INTRO 2

MED REC / PLAQUENIL / PVD / NEVI

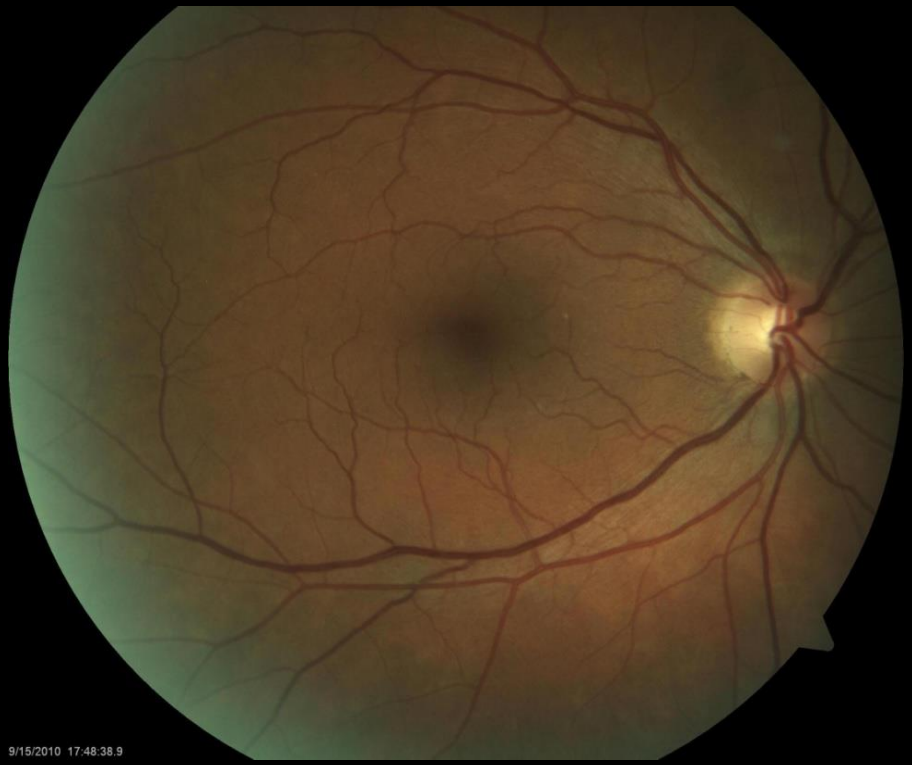
John M. Spalding, OD, FAAO

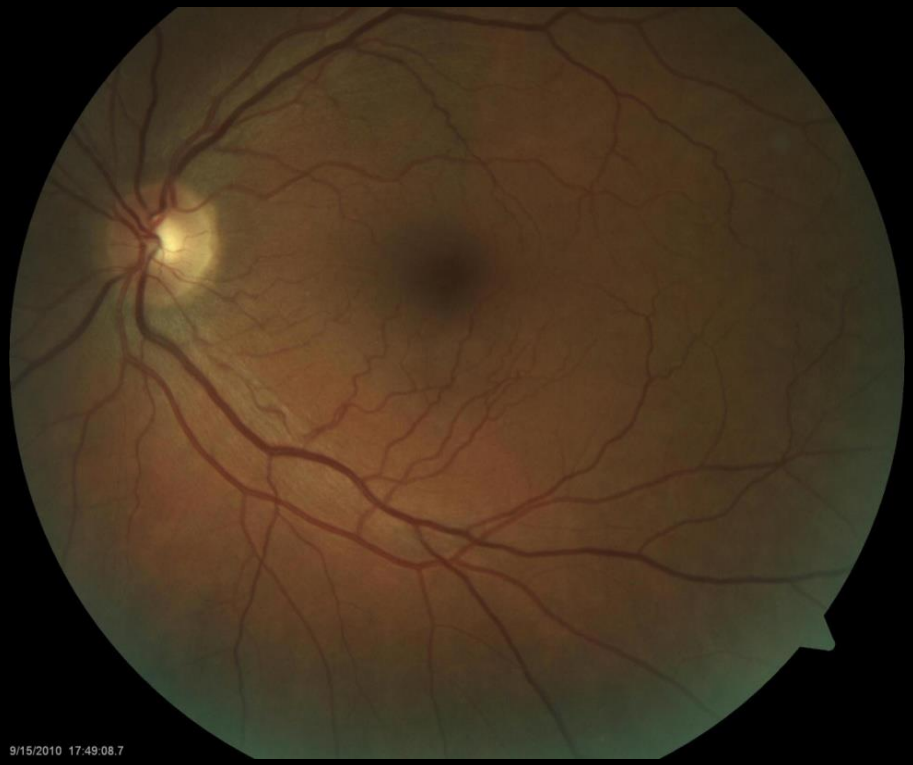
VA Medical Center

Orlando, Florida

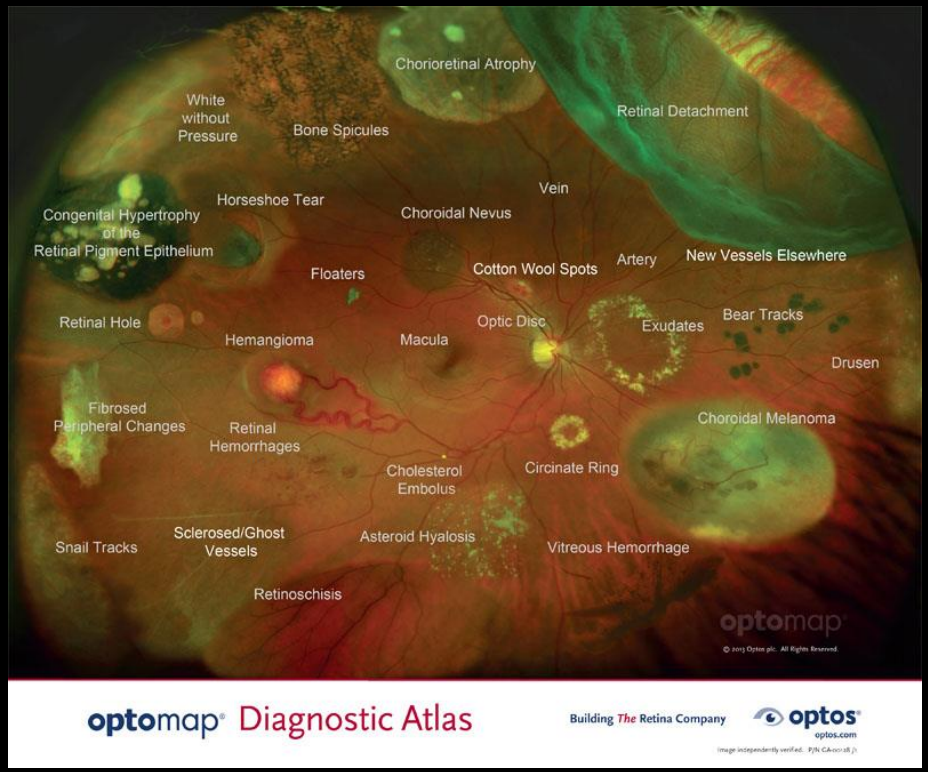
ARE YOU IN A RUSH AND TEMPTED TO SKIP DILATION?

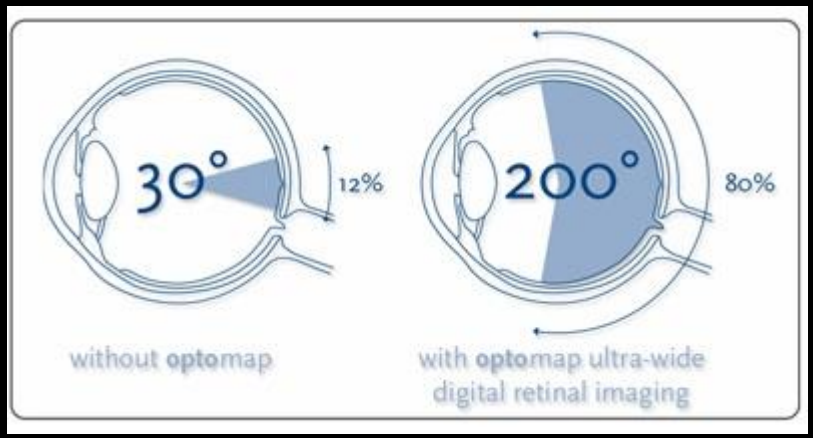
WHAT YOU WOULD SEE
UNDILATED



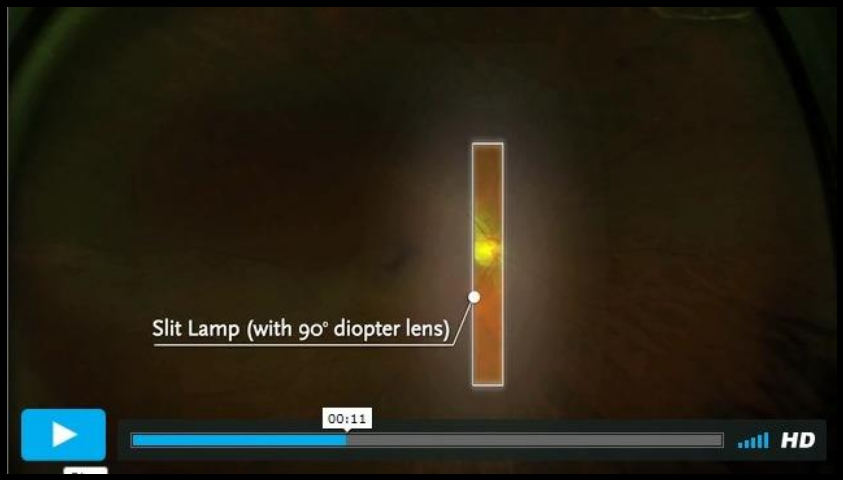


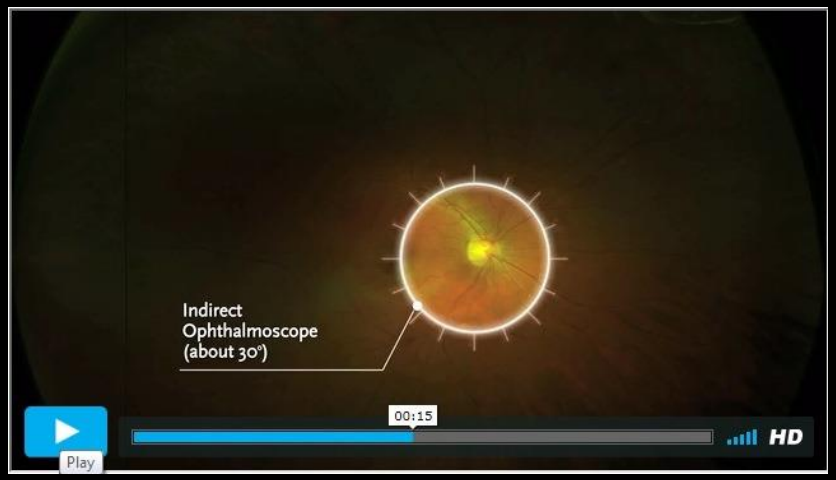
ULTRAWIDE FIELD PHOTOS





COMPARISON


Slit Lamp (with 90° diopter lens)
00:11
HD

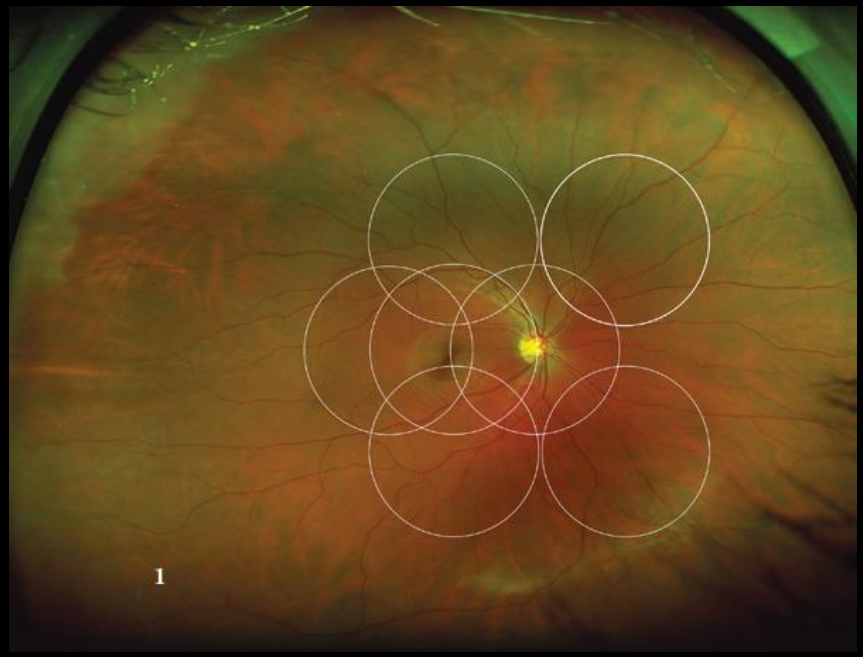

Indirect
Ophthalmoscope
(about 30°)
00:15
HD
Play


Fundus Camera (about 45°)
00:18
HD


optomap Retinal Image
(200°)
optomap

ULTRA-WIDEFIELD VS ETDRS 7 FIELDS FOR DM RET

- 2012 STUDY IN AJO
  - AT JOSLIN DIABETES CENTER
  - 103 PATIENTS WITH VARIOUS SEVERITY OF RETINOPATHY
  - MATCHED EXACTLY IN 84%
  - PRESENCE OR ABSENCE OF RETINOPATHY
    - 99% SENSITIVITY
    - 100% SPECIFICITY
  - OPTOS IS COMPARABLE TO ETDRS
    - 7 STANDARD FIELD 30-DEGREE COLOR FUNDUS PHOTOS



POINT-COUNTERPOINT
ULTRA-WIDEFIELD

REVIEW OF OPTOMETRY

HOME | CE | TOPICS | EVENTS | JOBS

Before I state my case as to why I support the use of UWFI, I want to make a few things clear:

1. *Dilation is still the standard of care to which an optometrist will be held in a court of law.*[1]
2. *No technology can replace a good case history and clinical examination.*
3. *UWFI is an excellent tool to have at our disposal—as is a bottle of tropicamide.*
4. *I have no financial agreements or endorsements to disclose. I own an Optos Daytona, but there are other UWFI devices to choose from.*
5. *In all patients for whom I use UWFI, I still look at their optic nerve and macula with a fundus lens at the slit lamp for an undilated binocular view.*

Published March 15, 2017

Point-Counterpoint: Ultra-Widefield Imaging vs. Dilated Funduscopy

A dilated exam is the standard of care—but is it always practical?

By Ken Jeffers, OD, and Paul C. Ajamian, OD

POINT-COUNTERPOINT
DILATED EYE EXAMS

Published March 15, 2017

Point-Counterpoint: Ultra-Widefield Imaging vs. Dilated Funduscopy

A dilated exam is the standard of care—but is it always practical?

By Ken Jeffers, OD, and Paul C. Ajamian, OD

Stay True to Your Principles

For sure, UWFI is a great modality for documentation and can be a useful adjunct to established protocols of care. But too often the clinical case for it gets conflated with financial rationalizations. We sometimes see the gee-whiz appeal of a shiny new piece of technology—*patients will love it, we'll look so high tech*—and get led astray contemplating the revenue stream it might bring in. But it's wise to remember your Shakespeare: all that glitters is not gold.

The purpose of adjunctive modalities is not to steer patients to a test with the primary purpose of making money. A screening test is fine as long as it leads to a detailed fundus exam, instead of acting as a replacement for one. Make sure you are thinking solely about the clinical value that any device brings to your practice and your patients.[13,14]

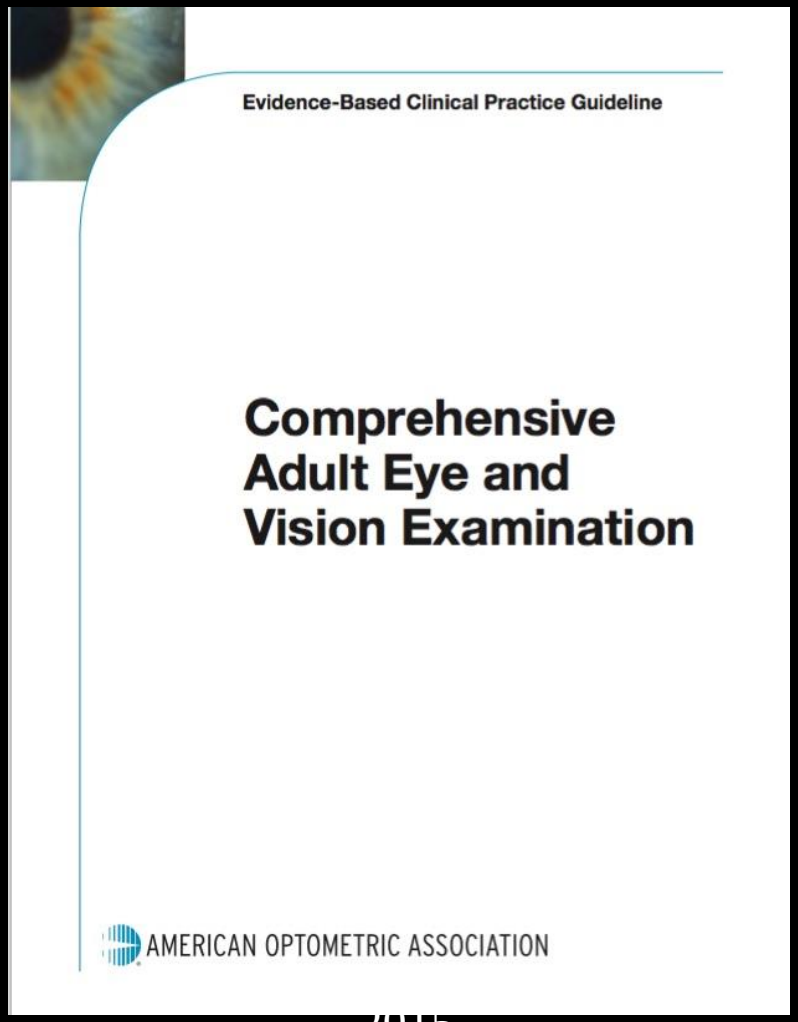
My practice has been dilating patients for 38 years. When patients are educated on the necessity of a procedure, it is not perceived as inconvenient. If we teach our patients that dilation is a bad thing so that we can upsell them an a la carte test, it's a disservice to our patients and our profession—and, in my opinion, unethical.[13]

If the test ultimately increases compliance with regular dilated eye exams, so be it. But don't lose sight of the main objective: compliance with the standard of care.

Dr. Ajamian is the center director of Omni Eye Services of Atlanta.

THE AOA CLINICAL PRACTICE GUIDELINES

THE STANDARD TO WHICH WE ARE HELD



F. SUMMARY LISTING OF ACTION STATEMENTS

A comprehensive adult eye and vision examination should include, but is not limited to:

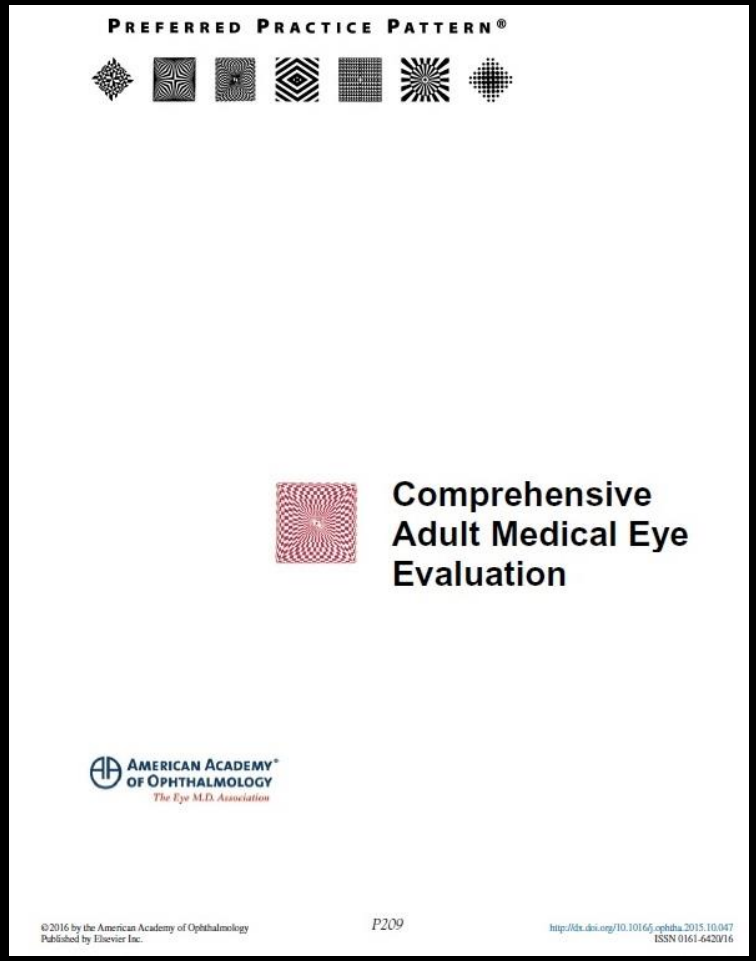
- Patient, family, and social history, including visual, ocular and general health, medication usage, and vocational and avocational visual requirements
- Measurement of visual acuity
- Preliminary examination regarding aspects of visual function and ocular health
- Determination of refractive status
- Assessment of ocular motility, binocular vision, and accommodation, as appropriate, based on patient's age, visual signs and symptoms, and visual requirements
- Ocular health assessment, including evaluation of the anterior and posterior segment, measurement of intraocular pressure, and visual field testing
- Systemic health assessment, as indicated. (consensus)

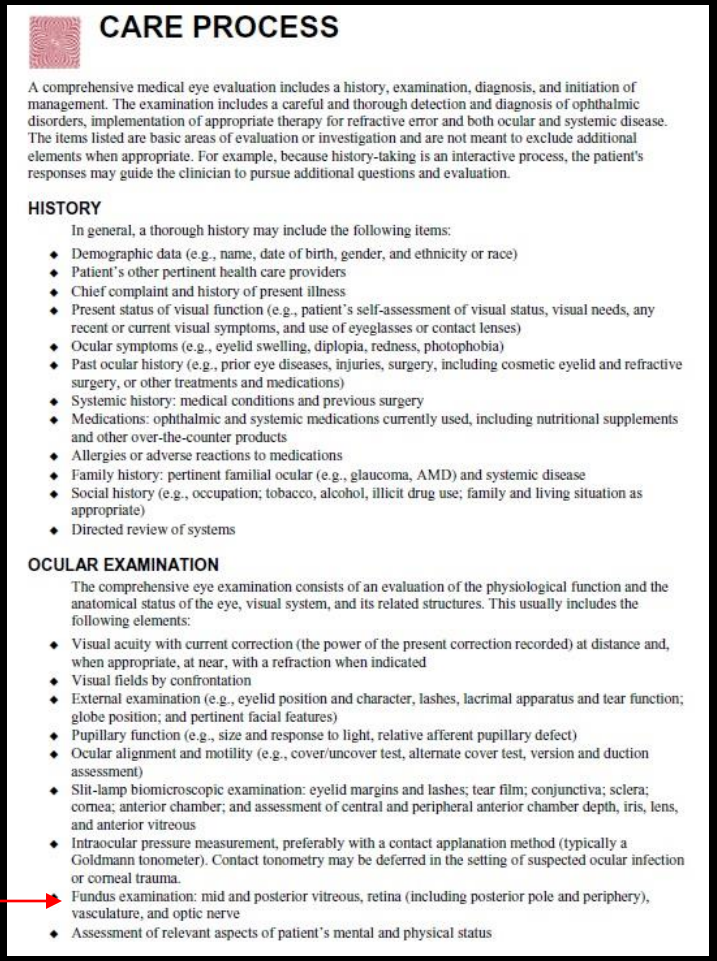
Any systemic medication or supplement used by patients should be investigated by their eye doctor for ocular risk factors or side effects. (consensus)

Pharmacologic dilation of the pupil is generally required for thorough stereoscopic evaluation of the ocular media, retinal vasculature, macula, optic nerve, and the peripheral retina. (consensus)

2015

AAO PPP





CARE PROCESS

A comprehensive medical eye evaluation includes a history, examination, diagnosis, and initiation of management. The examination includes a careful and thorough detection and diagnosis of ophthalmic disorders, implementation of appropriate therapy for refractive error and both ocular and systemic disease. The items listed are basic areas of evaluation or investigation and are not meant to exclude additional elements when appropriate. For example, because history-taking is an interactive process, the patient's responses may guide the clinician to pursue additional questions and evaluation.

HISTORY

In general, a thorough history may include the following items:

- Demographic data (e.g., name, date of birth, gender, and ethnicity or race)
- Patient's other pertinent health care providers
- Chief complaint and history of present illness
- Present status of visual function (e.g., patient's self-assessment of visual status, visual needs, any recent or current visual symptoms, and use of eyeglasses or contact lenses)
- Ocular symptoms (e.g., eyelid swelling, diplopia, redness, photophobia)
- Past ocular history (e.g., prior eye diseases, injuries, surgery, including cosmetic eyelid and refractive surgery, or other treatments and medications)
- Systemic history: medical conditions and previous surgery
- Medications: ophthalmic and systemic medications currently used, including nutritional supplements and other over-the-counter products
- Allergies or adverse reactions to medications
- Family history: pertinent familial ocular (e.g., glaucoma, AMD) and systemic disease
- Social history (e.g., occupation; tobacco, alcohol, illicit drug use; family and living situation as appropriate)
- Directed review of systems

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, 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 (e.g., cover/uncover test, alternate cover test, version and duction assessment)
- Slit-lamp biomicroscopic examination: eyelid margins and lashes; tear film; conjunctiva; sclera; cornea; anterior chamber; and assessment of central and peripheral anterior chamber depth, iris, lens, and anterior vitreous
- Intraocular pressure measurement, preferably with a contact applanation method (typically a Goldmann tonometer). Contact tonometry may be deferred in the setting of suspected ocular infection or corneal trauma.
- 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

2015

DILATE OR NOT?
FLORIDA LAW / REFUSAL

64B13-3.007 Minimum Procedures for Comprehensive Eye Examination.

(1) A comprehensive eye examination is defined as a comprehensive assessment of the patient's visual status and shall include those procedures specified in subsection (2), below.

(2) A comprehensive eye examination shall include the following minimum procedures, which shall be recorded on the patient's case record:

(a) Patient's history (personal and family medical history, personal and family ocular history, and chief complaint);
(b) Visual acuity (unaided and with present correction at initial presentation; thereafter, unaided or with present correction);
(c) External examination;
(d) Pupillary examination;
(e) Visual field testing (confrontation or other);
(f) Internal examination (recording, optic nerve health, blood vessel status, macula health, and any abnormalities);
(g) Biomicroscopy (binocular or monocular);
(h) Tonometry; (with time of measurement);
(i) Refraction (with recorded visual acuity);
(j) Extra ocular muscle balance assessment;
(k) Other tests and procedures that may be indicated by case history or objective signs and symptoms discovered during the comprehensive eye examination;
(l) Diagnosis and treatment plan.

(3) If because of the patient's age or physical limitations, one or more of the procedures specified herein or any part thereof, cannot be performed, or if the procedures or any part thereof are to be performed by reason of exemption from this rule, the reason or exemption shall be noted on the patient's case record.

(4) Except as otherwise provided in this rule, the minimum procedures set forth in subsection (2), above, shall be performed prior to providing optometric care during a patient's initial presentation, and thereafter at such appropriate intervals as shall be determined by the optometrist's sound professional judgment: provided, however, that each optometric patient shall receive a comprehensive eye examination prior to the provision of further optometric care if the last comprehensive eye examination was performed more than two years before.

WE PREFER TO DILATE

When indicated, pupillary dilation improves our doctor's ability to examine the internal structures of the eye for signs of disease, which is important for your health and well-being. Normal side-effects usually last 2 to 4 hours, and they include sensitivity to bright light (for which disposable eye shades are provided upon request) and difficulty focusing on near objects. Normally, your distance vision is not affected very much, and it is possible to drive safely after dilation if you currently have fairly up-to-date prescription eyeglasses.

PATIENTS MAY REFUSE

Patients reserve the right to refuse any test or diagnostic procedure recommended. If a patient refuses, however, he or she assumes all of the risk for potentially not detecting, and thereby treating in a timely manner, any serious eye conditions.

PATIENTS MAY RESCHEDULE

Some patients prefer to reschedule their dilated retinal exam for a different day and time to minimize visual side-effects upon their return to work or school. We will be happy to schedule a second appointment at a later time for this purpose, **privately charging an additional fee of $40.00.** There is absolutely **NO ADDITIONAL CHARGE** if we complete the dilated retinal exam during your initially scheduled comprehensive eye examination.

IN THE CASE OF DILATION REFUSAL

Acting under my own will and judgment, I fully understand the circumstances associated with refusing to have my eyes dilated. As a consequence, I understand that the doctor may not be able to detect cases in which the retina is diseased, physically compromised, or harboring cancerous growths. As such, early detection and diagnosis of certain eye conditions, along with timely and effective treatment, may not be possible. I accept all risk for the possibility of not detecting these eye conditions without pupillary dilation, and I understand that these conditions may result in permanent blindness, or even death.

Name: _____

Signature: _____ **Date:** _____

DILATE OR NOT?
BE AWARE OF MALPRACTICE

The Top 5 Malpractice Claims for Optometrists

Some of the most common claims against optometrists are easily preventable. Read on to learn to protect your practice from malpractice claims and the risks associated with them.

Avoid these Malpractice Claims for Optometrists

Unfortunately, every practice is exposed to risk and has the potential of litigation brought against them. Some of the most common claims against optometrist practices include:

1. Poor Record Keeping – Incomplete documentation is a primary target in malpractice litigation. Institute proper documentation processes in your practice to ensure that your records are always complete.

2. Forgetting Informed Consent Documentation – As with all professionals in the healthcare-related industries, always receive the proper informed consent documentation from a patient before performing a test or procedure. Missing this documentation opens you up to malpractice claims.

3. Lack of Pupil Dilation – When optometrists choose not to dilate the pupil when necessary in an examination, they may find themselves at risk of a lawsuit. Dilation itself rarely causes liability claims. It can result in injuries from slip-and-fall accidents that occur in the office or on the premises. Always warn patients of the side effects of dilation and provide mydriatic sunglasses.
4. Misdiagnosis – Rushing to a diagnosis or giving the wrong diagnosis, is an easy way to bring a lawsuit against your practice. If ever unsure, order specialized tests or get a second opinion from a specialist.

5. Improper Client Termination/Referral – If a patient wishes to terminate their relationship with your practice or switch providers, it is a practitioner's responsibility to give care until the patient is officially terminated or referred to another optometrist. Always document the process thoroughly.

BILLING
COMPREHENSIVE vs INTERMEDIATE

Elements of an Eye Exam

- Visual acuity
- Gross visual fields *
- Eyelids & adnexa #
- Ocular mobility *
- Pupils
- Iris
- Conjunctiva
- Cornea
- Anterior chamber exam
- Lens
- Intra-ocular pressure
- Retina
- Optic disc

* required for comprehensive level
# required for intermediate level

When to Use Eye Exam Codes vs. E&M

- Comprehensive exam consists of 9 or more of the 13 elements & **always** includes a *fundus* examination w/ pupils dilated (92004 or 92014).
- Intermediate exam consists of 3-8 of the 13 elements (92002 or 92012).
- If less than three of these elements are documented, an evaluation and management (E&M) code should be assigned based on the provider's documentation.

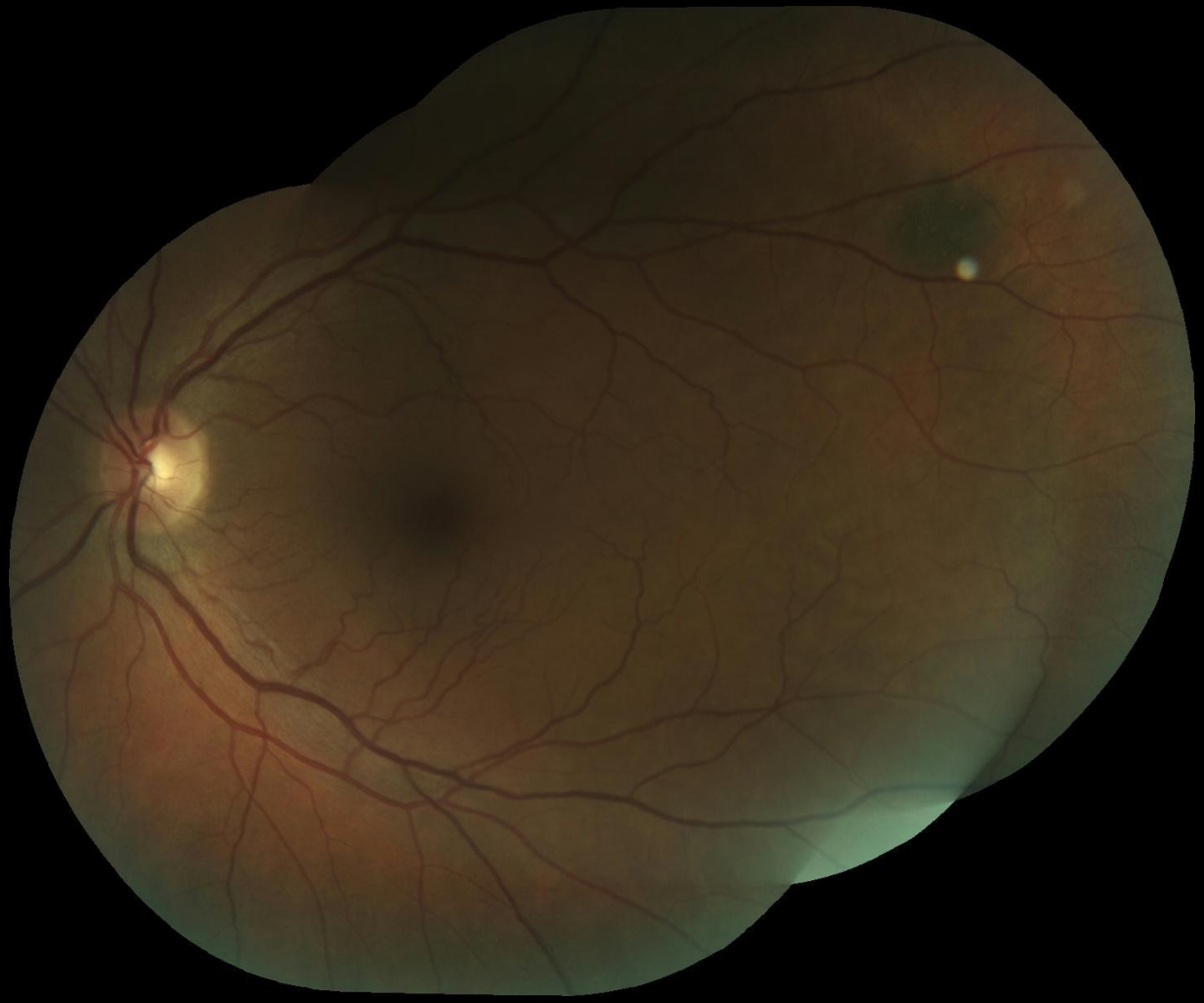
Comprehensive eye examination codes (92004, 92014). These describe a general evaluation of the complete visual system. According to the CPT definition, it "includes history, general medical observation, external and ophthalmoscopic examinations, gross visual fields and basic sensorimotor examination. It often includes, as indicated: biomicroscopy, examination with cycloplegia or mydriasis and tonometry. It always includes initiation of diagnostic and treatment programs."

Gross visual fields and a basic sensorimotor exam are also required for a comprehensive eye exam, while dilation is not; however, as part of the definition of each code, dilation is not a separately billable procedure should you choose to perform it.

Intermediate codes (92002, 92012). These are defined as: "an evaluation of a new or existing condition complicated with a new diagnostic or management problem not necessarily relating to the primary diagnosis, including history, general medical observation, external ocular and adnexal examination and other diagnostic procedures as indicated; may include the use of mydriasis for ophthalmoscopy." Some inappropriately use these codes to reduce the exam cost to a non-insured patient.

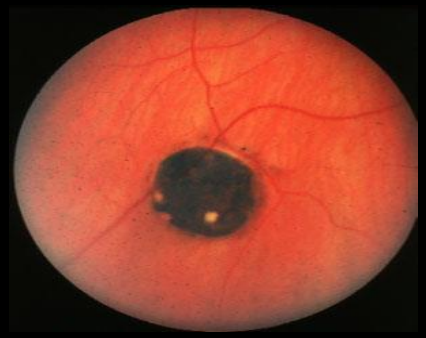
BACK TO THE PATIENT….

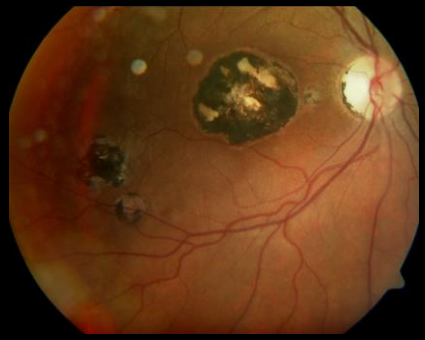
NOW DILATED…WHAT YOU MAY HAVE MISSED UNDILATED

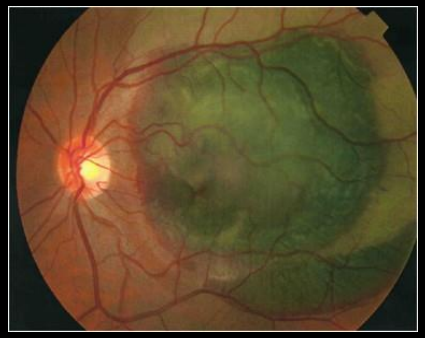


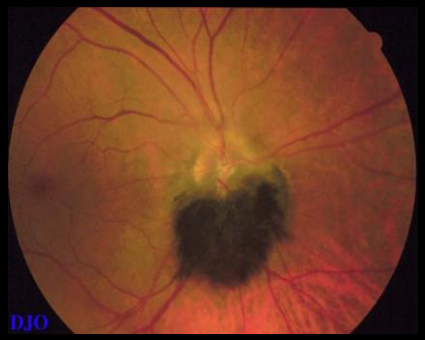
DIFFERENTIAL DIAGNOSIS

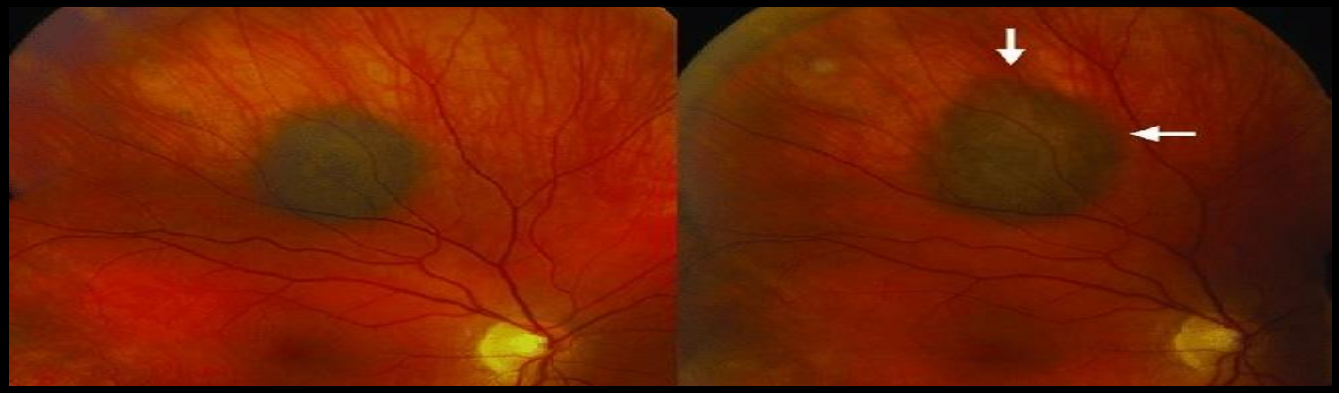
- RPE HYPERTROPHY
- RPE HYPERPLASIA
- SUBRETINAL BLOOD
- MELANOCYTOMA
- CHOROIDAL DETACHMENT
- CHOROIDAL NEVUS
- CHOROIDAL MELANOMA

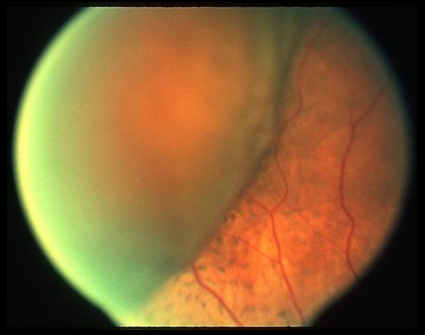




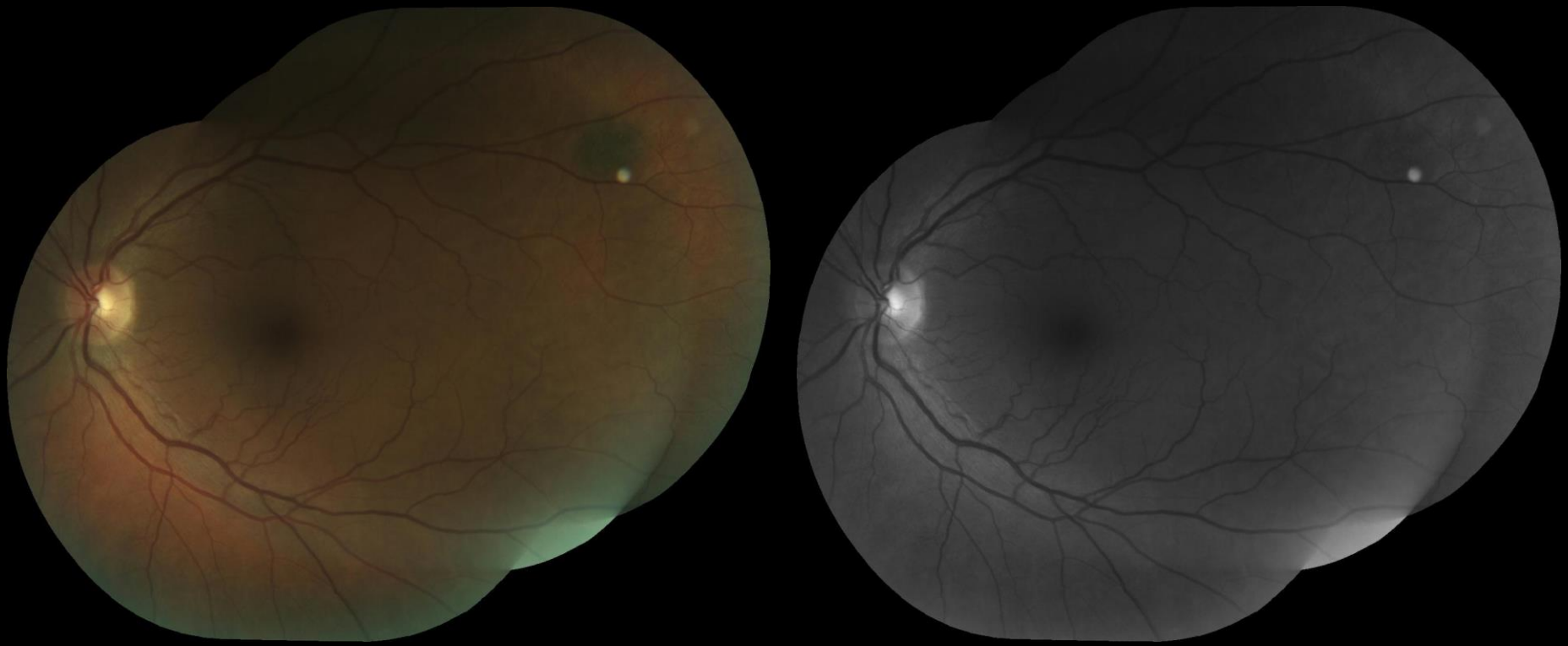








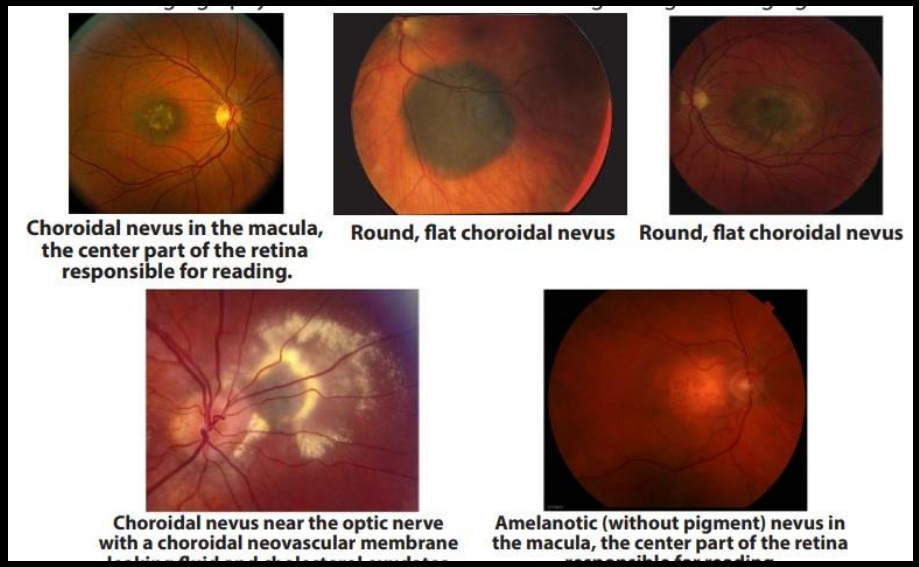
THAT'S A NEVUS. NO "BIG DEAL."



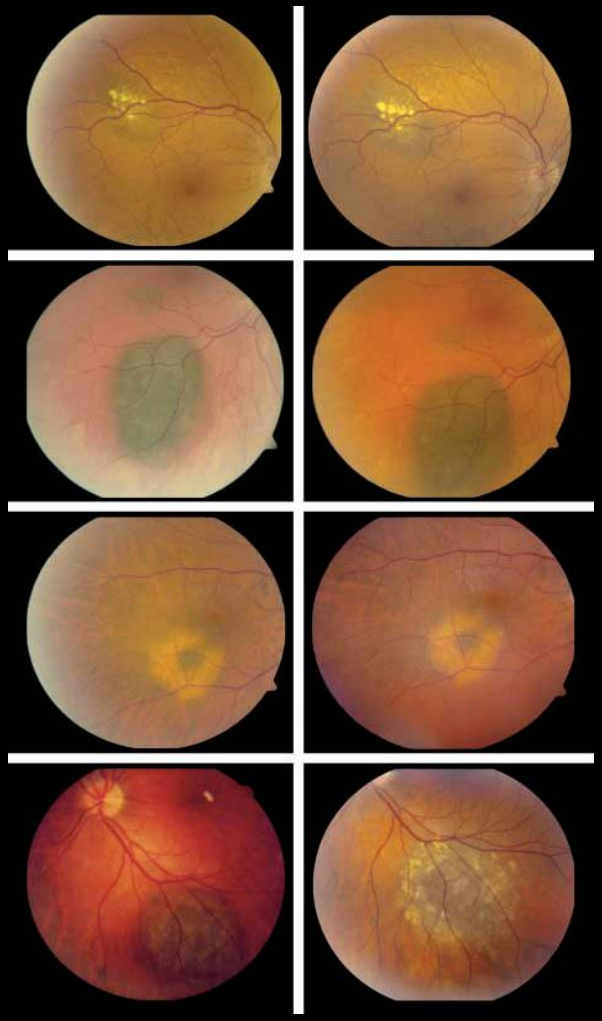
NEVUS WILL FADE OR DISAPPEAR WITH REDFREE FILTER

CHOROIDAL NEVUS

- SYMPTOMS
  - TYPICALLY NONE
  - HOWEVER, IF CENTRALLY LOCATED MAY CAUSE BLURRED VISION OR LOSS
- SIGNS
  - 77% PIGMENTED VS OTHER NON-PIGMENTED
  - 91% POSTERIOR TO EQUATOR
  - 94% EXTRAFOVEAL, 6% SUBFOVEAL
  - MEAN BASAL DIAMETER 1.2-5mm, MEAN THICKNESS 1.5mm



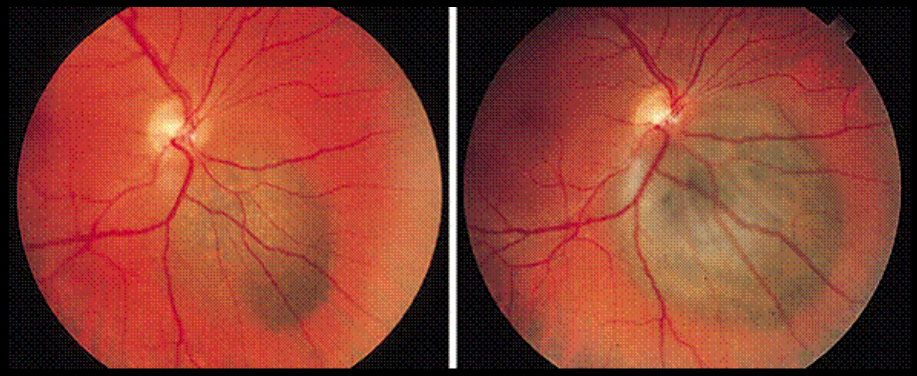
STABLE NEVI



- Choroidal nevus remaining stable over time. Choroidal nevus with drusen (A) remained stable during 3 years of follow-up, and the drusen became slightly more confluent (B).
- Choroidal nevus without drusen but with overlying retinal pigment epithelial atrophy (C) remained stable at 4-year follow-up (D).
- Halo choroidal nevus (E) remained stable at 3-year follow-up (F).
- Choroidal nevus with subtle drusen and retinal pigment epithelial atrophy (G) remained stable at 23-year follow-up (H).

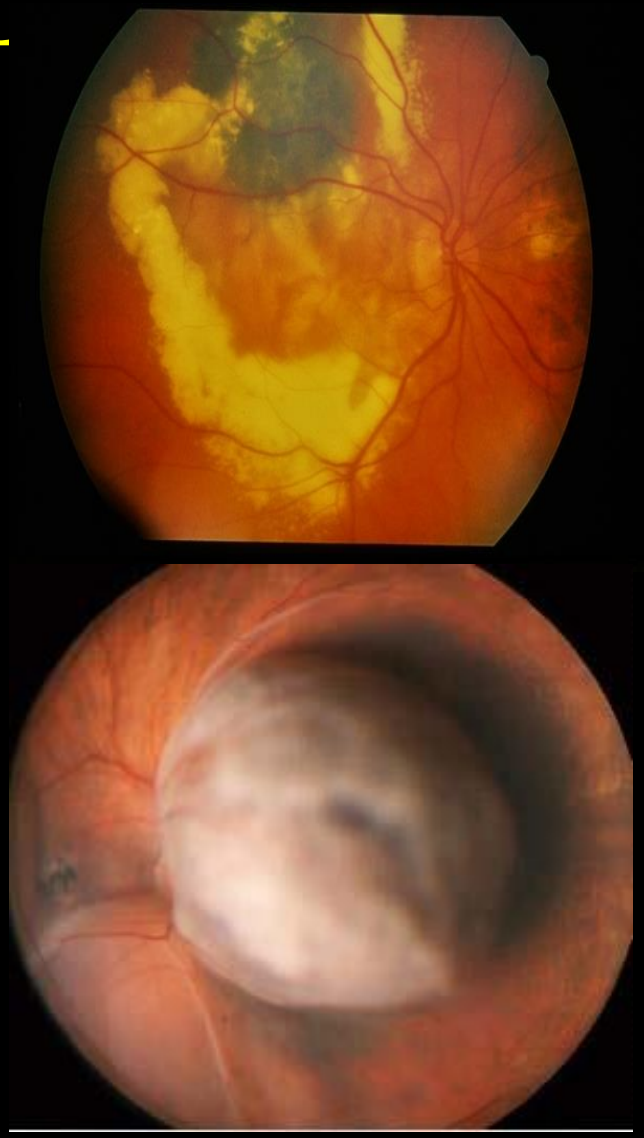
WHAT TO TELL THE PATIENT

- NEEDS TO BE PHOTODOCUMENTED AND MONITORED FOR CHANGE
  - BASELINE
  - 3 MONTHS
  - 6 MONTHS
  - YEARLY
- MAY NEED
  - FAF, OCT, ULTRASOUND, FA
  - RETINA REFERRAL
- BUT WHY?



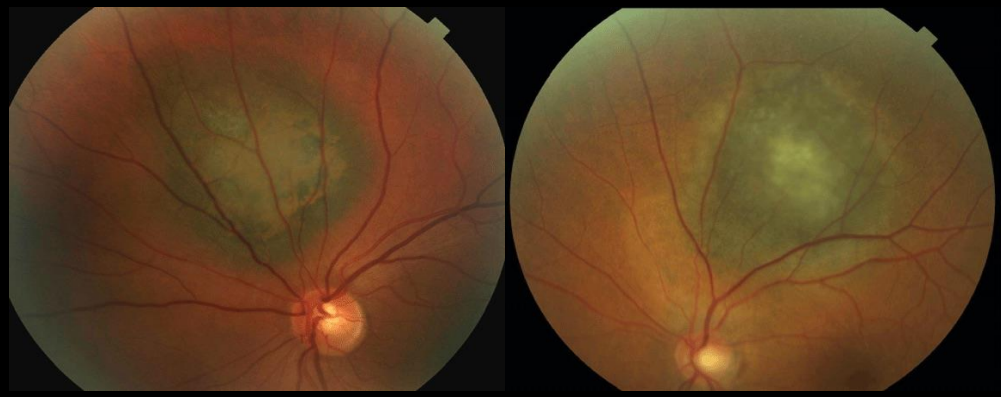
IT ACTUALLY MAY BE A "BIG DEAL"

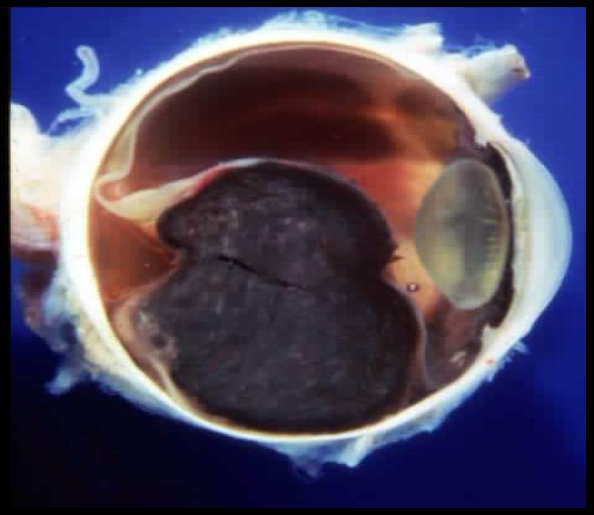
- CHOROIDAL NEVUS MAY…
  - 1. CAUSE VISION LOSS
    - ESPECIALLY IF SUBFOVEAL
    - HOW?
      - FROM MACULAR EDEMA OR RPE LOSS
  - 2. CAUSE OVERLYING CHOROIDAL NEOVASCULARIZATION
    - 1% OF PATIENTS
      - TX WITH ANTI-VEGF OR OBSERVATION IF EXTRAFOVEAL
  - 3. GROW INTO A MELANOMA
    - 1 IN 8000 CASES

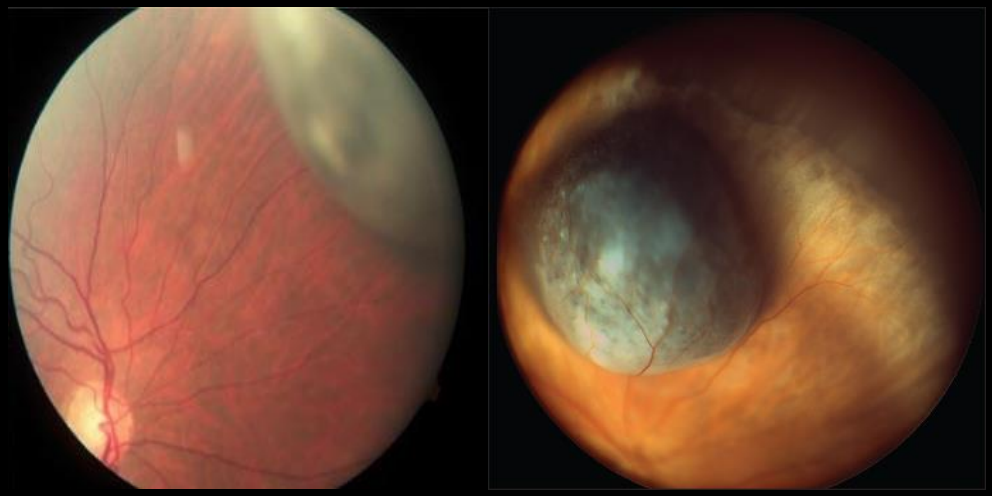


CHOROIDAL MELANOMA

- MOST COMMON PRIMARY MALIGNANT INTRAOCULAR TUMOR
- SECOND MOST COMMON TYPE IN THE BODY
- 1/100,00 PER YEAR







CHOROIDAL MELANOMA

- 95% ARE LIMITED TO THE EYE AT DIAGNOSIS
- 30% DEVELOP DISTANT METASTASES
  - LIVER IS THE FIRST SITE OF SYSTEMIC METASTASIS
  - WORK-UP
  - IF SPREADS, FIVE-YEAR SURVIVAL IS 15%

CHOROIDAL MELANOMA

- RISK FACTORS
  - LIGHT SKIN
  - OLDER AGE
  - PRESENCE OF UVEAL NEVI
  - EXPOSURE TO UV LIGHT
  - GENETICS

CHOROIDAL MELANOMA

- WORK-UP
  - HISTORY
    - CANCER, ANOREXIA, WEIGHT LOSS OR SYSTEMIC ILLNESS
  - FINE-NEEDLE BIOPSY
  - CT OR MRI OR ORBIT / BRAIN
  - BLOOD WORK
    - LACTATE DEHYDROGENASE (LD), GAMMA-GLUTAMYL TRANSFERASE (GGT), ASPARTATE (AST) AND ALANINE AMINOTRANSFERASES (ALT) , ALKALINE PHOSPHATASE (ALP)
      - IF ANY/ALL ELEVATED, INDICATES LIVER DAMAGE / DISEASE
  - CHEST CT
  - MRI OF LIVER
  - PHYSICAL BY PRIMARY CARE
    - BREAST EXAM, SKIN EXAM
    - CARCINOEMBRYONIC ANTIGEN ASSAY IF METASTASIS

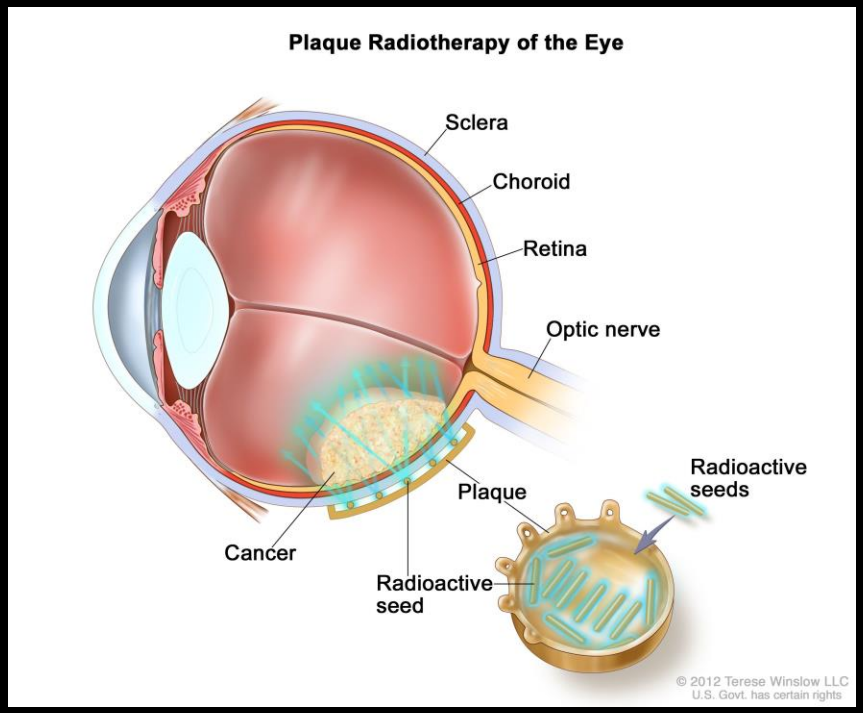
MELANOMA TREATMENT

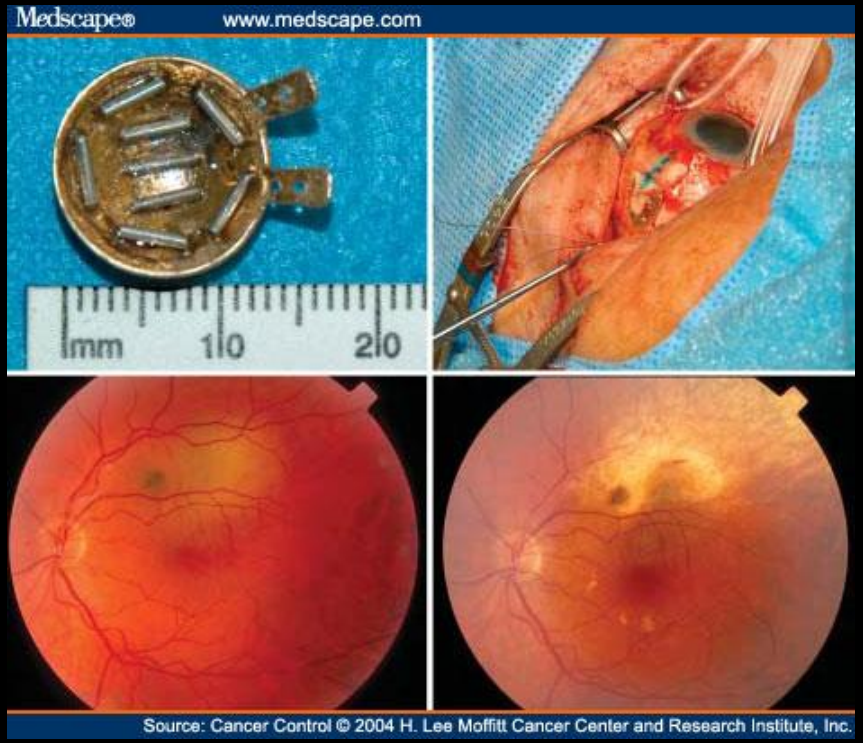
- DETERMINING FACTORS
  - VISUAL ACUITY
    - AFFECTED AND CONTRALATERAL EYE
  - SIZE
  - AGE OF PATIENT
  - HEALTH OF PATIENT
  - OCULAR STRUCTURES INVOLVED
  - PRESENCE OF METASTASES
- OPTIONS
  - MEDICAL CARE
  - SURGICAL CARE

CHOROIDAL MELANOMA

- TREATMENT
  - OBSERVATION
  - PHOTOCOAGULATION
  - TRANSPUPILLARY THERMOTHERAPY
  - RADIATION THERAPY
  - LOCAL RESECTION
  - ENUCLEATION
  - EXENTERATION
  - MOST….
    - PLAQUE RADIOTHERAPY
    - THERMOTHERAPY FOR SCAR CONSOLIDATION
    - CONSIDER ANTI-VEGF AND SECTOR PHOTOCOAGULATION TO PROTECT FROM VISION LOSS

TREATMENT
RADIOACTIVE PLAQUE

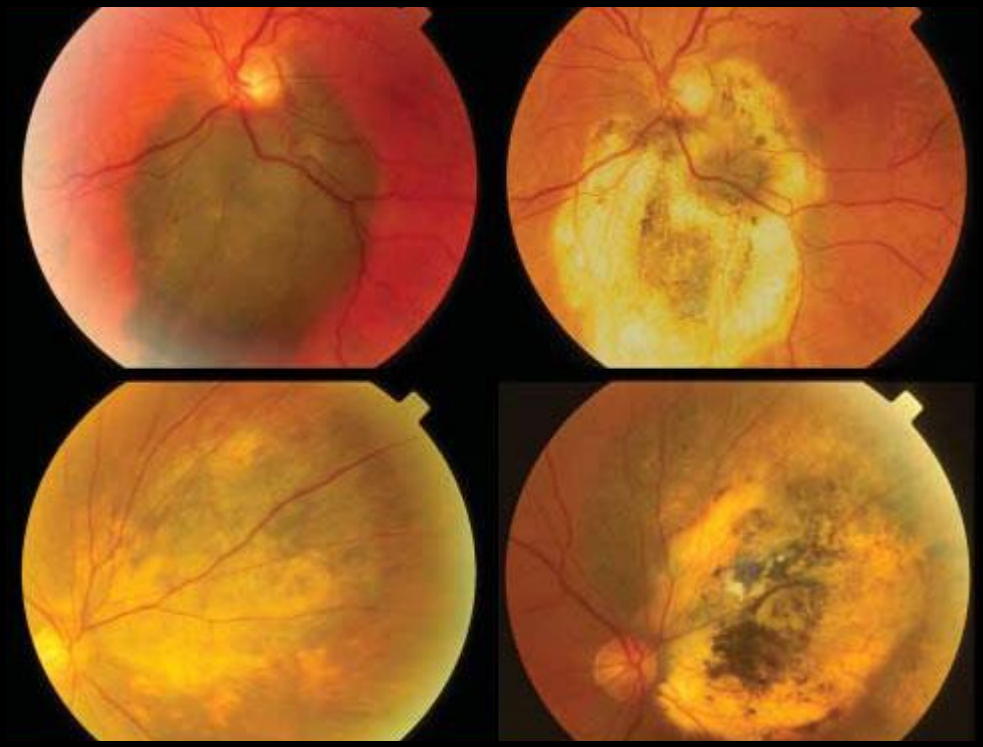




BEFORE AND AFTER IODINE-125 RADIOACTIVE PLAQUE

TREATMENT

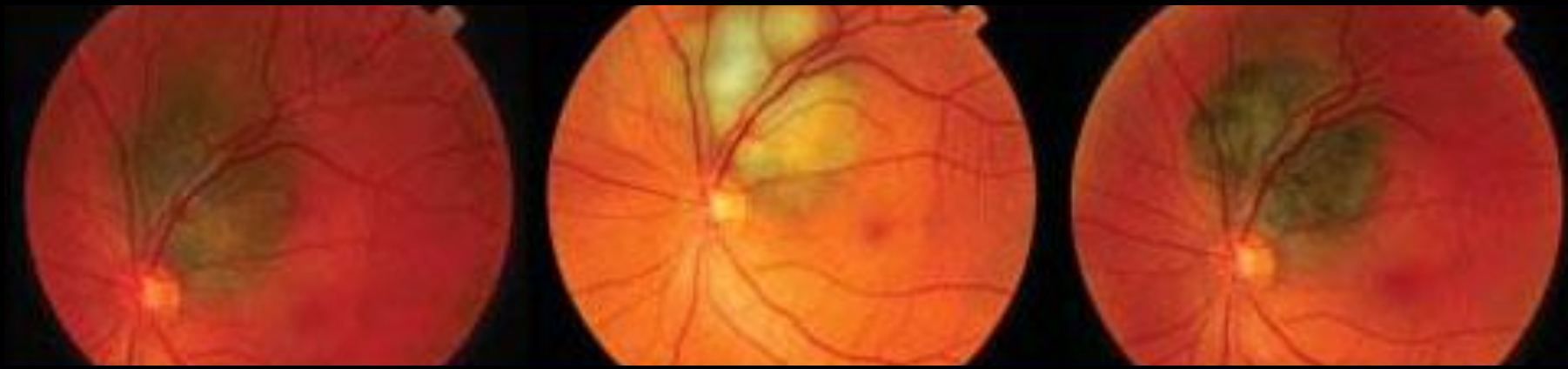
TRANSPUPILLARY THERMOTHERAPY



BEFORE AND AFTER TRANSPUPILLARY THERMOTHERAPY

TREATMENT

TRANSPUPILLARY THERMOTHERAPY



Choroidal malignant melanoma before, immediately after and 24 months after treatment with transpupillary thermotherapy.

IS IT A NEVUS or MELANOMA?

TO FIND SMALL OCULAR MELANOMA (TFSOM)

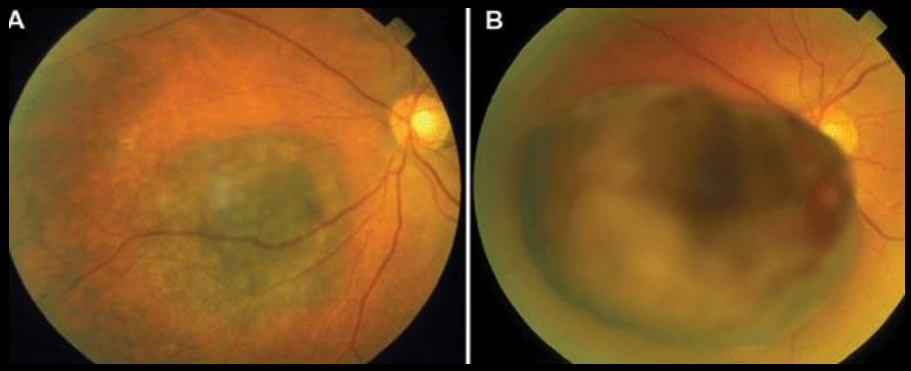
- THICKNESS > 2MM
- SUBRETINAL FLUID
- SYMPTOMS
- ORANGE PIGMENT
- MARGIN WITHIN 3mm of ONH

- ULTRASONOGRAPHIC HOLLOWNESS
- HALO ABSENCE
- ABSENCE OF DRUSEN

- 3 OR MORE RISK FACTORS = > 50% CHANCE NEVUS COULD TURN INTO MELANOMA

RISK OF PROGRESSION

- 0 RISK FACTORS
  - 3% CHANCE OF GROWTH IN 5YRS
  - PROBABLY NEVI
- 1 RISK FACTOR
  - 38% CHANCE OF GROWTH
- 3 OR MORE RISK FACTORS
  - 50% CHANCE OF GROWTH



FAF and OCT
NEVUS vs MELANOMA

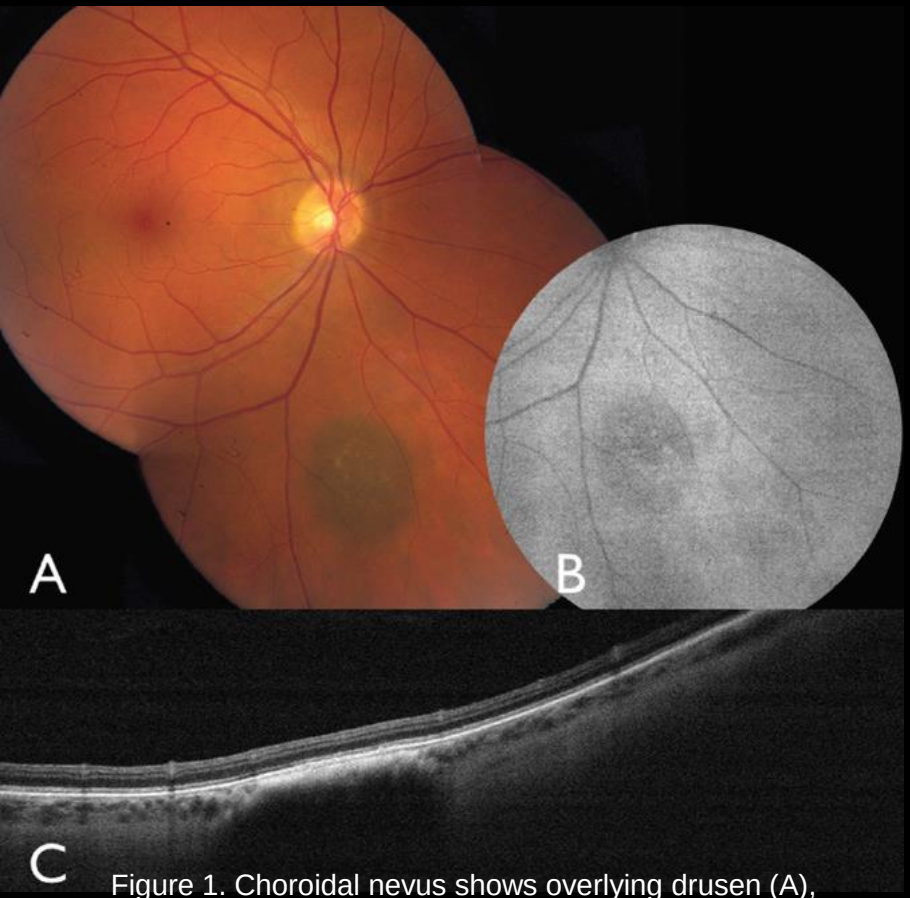


Figure 1. Choroidal nevus shows overlying drusen (A), hypoautofluorescence (B), and location within the choroid, causing deep shadowing overlying tiny drusen, and no subretinal fluid on OCT (C).

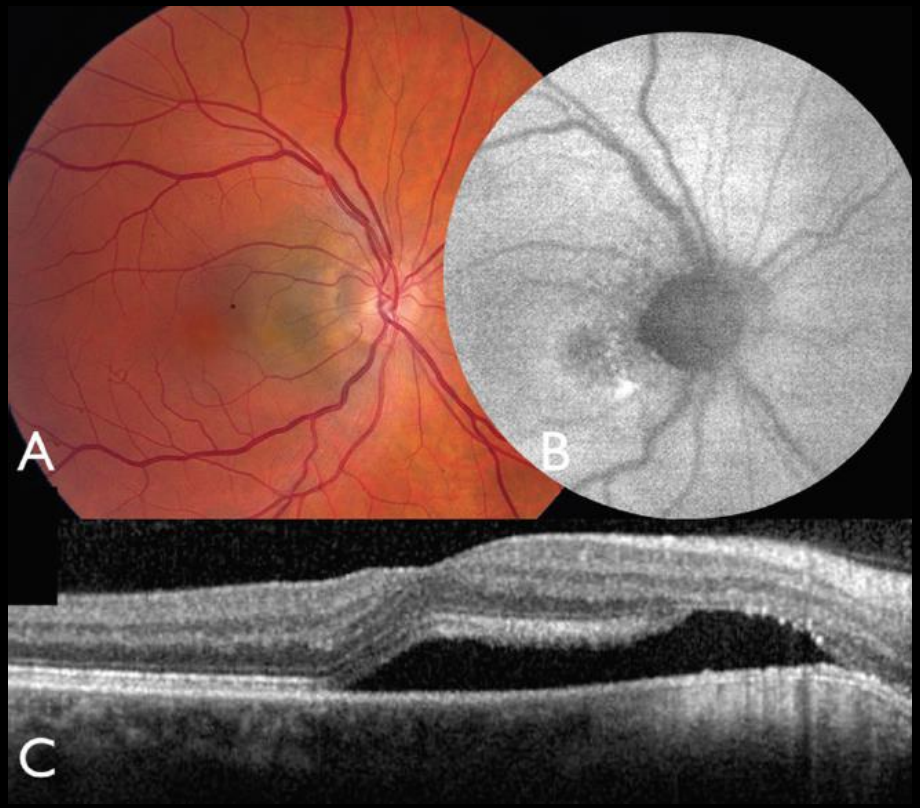
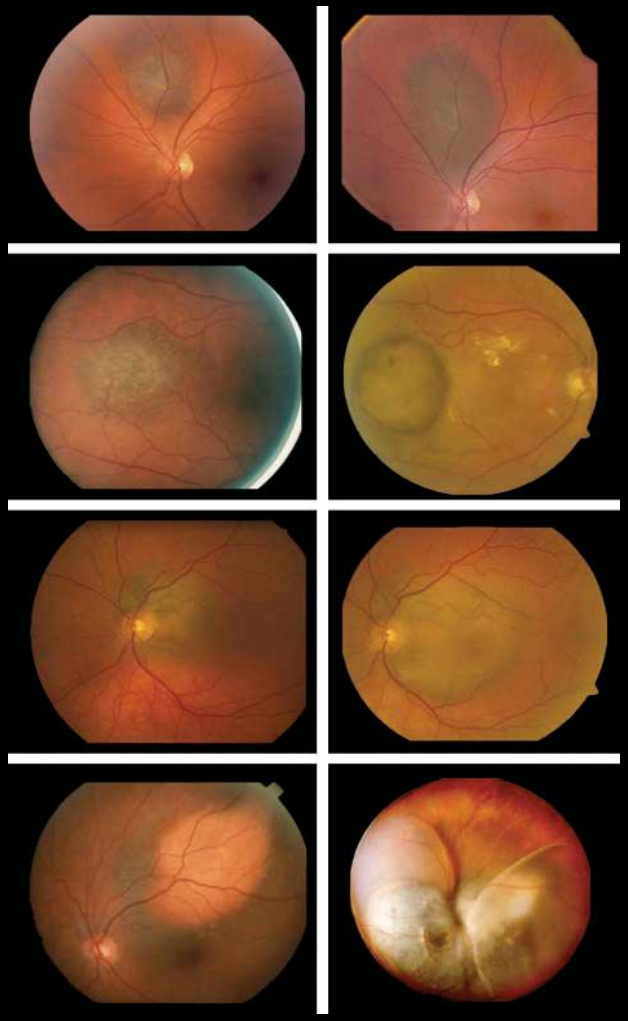


Figure 3. Small choroidal melanoma in papillomacular region (A) with hyper autofluorescence of orange-colored lipofuscin pigment (B) and with mild dome-shaped configuration, prominent overlying subretinal fluid, and shaggy photoreceptors on OCT (C).

NEVUS INTO MELANOMA



- Suspicious choroidal nevus with orange pigment and overlying subretinal fluid (A) showed enlargement in basal dimension during 6 years (B).
- Choroidal nevus with overlying retinal pigment epithelial atrophy (C) showed marked enlargement with flat basal growth, development of a central nodule, and retinal invasion over several years (D).
- Suspicious choroidal nevus with overlying orange pigment and subtle subretinal fluid (E) showed enlargement during 2 years (F).
- Suspicious choroidal nevus with variable pigmentation and lacking drusen (G) remained stable for 14 years and at year 15 showed marked enlargement with prominent retinal detachment (H).

TO FIND SMALL OCULAR MELANOMA DOING IMAGING

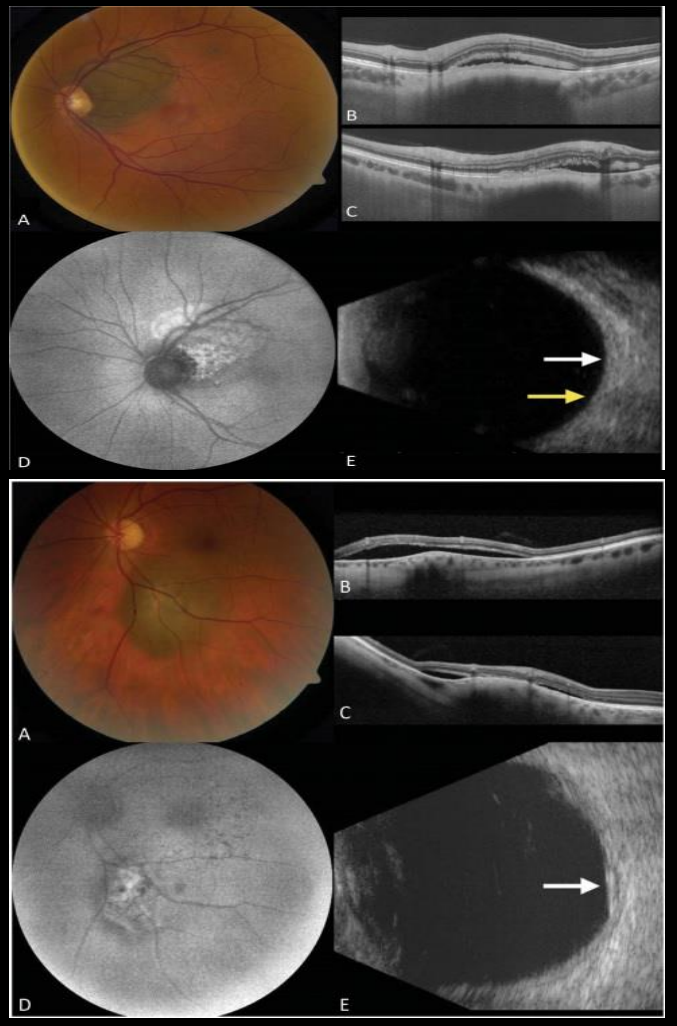
(TFSOM-DIM: Shields CL et al. Retina 2019)

- THICKNESS > 2MM (B-scan)
- SUBRETINAL FLUID (OCT)
- SYMPTOMS (VA 20/50 or worse)
- ORANGE PIGMENT (FAF hyperautofluorescence)
- MELANOMA ACOUSTIC HOLLOWNESS (B-scan)
  - DOME SHAPED, MUSHROOM SHAPED, COLLAR BUTTON
  - AREAS OF HOLLOWNESS WITHIN THE TUMOR

- DIAMETER > 5mm (photos)
  - ONH ~ 1.5mm diameter

ALSO CONSIDER…

- HALO ABSENCE
- ABSENCE OF DRUSEN



MOLES SYSTEM

- Mushroom Shape
- Orange Pigment
- Large Size
- Enlarging Tumor
- Subretinal Fluid

cancers

MDPI

Article

The MOLES System for Planning Management of Melanocytic Choroidal Tumors: Is It Safe?

Kelsey A. Roelofs [1], Roderick O'Day [1,2], Lamis Al Harby [1], Amit K. Arora [1,3], Victoria M.L. Cohen [1,3], Mandeep S. Sagoo [1,3] and Bertil Damato [1,4,*]

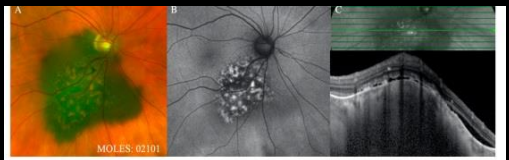


Figure 3. Representative cases demonstrating O = 2. (**A**) Color fundus photograph and (**B**) autofluorescence image demonstrating confluent 'clumping' of orange pigment. (**C**) OCT over the tumor confirms the location of lipofuscin superficial to the RPE and also demonstrates the presence of sub-retinal fluid, corresponding to a score of S = 1.

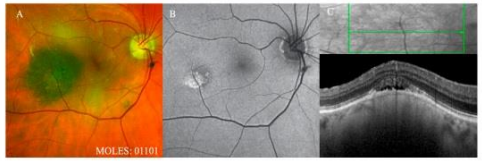


Figure 4. Representative cases demonstrating O = 1. (**A**) Color fundus photograph and (**B**) autofluorescence image demonstrating 'fine dusting' of orange pigment. (**C**) On OCT, the lipofuscin is visualized as small hyper-reflective foci lying 'superficial' to the RPE, unlike drusen that lie 'deep' to the RPE. The presence of trace sub-retinal fluid noted on OCT corresponds to a score of S = 1.

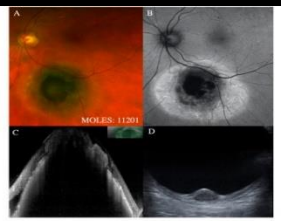


Figure 1. Representative cases demonstrating incipient mushroom shape (i.e., M = 1). (**A**) Fundus photographs showing focal atrophy of RPE, (**B**) highlighted as a well-defined region of hypo-autofluorescence (**C**) with corresponding area of RPE hyperplasia but (**D**) no evidence of a mushroom shape on B-scan ultrasonography (M = 1).

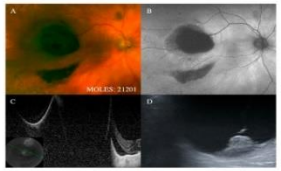


Figure 2. Representative cases demonstrating mushroom shape (i.e., M = 2). (**A**) Evidence of small nodule formation with associated hemorrhage on color photography and corresponding (**B**) hypo-autofluorescence with evidence of (**C**) a nodule on optical coherence tomography (OCT) and (**D**) confirmed on B-scan ultrasound (M = 2).

Table 1. a. MOLES scoring criteria. **b.** MOLES tumor categories and recommended management.

a.

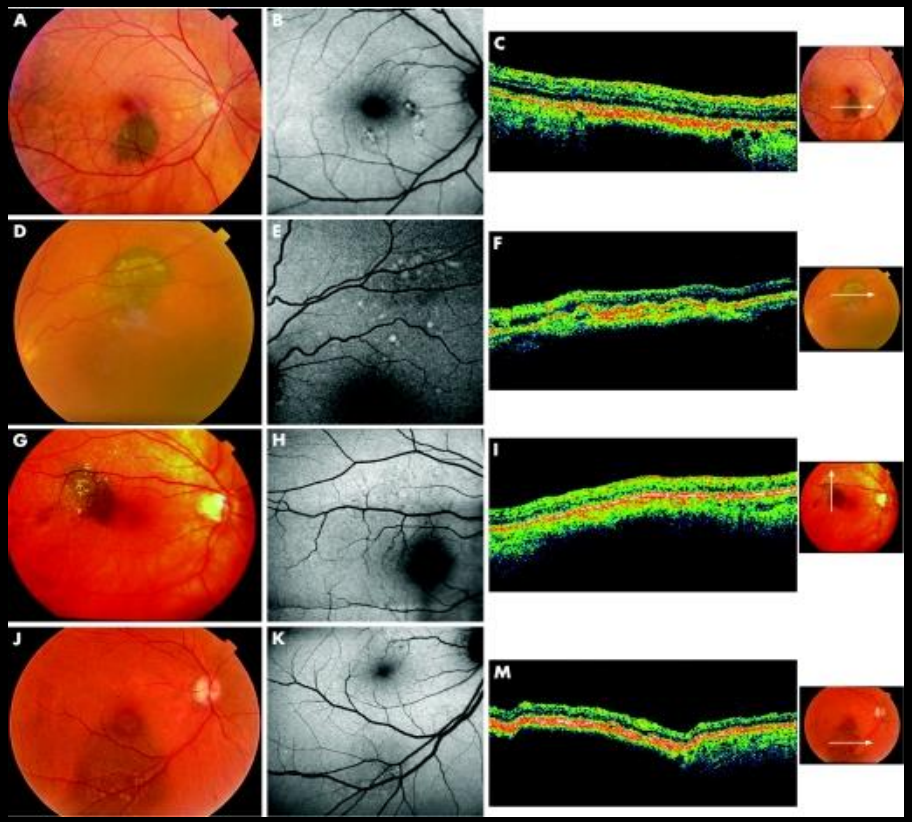
Risk Factor	Severity	Score
Mushroom shape	Absent	0
	Unsure/Early growth through RPE	1
	Present	2
Orange pigment	Absent	0
	Unsure/Trace (i.e., Dusting)	1
	Confluent clumps	2
Large Size	Thickness & Diameter	
	Thickness <1.0 mm ('flat/minimal thickening') and diameter < 3DD	0
	Thickness = 1.0–2.0 mm ('subtle dome shape') and/or diameter = 3–4 DD	1
	Thickness >2.0 mm ('significant thickening') and/or diameter > 4DD	2
Enlargement	None (or lesion not documented or mentioned to patient previously)	0
	Unsure (i.e., Poor image quality)	1
	Definite (confirmed with sequential imaging)	2
Subretinal fluid	Absent	0
	Trace (if minimal and detected only with OCT)	1
	Definite (if seen without OCT)	2
	Total Score	

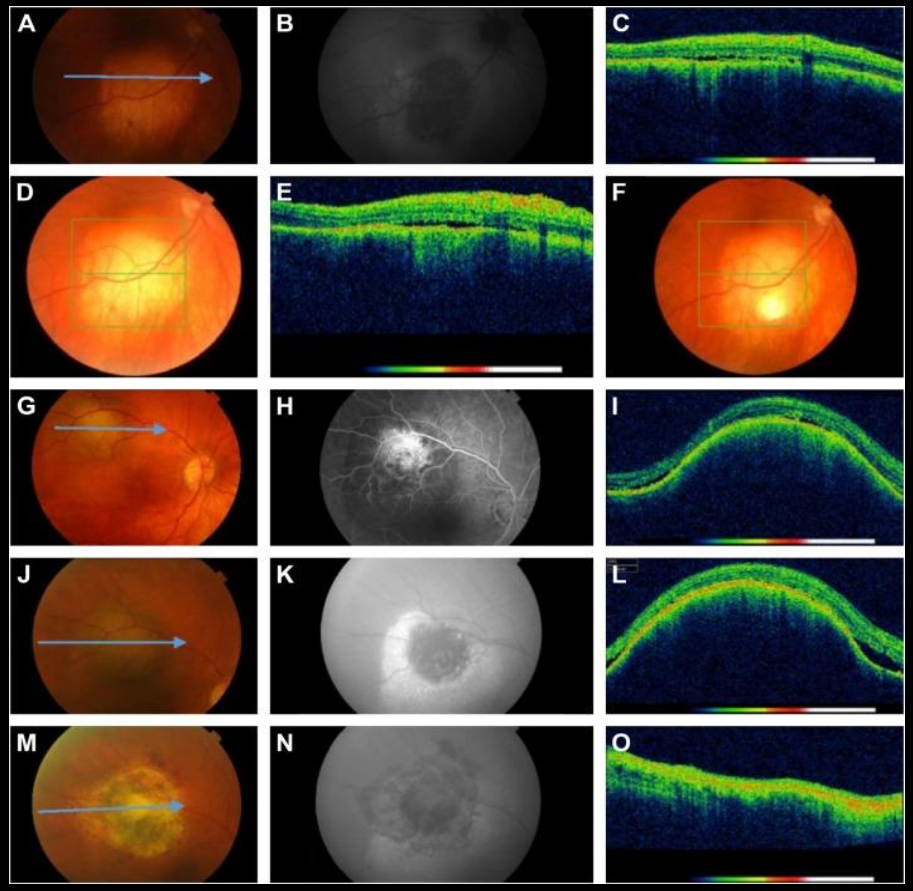
DD = disc diameter (=1.5 mm); *ignore thickness if this cannot be measured; **assume SRF if unexplained visual loss.

b.

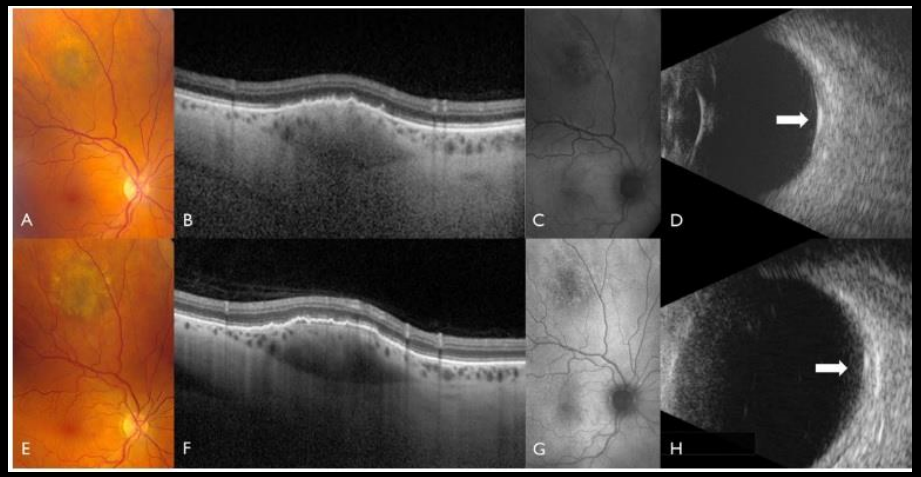
MOLES Score	Suggested Management
0 = Common naevus	**Monitoring in community** with color photography every 1–2 yrs.
1 = Low-risk naevus	**Non-urgent referral** for specialist investigation comprising wide-field photography, autofluorescence imaging, optical coherence tomography and, in selected cases, ultrasonography. Subsequent surveillance to be undertaken at a specialist clinic or in the community according to risk of malignancy.
2 = High-risk naevus	
3 = Probable melanoma	**Urgent referral** to ophthalmologist with urgent onward referral to ocular oncologist if suspicion of malignancy is confirmed.

PHOTOS and FAF and OCT
NEVUS vs MELANOMA



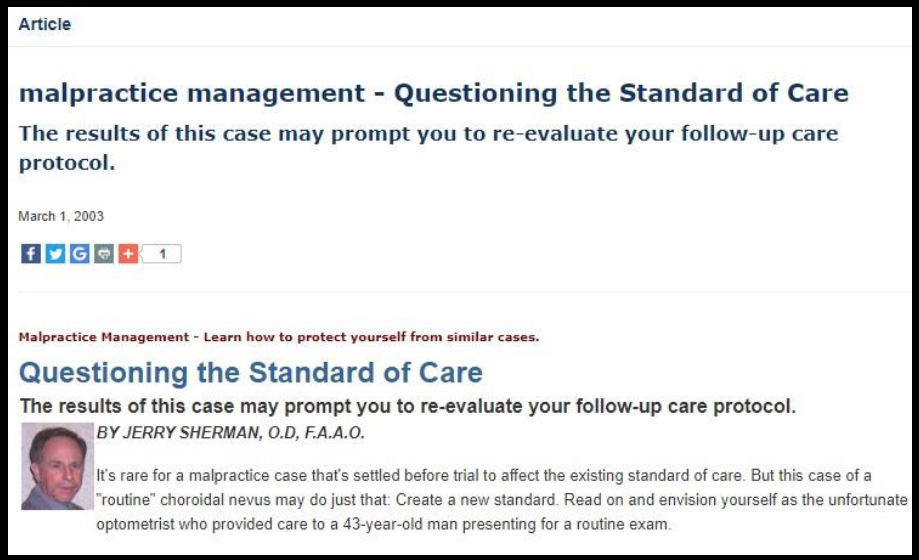


NEVUS vs
NEVUS to MELANOMA



PROTECT YOURSELF

- $2 MILLION SETTLEMENT
  - NEVUS WAS A MELANOMA
  - METASTASIZED TO LIVER
  - TREATED THEN DIED
- DRAWINGS NOT STANDARD OF CARE
- 1ST TIME NOTED
  - PHOTODOCUMENT
  - RTC 3 MOS
  - RTC 6 MOS
  - RTC YEARLY
- SUSPICIOUS LESIONS
  - ADDITIONAL TESTING
  - RETINA REFERRAL



Article

malpractice management - Questioning the Standard of Care

The results of this case may prompt you to re-evaluate your follow-up care protocol.

March 1, 2003

Malpractice Management - Learn how to protect yourself from similar cases.

Questioning the Standard of Care

The results of this case may prompt you to re-evaluate your follow-up care protocol.

BY JERRY SHERMAN, O.D, F.A.A.O.

It's rare for a malpractice case that's settled before trial to affect the existing standard of care. But this case of a "routine" choroidal nevus may do just that: Create a new standard. Read on and envision yourself as the unfortunate optometrist who provided care to a 43-year-old man presenting for a routine exam.

https://www.optometricmanagement.com/issues/2003/march-2003/malpractice-management-questioning-the-standard

CONCLUSION

- FOR
  - PLAQUENIL
  - PVD/LATTICE/RETINAL BREAKS/RD
  - CHOROIDAL NEVI
- KNOW
  - WHAT TO LOOK FOR
  - SYMPTOMS
  - WHAT TESTING TO BE DONE
  - TREATMENT OPTIONS
  - FOLLOW-UP