



STATE BOARD OF OPTOMETRY
 2450 DEL PASO ROAD, SUITE 105, SACRAMENTO, CA 95834
 P (916) 575-7170 F (916) 575-7292 www.optometry .ca.gov



Continuing Education Course
 Approval Checklist

Title:

Provider Name:

- Completed Application
 - Open to all Optometrists? Yes No
 - Maintain Record Agreement? Yes No
- Correct Application Fee
- Detailed Course Summary
- Detailed Course Outline
- PowerPoint and/or other Presentation Materials
- Advertising (optional)
- CV for EACH Course Instructor
- License Verification for Each Course Instructor
 - Disciplinary History? Yes No

February 1, 2017

California State Board of Optometry
2450 Del Paso Road, Suite 105
Sacramento, CA 95834

Dear California State Board of Optometry,

Re: Returned CE Course Approval Request – Lessons Learned as a Malpractice Consultant

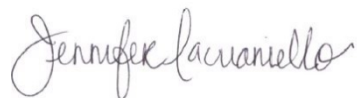
This letter serves to furnish the items requested after preliminary review of my initial application.

A sincere effort was made to submit the initial application 45 days in advance of the presentation date; however, I did not receive the presentation materials from Dr. Neda Shamie within an acceptable time frame. That said, I waited to mail the entire CE application packet until I was in possession of all presentations for the Kaiser Permanente 2017 Optometry Symposium. In the future, I will be more stringent with each instructor to ensure I have all necessary materials well in advance of the symposium date.

Additionally, there was a misunderstanding of the CE Course Approval Application process as I was unaware of the requirement that the application be submitted electronically and not by mail. Moving forward, I am now clear of the requirements and will submit future applications via email.

If you have any questions, please feel free to contact me at (626) 405 – 4648 or by email jennifer.n.iacuaniello@kp.org.

Sincerely,



Jennifer Iacuaniello

\$350 Paid for the 7 Courses

Cashiering and Board Use Only			
Receipt #	Payor ID	Beneficiary ID	Amount
1-2257	6423620	4274838	50

BUSINESS, CONSUMER SERVICES, AND HOUSING AGENCY



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CONTINUING EDUCATION COURSE APPROVAL APPLICATION

\$50 Mandatory Fee

Pursuant to California Code of Regulations (CCR) § 1536, the Board will approve continuing education (CE) courses after receiving the applicable fee, the requested information below and it has been determined that the course meets criteria specified in CCR § 1536(g).

In addition to the information requested below, please attach a copy of the course schedule, a detailed course outline and presentation materials (e.g., PowerPoint presentation). Applications must be submitted 45 days prior to the course presentation date.

Please type or print clearly.

Course Title Lessons Learned as a Malpractice Consultant	Course Presentation Date 02 / 11 / 2017
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Course Provider Contact Information

Provider Name		
Jennifer (First)	Iacuniello (Last)	Nami (Middle)
Provider Mailing Address		
Street 393 E. Walnut, 1st Fl	City Pasadena	State CA Zip 91188
Provider Email Address <u>jennifer.n.iacuniello@kp.org</u>		
Will the proposed course be open to all California licensed optometrists?		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Do you agree to maintain and furnish to the Board and/or attending licensee such records of course content and attendance as the Board requires, for a period of at least three years from the date of course presentation?		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

Course Instructor Information

Please provide the information below and attach the curriculum vitae for each instructor or lecturer involved in the course. If there are more instructors in the course, please provide the requested information on a separate sheet of paper.

Instructor Name		
Andrew (First)	Mick (Last)	Boyd (Middle)
License Number 11996	License Type Optometrist	
Phone Number (415) 221-4810 ext. 4606	Email Address <u>andrew.mick@va.gov</u>	

I declare under penalty of perjury under the laws of the State of California that all the information submitted on this form and on any accompanying attachments submitted is true and correct.

Jennifer Iacuniello
Signature of Course Provider

1.5.17
Date



[Home](#) | [Agenda](#) | [Faculty](#) | [Information](#) | [Location](#) | [Handouts](#) | [Attendees](#) | [Fees](#) | [Register](#)

WELCOME!

Please join us at this informative conference for Kaiser Permanente optometrists, opticians and other interested health care professionals. This event will provide a congenial atmosphere to exchange ideas and learn from notable experts in optometry and related fields.

Madhu Chawla, OD
Chairperson, Optometry Symposium Committee

DATE & LOCATION

Saturday, February 11, 2017

[The Waterfront Beach Resort, A Hilton Hotel](#)
21100 Pacific Coast Highway
Huntington Beach, CA 92648
(714) 845 - 8000

AGENDA

Download the symposium agenda

FACULTY

[Click here to meet the faculty](#)

SOCIAL MEDIA

Follow us on facebook and twitter for up to date information on all symposia.



Reminder

Name badges will no longer be printed.
Please bring your Kaiser Permanente issued badge for identification.



2017 Optometry Symposium

[Home](#) | [Agenda](#) | [Faculty](#) | [Information](#) | [Location](#) | [Handouts](#) | [Attendees](#) | [Fees](#) | [Register](#)

LEARNING OBJECTIVES

At the end of this activity, participants should be able to:

1. Enhance their knowledge surrounding the treatment and management of glaucoma
2. Co-manage patients with corneal disorders
3. Be informed and learn about new diagnostic technology available for patient care for the treatment and management of glaucoma and corneal disorders
4. Gain a better understanding of treatment options available for anterior segment disorders
5. Enhance knowledge of systemic disease as it applies to eye care
6. Reinforce knowledge of the standard of care within the profession and optimize care delivery

TARGET AUDIENCE

Optometrists, Ophthalmologists, Opticians and any other interested health care professionals

ACCREDITATION

Optometrists – California State Board of Optometry approval pending.

PERSONS WITH DISABILITIES

In compliance with the Americans with Disabilities Act, all reasonable efforts will be made to accommodate persons with disabilities at the meeting. If you have any special dietary or accommodation needs, please notify the meeting planner listed, prior to the symposium at (626) 405-4648 or tie-line 8-335-4648. This advance notice will help us serve you better.



2017 Optometry Symposium

Saturday, February 11, 2017

Agenda

7:00 am	Registration and Breakfast
7:50 am	Welcome and Introductions
8:00 am	Potpourri of Corneal Cases Neda Shamie, MD
8:50 am	Corneal Dystrophies and Pathology Neda Shamie, MD
9:40 am	Morning Break
10:00 am	Systemic and Medical Jeopardy David Sendrowski, OD
10:50 am	Viral Infections of the Anterior Segment David Sendrowski, OD
11:40 am	OD of the Year
11:50 am	Lunch
12:50 pm	Lessons Learned as a Malpractice Consultant Andrew Mick, OD
2:30 pm	Afternoon Break
2:40 pm	The Other Glaucoma Andrew Mick, OD
3:30 pm	Enlarged Optic Nerve Cupping Andrew Mick, OD
4:20 pm	Closing Comments and Raffle

Agenda is subject to change

Course: Lessons Learned as a Malpractice Consultant

Speaker: Andrew Mick, OD, FAAO

Time: 12:50 pm – 2:30 pm

CE Requested: 2 Hours

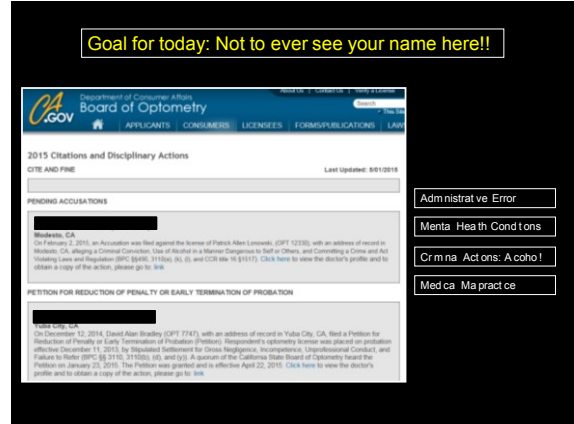
Summary: Malpractice litigation against optometrists is rare. However, much can be learned by studying common features of actual cases. This lecture reviews the essential elements of a malpractice case, along with discussion of community standards in eye care. Advice will also be given on how to avoid malpractice.

Objective: Reinforce knowledge of the standard of care within the profession and optimize care delivery.

Topical Outline

1. Malpractice in Optometry
 - a. Medical Liability Lawsuit
 - b. Standards of Care
2. Shifting Standards of Care: Not Knowing is not Legal Defense
 - a. Standards are constant changing
 - b. Stay up with peer reviewed literature and preferred practice patterns
3. Know the Dangers of not Dilating and “Pseudo-dilating”
 - a. Retinal detachments are asymptomatic
 - b. Risk Factors
 - c. Preferred practice guidelines for the American Optometric Association
4. Small Melanoma are Clinically Indistinguishable from Choroidal Nevi
 - a. Photograph Lesions
 - b. Lesions with Risk Factors
 - c. Refer Lesions with Documented Growth
5. Know the Laws and Standards of Care in the Treatment of Infections keratitis
 - a. Corneal Ulcer Referral
 - b. Academy of Ophthalmology and American Optometric Association Recommendation
6. There is Only One Acute Optic Neuropathy
 - a. NA-ION Diagnosis
7. Forget the “Rule of the Pupil” in the management of acute CNIII Palsy
 - a. Definition
 - b. Application of Rule
8. Steroid Responsiveness: Common Misconceptions
 - a. Steroid IOP response is rare

- b. Steroid response takes weeks to develop
- c. Known Risk Factors



We have put you in a risky position:
Previous educational environment probably won't match your new world

Digital fundus and FA camera
Digital anterior segment camera
SD OCT
A and B scan ultrasonography
Ultrasound biomicroscope
Corneal topographer
Humphrey field analyzer x 2
Frequency doubling perimeter
Hand held slit lamp
Argon, YAG and SLT lasers
Two operating rooms

Same day access to lab results
Same day access to MRI/CT/ultrasound
Emergency room
Microbiology lab for cultures

In clinic subspecialty consultation:
Retina specialist
Cornea specialist
Glaucoma specialist
Oculoplastics specialist
Uveitis specialist
Ocular pathology
Ocular oncology

In facility subspecialty consultation:
Neurology
Rheumatology
Infectious Disease
Vascular surgery
Dermatology
Hematology / Oncology

Attending optometrists have 50+ years of practice with an expanded scope of practice

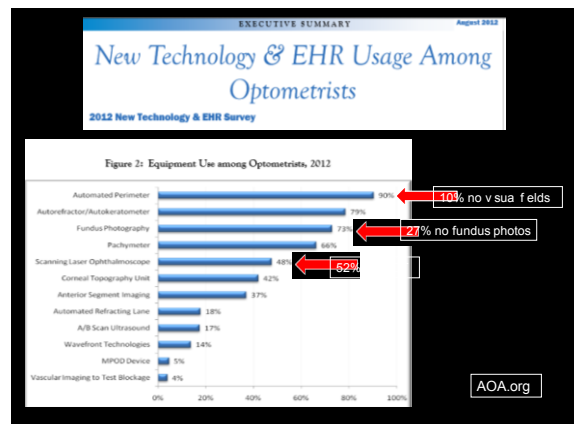
Peer reviewed literature accessible in every room

We have put you in a risky position:
Majority of "disease" lecturers, school faculty members, and authors in optometry "journals" practice in similar low liability environments

Meanwhile 81% of optometrists practice in OD-only private or commercial affiliated practices

ODS BY PRIMARY PRACTICE SETTING		
	NUMBER	%
INDEPENDENT PRACTICE	22,800	57%
OPTICAL CHAIN AFFILIATION	9,600	24%
OPHTHALMOLOGY PRACTICE	3,300	8%
OTHER MEDICAL	2,000	5%
GOVERNMENT	1,900	5%
OTHER	400	1%
TOTAL	40,000	

Source: ACA 2013 Survey

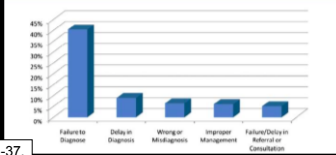


Malpractice in Optometry

Between 1991 and 2008: a total of 609 optometric malpractice settlement payments were reported nationally, ranging from \$50 to \$2.05 million (National Provider Data Band (NPDB))

Over 55% of malpractice payments were for three reasons:

- Failure to diagnose
- Delay in diagnosis
- Wrong diagnosis



Duszak. Optometry 2011;82:32-37.

Basic elements of medical liability lawsuit

1

It can be proven that the patient sustained an injury: In Optometry

- Lost vision
- Lost visual field
- Cosmetic disfigurement
- Affected ability to work/make money
- Caused significant emotional distress

2

It can be proven the doctor practiced outside of **STANDARDS OF CARE**

3

It can be proven that the injury was sustained because of the doctor practicing outside of standards of care

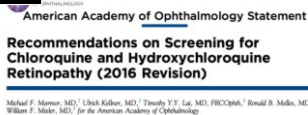


How do you know the standards of care?

Preferred Practice Patterns of Optometry and Ophthalmology



The Peer Reviewed Literature



Standards of Care Constantly Change!
It is YOUR responsibility to stay current!!!

And don't practice outside state optometry laws!!

Why add an action against your license to your malpractice case!!



CHAPTER 7: OPTOMETRY

The Good News!!

Just by doing a thorough comprehensive examination you can avoid most litigation!!

Top 4 specific reasons optometrists get sued in the United States?

Failure to detect retinal detachment

I didn't dilate or did and missed OBVIOUS signs of detachment

Failure to detect glaucoma

I didn't look at the nerve critically or I didn't measure / react appropriately to an elevated IOP

Failure to detect malignancy

I didn't dilate or I pseudo dilated I missed OBVIOUS signs of ocular malignancy I didn't look closely at the conjunctiva and adnexa

The Good News!!

Just by doing a thorough comprehensive examination you can avoid most litigation!!

Top 4 reasons optometrists get sued in the United States?

Contact lens related complications

I didn't follow up at appropriate intervals to ensure healthy fit / compliance

I didn't educate patient on how to minimize risk of infection / and DOCUMENT IT:
Explain need for regular disinfection
Explain that overnight / prolonged wear increases infection risk
Explain that if symptoms of infection occur: Discontinue wear and RTC

More Good News!!
 The wrong initial diagnosis/treatment with timely referral often doesn't lead to malpractice

This really isn't responding the way I thought it would. I better get second opin
 Good idea!

This really isn't responding the way I thought it would. Let me give it another month.....
 so good idea!



Truly beneficial experience

The experience has fundamentally changed how I teach

I now point out where there may be contradictions between observed care in the optometric community and standards of care

I explain that sometimes there are limitations to optometrists being able to deliver standards of care (diagnostic equipment, insurance coverage, access to ancillary laboratory testing or imaging, optometric law), but this does not protect against potential liability



**Shifting Standards of Care:
 Not knowing is not legal defense**

Andrew B. Mick, OD, FAAO
 San Francisco VA Medical Center Eye Clinic
 UCSF Department of Ophthalmology
 UC Berkeley School of Optometry

69 year-old Chinese American female

Vague chief complaint about subtle reduction in night vision

Systemic history significant for HTN, hyperlipidemia, rheumatoid arthritis

Has been taking hydroxychloroquine for 15 years for rheumatoid arthritis

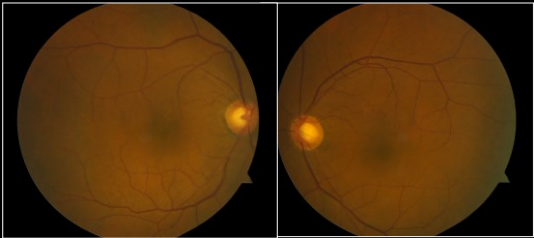
Taking 200 mg of hydroxychloroquine bid and weighs 145 lbs

Best corrected vision is 20/20 OU

Passes 14/14 Ishihara Color Plates

Amsler Grid negative for metamorphopsia

Normal ocular fundus examination



Assessment: Normal ocular health, 20/20 vision
 Plan: RTC 1 year

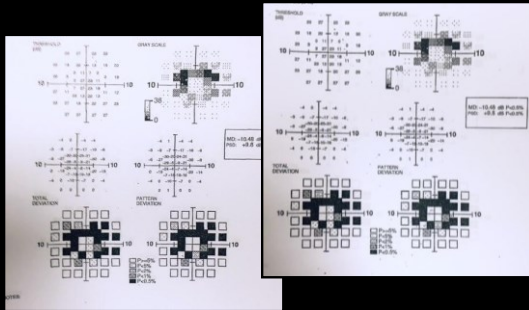
Was the community standard met?

- Does this patient have risk factors for hydroxychloroquine toxicity?
- Were the recommended diagnostic examination techniques completed?
- Was the appropriate follow up interval scheduled?

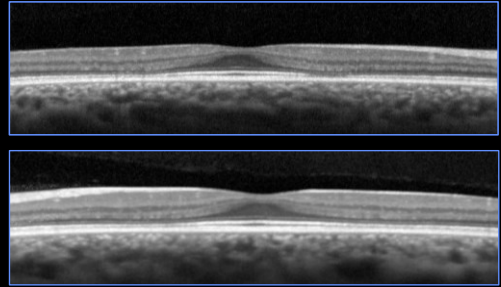
69 year-old Chinese American female

- Symptoms of reduced vision worsened over next 6 months
- Patient presents to a retinal specialist
- Best corrected vision now 20/30 OD, 20/25 OS

10-2 perimetry showed pericentral scotomas




SD-OCT showed pericentral ellipsoid zone disruption



Have basic elements of malpractice been proven?

- Can it be proven that the patient sustained an injury?
Yes: Patient has permanent vision and field loss
- Can be proven the doctor practiced outside of standards of care?


American Academy of Ophthalmology Statement
Recommendations on Screening for Chloroquine and Hydroxychloroquine Retinopathy (2016 Revision)

Michael F. Marmor, MD,¹ Ulrich Kellner, MD,² Timothy Y.Y. Lai, MD, FRCOphth,³ Ronald B. Meller, MD,⁴ William F. Milder, MD,⁵ for the American Academy of Ophthalmology

Marmor. Ophthalmology 2016 123:1386-1394.

Updated risk factors for hydroxychloroquine toxicity

Table 1. Major Risk Factors for Toxic Retinopathy

Daily dosage	
HCQ	>5.0 mg/kg real weight
CQ	>2.3 mg/kg real weight
Duration of use	>5 Yrs, assuming no other risk factors
Renal disease	Subnormal glomerular filtration rate
Concomitant drugs	Tamoxifen use
Macular disease	May affect screening and susceptibility to HCQ/CQ

CQ = chloroquine; HCQ = hydroxychloroquine.

The patient had two major risk factors for toxicity:
 145 lbs = 66 kg (6.1 mg/kg dose)
 Must be above 176 lbs for standard 400 mg/day dosing
 The patient had been on therapy x 15 years
 Risk of toxicity is only 2% at 10 years, but reaches 20% at 20 years

Marmor. Ophthalmology 2016 123:1386-1394.

Updated clinical examination techniques

Table 3. Clinical Examination Techniques

Recommended Screening Tests
Primary tests ideally do both
Automated visual fields (appropriate to race)
SD OCT
Other objective tests (as needed or available):
mERG
FAF
Never tests of possible value in future
Microperimetry
Adaptive optics retinal imaging
Not Recommended for Screening
Fundus examination
Time-domain OCT
Fluorescein angiography
Full-field ERG
Amlier grid
Color testing
EOG

EOG = electro-oculogram; ERG = electroretinogram; FAF = fundus autofluorescence; mERG = multifocal electroretinogram; SD OCT = spectral-domain optical coherence tomography.

Recommended examination techniques not employed:
 SD OCT (can substitute FAF or mERG)
 Automated threshold fields (30 2 for Asians, 10 2 for all others)

Marmor. Ophthalmology 2016 123:1386 1394.

Frequency of examinations remains unchanged

Table 2. Screening Frequency

Baseline Screening
 Fundus examination within first year of use
 Add visual fields and SD OCT if maculopathy is present

Annual Screening
 Begin after 5 yrs of use
 Sooner in the presence of major risk factors

SD OCT = spectral-domain optical coherence tomography.

Lessons Learned as a Malpractice Consultant

- Standards of care of constantly changing
- Standards of care may require technology or expertise that excludes you from managing certain patients
- The only way to keep track of these changes is stay up with the peer reviewed literature and preferred practice patterns

Know the dangers of not dilating and "pseudo-dilating"

(And don't work for practices that encourage not dilating!)

Andrew B. Mick, OD, FAAO

San Francisco VA Medical Center Eye Clinic
 UCSF Department of Ophthalmology
 UC Berkeley School of Optometry

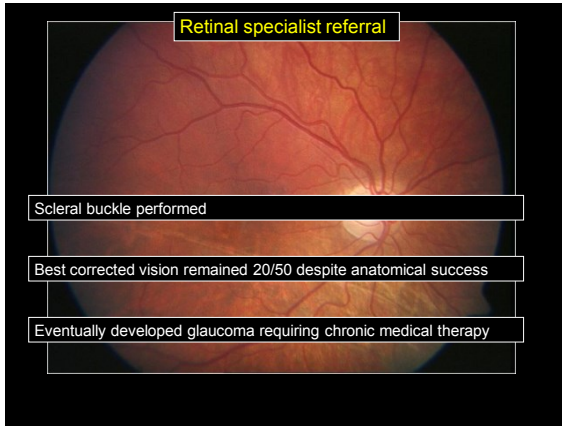
SFVA Case: 24 year old Caucasian male

- Consult for routine eye examination
- Slight distance blur through 1 year old glasses
- Seen 6 months ago outside the VA, was not dilated
- 20/60 OD, 20/20 OS best corrected vision spherical equivalent 8.00 diopter myopic Rx
- Anterior segment examination unremarkable
- Intraocular pressures were symmetric and 16 mmHg

Dilated fundus examination of right eye



Lattice degeneration with atrophic holes seen at 7 o'clock right eye and in two locations in the left eye



Have basic elements of malpractice been proven?

Can it be proven that the patient sustained an injury?
Yes: Patient has permanent vision loss and glaucoma

Can be proven the doctor practiced outside of standards of care?

Comprehensive Adult Eye and Vision Examination

American Optometric Association

F. OCULAR HEALTH ASSESSMENT AND SYSTEMIC HEALTH SCREENING

- Anterior and posterior ocular segments
- Ocular media
- Intraocular pressure
- Confrontation visual fields
- Systemic health screening test

Care of the Patient with Myopia

American Optometric Association

Frequency and Composition of Evaluation and Management Visits for Myopia

Type of Patient	Number of Evaluation Visits	Treatment Options	Frequency of Follow-up Visits	Composition of Follow-up Evaluations				Management Plan
				Visual Acuity	Refraction	Accommodation/Vergence Testing	Ocular Health Evaluation	
Single contact lens wearers	1	Single contact lens, optical correction, vision therapy	Children, annually; Adults, every 1-2 years	Each visit	Each visit	Each visit	Each visit	Provide reflective counseling, provide or refer patient for vision therapy, contact lens, or other services as appropriate. In some circumstances, follow-up may be needed to ensure patient compliance.
		Possible single contact lens, optical correction, vision therapy	Every 6-9 months	Each visit	Each visit	Each visit	Each visit	
Multifocal contact lens wearers	1-2	Multipurpose contact lens, optical correction, vision therapy	Variable, depending on extent of refractive correction	Each visit	Each visit	Annually	Each visit	Provide reflective counseling, provide or refer patient for vision therapy, contact lens, or other services as appropriate. In some circumstances, follow-up may be needed to ensure patient compliance.
		Optical correction	1-4 wk after dispensing of progressive lens	Each visit	Annually or p.r.n.	Annually	Annually	
Pseudo-myopia	1-2	Optical correction, pharmacological, vision therapy	Every 1-4 wk until accommodation stabilizes or discontinued, then annually	Each visit	Each visit	Annually or p.r.n.	Annually	Provide reflective counseling, reduce accommodation response with vision therapy, provide cycloplegic agents to disambiguate accommodative spasm, provide contact lenses with plus lenses, patient education, etc.
Refractive surgery	1-2	Optical correction	Annually or more frequently until stable (no more than 6-12 months)	Each visit	Annually or p.r.n.	Annually or p.r.n.	Each visit	Provide reflective counseling, provide or refer for appropriate treatment for ocular health, contact lens, or other services.

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The Eye M.D. Association

OCULAR EXAMINATION

The comprehensive eye examination consists of an evaluation of the physiological function and the anatomical status of the eye, visual system, and its related structures. This usually includes the following elements:

- Visual acuity with current correction (the power of the present correction recorded) at distance and, when appropriate, at near
- Measurement of best corrected visual acuity (with a refraction when indicated)
- Visual fields by confrontation
- External examination (e.g., eyelid position and character, lashes, lacrimal apparatus and tear function, globe position, and pertinent facial features)
- Pupillary function (e.g., size and response to light, relative afferent pupillary defect)
- Ocular alignment and motility
- Slit-lamp biomicroscopic examination: eyelid margins and lashes, tear film, conjunctiva, sclera, cornea, anterior chamber, and measurement of central and peripheral anterior chamber depth, iris, lens, and anterior vitreous
- Intraocular pressure measurement, preferably with a contact application method (typically a Goldmann tonometer); contact tonometry may be deferred in the setting of suspected ocular infection
- Fundus examination: mid and posterior vitreous, retina (including posterior pole and periphery), vasculature, and optic nerve
- Assessment of relevant aspects of patient's mental and physical status.

Examination of anterior segment structures routinely involves gross and biomicroscopic evaluation prior to and after dilation. Evaluation of structures situated posterior to the iris is best performed through a dilated pupil. Optimal examination of the peripheral retina requires the use of the indirect ophthalmoscope or slit-lamp fundus biomicroscopy. Optimal examination of the macula and optic nerve requires the use of the slit-lamp biomicroscope and accessory diagnostic lenses.

Based on the patient's history and findings, additional tests or evaluations might be indicated to evaluate further a particular structure or function. These are not routinely part of the comprehensive medical eye clinical evaluation. Specialized clinical evaluations may include the following:

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The Eye M.D. Association

Based on the patient's history and findings, additional tests or evaluations might be indicated to evaluate further a particular structure or function. These are not routinely part of the comprehensive medical eye clinical evaluation. Specialized clinical evaluation may include the following:

- Macular area vision testing
- Potential acuity testing
- Glare testing
- Contrast sensitivity testing
- Color-vision testing
- Testing of stereovision and fusion
- Testing of accommodation and convergence amplitudes
- Central visual field testing (Annular grid)
- Perimetry
- Expanded evaluation of ocular motility and alignment in multiple fields of gaze at distance and near
- Exophthalmometry (e.g., Hertel)
- Tear breakup time
- Schirmer testing and ocular surface dye staining
- Contact tonometry
- Gonioscopy
- Functional evaluation of the nasolacrimal tear drainage system
- Extended indirect ophthalmoscopy with scleral indentation

Other Ocular Disorders

Other examples of high-risk conditions or diseases for which medical eye examinations are indicated include a past history of ocular trauma or the presence of abnormalities of the anterior segment that increase the risk of open-angle and angle-closure glaucoma. High degrees of myopia and abnormalities of the posterior segment such as retinal tears and detached retina increase the risk of retinal detachment.

On another note: Examining patients with PVD symptoms

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The Eye M.D. Association


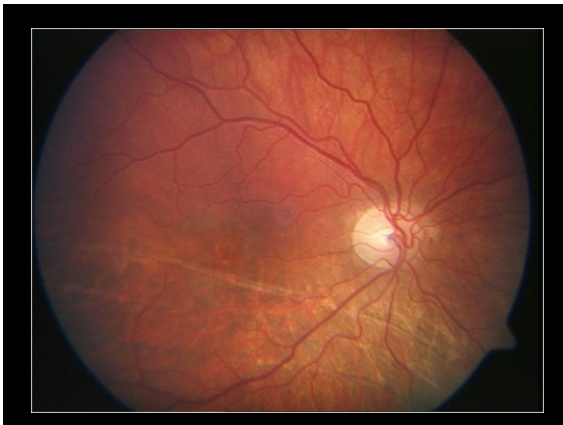
Examination

The eye examination should include the following elements:

- Examination of the vitreous for hemorrhage, detachment, and pigmented cells.^{4,5,9 [A]}
- **Peripheral fundus examination with scleral depression**.^{10 [A]}

There are no symptoms that can reliably distinguish a PVD with an associated retinal break from a PVD without an associated retinal break; therefore, a peripheral retinal examination is required.^{10 [A]} The preferred method of evaluating peripheral vitreoretinal pathology is with indirect ophthalmoscopy using scleral depression.^{10 [A]} Many patients with retinal tears have blood and pigmented cells in the anterior vitreous. Slit-lamp biomicroscopy with a mirrored contact lens or a small indirect condensing lens may complement the examination.

Note, this is not considered as standard of care for examination of the peripheral retina!

Two types of rhegmatogenous retinal detachment

Symptomatic:
Vast majority (95%)
Present with symptoms including flashes/floaters/sectoral vision loss
Acute onset and symptomatic progression
Often associated with retinal tears caused by PVD
Older age groups

Asymptomatic:
Small minority (5%)

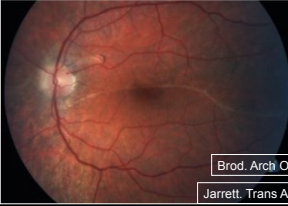
Epidemiology of asymptomatic rhegmatogenous RD

- Age range from teens to 80s with mean in the 40s
- Greater than 5.00 D of myopia found in 67%
- Phakic in greater than 85%
- Majority occur with an absence of PVD
- Often associated with atrophic retinal holes (60-80%)
- Slightly more common in females

Brod. Arch Ophthalmol 1995;113:1030-1032.
Jarrett. Trans Am Ophthalmol 1988;86:307-320

Clinical signs of asymptomatic rhegmatogenous RD

- Absence of symptoms, usually found on routine exam
- Most often occur in the inferior quadrants
- Greater than 90% of RDs extend posterior to equator at diagnosis



Brod. Arch Ophtha mol 1995;113:1030-1032.
Jarrett. Trans Am Ophthalmol 1988;86:307-320

Asymptomatic RD show signs of chronicity

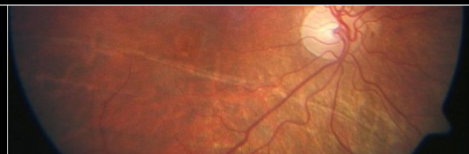
- Detached retina appears atrophic and thin
- Underlying RPE alteration from chronic subretinal fluid
- 40-70% have one or more demarcation line
- Macrocysts may be found in atrophic detached retina
- Presence of proliferative vitreoretinopathy
- Peripheral retinal neovascularization



Brod. Arch Ophthalmol 1995;113:1030-1032.

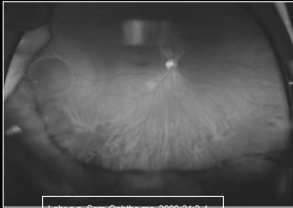
Demarcation lines

- Represent RPE hyperplasia at junction of attached and detached retina
- Shape is concave to the ora
- Believed to take at least 3 months to develop
- Occur more often in younger patients
- Greater than 50% of demarcation lines fail to stop progression of RD and often multiple are seen



Brod. Arch Ophthalmol 1995;113:1030-1032. Benson. Am J Ophthalmol 1977;84(5):641-644

Retinal macrocysts



Marcus. Arch Ophthalmol 1979;97:1273-1275

Labriola. Sem Ophthalmol 2009;24:2-4.

Secondary change in the detached, atrophic retina
 Usually between 2-8 disc diameters in size
 Split occurs at the level of the outer plexiform layer
 Do not extend peripherally to the ora serrata
 Often associated with retinal beaks
 Often resolve upon surgical repair of the retina
 Found in 3% of retinal detachments

Hager. Trans Am Acad Ophthalmol Otolaryngol 1967;71:422-454

Why are patients asymptomatic?

Slow progression leads to a lack of symptoms
 In greater than 50% there is no posterior vitreous detachment
 Intact posterior vitreous does not cause retinal traction
 Younger patients have less liquid vitreous
 Liquefied vitreous is source of subretinal fluid in RD
 Little fluid, and inferior location make for slow progression
 Slow progression less likely to be noticed by patients (ie glaucoma)

Jarrett. Trans Am Ophthalmol 1988;86:307-320. Brod. Arch Ophthalmol 1995;113:1030-1032.

Natural history of asymptomatic rhegmatogenous RD

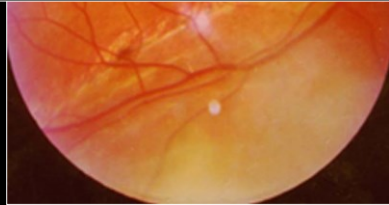
- Low rates of progression to involve central vision
- Brod: 7% of 31 RDs progressed over 2-3 years follow up
- Jarrett: Zero of eight RDs followed for up to ten years without intervention showed signs of progression
- Byer: 20% of 10 RDs followed for up to 23 years showed signs of progression

Brod. Arch Ophthalmol 1995;113:1030-1032.

Jarrett. Trans Am Ophthalmol 1988;86:307-320

Indications for treatment of asymptomatic rhegmatogenous RD

- Threat to central vision at diagnosis
- Documented progression of retinal detachment
- Development of symptoms



Lessons Learned as a Malpractice Consultant

- Warning! 5% of retinal detachments are asymptomatic
- Presents in younger age groups than symptomatic RDs
- Risk factors include myopia greater than 5.00 D, lattice degeneration and atrophic holes
- Predilection for inferior quadrants
- Preferred practice guidelines for the American Optometric Association and Academy of Ophthalmology both recommend dilated eye examinations with indirect ophthalmoscopy at least annually. Increased frequency and scleral depression in high myopes and those with peripheral retinal pathology

Small melanomas are clinically indistinguishable from choroidal nevi:
 Know which to photograph and which to refer

Andrew B. Mick, OD, FAAO

San Francisco VA Medical Center Eye Clinic
 UCSF Department of Ophthalmology
 UC Berkeley School of Optometry

Is this a choroidal nevus or melanoma?

In a new patient without previous documentation, I have no idea?

Mistakes with these lesions kill patients!!!!

46 year old Caucasian male presented for comprehensive examination

Nevus commented on in chart and baseline photograph taken. RTC 1 year

One year later, nevus again noted. Optos image taken:
 Not malignant because still seen with both red and green separation
 No comment about comparing size to previous year fundus photograph
 RTC 1 year

46 year old Caucasian male presented for comprehensive examination

Patient no shows to scheduled annual examination

Post card sent and two messages left on cell phone urging a follow up

Secondary number in his file called (Wife) and doctor informed patient has died of metastatic melanoma originating in his choroid

Have basic elements of malpractice been proven?

Can it be proven that the patient sustained an injury?
 Yes: Patient is dead

Can be proven the doctor practiced outside of standards of care?

AMERICAN ACADEMY OF OPHTHALMOLOGY
The Eye M.D. Association

I apply for pigmented choroidal lesions over 3 DD in basal diameter

Management of Choroidal Nevi

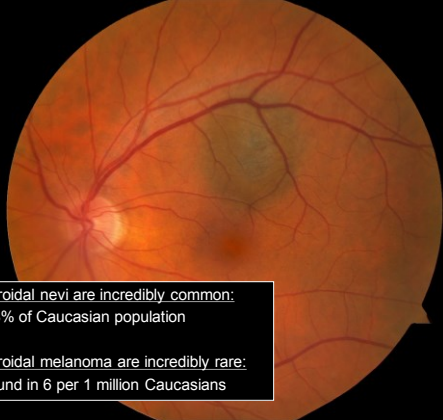
Management of a choroidal nevus is determined by its risk of transforming into a choroidal melanoma.

By risk factors. From studies using the TFOSOM-UHHD risk factors, choroidal melanocytic tumors that displayed none of the risk factors had a 3 percent chance for growth at five years and most likely represented nevi.¹ For lesions that display one factor, imparting a 38 percent chance for growth, observation is a reasonable option, especially if the lesion is in a visually important location. Lesions with three or more factors will show growth in more than 50 percent of cases. Such lesions likely represent small choroidal melanomas; and early intervention may be warranted, as they occasionally lead to metastasis.

By lesion size. Some clinicians suggest observation for lesions smaller than 2 mm; lesions larger than 2 mm but smaller than 2.5 mm may be managed based on clinical risk factors, with either close observation or immediate treatment.

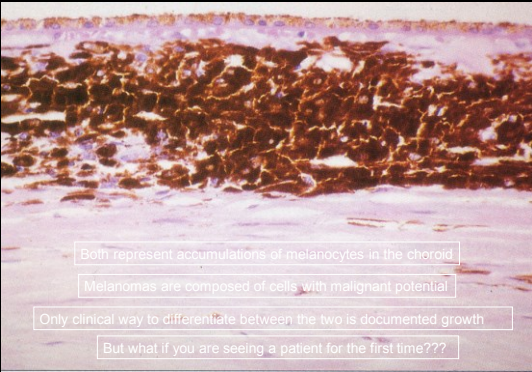
Recommended follow-up. Patients with choroidal nevi who show no suspicious features require no treatment. During the first year, they should be monitored twice; subsequently, they should be evaluated annually as long as the nevi remain stable. Although the link between UV light exposure and choroidal melanoma has not been proved, sunglasses could possibly reduce ocular melanoma risk.

Patients who have one or two risk factors for malignant transformation should be monitored every four to six months. Patients with nevi and three or more suspicious features should be evaluated at an experienced center for management alternatives and possible treatment due to their increased risk of developing melanoma.



Choroidal nevi are incredibly common:
5.8% of Caucasian population

Choroidal melanoma are incredibly rare:
Found in 6 per 1 million Caucasians



Both represent accumulations of melanocytes in the choroid

Melanomas are composed of cells with malignant potential

Only clinical way to differentiate between the two is documented growth

But what if you are seeing a patient for the first time???

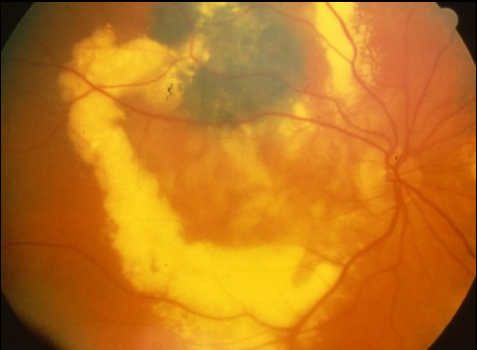
To Find Small Ocular Melanoma Using Helpful Hints Daily

- Thickness greater than 2 mm
- Presence of subretinal Fluid
- Presence of Symptoms
- Overlying Orange pigment
- Margins near the optic disc
- Ultrasonographic Hollowness
- Absence of surrounding Halo
- Absence of overlying Drusen

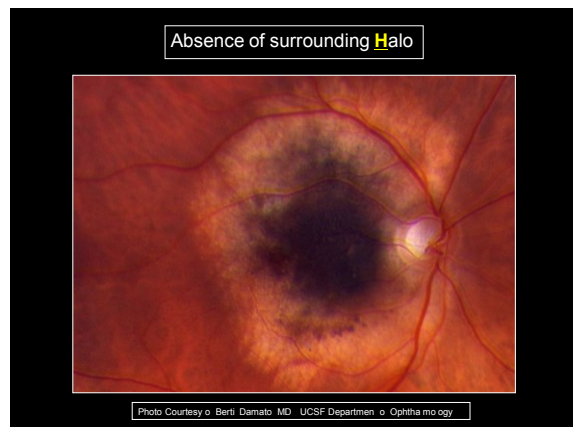
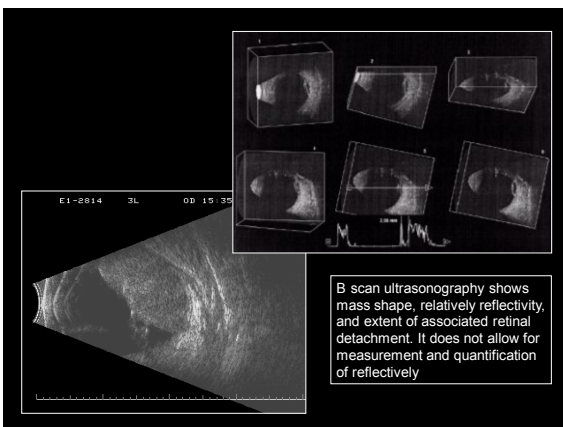
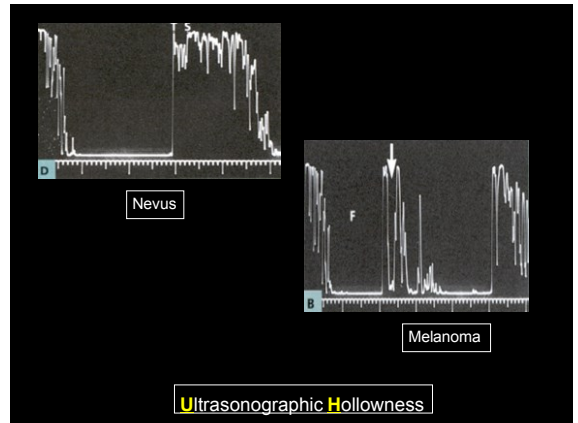
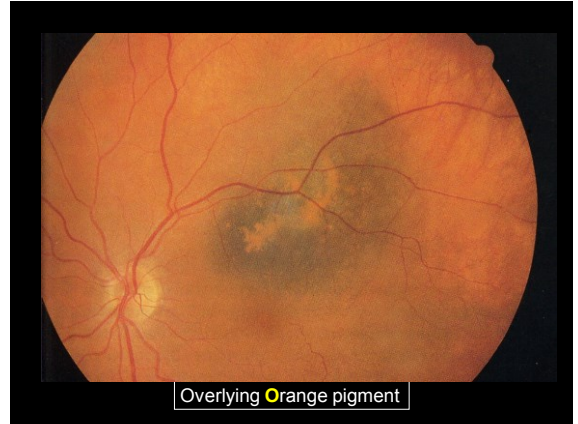
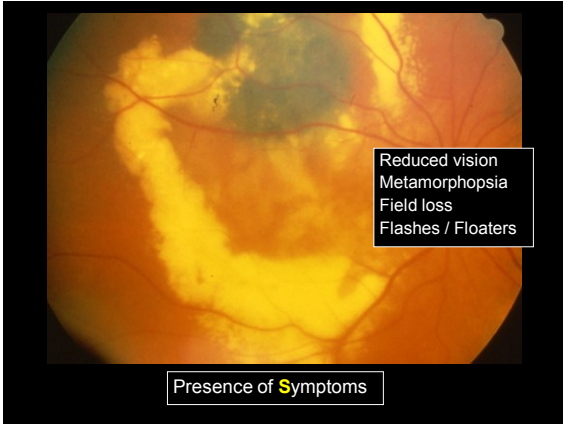
Shields. Arch Ophtholmo. 2009;127(8):981-987

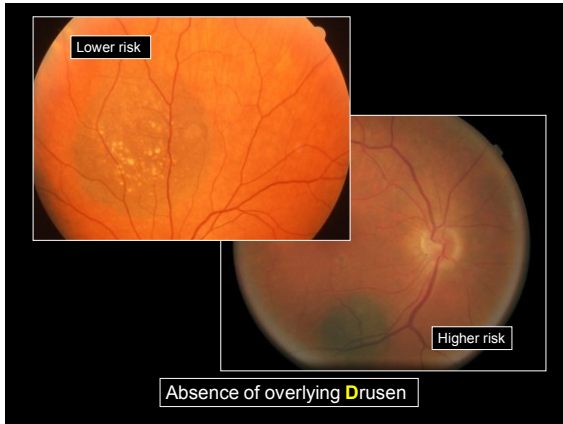


Thickness greater than 2 mm



Presence of subretinal Fluid





Optometric Risk Factors:

- Thickness greater than 2 mm
- Presence of subretinal Fluid
- Presence of Symptoms
- Overlying Orange pigment
- Margins near the optic disc
- Absence of overlying Drusen

Lessons Learned as a Malpractice Consultant

- All choroidal nevi greater than 3 DD diameters in basal diameter or with clinically obvious elevation should be photographed and risk assessment made
- Lesions with no risk factors should be photographed twice in first year, then annually
- Lesions with 1-2 risk factors should be monitored every six months
- Lesions with 3 or greater risk factors should be referred to an ocular oncologist for monitoring
- Any lesion with documented growth is assumed to be a melanoma and requires urgent referral

What about your indirect ophthalmoscope red-free filters??

Red Free

Click image to enlarge

Red Free Retinal Exam Images

Unlike white light used in conventional products, this technology incorporates low powered laser wavelengths that scan simultaneously. This allows review of the retinal substructures in their individual laser separations. The red free view scans from the sensory retina to the pigment epithelial layers.

Choroidal

Click image to enlarge

Choroidal Retinal Images

Unlike white light used in conventional products, this technology incorporates low powered laser wavelengths that scan simultaneously. This allows review of the retinal substructures in their individual laser separations. The choroidal view is a scan from the RPE to the choroid.

Or the Optos "red-free" and "choroid filters?"

To keep my head from exploding please forget the "red-free" stuff!!

Review of Optometry: "Redefining your retinal examination."

"Deeper lesions, such as choroidal nevi, will seem to disappear with this filter."

OPTOS Forum:

This can be used in the differential diagnosis. For example, a lesion may appear to be a choroidal nevus, but since it was also seen in the green laser image, it may be a congenital hypertrophy of the pigment epithelium (CHRPE). Or if a retinal lesion was observed and if you wanted to know if there was deeper involvement down to the pigment epithelium and choroid, the simultaneous dual color laser images could be able to determine this possibility.



Know the laws and standards of care in the treatment of infectious keratitis: When should ulcers be referred (cultured)?

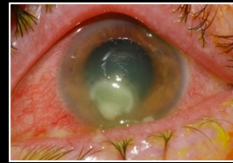
Andrew B. Mick, OD, FAAO
 San Francisco VA Medical Center Eye Clinic
 UCSF Department of Ophthalmology
 UC Berkeley School of Optometry

Contact lens wearer with 24 hour history of eye pain

Slit lamp examination shows infiltrate extends to 50% depth of corneal stroma

Does not sleep in lenses, but does admit to swimming in lenses

Fluorescein stains densely over 75% of the infiltrate, Vision 20/60



Can this infiltrative keratitis be treated by law in California?

Would treating it in a private practice setting (not culturing) be breaking community standards?



CHAPTER 7: OPTOMETRY

(A) If the patient has been diagnosed with a central corneal ulcer and the central corneal ulcer has not improved 48 hours after diagnosis, the optometrist shall refer the patient to an ophthalmologist.

(B) Peripheral corneal inflammatory keratitis, excluding Moorens and Terrien's diseases, an optometrist shall consult with an ophthalmologist or appropriate physician and surgeon if the patient's condition worsens 72 hours after diagnosis.



Traditional management of corneal ulcers and severe infectious begins with the acquisition of cultures on blood and chocolate agars, on heart and blood infusion (HBI, for fungi), or on thioglycolate medium or Eugenic broth (for anaerobes), with Gram-staining of smears for microscopic evaluation. A sterilized Kimura spatula is used to acquire material for these laboratory investigations by scraping the base and leading edge of the corneal ulcer.^{13,17}

Clinicians should recognize that the diagnosis and management of corneal infection continues to evolve. For example, community doctors tend to treat empirically, without initially collecting cultures and smears/staining, whereas such laboratory investigations prior to treatment remain the standard of care at hospitals and university medical centers. In general, the trend is toward treating peripheral and small, suspected corneal infections without laboratory investigation, while central and large corneal lesions are almost universally cultured prior to treatment.^{16,18}

Expe- witnesses often un vers ty/hosp ta based



Diagnostic Tests

Cultures and Smears

The majority of community-acquired cases of bacterial keratitis resolve with empiric therapy and are managed without smears or cultures.^{11,41} Smears and cultures are indicated, however, in cases that involve a corneal infiltrate that is large and extends to the middle to deep stroma; that are chronic in nature or unresponsive to broad spectrum antibiotic therapy; or that have atypical clinical features suggestive of fungal, amoebic, or mycobacterial keratitis.^{10,42} Smears and cultures are often helpful in eyes that have an unusual history, e.g., if there has been trauma with vegetable matter or if the patient wore contact lenses while in a hot tub. Specialized studies may be indicated to identify atypical organisms. The hypopyon that occurs in eyes with bacterial keratitis is usually sterile, and aqueous or vitreous taps should not be performed unless there is a high suspicion of microbial endophthalmitis, such as following an intraocular surgery, perforating trauma, or sepsis.^{14,43} Before initiating antimicrobial therapy, cultures are indicated in subtle-thrusting or severe keratitis of suspected microbial origin.^{14,44}

Lessons Learned as a Malpractice Consultant

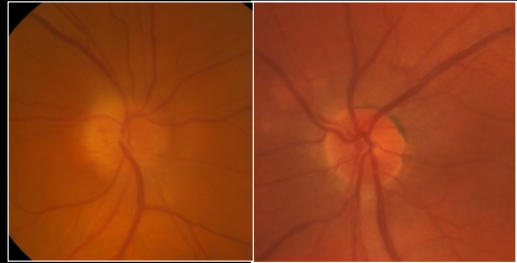
- In California, all central corneal ulcers, by law, that do not improve within 48 hours must be referred
- Small, superficial, peripheral ulcers with typical clinical features should be treated with broad spectrum antibiotics and monitored closely (24 hours) and referred at 72 hours if no improvement
- The Academies of Ophthalmology and American Optometric Association recommend culturing of ulcers that are severe: large, deep, nonresponsive, and have unusual clinical features (satellite lesions, vegetative trauma, swimming in contact lenses).
- Be careful with central or large (regardless of location) ulcers: Likely considered severe and standards dictate culturing

There is only one ACUTE (swollen) optic neuropathy that doesn't require an extensive work-up

Andrew B. Mick, OD, FAAO

San Francisco VA Medical Center Eye Clinic
 UCSF Department of Ophthalmology
 UC Berkeley School of Optometry

Walk-In: Change in vision OD

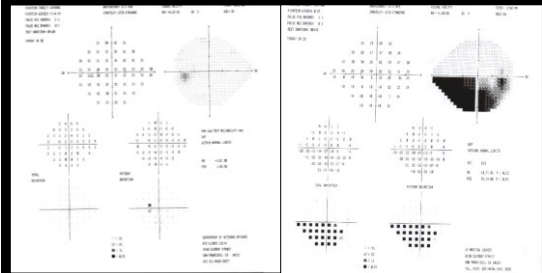


78 year old Caucasian male

Initial Examination Findings

Exam Findings:	
Vision:	OD: 20/30+ OS: 20/20
APD:	Trace APD OD
Confrontation VF:	Inferior field loss OD

Same day visual fields



What is your diagnosis? Management?

Further History

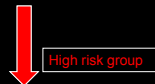
Medical History:	Hypertension, hyperlipidemia
Symptom Onset:	Not sure when vision loss occurred
Additional Symptoms:	No other neurologic symptoms Occasional headaches, but not new Lost some weight, but has been dieting No jaw pain

How about now? Diagnosis and Management?

First line of questioning, is it GCA (arteritic - AION)?

Epidemiology:
 Caucasians > pigmented races
 Women > men
 Increased risk with increased age > 50

Associated signs/symptoms:
 Unexplained weight loss
 Temporal headache
 Jaw claudication
 Neck pain
 Fever like symptoms



High risk group
 ESR
 CRP
 Platelet count (> 400,000 K/cmm)

Positive Signs/Symptoms

Giant Cell Arteritis: Validity and Reliability of Various Diagnostic Criteria

Odds ratios for having biopsy confirmed GCA:

- 9.0x greater risk with jaw claudication
- 3.4x greater risk with neck pain
- 3.2x greater risk with CRP > 2.45 mg/dl
- 2.0x greater risk with SED rates > 4.7 mm/hour

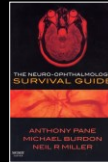
Hayreh. Am J Ophthalmol 1997;123:285-296.

Was this case typical enough to diagnose NA-AION and not work up?

Clinical Characteristics from Decompression Trial:

- Mean age of 68 years
- 51% were hypertension, 27% were diabetic
- Acute onset, with 42% of vision loss within 2 hours of waking
- 49% had vision better than 20/64
- Altitudinal most common field defect
- 84% had diffuse swelling

Arch Ophthalmol 1996;114:1366-1374.



Must be isolated to the optic nerve!

- No diplopia / other neurologic signs
- No proptosis
- No vitritis
- No progressive vision loss after a week

Pane, Antony. Mosby, St Louis 2007.

Was this case typical enough to call NA-AION and not work up?

Nonarteritic Anterior Ischemic Optic Neuropathy: Refractive Error and Its Relationship to Cup/Disc Ratio

- 608 consecutively presenting NAION
- C/D ratio significantly smaller in NAION group compared to normals
- C/D < 0.15 in 37%
- C/D < 0.25 in 75%

Hayreh. Ophthalmology 2008;115:2275-2281.

Be careful in diagnosing NA-AION if patients don't have "discs at risk"

So does this case need to be worked up, or can we say it is NA-AION?

Epidemiology:

- Caucasians > pigmented races
- Women > men
- Increased risk with increased age > 50

Must get SED rate, CRP and platelet count to rule out GCA!

Additional Symptoms:

(Rare y get definitive answers!)

- No other neurologic symptoms
- Occasional headaches, but not new
- Lost some weight, but has been dieting
- No jaw pain

Lessons Learned as a Malpractice Consultant

- The only acute optic neuropathy (disc swelling) that doesn't require some additional, immediate work up is NA AION
- To diagnose NA AION without additional work up, must not be in a high risk population and have an absence of GCA systemic symptoms
- Must be isolated to the optic nerve, be noticed upon awakening, resulted in an altitudinal visual field defect, occurred in a disc at risk, and in the presence of vascular risk factors



82 year old Asian male presenting with 1 day history of double vision

Medical history significant for hypertension and hyperlipidemia

Mild exotropia and hypotropia of left eye. Mild restriction in adduction

Also noted to have ptosis of the left upper lid

Pupils equal in size

Management? Can someone please give the Rule of the Pupil?

**Forget the "Rule of the Pupil"
in the management of acute CNIII Palsy**

Andrew B. Mick, OD, FAAO
San Francisco VA Medical Center Eye Clinic
UCSF Department of Ophthalmology
UC Berkeley School of Optometry

Can anybody define the "Rule of the Pupil" with regards to CNIII Palsies?

Definition:

When a compressive aneurysm, usually of the posterior communicating artery, is the cause of a cranial nerve three (CNIII) palsy, pupillary function is usually affected

Anatomic Basis:

Pupil fibers of CNIII lie on the superficial, dorsomedial portion of the nerve in the subarachnoid space
Aneurysms of the posterior communicating artery can compress CNIII in this location
In contrast, ischemia from small vessel disease tends to affect the central part of the nerve where the motor fibers lie and therefore spares the pupillary fibers

Can the "Rule of the Pupil" be used on all CNIII palsies?

Can the "Rule of the Pupil" be used on all CNIII palsies?

To apply the rule:

The CNIII should be neurologically isolated
The CNIII should be complete externally (both superior and inferior branches completely affected).
The involved eye should be down and out with ptosis
The patient should have vascular risk factors (hypertension, diabetes)
The patient should be over age 40

In the previous case, can the Rule of the Pupil be applied?

No, it was not a complete external palsy!

Should we ever apply the Rule of the Pupil in acute CNIII palsies?

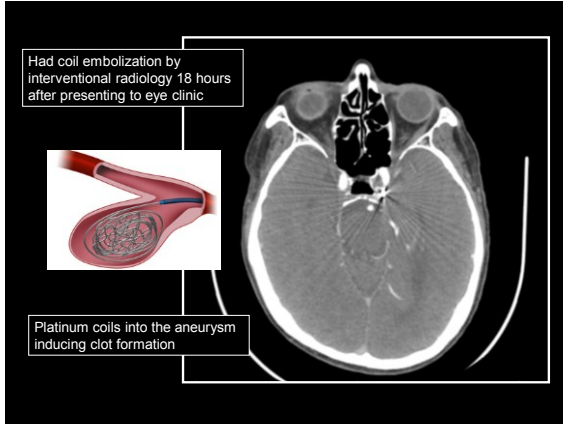
Why the "Rule of the Pupil" should not be used in acute CNIII palsies

A normal pupil reduces the chance there is an aneurysm, it doesn't eliminate it
Aneurysm in other locations (ex: basilar tip) can compress the CNIII and not affect the pupil fibers
The pupil can become involved days to weeks after an initially normal examination
When the Rule of the Pupil was devised, imaging was done with catheter angiography (risk of mortality and morbidity) and prior to widespread availability advance imaging techniques
MRI/MRA and CT/CTA are now available with dramatically reduced risk of mortality and morbidity
Missing an aneurysm carries a significant risk of morbidity
Average time from the onset of CNIII palsy from aneurysm to rupture is 29 days
Morality rate of 50% in ruptured aneurysm

Urgent referral to ER

MRI/MRA 3 hours later





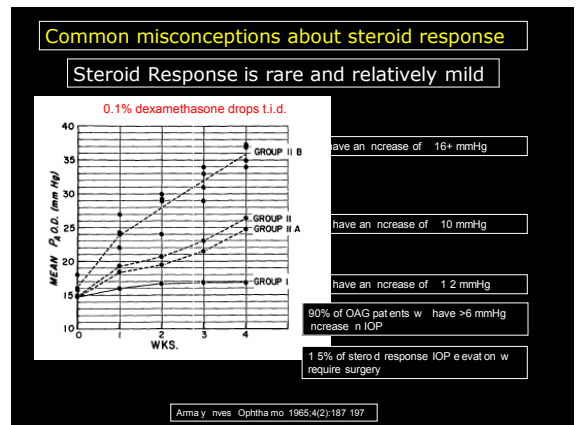
Lessons Learned as a Malpractice Consultant

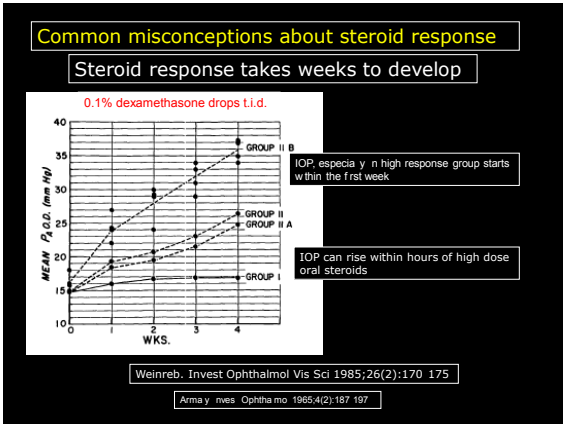
- ALL acute CNIII palsies are an emergency and urgent MRI/MRA or CT/CTA is indicated

Steroid responsiveness: Common misconceptions

Andrew B. Mick, OD, FAAO
 San Francisco VA Medical Center Eye Clinic
 UCSF Department of Ophthalmology
 UC Berkeley School of Optometry

- ### A few questions about steroids.....
- What percentage of patients are steroid responders?
 - How much does the IOP go up in responders?
 - How long does it take for response to occur?
 - How do you treat steroid response?
 - Can you treat steroid response in California?
 - What conditions do you prescribe steroids for?





CALIFORNIA STATE BOARD OF
OPTOMETRY

**CALIFORNIA LAWS AND REGULATIONS
RELATED TO THE PRACTICE OF
OPTOMETRY**

2013 Edition

(7) Topical and oral antiglaucoma agents pursuant to the certification process defined in subdivision (f).

- Presentation of conditions/cases that licensees may treat:
 - All primary open-angle glaucoma;
 - Exfoliation and pigmentary glaucoma.

- Lessons Learned as a Malpractice Consultant**
- Steroid IOP response is not rare
 - Steroid response does not take 2 weeks to develop
 - There are known risk factors for steroid response
 - Glaucoma suspects Older age groups
 - Glaucoma patients
 - High myopes
- Not all steroid IOP response resolves with stopping steroids or with topical anti glaucoma medications

Lessons Learned as a Malpractice Consultant

Andrew Mick, OD, FAAO
San Francisco VA Medical Center
UC Berkeley School of Optometry
UCSF Department of Ophthalmology

Thank you for your attention

KAISER PERMANENTE

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EDUCATION

1993-1997 **University of Michigan**, Ann Arbor. Bachelors of Science in Biology
1997-2001 **University of California**, Berkeley. Doctorate of Optometry
2001-2002 **Bascom Palmer Eye Institute**
University of Miami, Department of Ophthalmology
Optometric Residency in Ocular Disease

EMPLOYMENT

1995-1997 **Kellogg Eye Center, University of Michigan, Department of Ophthalmology**
Glaucoma/Molecular Biology Research Assistant
Principle Investigator: Julia E. Richards, Ph.D.
2002-2004 **Meredith Morgan Eye Center, University of California Berkeley**
Clinical Faculty, School of Optometry
2002-Present **San Francisco VA Medical Center**
Staff Optometrist (2002-Present)
Optometry Student Externship Coordinator (2002-2012)
Optometric Residency Coordinator (2012-Present)

FACULTY APPOINTMENTS

2002-Present **University of California, Berkeley, School of Optometry**
Associate Clinical Professor
2007-Present **University of California, San Francisco, Department of Ophthalmology**
Associate Clinical Professor

HONORS AND AWARDS

2000 Harris Family Scholarship
2000 California Optometric Association Junior Leadership Award
2001 Thal/VSP Excellence in Primary Care Award
2001 Vision West Annual Scholarship

2001	Vistakon Award of Contact Lens Excellence
2001	Robert Gordon and Andrea Silvers Award
2001	William Feinbloom Low Vision Award
2001	Medical Eye Services Award
2001	University of California, Berkeley, Gold Retinoscope Award
2003	American Academy of Optometry Fellowship
2004	San Francisco VA Medical Center, Service and Patient Care Award
2012	Bernard Dolan Residency Mentor of the Year Award

BOOK CHAPTERS

1. Mick AB. Lacrimal disorders. In Onofrey B, Skorin L, Holdeman N (Editors). Ocular Therapeutics Handbook: A Clinical Manual 2nd Edition 2005. Philadelphia: Lippincott, Williams, Wilkins.
2. Mick AB. Ocular Trauma. In Onofrey B, Skorin L, Holdeman N (Editors). Ocular Therapeutics Handbook: A Clinical Manual 2nd Edition 2005. Philadelphia: Lippincott, Williams, Wilkins.
3. Mick AB. Lacrimal disorders. In Onofrey B (Editor). Ocular Therapeutics Handbook: A Clinical Manual 3rd Edition 2011. Philadelphia: Lippincott, Williams, Wilkins.
4. Mick AB. Ocular Trauma. In Onofrey B (Editor). Ocular Therapeutics Handbook: A Clinical Manual 3rd Edition 2011. Philadelphia: Lippincott, Williams, Wilkins.

PEER REVIEWED PUBLICATIONS

1. Othman MI, Sullivan SA, Skuta GL, Cockrell DA, Stringham HM, Downs CA, Fomes A, Mick AB, Boehnke M, Vollrath D, Richards JE. Autosomal dominant nanophthalmous (NN01) with high hyperopia and angle closure glaucoma maps to chromosome 11. *Am J Hum Genet* 1998;63:1411-1417.
2. Mick AB, Gonzalez S, Dunbar MT, McSoley JJ. A cost analysis of the prostaglandin analogs. *Optometry* 2002;73(10):614-619.
3. Tsou-Chong J, Mick AB. Choroidal metastasis: Case reports and review of the literature. *Optometry* 2005;76(5):293-301.
4. Hicks D, Mick AB. Recurrent conjunctival hemorrhage leading to the discovery of ocular adnexal lymphoma. *Optometry* 2010;81(10):528-32.
5. Harrison WW, Bearse MA, Schneck ME, Wolfe BE, Jewell NP, Barez S, Mick AB, Dolan BJ, Adams AJ. Prediction by retinal location of the onset of diabetic macular edema in patients with nonproliferative diabetic retinopathy. *Invest Ophthalmol Vis Sci* 2011;52(9):6825-6831.
6. Guan H, Mick A, Porco T, Dolan BJ. Preoperative factors associated with IOP reduction after cataract surgery. *Optom Vis Sci* 2013;90(2):179-184.

PEER REVIEWED POSTERS

1. Carlson PE, Mick AB, McNamara NA, Fleiszig SMJ. Hypoxia protects human corneal epithelial cells from killing by cytotoxic *P. Aeruginosa*. ARVO, 2000.
2. Tran T, Mick A, Dolan B. Posterior segment complications of interferon therapy for chronic hepatitis C. American Academy of Optometry; Dallas 2003.
3. Fong C, Chen M, Mick A. Ocular side effects with reduced vision from high dose, long term chlorpromazine treatment. American Academy of Optometry; San Diego 2005.
4. Yoshiyama K, Mick A, Dolan B. Corneal crystal deposits secondary to multiple myeloma. American Academy of Optometry; Denver 2006.
5. Wong A, Dolan B, Mick A. Visual loss as the only presenting symptom in a patient with AIDS-associated progressive multifocal leukoencephalopathy. American Academy of Optometry; Tampa 2007.
6. Tobin L, Dolan B, Mick A. Idiopathic intracranial hypertension presenting as symptomless unilateral optic disc edema. American Academy of Optometry; Tampa 2007.
7. Hicks D, Mick A. Ocular adnexal lymphoma presenting as recurrent subconjunctival hemorrhage. American Academy of Optometry; Orlando 2009.
8. Bedwell A, Mick A. Spectral domain OCT in four patients with adult onset foveomacular vitelliform dystrophy. American Academy of Optometry; Boston, MA 2011.
9. Jones H, Mick A. Expanding the differential diagnosis of papilloedema: Ruling out cerebral venous thrombosis. American Academy of Optometry; Boston, MA 2011
10. Flettner J, Mick A, Dolan B. Federal aviation (FAA) vision requirements: What are your responsibilities when a pilot develops a disqualifying visual condition? American Academy of Optometry; Phoenix, AZ 2012
11. Meadows J, Bahn M, Mick A. Antibiotic therapy in anticoagulated patients with risk factors for community associated methicillin-resistant *Staphylococcus aureus*. American Academy of Optometry; Seattle, WA 2013.

NON-PEER REVIEWED PUBLICATIONS

1. Mick AB. A revolution at Berkeley. *California Optometry* 1999;26(6):21.
2. Mick AB. A cancer patient's vision declines. *Review of Optometry* 2002;139(2):101-102
3. Mick AB. Book Review: Imaging the eye from front to back with RTVue fourier domain optical coherence tomography. *Optom Vis Sci* 2011;88:781.
4. Mick AB. Book Review: Cataracts: A patient's guide to treatment. *Optom Vis Sci* 2012;89(10).

5. Chen-Lynch M, Mick AB. Nonnecrotizing anterior scleritis mimicking orbital inflammatory disease. *Clin Optom* 2013;5:29-37.

NATIONAL PROFESSIONAL APPOINTMENTS

1999	American Optometric Association House of Delegates, Student Delegate
2004-2006	American Academy of Optometry Membership Committee
2005-2008	National Board of Examiners in Optometry Part III Examiner
2006-2010	Accreditation Council on Optometric Education Consultant (2006-2008) Team Chair (2009-2010)
2006-2016	American Academy of Optometry, Scientific Program Committee Member (2006-2012) Vice Chair (2012-2014) Chair (2014-2016)
2014-2016	Optometric Glaucoma Foundation Chief Financial Officer
2015-2016	American Academy of Optometry, Awards Committee Member
2015-Present	American Academy of Optometry, Glaucoma Diplomate Program Candidate Mentor

VETERANS AFFAIRS COMMITTEE APPOINTMENTS

2004-2006	Advanced Clinic Access Committee Eye Clinic Representative
2005-Present	Veterans Integrated Service Network 21 Co-Consultant to National Optometry Service
2009-Present	Reusable Medical Equipment Disinfection Committee Eye Clinic Representative
2016 – Present	Direct Scheduling Committee Eye Clinic Representative

ACADEMIC COMMITTEE APPOINTMENTS

1999-2000	University of California, Berkeley, School of Optometry Optometry Student Association President
2000	University of California, Berkeley, School of Optometry ACOE Self Study Committee: Student Education
2000	University of California, Berkeley, School of Optometry Admissions Committee
2002-2006	University of California, Berkeley, Optometry Alumni Association Vice President
2003-2004	University of California, Berkeley, School of Optometry Clinic Advisory Committee
2002-2005	University of California, Berkeley, School of Optometry Faculty Glaucoma Certification Program Instructor
2006	University of California, Berkeley, School of Optometry ACOE Self Study Committee: Resident Education
2006-2008	University of California, Berkeley, School of Optometry Clinical Curriculum Committee
2008	University of California, Berkeley, School of Optometry California State TPA Glaucoma Course Curriculum Committee
2008-2009	University of California, Berkeley, School of Optometry Curriculum Committee
2011-2012	University of California, Berkeley, School of Optometry California State Optometry Glaucoma Certification Course Beta II Course Reviewer Beta III Course Reviewer Examination Question Writer Grand Rounds Facilitator
2012	University of California, San Francisco Department of Ophthalmology Staff Optometrist Search Committee
2014	University of California, San Francisco Department of Ophthalmology San Francisco General Hospital Staff Optometrist Search Committee
2016	University of California, San Francisco Department of Ophthalmology Staff Optometrist Search Committee

EXPERT WITNESS CONSULTING

2012 **Montana Fourth Judicial District Court**
2012 - Present **Superior Court of the State of California**

JOURNALS EDITED

2011-Present **Optometry and Vision Science**
 Journal of the American Academy of Optometry
 Associate Topical Editor (2011-2014)
 Editorial Board (2014-Present)

JOURNALS REVIEWED

2004-Present **Optometry and Vision Science**
 Journal of the American Academy of Optometry

2007-2011 **Optometry**
 Journal of the American Optometric Association

2013-Present **Journal of General Internal Medicine**

INVITED PROFESSIONAL LECTURES

1. **American Academy of Optometry, Dallas, TX, 2003**
Recent large multi-center clinical trials and how they have shaped optometric glaucoma management
2. **University of California, Berkeley, 2003**
Optometry Alumni Association Reunion
The ocular ischemic syndrome
3. **Clinical Educators in Eyecare, San Jose, CA, 2003**
Glaucoma treatment: A study driven philosophy
4. **University of California, Berkeley, 2003**
Meredith Morgan Symposium
Glaucoma management in optometric practice
5. **Sacramento Optometric Society, 2003**
Integrating recent glaucoma clinical trials into patient management
6. **San Mateo Optometric Society, 2003**
Uveitic glaucoma
7. **American Academy of Optometry, Tampa, FL, 20004**
Seeing the whole picture: Ocular clues to systemic disease

8. **San Francisco Optometric Society, 2004**
Anterior uveitis and the judicious use of steroids
9. **University of California, Berkeley, 2004**
Optometry Alumni Association Reunion
Diabetes and the eye: Diagnosis, management strategies, and potential future therapies
10. **American Academy of Optometry, San Diego, CA, 2005**
Evidenced based medicine
11. **Tri-County Optometric Society, Santa Barbara, CA, 2005**
Central corneal thickness: Its relationship to IOP and glaucoma
12. **VISN 21 Nurse Practitioners Conference, San Francisco, CA 2005**
Ocular emergencies
13. **American Academy of Optometry, Denver, CO, 2006**
Transient ischemic attack
14. **Kentucky Optometric Association, Louisville, KY, 2006**
Current and future AMD treatments
Ocular manifestations of systemic disease
15. **Asian American Optometry Study Group, San Francisco, CA, 2006**
Corneal thickness: What is it telling us?
16. **Vision Expo West, Las Vegas, NV, 2007**
Evidenced based medicine
A review of the glaucoma medications
Central corneal thickness and glaucoma
17. **American Academy of Optometry, Tampa, FL, 2007**
The dilemma of early glaucoma diagnosis
Transient ischemic attack
18. **University of California, Berkeley, 2007**
Meredith Morgan Symposium
Early glaucoma diagnosis dilemma: Should early diagnosis be followed by treatment?
19. **Northern California Optometric Society, Chico, CA 2007**
Transient ischemic attack
Early diagnosis dilemma: Should early diagnosis be followed by treatment?
20. **American Academy of Optometry, Anaheim, CA, 2008**
Vitreous: Friend or Foe?
The dilemma of early glaucoma diagnosis
21. **Santa Clara County Optometry Society, 2008**
Transient ischemic attack

22. **Asian American Optometric Study Group, Berkeley, CA, 2008**
Transient ischemic attack
23. **University of Alabama, Birmingham, 2009**
Primary Eye Care Update
Vitreous: Friend or Foe?
The dilemma of early glaucoma diagnosis
Ocular manifestations of systemic disease
24. **American Academy of Optometry, Orlando, FL, 2009**
Vitreous: Friend or Foe?
Angle Closure Glaucoma
25. **Kaiser Foundation Optometric Symposium, Anaheim, CA, 2009**
Transient ischemic attack
Early glaucoma diagnosis dilemma
26. **Santa Clara County Optometric Society, 2009**
Ocular manifestations of systemic disease
27. **Northern California Optometric Society, Chico, CA, 2009**
Vitreous: Friend or Foe?
Ocular manifestations of systemic disease
28. **American Academy of Optometry, San Francisco, CA, 2010**
Angle closure glaucoma
The art of writing scientific abstracts
The Viagra anterior ischemic optic neuropathy link
29. **Alameda Contra Costa County Optometric Society, 2010**
Ocular manifestations of systemic disease
30. **Alameda Contra Costa County Optometric Society, 2010**
Transient ischemic attack
31. **Santa Clara County Optometric Society, 2010**
Early glaucoma diagnosis dilemma
32. **American Academy of Optometry, Boston, MA, 2011**
The trabecular meshwork
The art of writing scientific abstracts
33. **Wyoming Optometric Association, Cheyenne, WY, 2011**
Angle closure glaucoma
The vitreous: Friend or Foe
Ocular manifestations of systemic disease
34. **San Francisco Optometric Society, 2011**
Challenging cases from SFVA

35. **Bay Area Optometric Societies, San Jose, CA, 2011**
Tales from the trenches
36. **Southeastern Council of Optometrists (SECO), Atlanta, GA, 2012**
Talking TIA
The other glaucoma: Angle closure glaucoma
Tales from the trenches
37. **American Academy of Optometry, Phoenix, AZ, 2012**
The trabecular meshwork
The art of writing scientific abstracts
Identifying glaucoma progression clinically
38. **Santa Clara County Optometric Society, 2012**
SFVA grand rounds
39. **Alameda Contra Costa County Optometric Society, 2012**
Angle closure glaucoma
40. **American Academy of Optometry, Seattle, WA, 2013**
The cupped disc: Differentiating between glaucoma and compressive optic neuropathy
41. **Vision Expo East, New York, NY, 2013**
Talking TIA
The vitreous: Friend or Foe?
Ocular manifestations of systemic disease
42. **Southeastern Council of Optometrists (SECO), Atlanta, GA, 2013**
VA eye clinic grand rounds
Current and future trends in AMD
Ocular manifestations of systemic disease
43. **Santa Clara County Optometric Society, 2013**
Lessons learned as a malpractice consultant
44. **Maine Optometric Association, Freeport, ME, 2013**
The trabecular meshwork
Lessons learned as a malpractice consultant
Ocular manifestations of systemic disease
Talking TIA
The cupped disc: Differentiating between glaucoma and compressive optic neuropathy
45. **Broward County Optometric Association, Ft. Lauderdale, FL, 2014**
Ocular manifestations of systemic disease
VA eye clinic grand rounds
46. **Vision Expo East, New York, NY, 2014**
Retinal manifestations of systemic disease and drugs
Talking TIA
The other glaucoma: Angle closure

47. **San Francisco Optometric Society, 2014**
Lessons learned as a malpractice consultant
48. **American Academy of Optometry, Denver, CO, 2014**
Ocular Herpes Management: Beyond HEDS
OVS author workshop: Preparing a manuscript
Glaucoma Special Interest Group Roundtable: Angle closure glaucoma
49. **Santa Clara County Optometric Society, 2014**
Ocular herpes management: Beyond HEDS
50. **Redwood Empire Optometric Society, Petaluma, CA, 2015**
Ocular herpes management: Beyond HEDS
51. **Southeastern Council of Optometrists (SECO), Atlanta, GA, 2015**
Talking about TIAs
The other glaucoma: A closer look at angle closure
How to avoid a lawsuit
Breakfast with the experts
52. **Vision Expo East, New York, NY, 2015**
Enlarged optic nerve cupping: Differentiating glaucoma from compressive optic neuropathy
Lessons learned as a malpractice consultant
The other glaucoma: A closer look at angle closure
53. **Vision Expo West, Las Vegas, NV, 2015**
Enlarged optic nerve cupping: Differentiating glaucoma from compressive optic neuropathy
Lessons learned as a malpractice consultant
The other glaucoma: A closer look at angle closure
54. **American Academy of Optometry, New Orleans, LA, 2015**
Methicillin Resistant Staph Aureus: Ocular manifestations and clinical management
55. **Association of Lease-Holding Lenscrafters Doctors Meeting, Cancun, Mexico, 2015**
Methicillin resistant Staph aureus: Ocular manifestations and clinical management
Ocular herpes management: Beyond HEDS
56. **UC Berkeley Optometry Alumni: 65th Annual Alumni CE Program, Berkeley, CA 2015**
Update on the optometric management of angle closure
57. **Maine Optometric Association, Freeport, ME, 2015**
Methicillin resistant Staph aureus: Ocular manifestations and clinical management
Ocular herpes management: Beyond HEDS
VA Eye Clinic Grand Rounds
Retinal manifestations of system disease and drugs
58. **San Mateo County Optometric Association, San Mateo, CA 2015**
Methicillin resistant Staph aureus: Ocular manifestations and clinical management
59. **Santa Clara County Optometric Society, 2016**
Methicillin resistant Staph aureus: Ocular manifestations and clinical management

60. **San Francisco Optometric Society, 2016**
Methicillin resistant Staph aureus: Ocular manifestations and clinical management
61. **UC Berkeley School of Optometry: Sheldon M. Golden Conference, Berkeley, CA**
The use of imaging in the diagnosis and management of glaucoma: Where are we?
The use of visual fields in the diagnosis and management of glaucoma: Where are we?
The surgical management of glaucoma: Where are we?
Glaucoma panel discussion
62. **East West Eye Conference, Cleveland, OH, 2016**
The early glaucoma diagnosis dilemma
Enlarged optic nerve cupping: Differentiating glaucoma from compressive optic neuropathy
The trabecular meshwork: Its role in glaucoma pathogenesis and as a target of therapy
The other glaucoma: A closer look at angle closure glaucoma
Methicillin resistant Staph aureus: Ocular manifestations and clinical management
Ocular herpes management: Beyond HEDS
63. **American Academy of Optometry, Anaheim, CA, 2016**
Headache disorders that affect the visual system
Essentials of peer-review and constructive criticism
Best practices for getting published
64. **Maine Optometric Association, Portland, ME 2016**
Headache disorders that affect the visual system
The early glaucoma diagnosis dilemma
VA Eye Clinic Grand Rounds
Retinal manifestations of system disease and drugs

INVITED ACADEMIC LECTURES

1. **University of California, Berkeley, 2000**
Course: Optometry 106B
Problem based learning facilitator
2. **University of California, San Francisco, 2002-Present (Recurring)**
Department of Medicine
Differential diagnosis of the acute red eye
Differential diagnosis of painless loss of vision
Slit lamp and direct ophthalmoscopy techniques
3. **University of California, Berkeley, 2002-2005**
Course: 430
Glaucoma clinical trials: What they tell us
Glaucoma management: A literature driven philosophy
Common and uncommon retinal vascular diseases
The pupil: Important clinical indicator
Anterior ischemic optic neuropathy
Macular degeneration basics
Glaucoma medication review
Diabetic retinopathy basics

4. **University of California, San Francisco, 2008**
Department of Ophthalmology Grand Rounds
Progressive multifocal leukoencephalopathy
5. **University of California, San Francisco, 2012**
Department of Ophthalmology Grand Rounds
FAA guidelines on reporting visual dysfunction
6. **University of California, San Francisco, 2013**
Department of Ophthalmology Grand Rounds
Brimonidine associated uveitis
7. **University of California, San Francisco, 2008-Present (Recurring)**
Department of Ophthalmology
Fundamentals of Ophthalmology Course
Basic refraction and lensometry
The optics of refraction and retinoscopy
Introduction to rigid gas permeable contact lenses
Introduction to hydrogel contact lenses
Ophthalmic Knowledge Assessment Program (OKAP) Examination Optics Review
8. **University of California, Berkeley 2011-Present (Recurring)**
Course: 256
Retinal vascular occlusive disease
9. **University of California, Berkeley, 2014-Present (Recurring)**
Old Week 2014 Graduating Class Final Review
Clinical Advice to Avoid Malpractice
10. **University of California, San Francisco, 2014**
School of Nursing
Ocular disorders: The red eye
11. **University of California, San Francisco, 2016**
Department of Ophthalmology Grand Rounds
Topiramate associated ciliochoroidal effusion angle closure
12. **University of California, Berkeley, 2016**
School of Optometry Grand Rounds
Methicillin resistant Staphylococcus aureus keratitis

PROFESSIONAL ORGANIZATIONS

American Academy of Optometry, Fellow, 2003-Present
National Association of VA Optometrists, 2003-Present
American Optometric Association; 2001-2009
Optometric Glaucoma Society, 2013-Present

VOLUNTEER ORGANIZATIONS

Project Homeless Veteran Connect, 2008-2010

Volunteer Optometric Service to Humanity, Costa Rica, Brazil, 2000-2003

Oakland Public Schools, Eyeball dissections in high school science curriculum , 1999-2000

OPTOMETRIC LICENSURE

State of Florida, 2001-2015 (#OPC 3605)

State of California, 2002-Present (#11996TPLG)

State of Idaho, 2015-Present (#ODP-100330)