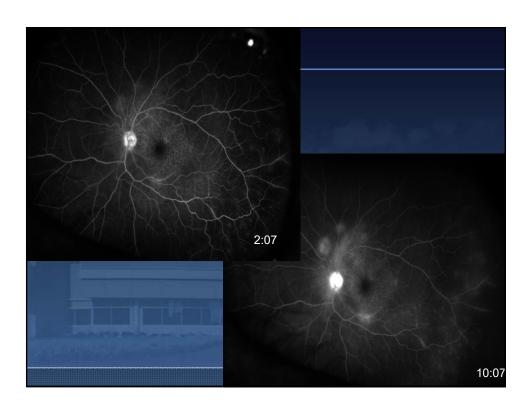
- POSITIVE +night sweats
- NEGATIVE denies any recent weight loss/gain, fevers/chills, fatigue, generalized weakness, easy bruising/bleeding, tremor or intolerance to heat or cold, sicca symptoms, nasal ulcers, oral ulcers, cold sores, genital ulcers, difficulty swallowing, chest pain, shortness of breath, wheezing, cough, blood in sputum, nausea, vomiting, abdominal pain, diarrhea, changes in bowel or bladder patterns, change in urine, weakness/numbness/tingling of limbs/digits, muscle pain, joint aches/pains, rash, hives, sun sensitivity, hair loss, skin discoloration, headache, dizziness, seizure, tinnitus, hearing loss, depression, anxiety, enlarged lymph nodes. Denies h/o STDs, recent foreign travel

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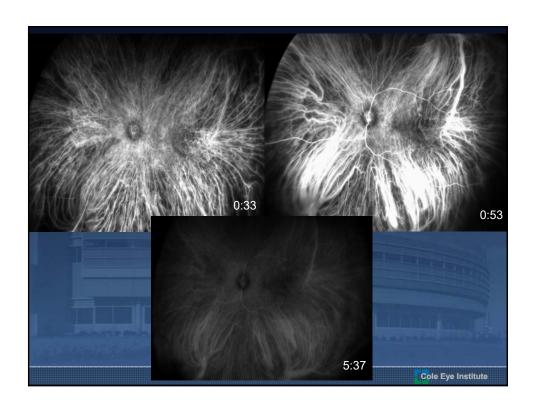
Base Exam				
		l		
		OD	OS	
	BCVA	20/250	20/80	
	Pinhole	NI	NI	-
	IOP	13	25	-
	Pupils	4 → 2 no APD	4 → 2 no APD	
-	EOM	Full	Full	
	CVF	Full	full	
			<u> </u>	Cole Eye Institute

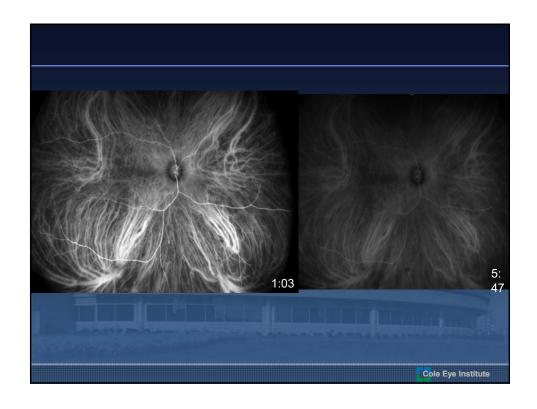






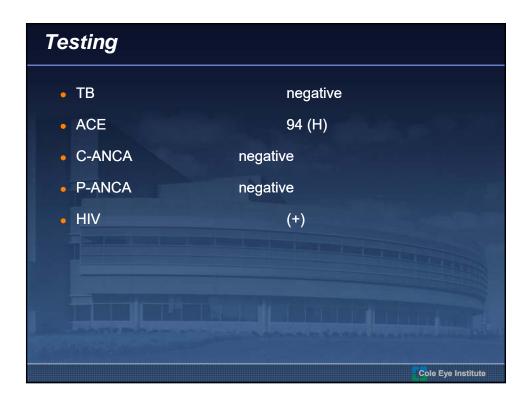






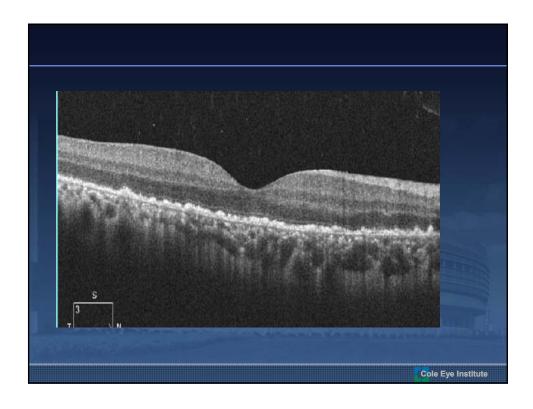


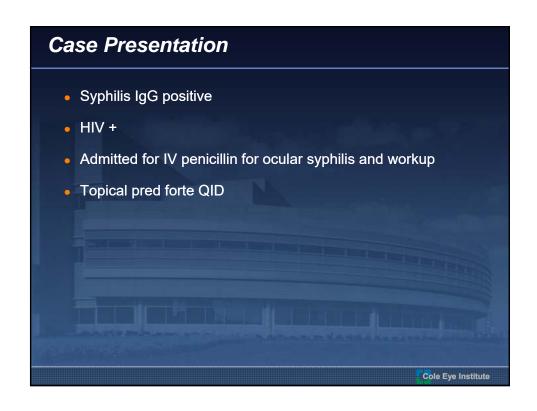
Differential for panuveitis? Workup?	
<ul> <li>Lymphoma</li> </ul>	
Syphilis	
Sarcoid	
• TB	
• Wegner's	
• VKH	
• Lupus	
Autoimmune retinopathy	
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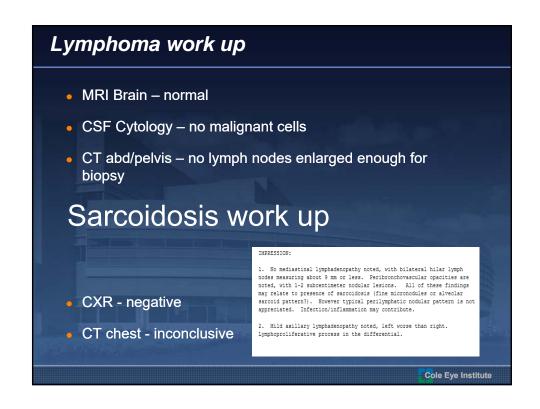
# Could be – it's a little odd looking Lets look at the images again Cole Eye Institute

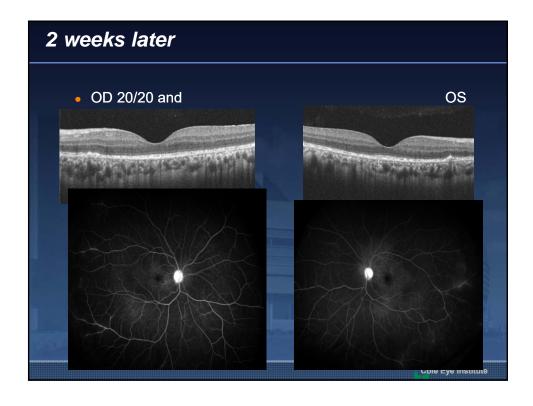




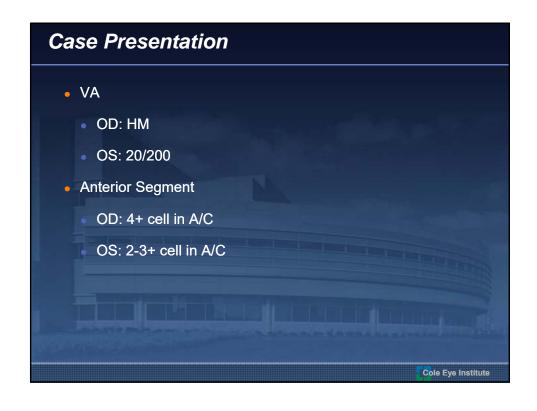


# Neurosyphilis Work up CSF RPR reactive 1:256 CSF VDRL negative CSF FTA-ABS negative CSF with no pleocyosis





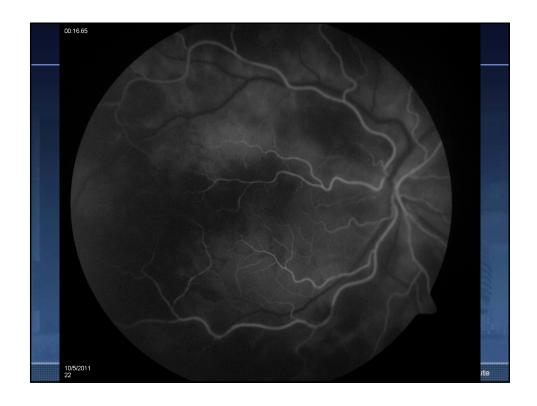
### Case Presentation Last patient of the day, Dinner plans at 6 pm Was away at AAO for 7 days, this is my first date night in a few months 31 y/o female presents with sudden loss of vision OU. Flu like symptoms starting six days ago. Four days ago noted pain over entire body. Seen in ER on the following day and diagnosed with viral infection.

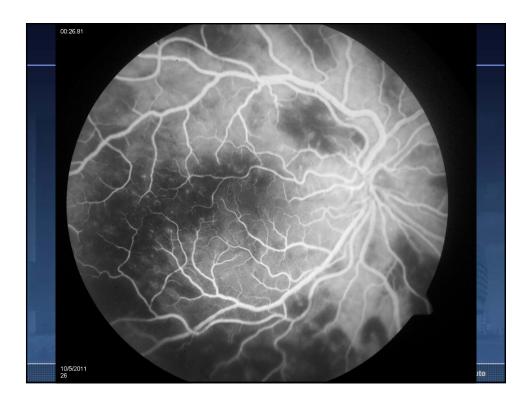


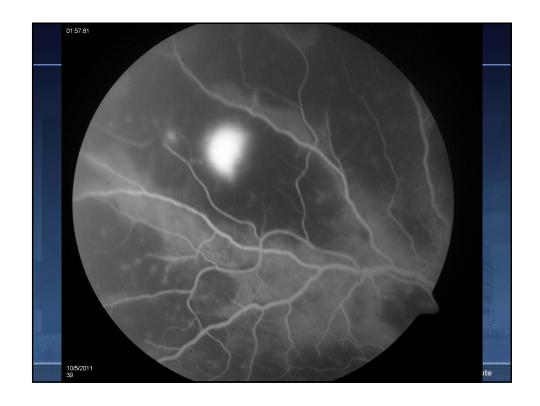




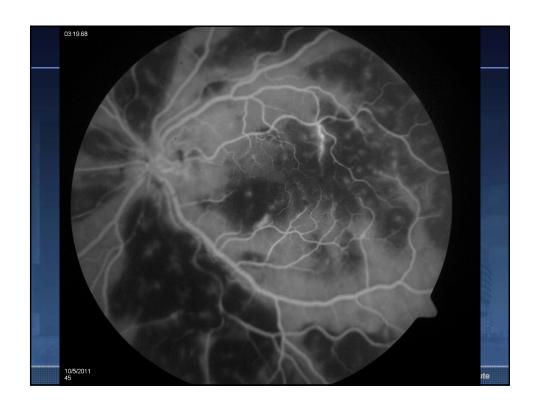


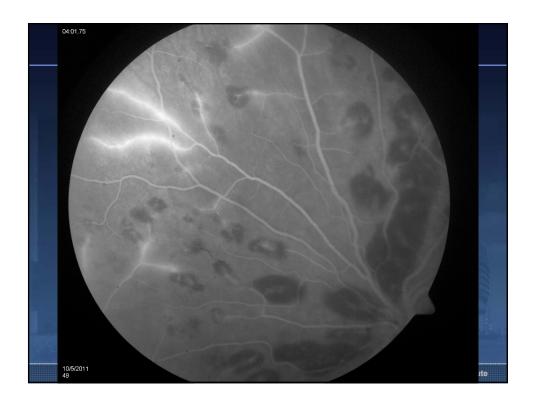


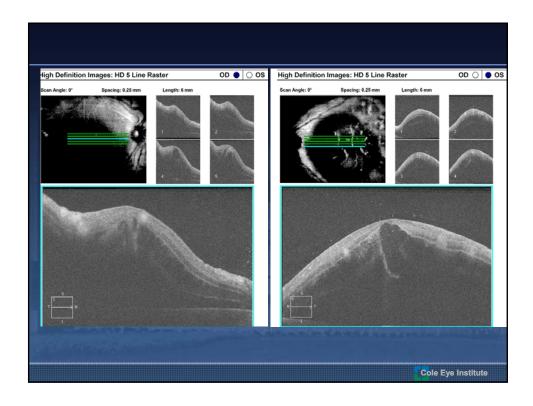












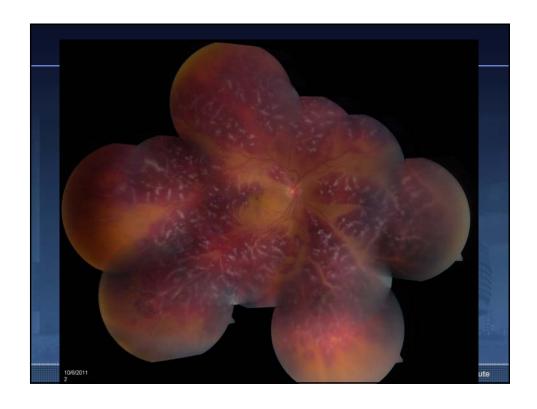


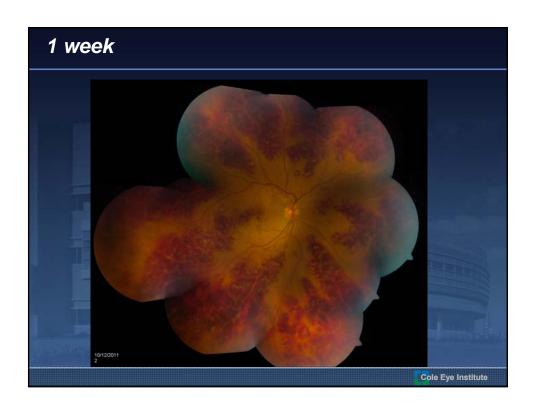


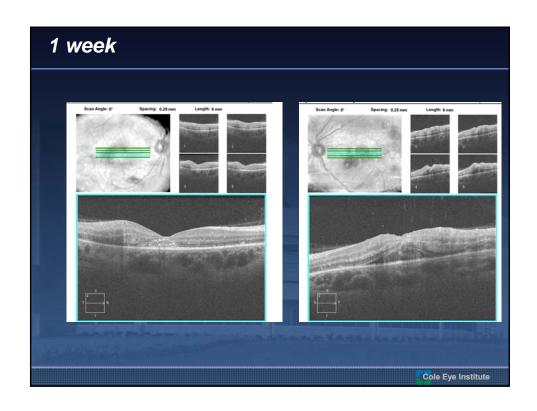


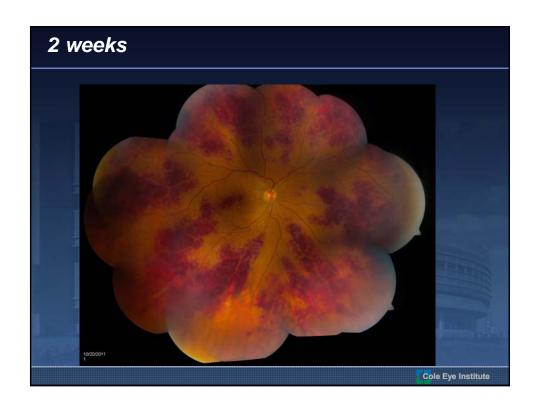
# Heliotrope Purplish discoloration around the eyes Gottron's sign Erythematous rash over the extensor surface of the metacarpophalangeal, proximal interphalangeal, and distal interphalangeal joints Cole Eye Institute

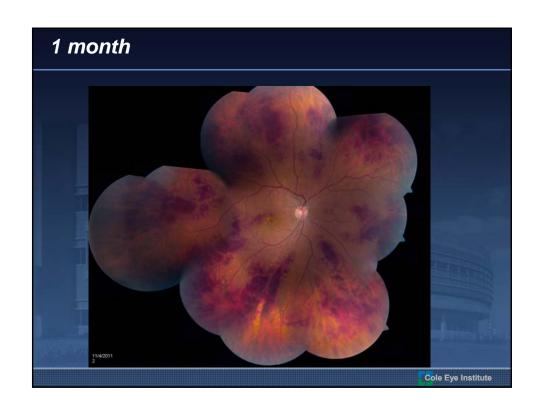


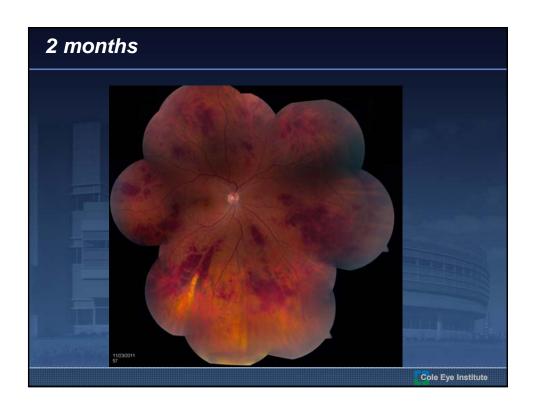


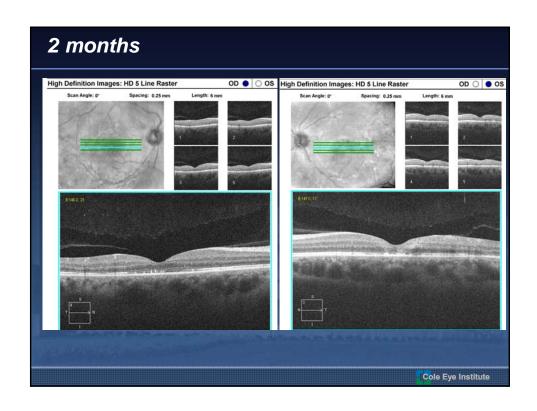




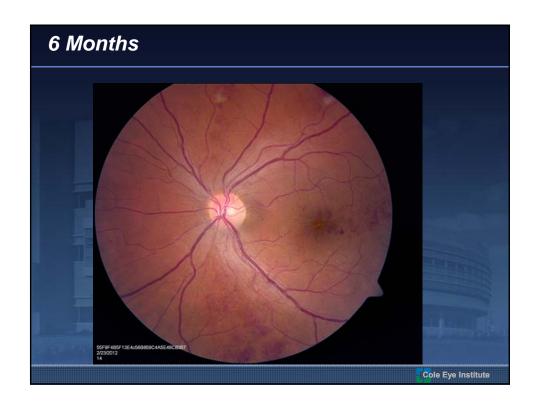


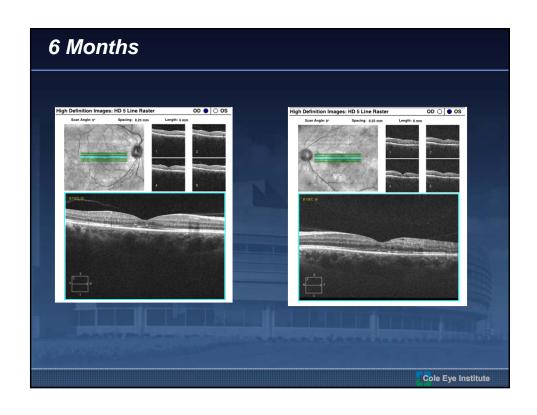












# • At 1 year – 20/40 OD, 20/30 OS

# Don't let the lab test dictate treatment Care with local steroids Persistence in obtaining biopsy – watch for pre-surgery prednisone Common presentation with a rare bug Aggressive treatment in those with aggressive vasculitis Multi-team approach for complex patients Never forget syphilis Just in case: srivass2@ccf.org