

"We cannot hold a torch to light another's path without brightening our own." - Ben Sweetland



The first lightkeeper of the Point Pinos Lighthouse was Charles Layton, appointed to the post at \$1,000 per year.

#### **Announcement**

On July 24, 2019, Altaire Pharmaceuticals, Inc. issued a recall of specific lots of various ophthalmic products. This voluntary recall was initiated due to management concerns regarding the sufficiency of Quality Assurance controls over crucial systems in the manufacturing facility.

You can check if any Altaire products you currently have are affected by checking their lot number at: <a href="https://www.fda.gov/safety/recalls-market-withdrawals-safety-alerts/altaire-pharmaceuticals-inc-issues-voluntary-recall-multiple-ophthalmic-products-manufactured-and">https://www.fda.gov/safety/recalls-market-withdrawals-safety-alerts/altaire-pharmaceuticals-inc-issues-voluntary-recall-multiple-ophthalmic-products-manufactured-and</a>

(Note: I had a number of bottles of affected Fluoracaine that I returned to the supplier.)

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10/03 – Taste of Carmel

10/12 – Hollister Grape & Fall Festival

10/18 – Viva Momix at Sunset Center in Carmel

10/26 – Santa Cruz Beach Boardwalk Chili Cook-Off 11/02 – Monterey Cowboy Festival

11/09 – Capitola Village Sip and Stroll

11/16 – Evita at the Western Stage in Hartnell College

11/24 – Salinas holiday parade of lights

11/29 – Monterey tree lighting celebration

#### Calendar of Upcoming Optometry Events

10/06 – SJOS CE: Fall Harvest, 7:30am-3:00pm: <a href="https://sjos.org/event/fall-harvest/">https://sjos.org/event/fall-harvest/</a>

10/06 - volunteer in Clovis: https://www.cervistech.com/acts/console.php?console\_id=0252&console\_type=event

(other volunteer dates: 10/27 in Templeton, 11/3 in Mountain View, 12/8 in Watsonville)

10/15 - MBOS CE: Dr. Anna Shi, glaucoma, 6:30pm, at Tarpy's Roadhouse in Salinas

10/27 - MBOS fundraiser for John Laird, 1:30pm-3:00pm at Plaza Lane Optometry in San Jose

11/15-17 - Monterey Symposium CE: <a href="https://www.coavision.org/i4a/pages/index.cfm?pageid=3288">https://www.coavision.org/i4a/pages/index.cfm?pageid=3288</a>

### **FORWARD FOCUS: Remote Refractions**

I have been dealing with telemedicine for decades. When I was a teenager, our high school principal would call me to run to my father's private medical practice (albeit only a distance of two blocks in our small town) to troubleshoot the remote camera and internet connection in my father's clinic. Then he could connect to the closest major hospital, which was a few hours away, to, for example, zoom in on a patient's skin lesion so the dermatologist could figure out if the patient would need to drive all of the way to the hospital for surgery, or if they could simply monitor it.

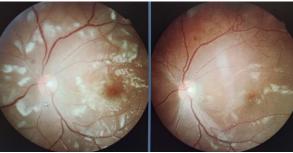
The internet is one of the most amazing inventions of our time, and a huge potential benefit is telemedicine. Being able to perform observations and tests locally, either from a nearby clinic or even from your home, instead of having to drive to a specialist, could greatly improve diagnosis, follow-up, compliance, and treatment for a multitude of diseases and disorders. However, there are also pitfalls, especially when tests require a level of precision that is still not available remotely. I'm not yet trusting enough to have surgery performed on me using robot arms in the operating room controlled by a doctor thousands of miles away. Remote refractions is another procedure that is currently being pushed by various entities, but, as with surgery, the results are still quite lacking.

We are doctors. We need to believe in and base our decisions on evidence-based medicine. Therefore, we should not simply declare without any proof that online or remote refractions are not up to par with in-person refractions with optometrists or ophthalmologists. To do so greatly undermines the public trust in us and in our profession. In light of this, my wife and I both went to Stanton Optical in Salinas, which uses remote technicians, for our annual eye exams, so we could assess how the remote eye exams measure up to in-person eye exams.

However, we did not receive eye exams. Let's start from the beginning. First, there was no history. No personal ocular history, no personal health history, no family ocular, no family health history. This was very disconcerting given both of our situations. I have a family history of eye disease. My grandmother had glaucoma; my mother has macular degeneration. I'm likely too young to have either of those diseases, especially the latter, but as an eye doctor, I would still want to know about them in my patients' families. My wife has a personal history of medical disease. She has lupus and takes Plaquenil, both of which have a recommendation of yearly dilated eye exams with additional testing.

Second, I wear contact lenses. They did not ask if I sleep in them, how often I dispose of them, if my eyes were red or painful, or if I had any other problems with them. They only asked me to take them out so they could begin the "exam."

Third, a technician performed an autorefraction and then, to their credit, took anterior slit lamp pictures of my eyes, albeit without my contact lenses on. I guess the doctor could review the photo to see that I don't have any neovascularization, although I'm not sure if he could pick up on any possible ulcers. They did not view posteriorly in any way; there was not even an option for an Optomap or any other imaging system. They did not look at my wife's eyes at all, anteriorly nor posteriorly. Then again, if they didn't ask if she has lupus, how would they ever know to take a careful look at her retina for lupus retinopathy?



Patient with lupus retinopathy, by Jared Cox, OD, on ODWire

Fourth, someone in a cubicle at a remote location performed refractions. This was far and away the worst refraction I have ever experienced in my life. A major detriment was the horrible internet connection, which was both noticeably delayed and had extremely poor audio quality. The refractionist would ask a question, it would take around a second to reach me, I could barely understand what he asked, but I would give my best answer, which was also delayed by around a second, and then he would ask another question. I can't think of a single patient I have ever performed a refraction on that slowly or one whose responses were so difficult to comprehend.

Fifth, once our refractions were done, we were given our new glasses prescriptions and I was given my new contact lens prescription. Even though they gave me a trial pair of contact lenses in my new prescription, they never looked at the new lenses on my eyes nor checked my visual acuity with the trial contacts.

Sixth, again going back to them not even asking my wife's history, they did not recommend she get a visual field and OCT to check for Plaquenil maculopathy.

Seventh, they got both my glasses and contact lens prescription quite incorrect. This was the first time in over 20 years that I can remember that my prescription had changed (or was incorrect) by that much. However, I always tell my patients to take a few days to adjust to their new prescription. I took my own advice and tried out the new glasses and contact lenses, but I never adapted to them and they were still blurry after a week, so I ended up asking Stanton to simply go back to what my previous prescriptions were.

My glasses prescriptions over the years:

<u>OD</u>	<u>OS</u>	<u>Location</u>
-2.00-1.75-080	-3.50 DS	Vantage Eye Center
-2.75-1.75x089	-3.25-1.00x073	Stanton Optical
-2.00-1.75x076	-3.50 DS	North Coast Vision
-1.75-2.00x075	-3.50-0.25x115	Green Valley Opt.
-2.00-1.75x075	-3.25-0.25x092	Eyed LA Optometry
-2.25-1.50x075	-3.50 DS	UHCO
-2.50-1.50x070	-3.50-0.25x110	Hall & Szeto Ont.

I see two major problems with the way Stanton currently operates. First, there is no signage nor mention that they do not perform eye exams and instead merely provide refractions. In fact, their store front is covered with the words "eye exams." For most healthy young adults, this might not be a problem, but for many patients, especially more elderly ones or ones with disorders where complete eye exams are recommended, it's a grave concern.



"Eye Exams" "Eye Exams"

"Eye Exams"

Second, we never saw an optometrist at all, not even remotely. According to the Optometry Laws and Regulations Book by the California Board of Optometry, an optometrist must perform certain components of an eye exam himself or herself; they cannot be relegated to a technician. This is also an appalling practice.



refractionist



OD who signed our prescriptions

I was going to try Visibly (formerly Opternative) online and see how well that refraction worked. Unfortunately for this article but fortunately for patients, they are no longer offering online refractions after an August 8th, 2019 notice by the FDA. Warby Parker and 1-800-Contacts have also experimented with online refractions.

More insidiously, a much larger and much more affluent corporation than any of those, Walmart, has also been probing into this area. Oklahoma State Question 793 was defeated in 2018; many optometrists feared it would have allowed patients to receive refractions without complete eye exams. I have heard that Walmart is currently performing remote refractions in Maryland, however, and, given their penchant for reducing prices, I'm sure they will keep pushing to expand their coverage.

I'm not arguing against remote refraction solely for my own self interesting. That would be similar to candlemakers asking the government to block out the sun so they could sell more candles, a horribly selfish request which is a net loss for society as a whole. In fact, the number one cause of vision loss around the world is uncorrected refractive error; being able to determine that remotely and then get those people cheap glasses would be a massive benefit to all of humanity. But I've tried remote refraction, and currently, at least in my case, the end result was quite terrible. Instead, I'm arguing against remote refraction because the technology and algorithms are not good enough yet.

Refraction is both a science and an art. Current remote refractionists are neither scientists nor artists; it seems they are the cheapest random people the companies can hire to sit in a cubicle. In addition, so much of a good refraction is inflection; how long patients hesitate, how sure they are of their answers, the slight disparities between two different responses. These subtleties are completely lost over most current internet connections or even in person by largely untrained people.

Perhaps in ten years I will feel differently. Perhaps in ten years the technology will be improved to the point where remote refractions result in good prescriptions. But not yet.

It seems likely the only reason the FDA even made this decision against Visibly is because the AOA has spent the past few years lobbying the FDA non-stop against online refractions. If you wish to help, please continue to be an MBOS/COA/AOA member and consider donating to AOA-PAC. I have no doubt that without our membership dues, AOA would not be able to fight these battles for us, and Visibly would still be in operation.

### **EDUCATION EMANATION: Dr. Steve Ferrucci**

Dr. Steve Ferrucci came up from the Sepulveda VA in Los Angeles to discuss OCT and glaucoma with MBOS.

First he discussed optical coherence tomography. He mentioned how the FLV% is similar to the PSD in visual fields and according to some studies is the single best parameter indicating conversion to glaucoma with an 83% accuracy. Some other pointers were that red on an OCT scan is not always bad, but it does mean stop and think. Also, if a patient has very asymmetric pressures, you should pay attention to gonioscopy for angle recession.



Then he discussed glaucoma medications. Prostaglanin analogues are still the most effective drops, slightly more effective at night, but if a patient forgets their nightly drop, it's fine to use it the next morning. Non-response to prostaglandin analogues is around 8-9%, and generic latanoprost seems to be about 1 mmHg less effective than branded, although there are few studies. Xelpros is latanoprost that does not use BAK as a preservative, although it is not available through insurance, only via cash from the pharmacy. Zioptan is preservative free.

He also had a few notes on other classes of glaucoma drops. Beta blockers often have long-term drift; after two years, nearly 50% of patients require a change in therapy. Dorzolamide is only required to be used BID if used in a combination drop instead of TID if monotherapy. Brimonidine is especially bad for allergic conjunctivitis. All three classes (beta blockers, carbonic anhydrase inhibitors, and alpha agonists) seem to perform approximately equally well as adjuncts to prostaglandins, so choose based on your personal preferance and side effects.

As for newer drops, Rhopressa seems to be more effective than beta blockers but less effective than prostaglandins according to most studies so far. Roclatan is a new combination drop of Rhopressa and latanoprost, approved by the FDA in March of 2019. The FDA will not approve a combination drop for convenience, only for increased efficacy over individual drops, which is why there is still no prostaglandin analogue and beta blocker combo in the US, even though they have been available in Europe for years.

Imprimis will compound ophthalmic drops, branded as Simple Drops, which are preservative free, and you can choose which drops you want included. You can compound a latanoprost + timolol + brimonidine + dorzolamide drop and even create combination dilation drops.

Compliance is always an issue with drops. Studies indicates compliance is only 50% if the drops are dosed daily and worse if more often. If the drops are expensive, many manufacturers have coupons or discount programs to lower the price to the patient.

"Learn to light a candle in the darkest moments of someone's life. Be the light that helps others see; it is what gives life its deepest significance." - Roy T. Bennett

# **LEGISLATION LAMP: Meetings, Medi-Cal, Fundraiser**



Dr. Jonovan Ottenbacher and his wife Ogii met with Robert Rivas, California State Assemblymember, at his open house in Salinas to discuss issues relating to optometry in the legislature.



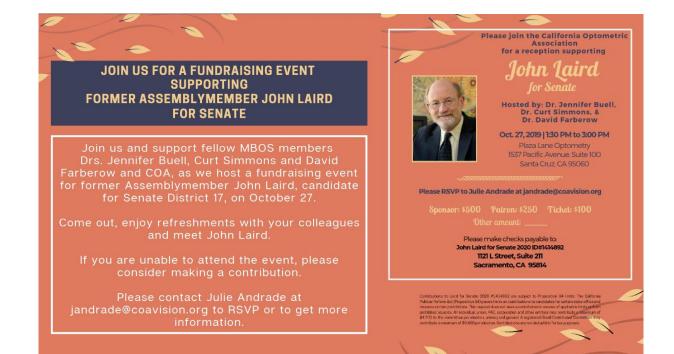
Dr. Ronald Seger, President of the California Optometric Association, discussed issues with MBOS before the CE meeting with Dr. Ferrucci.

COA members recently asked their legislators to reinstate the optical benefits for adult Medi-Cal beneficiaries - and they did!

Please <u>click here</u> to send a much deserved thank you letter to your lawmakers today. Legislators are pounded daily with requests and negativity. It will be a breath of fresh air to receive a positive note of thanks that will only strengthen our relationships with them.
-Ronald Seger, OD, FAAO, COA President

# Department of Health Care Services





## **SCINTILLATING SOCIETIES: Tech Training Program**

The Eye Care Assistant Training Program – a collaboration between the Alameda Contra Costa Counties Optometric Society and adult schools throughout the Bay Area and South San Francisco area – is looking to coordinate MBOS optometrists with the Watsonville Adult School and CSC Lab at Watsonville in the winter of next year.

Interested optometrists would volunteer as guest lecturers and/or shadow sites (4 hours minimum, up to as many students and whichever times during the session works for them, usually an 8-10 week session) and could donate used equipment / tools/ old glasses.

The graduating students would also have the ability to post their resumes for MBOS doctors to consider for employment. The classes are small, usually no more than 15 per class, with graduation rates varying at 75% depending on class demographics/composition.

If you are interested in participating, please contact Dr. Jennifer Ong at <u>drjenniferong@gmail.com</u> soon; they are trying to gauge interest for next year so they may properly coordinate the program.



Alejandra Martinez, a graduate of the San Leandro Adult School Optometric Assistant Training Program

# **ILLUMINATING INSTANCES: Refraction-Only Misses**

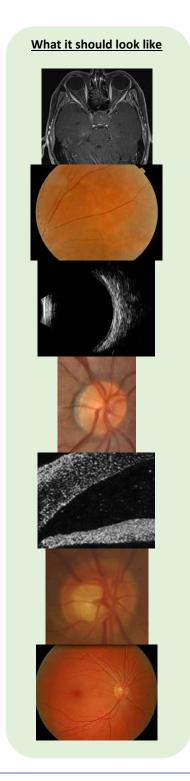
Rather than having a specific case or two, the following page contains just a few of the many eye diseases and disorders Dr. Jonovan Ottenbacher saw this past year which would have been missed with refraction-only "eye exams."

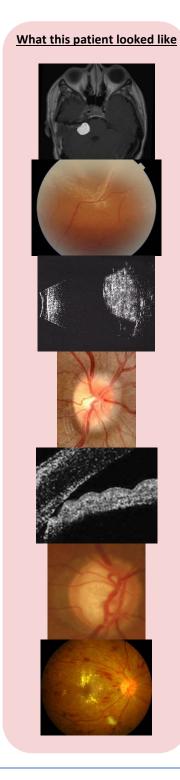
In all of these cases, the patients came in for routine eye exams only wanting glasses and with no other symptoms of their problems. No redness, no visual field loss, no eye pain (even the angle closure patient, whose IOP was in the 60s; I kept asking if he had pain, and he kept saying he didn't). In fact, for all of these patients, glasses completely resolved their only concern. If they would have received only refractions without a slit lamp exam, they would have left completely satisfied. And completely unaware of these issues. It was only by looking into their eyes as a part of a routine eye exam that these were found.



- These are examples of patients Jonovan Ottenbacher, OD, has seen in the past year.
- Most of these patients had no visual complaints other than needing new glasses and were completely unaware these problems existed. This was the first time these problems were found.

• All of these problems would be missed in online or brick-and-mortar refraction-only "eye exams." Without comprehensive eye exams to find these problems, these patients would all have irreversible blindness.





#### Cause and description

#### **Brain Cancer**

A tumor in the patient's brain put pressure on his optic nerve, allowing it to be detected.

#### **Retinal Detachment**

The patient's upper retina had pulled off from the rest of his eye.

#### **Ocular Cancer**

The patient had a melanoma growing in the back of his eye.

#### Papilledema

Pressure in the patient's brain caused his optic nerve to swell.

#### **Angle Closure**

The area where fluid flows out of the patient's eye had closed down.

#### Glaucoma

The patient's optic nerve was being destroyed from pressure in his eye.

#### **Diabetes**

The blood vessels inside the patient's eyes were leaking.

### REFLECTIVE RESEARCH: OCT and Glaucoma

I was so happy when I got an OCT. No longer would I have to put any effort into figuring out if patients have glaucoma or not; a single scan and the machine would tell me. Unfortunately, that was not the case. Simply having yellow or red show up on the GCL or RNFL layers does not indicate glaucoma. If it did, I would have glaucoma rather than tiny optic nerves that confuse the machine.







My GCL, RNFL, and ONH; OCT thinks I have glaucoma.

The next obvious step was to look for change. We all know that glaucoma is defined as change in the optic nerve, so all I had to do was see if the numbers change. Unfortunately, the numbers always changed due to imprecision of the scans. Well, that's a problem; if the variability between scans is greater than actual change from glaucoma, how am I supposed to know if the changes are from glaucoma or the scans?

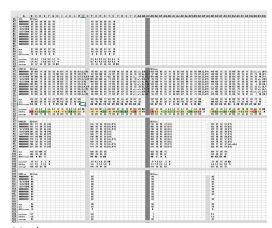
So I read around a bit, and it seems the normal RNFL loss per year is 0.5 microns, the loss in glaucoma is 2.0 microns or more, but the inter-test variability is 4.0 microns. Because of this, some doctors are very wary of any changes less than 10 microns.

That's all well and good, but they're not using my OCT, which is a Topcon Maestro; perhaps the intertest variability is different? I couldn't find any studies for that, so I decided to test it myself. A couple of caveats with these numbers: I only tested it on myself, and I have a rather wonky optic nerve head (in fact, I'm only using results from my right eye, because my left eye had unusable results too often). In addition, I only repeated the tests 10 times. But at least it gives me some numbers to work with.

Looking at my results (see the next page), they seem to agree with Dr. Budenz: the clock hours have pretty high variability, whereas the quadrants are better and the average is even more so. However, glaucomatous loss tends to be focal, so we really should probably pay more attention to the clock hours. Also, the disconly scans tended to produce slightly better results than the wide scans, although the clock hour disconly scans are extremely variable. I'd assume that has to do with my tiny optic nerves, but I can't be sure. The average RNFL also agrees with other studies: an intertest variability of around 4 microns.

In the end, I think this is helpful in two ways. First, just because I see a decrease in RNFL from one test to the next, I can be more wary of it possibly being variability instead of actual glaucomatous progression. Second, I have a better idea of how much variability my OCT has, so if a patient has a change greater than that, I can be more confident it's actual loss.

Unfortunately, OCT is not the magical glaucoma diagnostician I had at first hoped; it merely provides more data, in addition to IOP, CCT, visual fields, retinal photographs, gonioscopy, and, most importantly, a stereoscopic view of the neuroretinal rim. However, the data it provides can be extremely useful, and it is one of my favorite tools in glaucoma diagnosis and especially patient education.



My data

#### Others' results

	RNFL loss per year		inter-test variability		
	normal	glaucoma	average	quadrants	clock hours
Mwanza et al.			4.0		
Budenz et al.	0.21		4.5	8.0	12.0
Parikh et al.	0.16				
Wessel et al.	0.60	2.1			
Wollstein et al		2.5			
Leung et al.		1.2-15.4			

#### My results

	range	variance	standard deviation
GCL, 3D Wide	5.0	1.0	0.9
RNFL clock hours, 3D Wide	5-34	15	3.5
RNFL clock hours, 3D Disc	4-51	40	4.9
RNFL quadrants, 3D Wide	4-13	7.3	2.6
RNFL quadrants, 3D Disc	5-15	6.7	2.3
RNFL average, 3D Wide	6	3.7	1.9
RNFL average, 3D Disc	4	1.0	1.0

# **VOLUNTEERING VIEW: Soquel Life Hope Center**

Dr. Jonovan Ottenbacher, Dr. Pinhkeo Southaphana, and Dr. Garrick Peterson volunteered at the Life Hope Center in Soquel, along with Dr. Ottenbacher's wife Ogii, Dr. Peterson's wife Jeanette, and a number of others who performed histories, pretesting, and glasses selection and fitting.

On Saturday I saw 37 patients, and on Sunday I saw 17 patients, with approximately a similar number of patients for both other doctors.

While most patients only needed (and were extremely thankful for) glasses, I personally also saw three patients with very narrow angles, a patient with NPDR, and patient with DME with a BCVA of 20/200, three patients with previously-undiagnosed glaucoma (one with a C/D of 0.85 and severe notching), a patient with a cataract yielding a BCVA of 20/100, and a patient with keratoconus, all of whom were referred for further treatment. And the patient with a -12.00 OU prescription was very happy to be getting "only glasses" as well.



## **INTERNET INCANDESCENCE: GONE Project**

The Glaucomatous Optic Neuropathy Evaluation (GONE) project is a great resource for direct optic nerve observation in the evaluation of glaucoma. Even with all of our technology, a good look at the nerve is still the fundamental basis of diagnosis.

You appraise a series of optic nerve photos based on a set of factors to determine if each nerve has glaucoma. You are then graded and can learn from your mistakes. I found it very useful.

GONE can be found at <a href="https://gone-project.com/newgone/">https://gone-project.com/newgone/</a>



## **SPONSOR SPOTLIGHT: Optovue**



Thanks to Optovue for being the generous sponsor for our last CE meeting. As they explained at the meeting, Optovue truly has an OCT for every practice. From cutting-edge OCTA to small, portable models, they can fit your individual practice's needs.

I personally prefer the combination models which include both an OCT and a retinal camera, greatly cutting down on the space required for the instruments and time necessary to gather data.

# MATUTINAL MENTION: Dr. Kasey Nakajima

Born and raised in Monterey, Dr. Kasey Nakajima is thrilled to return to her hometown as an optometrist at Monterey Bay Eye Center. She completed her training in Oregon at Pacific University College of Optometry and loves to work with pediatric and Spanish-speaking populations. In her spare time she tends to her tomato garden and tries to plan for her wedding next year.

Dr. Nakajima will be taking over the MBOS Membership chair from Dr. Covie Gonzales. We would like to thank Dr. Gonzales for all of his hard work with MBOS, wish him well with his new practice and new child, and look forward to seeing him at future MBOS CE meetings.



### **VESPERTINE VENERATION: Ellie Hattori**

Dr. Ellie Hattori graduated from UC Berkeley School of Optometry in 1970. She practiced in her hometown of Sacramento with her childhood optometrist until she married fellow optometrist classmate Rick Hattori in 1971. After Dr. Rick completed his US Navy duties, they returned to Rick's hometown of Monterey.

Drs. Ellie and Rick immediately became active with their local optometric society, then called Central Coast Optometric Society (CCOS). Dr. Ellie was the first female optometrist to join CCOS. Dr. Ellie and Rick were the society's newsletter editors. At that time there was an active CCOS wives club. At the monthly CCOS dinner meetings, the wives met in an adjoining room. One of the goals of the CCOS wives club was to distribute emergency vision kits to the local fire stations and schools. An event everyone always looked forward to was our annual gatherings at the current's president's home in the summer.

Dr. Ellie spent her first years in Monterey raising their two children and volunteering much of her time with local schools and charitable organizations. While not actively practicing, Dr. Ellie attended continuing optometric education classes and remained active with the now Monterey Bay Optometric Society (MBOS) events and meetings.

Upon returning to practice in 1985, Dr. Ellie found her passion. She spent the next 34 years at Hattori Vision Optometry limiting her practice to the fitting of contact lenses. She frequently participated in clinical studies for various contact lens companies, published numerous articles in optometric journals and was a speaker for Johnson & Johnson Vision Care Institute Speaker's Bureau. Dr. Ellie was MBOS's first female President, serving from 2004-2005. She was named an Optometric Business Innovator in the Contact Lens category in 2013 by Review of Optometry Business and Vision Monday.



What Dr. Ellie loves about optometry is how much the contact lens world has changed. She remembers telling her patients maybe next year there will be a lens available for them, or a custom lens would be the only possible option. She still finds it fascinating and gets excited about all the incredible options we have today. Dr. Ellie remembers thinking the possibility of a multifocal contact lens that really worked was something probably not possible in her career and to have a disposable, toric multifocal today is phenomenal to her.

Dr. Ellie's passion for optometry has influenced several of her patients to pursue optometry as a career. She feels blessed to have found a profession that she loved up to her retirement this year.

"You have to find what sparks a light in you so that you in your own way can illuminate the world." - Oprah Winfrey

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