

SOMETIMES YOU NEED TO
DO AN EXTRA TEST / STEP....

David L Bejot OD
Cell 419-343-6750



OHIO STATE

► Applicants

- Total all colleges 2021 2594
- 2022 2404
- 2023 2322 (Down 3.4%, 2 yr = 11%)
- Ohio State
 - Total appl for class 2022 515
 - 2023 503 (Down 2.5%)
- ~~14=2327~~ → 12,390 (avg ~5 per college)
- Ratio: 8:1

OHIO STATE

► OSU Class of 2023

1. 67 students
2. Avg GPA 3.63 (3.72)
 1. Avg Science 3.52 (undergrad)
 2. Avg OATS Academic Avg 399 Total Science 336
 3. National avg = 300
3. 41 female /26 male
4. 32 Ohio / 33 non-Ohio/ 2 international
5. 57 White, 9 Asians, 1 Hispanic

Ultimate Pass Rate (All Three Parts at Summer After Graduation)

Class of	OSU Pass Rate	National Pass Rate	The Buckeye Advantage
2014	98%	91%	+7%
2015	98%	85%	+13%
2016	100%	84%	+16%
2017	97%	91%	+6%
2018	97%	92%	+5%

LEADERSHIP MODEL I-CE

1. The most disingenuous myth.....
2. Innovate - Credibility - Ability to execute
3. Optometry is a dynamic, rapidly evolving profession
4. **Tomorrow's OSU grads will require new skill sets**
 1. Dev unique leadership capacity for EACH student
 2. Create self awareness around leadership competencies, personal values, and career interests.
5. FIRST type of program in any optometric colleges

Technical

Interpersonal

How will optometry be practiced in the future?

GLAUCOMA.....OR SOMETHING ELSE?

Nick Carr OD
OSU Resident

CASE PRESENTATION

- ▶ 48 year old Caucasian female in for referral for glaucoma work-up
- ▶ Patient thinks both mother and both grandparents had glaucoma
- ▶ IOP's at visit were 19/20 at previous visit with referral doctor
- ▶ Reports occasional migraines but patient states has had headaches for many years

EXAM FINDINGS

Entrance Testing

- ▶ VA w/o: 20/25- OD, 20/25- OS
- ▶ BCVA: 20/25 OD, 20/25 OS
 - ▶ -0.25 -0.50 x 058 +1.75
 - ▶ -0.75 -0.50x 141 +1.75
- ▶ Pupils: ERRL, no APD
- ▶ EOMs: full and smooth
- ▶ 30-2VF (see next slides) with history of unreliable fields

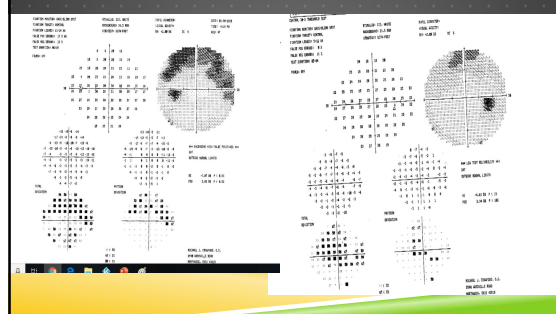
DFE

- Unremarkable; C/D 0.40 OU with healthy rim tissue

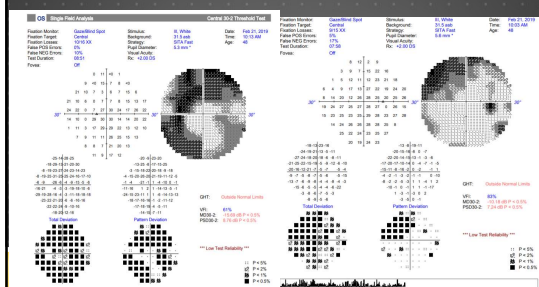
Slit Lamp

- ▶ Lids/lashes: mild anterior blepharitis OU, pinguecula OU, 1+ injection OS
- ▶ Cornea: small scar at 7:00 OD with no staining pattern
- ▶ Anterior Chamber: deep/quiet
- ▶ Iris: flat and intact OU, no NVI
- ▶ Lens: Gr I+NS OU, Gr I+CS OD Gr I+ OS CS
- ▶ IOP: 17 OD, 16 OS with applanation

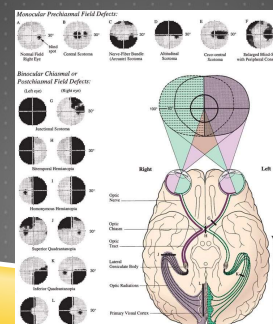
30-2 VISUAL FIELD 3 MONTHS PRIOR



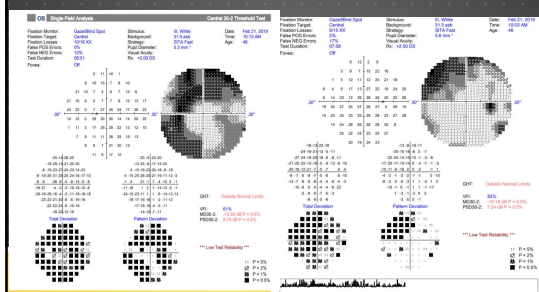
30-2 VISUAL FIELD DAY OF EXAM



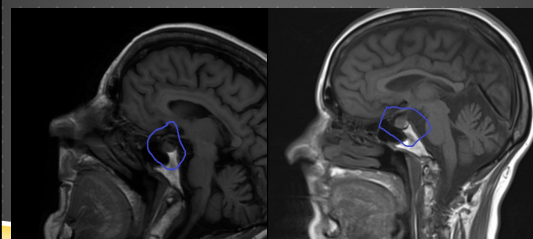
VISUAL FIELD PATHWAY



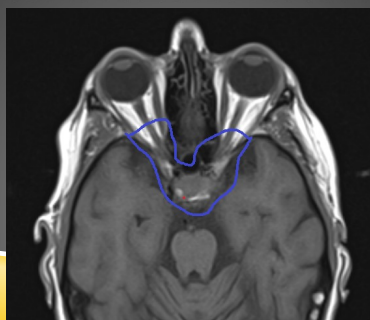
30-2 VISUAL FIELD DAY OF EXAM



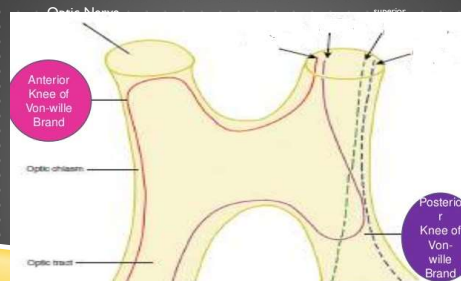
PATIENT JW'S MRI'S



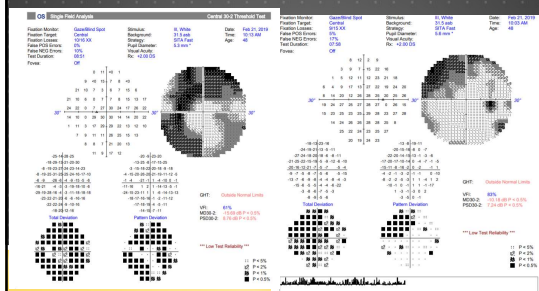
MRI OF OPTIC CHIASM



OPTIC CHIASM



30-2 VISUAL FIELD DAY OF EXAM



CONCLUSIONS AND TAKE HOME POINTS

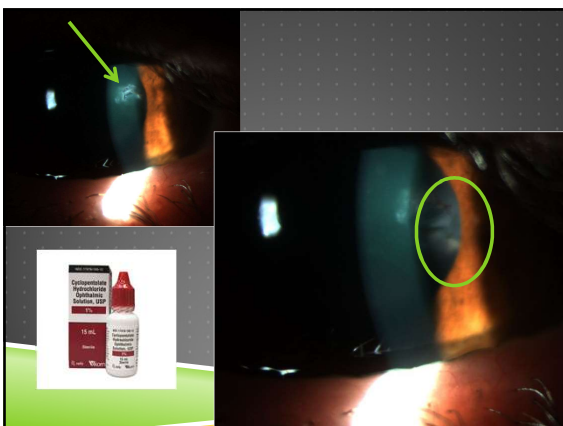
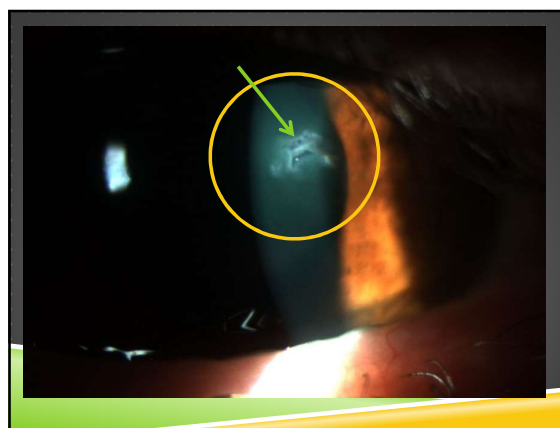
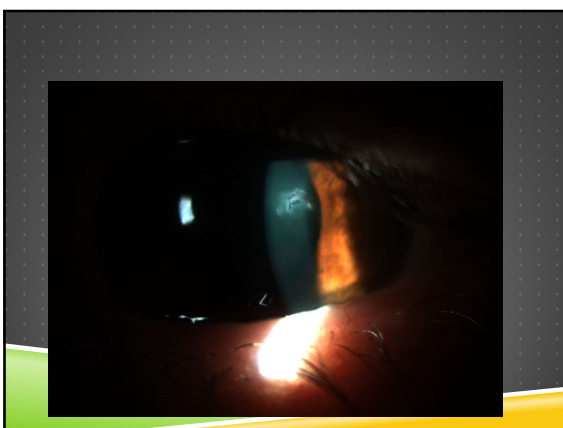
- ▶ Although visual fields are a great source of information, one always must be prepared for non-traditional presentations
- ▶ Re-examine the visual pathway, especially concerning the optic chiasm, as neurological symptoms can usually always be traced back to a specific location
- ▶ If unsure about the correct diagnosis, do not be afraid to order that extra test which in the end may be the difference for patient outcome

REFERENCES

- ▶ Kunimoto DY, et al. Wills Eye Manual, 4th Edition
- ▶ Zaai MJ, Volker-Dieben HJ, D'Amarao J. Prognostic value of junctional scotoma in acute visual field loss. Graefes Arch
- ▶ Clin Exp Ophthalmol 2003;241:187-191 Oxman MN, Levin MJ, Johnson GR. Pituitary Tumor Prevention Study Group.
- ▶ A management to prevent permanent vision loss for brain tumors in younger adults. N Engl J Med. Thomas SL, Hall AJ.
- ▶ What does epidemiology tell us about risk factors for brain lesions? Lancet Infect Dis Chapman RS, Cross KW, Fleming DM.
- ▶ The incidence of junctional scotoma and its implications for initiating surgery. Vaccine Gilden DH, Cohrs RJ, Mahalingam R, VZV
- ▶ Kneef of Willebrand: progress and perspective on chiasm pathway. Neurology, Nikkels AF, Pierard GE.
- ▶ Redefining visual field defects in patients with brain lesions: 24-2 versus 30-2; what do they accomplish? Am J Clin Neurology.

"I SWEAR I WAS WEARING MY SAFETY GLASSES....."

- ◆ Referred for deep piece of metal in cornea OS (+ Pain)
 - ◆ Thursday afternoon
- ◆ Was at the ER 4 days prior for metallic FB removal
 - ◆ Was told the metal was removed and everything is "fine"
 - ◆ Smoothie tears and Maxitrol ung x 1 wk
- ◆ Va 20/20 OD 20/250 OS
- ◆ Ta 17 OS 14 OS
- ◆ SLE: photos



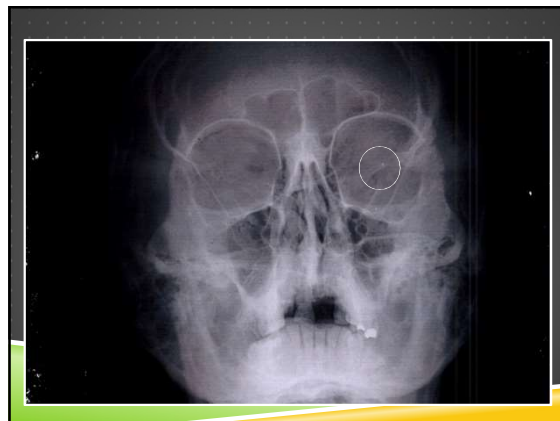
"I SWEAR I WAS WEARING MY SAFETY GLASSES....."

- ◆ Imp: Intraocular foreign body (OS)
 - ◆ The globe in "closed / intact"
 - ◆ Retina clear
- ◆ Plan:
 - ◆ Dr. Tolchin Tomorrow
 - ◆ X-ray
 - ◆ Tetanus

◆ There is an issue.....

"I SWEAR I WAS WEARING MY SAFETY GLASSES....."

- ▶ Pt then says "I can't have the surgery until Monday"



"I SWEAR I WAS WEARING MY SAFETY GLASSES....."

▶ Went over risks

- ▶ Noted in the record / gave pt my cell #

▶ Key

1. 5 days since the accident.
2. No cells
3. Retina clear

Month post CE

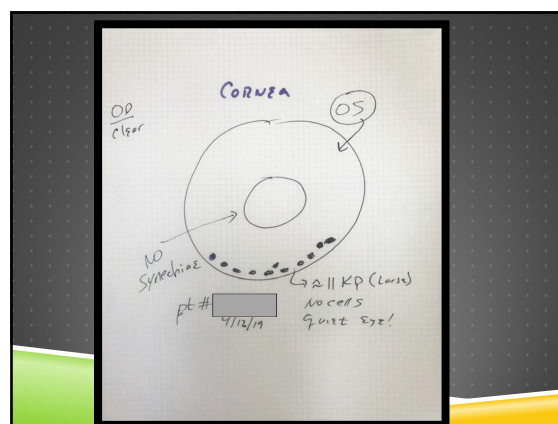
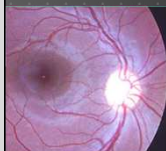
20/25 uncorrected

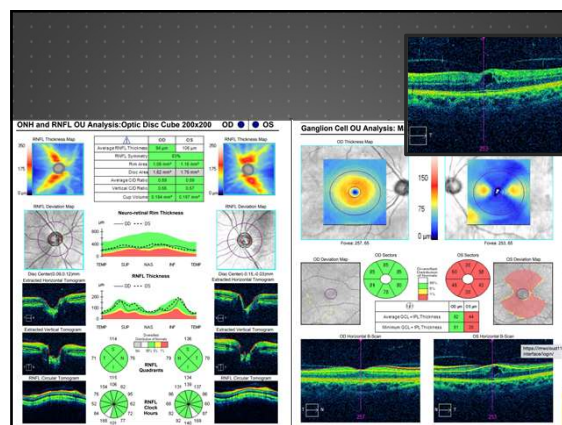
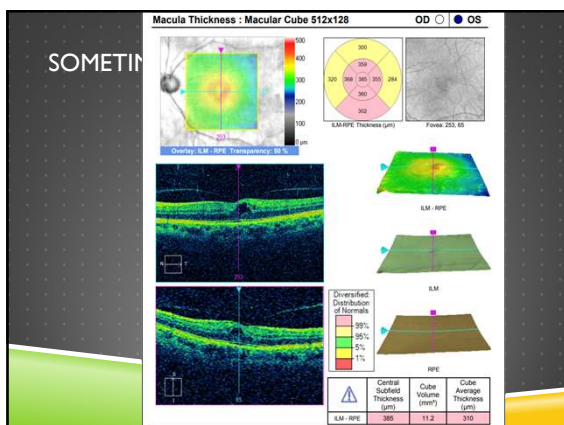
SOMETIMES IT'S BETTER TO BE LUCKY...

- ▶ 54 Caucasian female
- ▶ Pt is Asymptomatic
- ▶ General health – No medical conditions / Started on PFI% by her OD
- ▶ Referred + Uveitis Eval OS
 - ▶ Started on PFI% x 10 days ago

SOMETIMES IT'S BETTER TO BE LUCKY...

- ▶ Va 20/20 OD 20/25- OS
- ▶ Ta 13 OD 38 OS
- ▶ SLE OD clear
 - OS + KP inferior (**note** → quiet eye)
- ▶ Fundus: Clear retina OD
 -) irregular fovea OS
 -) No Foveal reflex OS





SOMETIMES IT'S BETTER TO BE LUCKY...

► DX: Uveitic Glaucoma OS (iop=13/38) today

- Could be Steroid Responder
- + KP, quiet eye
- Her mother was dx with POAG
- Macular Edema
- Suspect from Chronic Iritis

SOMETIMES IT'S BETTER TO BE LUCKY...

► Plan: discussed the need for lab testing

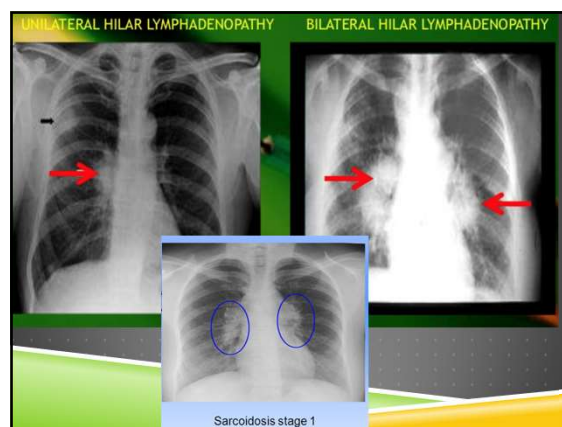
1. ANA, CBC diff, ACE, FTA-ABS, VDRL, Sed Rate, HLA-B27
2. X-Ray 1. Chest (r/o Sarcoid, TB)
2. Sacroiliac (r/o Anky Spnd)
3. Start Prolensa BID OS
4. ↑ PFI % Q 2 H OS
5. Start Combigan BID OS

SOMETIMES IT'S BETTER TO BE LUCKY...

► Lab Result

- Blood Tests: Every test / sacroiliac NORMAL
- Chest: X-ray: + lymph node (medial area); suggestive of Sarcoid → recommend further testing
- Family PCP CT scan of lungs (no contrast)
+ Hilar nodes / 3 areas of enlarged lymph nodes

Biopsy/Endoscope: 2 areas consistent with granulomas
No carcinomas seen
Biopsy taken



CT SCAN

Right Hilar node	1.9 cm
Left Hilar node	1.7 cm
Left Prehilar node	1.2 cm
Left Paratracheal node	1.4 cm
Subcarinal node	1.5 cm

Note: highly suspicious of malignancy

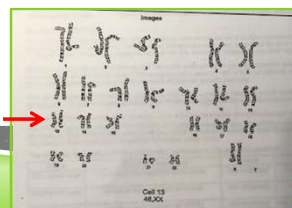
SOMETIMES IT'S BETTER TO BE LUCKY...

► Biopsy: Lymphoma

► Oncology:

Chronic Lymphocytic leukemia (CLL)
Small Lymphocytic lymphoma (SLL)

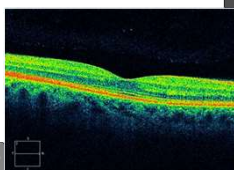
► NO Treatment.....monitor



SOMETIMES IT'S BETTER TO BE LUCKY...

► 4 weeks

- All KP resolved
- CME resolved
- Taper off gtts PF

YOU NEED TO GO THE ER....NOW!
(FRIDAY AFTERNOON)

► Carol (78 female)

► c/o missing top half of vision OD

► Hit her head on TV 6 weeks ago

► HTN, Asthma.....**DM**

► Only after getting her meds on E-Scribe

► Her daughter brought her in



YOU NEED TO GO THE ER....NOW!

► Va (sc) 20/800 OD 20/70

► EOM's: didn't see any ob

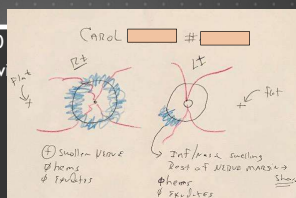
► Ta: 15/14

► SLE: PCIOL (OU)

► F: swollen Nerve OD / sv

► 100% Unable to do VF, OC

► Penlight Brightness 50% r



YOU NEED TO GO THE ER....NOW!

► Diff Dx:

1. Optic Nerve swelling (asymmetrical)

1. ??? Papilledema (ie ↑ Cerebral Spinal Fluid)

1. Tumor / Aneurysm

2. A more important question.....Worst case scenario

1. **Temporal Arteritis**

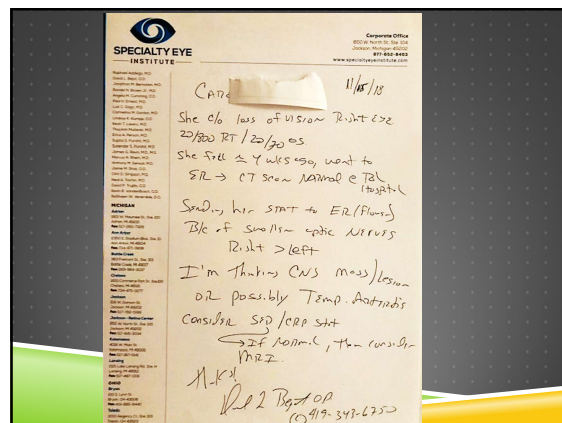
1. **Denies symptoms**

YOU NEED TO GO THE ER....NOW!

Plan:

Told her Daughter she needs to take her mom to ER Stat
 -) Sent to _____ ER
 I called ER and spoke to head RN
 Wrote out a letter to the ER Physician
 Fax records
 Told her I will call 1 hour later to check on them.

DOCUMENT - DOCUMENT - DOCUMENT



FOLLOW UP.....GETS INTERESTING

1. ER Physician called me from the ER exam room
2. Called daughter that night SED rate 91 CRP 9.0 (0- 0.7), FBS 301
 1. Admitted her mother, started steroids
3. Called Monday.....doing OK
4. Hospitalized 6 days
5. 12 days later

NOTES: got all the records..... ER admitted pt and started steroids (+ TA)

- pt was a BRITTLE DIABETIC
- pt in Kidney failure
- " + jaw claudication "
- Attending 2 days post admittance -> ophthalmological exam "Optic Nerves Healthy" OU
- NP 2 days later wrote in the chart...

" I doubt patient has Temporal Arteritis "

TAKE HOME MESSAGE



PRETTY SURE I "MIGHT" HAVE A PROBLEM IN MY LEFT EYE"...

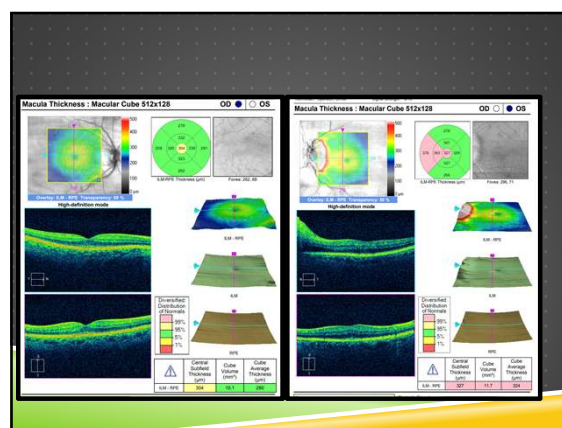
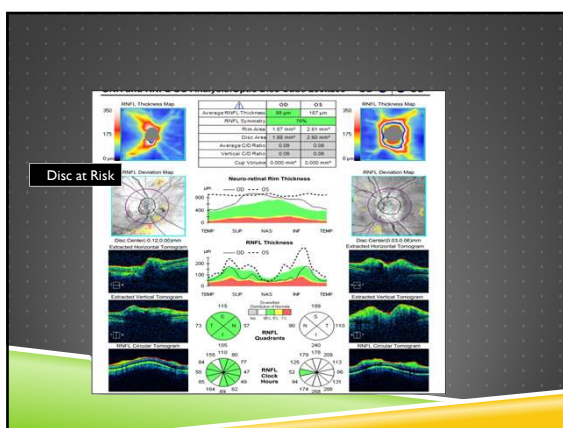
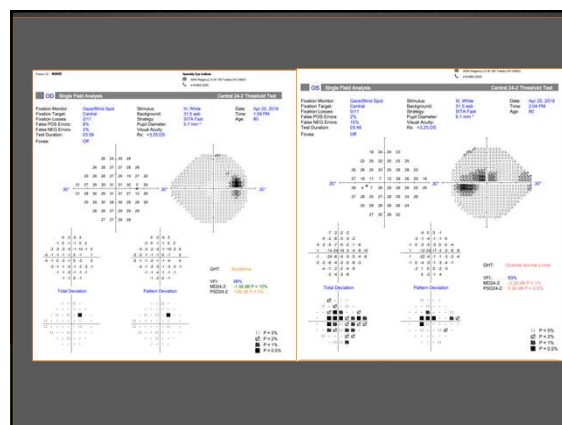
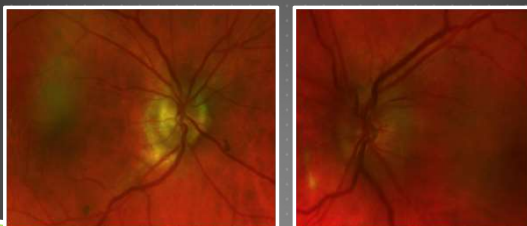
- 78 yrs old
- ↓ edVA x 13 days
- Med: Denied high cholesterol, DM & HTN
 - Just some arthritis
- Retired TFD

PRETTY SURE I "MIGHT" HAVE A PROBLEM IN MY LEFT EYE"...

- Va 20/30 OS 20/800 OS
- Ta 15 OS
- + APD
- Penlight Brightness 100 / 60ish OS
- SLE: PCIOU OU
- F: swollen optic nerve OS



PRETTY SURE I **"MIGHT"** HAVE A PROBLEM IN MY LEFT EYE"...



PRETTY SURE I **"MIGHT"** HAVE A PROBLEM IN MY LEFT EYE"...

- ▶ Dx: Optic nerve edema OS
 - ▶ Suspect NON-AION OS
 - ▶ Need to r/o Temp Arteritis
 - ▶ No hx Polymyalgia Rheumatica
 - ▶ Denies jaw/scalp/ temp artery pain/discomfort
- ▶ Plan: Stat SED Rate / CRP
- ▶ MRI
- ▶ Results: Sed 18 CRP 0.08
- ▶ MRI normal

QUARK STUDY

discovery and development of novel RNA interference (RNAi)-based therapeutics,
October 27, 2015– Quark Pharmaceuticals, Inc

- ▶ Quark Pharma (Oct 2015) QRK207
 - ▶ Eval the safety and efficacy of QPI-1007 (siRNA) for NEUROPROTECTION
 - ▶ Based on the idea there in " NO Novel Tx for Non-AION"
- ▶ Discovery / Dev of novel RNAi based therapeutics
 - ▶ Living cells has non-coding RNA to control which genes are active
 - ▶ Won Nobel Prize 2006
- ▶ Phase II/III for Non-AION
 1. 50-80 yrs old
 2. No tx initiated
 3. <14 days onset

MY WIFE MADE "MADE" MY APPT WITH YOU TODAY

- ▶ Dx: LTG?
- ▶ POAG (? spiker of iop)
- ▶ NO Tx for now
 - ▶ Appt was mid afternoon
- ▶ Plan: RTC 1-2 weeks, appt 800 am
- ▶ Follow up: IOP 18 OD / 17 OD
- ▶ Plan: LTG for now
 - ▶ START Trav Z qhs OS
 -) no sleep apnea, good health except for smoking
 - CT Scan Orbits (contrast)

MY WIFE MADE "MADE" MY APPT WITH YOU TODAY

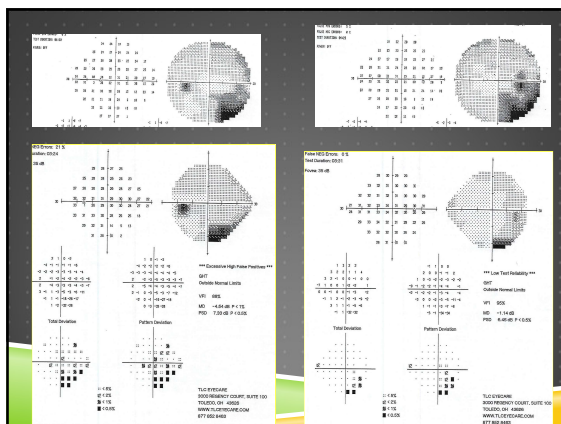
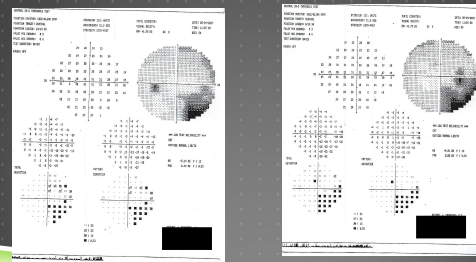
- ▶ Follow up
- ▶ Just when you thought you see it all.....
- ▶ Insurance denied CT and gave prior authorization for MRI contrast
- ▶ Pt failed to have to MRI done so far
 1. Called twice and left message
 2. Certified letter if does not reply



CHARLES "WHERE IS HE NOW" EARLY 2017

- ▶ Referred patient for visual field loss
 - ▶ Hard to see in bottom right corner for last 3 wks
- ▶ Med Hx:
 - ▶ HTN, Cholesterol, Arthritis, HAS, Heart Disease
- ▶ Meds:
 - ▶ Amlodipine, Bystolic, Doxazosin, Losartan, Zetia
- ▶ VA: OD 20/40-2 OS 20/70-1
 - ▶ Uncorrected (BCVA 20/25 OU)
- ▶ IOP: 15/14 @ 10:21
- ▶ External exam: Unremarkable
- ▶ Anterior seg: Unremarkable
- ▶ Fundus:
 - ▶ C/D: 0.15 OD, 0.15 OS (1.5mm dia)
 - ▶ Rest of fundus unremarkable

VF (REFERRING DOCTOR)



MY WIFE MADE "MADE" MY APPT WITH YOU TODAY


- ▶ Dx: Lower Right Quadrantopia
- ▶ Diff Dx
 - ▶ Glaucoma / Optic Neuropathy
 - ▶ POAG / LTG / Chronic angle closure
 - ▶ Optic nerve edema (previous)
 - ▶ ? MS
 - ▶ Tumor
- ▶ Plan: assume worst case scenario-----

MY WIFE MADE "MADE" MY APPT WITH YOU TODAY

- ▶ Order MRI with and without contrast of brain
- ▶ Right now
 - ▶ Rule out stroke, tumor

Pt: wants to wait....

His wife was in the exam room

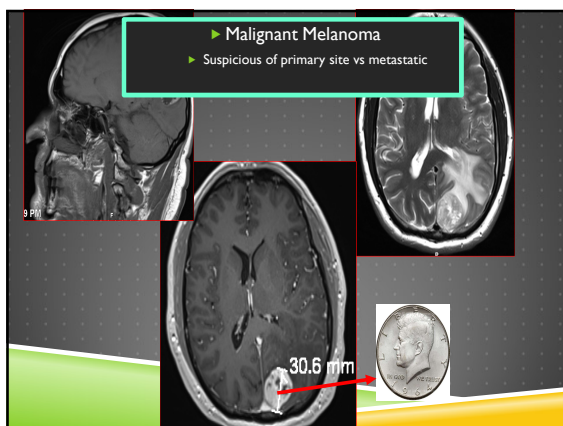


PATHOLOGY REPORT

- ▶ There is a 4.0 x 3.3 x 2.6 cm intra-axial mass at the left occipital lobe with a moderate degree of vasogenic edema
 - ▶ Highly suspicious for primary vs metastatic
- ▶ No localized areas of restricted diffusion to support stroke
- ▶ Optic nerves normal

▶ Malignant Melanoma

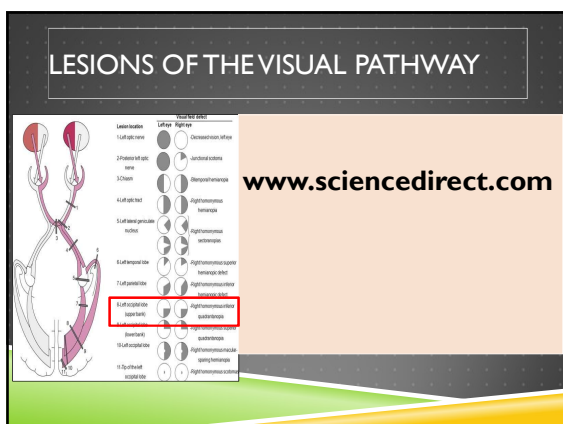
▶ Suspicious of primary site vs metastatic



BRAIN TUMORS

<p>▶ Benign</p> <ul style="list-style-type: none"> ▶ Slow growing ▶ Noncancerous ▶ Do not spread to the surrounding tissues <p>▶ Localized</p> <ul style="list-style-type: none"> ▶ Confined to one specific area ▶ Easier to remove 	<p>▶ Malignant</p> <ul style="list-style-type: none"> ▶ Cancerous ▶ Fast-growing and aggressive ▶ May invade surrounding tissues ▶ Likely to recur after treatment <p>▶ Invasive → Met</p> <ul style="list-style-type: none"> ▶ Spreads to surrounding areas ▶ Difficult to remove entirely
---	---

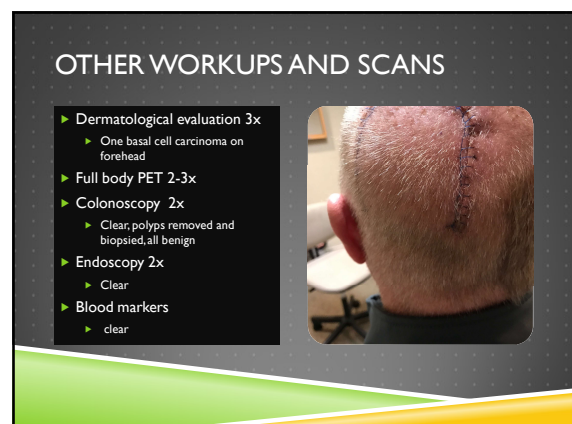
LESIONS OF THE VISUAL PATHWAY

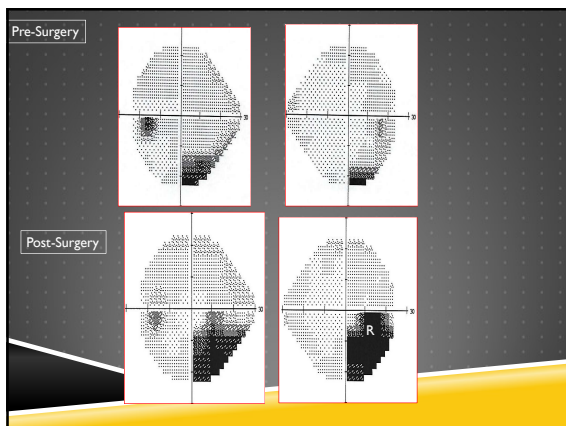


www.sciencedirect.com

OTHER WORKUPS AND SCANS

- ▶ Dermatological evaluation 3x
 - ▶ One basal cell carcinoma on forehead
- ▶ Full body PET 2-3x
- ▶ Colonoscopy 2x
 - ▶ Clear, polys removed and biopsied, all benign
- ▶ Endoscopy 2x
 - ▶ Clear
- ▶ Blood markers
 - ▶ clear



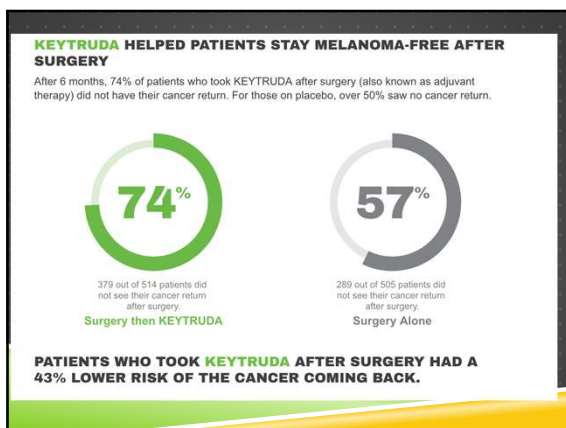


KEYTRUDA

Keytruda → a monoclonal antibody

- Identify and block the PD-1 receptor.
- By blocking PD-1, the T-cells can "find" and destroy the cancer cells.

Keytruda acts to remove an immune system checkpoint, → T-cells to attack healthy cells.



THANK YOU !!!!

▶ David L Bejot OD

▶ Cell 419-343-6750