

VISIONARY

2021 EDITION

UPTOWN EYE DOCTOR MAKES QUALITY VISION CARE AVAILABLE IN KENYA

Dr. Fariba Nazemi has spent the last 10 years making quality eye care available to those living in underprivileged communities.

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Dr. Sohel Somani

UPTOWN
EYE SPECIALISTS

“While we are as forward-thinking as the name of this publication implies – the year 2020 has also taught us to pause, reflect, and look back.

— DR. SOHEL SOMANI

COURAGE. OPTIMISM. VULNERABLE. INTROSPECTION. DETERMINATION.

These are but a handful of words that our health care team have used to describe what is amounting to an epic year of challenge and uncertainty. However, if we had only one word to attribute to 2020 – the ubiquitous choice would be COVID.

This pandemic affected all of us in different ways. While globally it served to unite humanity in our common struggle to seek a cure, individually it served to reconnect our priorities and values in the face of this hidden but eminent danger. In this second issue of the VISIONARY, we have an opportunity to examine the impact and reaction of the COVID-19 pandemic from the lens of our front line staff at Uptown Eye Specialists.

This brief snapshot into our story is just one facet of the myriad of experiences across all types of front line health care workers. To that end, we wish to salute and acknowledge all our fellow front-line heroes the world over for their selfless sacrifices and commitment to the welfare of others.

As this issue goes to print it is clear the struggle with COVID is not over – yet, our team of doctors and staff continue in their unyielding pursuits of vision restoration. Ironically, the year 2020 can symbolically be associated with the year of vision (or 20/20 vision to be more precise).

This issue also highlights this very passion for perfecting our approach to vision restoration surgery through a surgical approach that is synonymous with Uptown Eye Specialists: UltraView ReLACS™.

Our academic focus on this particular area is crystalized as we read about the successful journey one of our patients endured to achieve visual perfection. We are also proud to share a glimpse of some of our other clinical and research interests – whether it is in the realm of glaucoma, pediatrics, retina, oculoplastics, or international outreach, our interests literally have no boundaries.

The diversity of our interests and areas of specializations speak to who we are – a family of eye care providers. This issue of the

VISIONARY continues to embrace its purpose – to provide a tangible glimpse into our professional lives as dedicated and passionate eye doctors and surgeons. While we are as forward-thinking as the name of this publication implies – the year 2020 has also taught us to pause, reflect, and look back.

We hope you have a chance to do the same as you read this issue. We continue to be driven by our patients and colleagues – and invite you to stay connected with our journey through our social media channels.

To another year of health,

*Uptown Eye
Specialists Team*

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VISIONSARY

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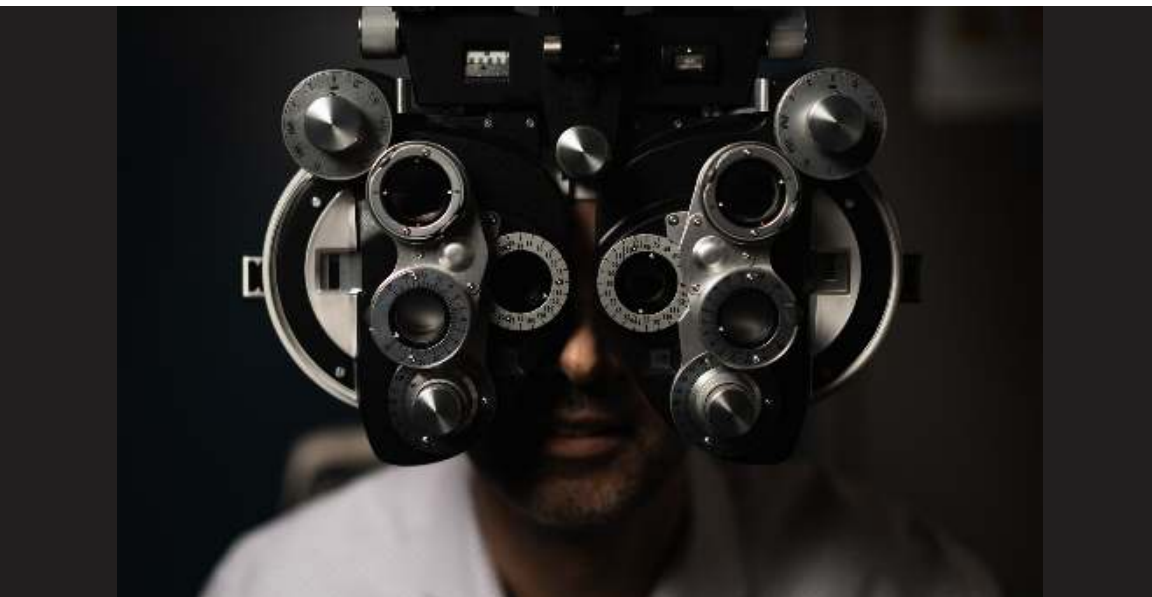
Although no one could have anticipated COVID-19, the dedication shown to patients and the community during a time of crisis confirms that Uptown Eye Specialists is a practice committed to making quality eye care available under all circumstances.



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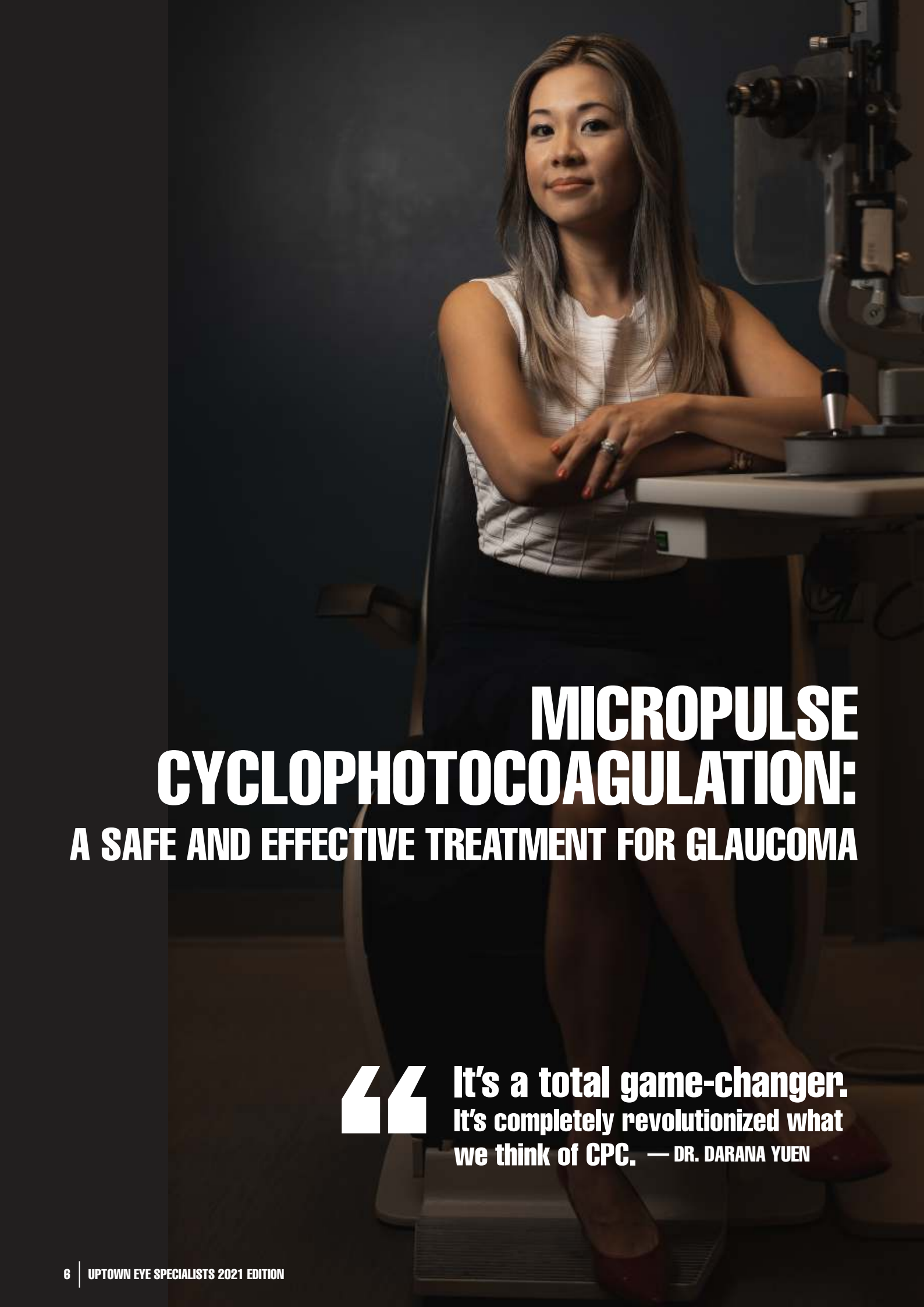
Presbyopia, cataracts, or astigmatism; the goal will always be to help them turn back the clock and keep enjoying a healthy and active lifestyle.



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PATIENT STORY: UPTOWN EYE DOCTORS PROVIDE PATIENT WITH GIFT OF SIGHT

"I think Dr. Somani is a hero," Dean says.

A woman with long, light-colored hair is sitting at a desk in a clinical setting. She is wearing a white sleeveless top and a dark skirt. Her arms are crossed on the desk. In the background, there is a piece of medical equipment, possibly a phoropter or a similar device. The lighting is soft and focused on the woman.

MICROPULSE CYCLOPHOTOCOAGULATION: A SAFE AND EFFECTIVE TREATMENT FOR GLAUCOMA

**“ It’s a total game-changer.
It’s completely revolutionized what
we think of CPC. — DR. DARANA YUEN**

According to the Fighting Blindness Canada and the Glaucoma Research Society of Canada, over 400,000 Canadians are affected by glaucoma. Glaucoma, a leading cause of irreversible blindness, is a progressive disease characterized by intraocular pressure (IOP) that is too high for the eye, optic nerve damage and subsequent vision loss. The mainstay of treatment is IOP reduction via topical ocular medication, oral medication, laser therapy, and incisional surgery.

Dr. Darana Yuen, a leading refractive cataract-glaucoma surgeon who has co-authored many award-winning papers on glaucoma studies, says that Uptown Eye Specialists offers a revolutionary treatment called MicroPulse cyclophotocoagulation (MPCPC; Iridex Cyclo G6 Glaucoma Laser System).

MICROPULSE VS. STANDARD CYCLOPHOTOCOAGULATION

Traditionally, standard cyclophotocoagulation (CPC) was a form of laser surgery reserved for refractory or end stage glaucoma, due to the potential risks associated with the procedure. Visual deterioration, intraocular inflammation, intractable pain, hypotony, macular edema, phthisis, and sympathetic ophthalmia were some of the most feared complications of standard CPC. Although MPCPC utilizes an identical wavelength as standard CPC, it differs in that the MicroPulse platform allows the laser to be delivered in short bursts rather than continuous mode. This allows treated and ancillary tissue time to cool down between each on-off duty cycle, thereby mitigating the risk of any potential side effects. Furthermore, this allows a faster and more comfortable recovery for the patient.

Dr. Yuen is the senior lead author on the largest MPCPC cohort published to date. 'The Effectiveness and Safety of MicroPulse Cyclophotocoagulation in the Treatment of Ocular Hypertension and Glaucoma' was featured in



Dr. Darana Yuen has developed her niche in the GTA as a refractive cataract-glaucoma surgeon. She is highly sought after for her expertise in cutting-edge glaucoma surgeries and lasers.

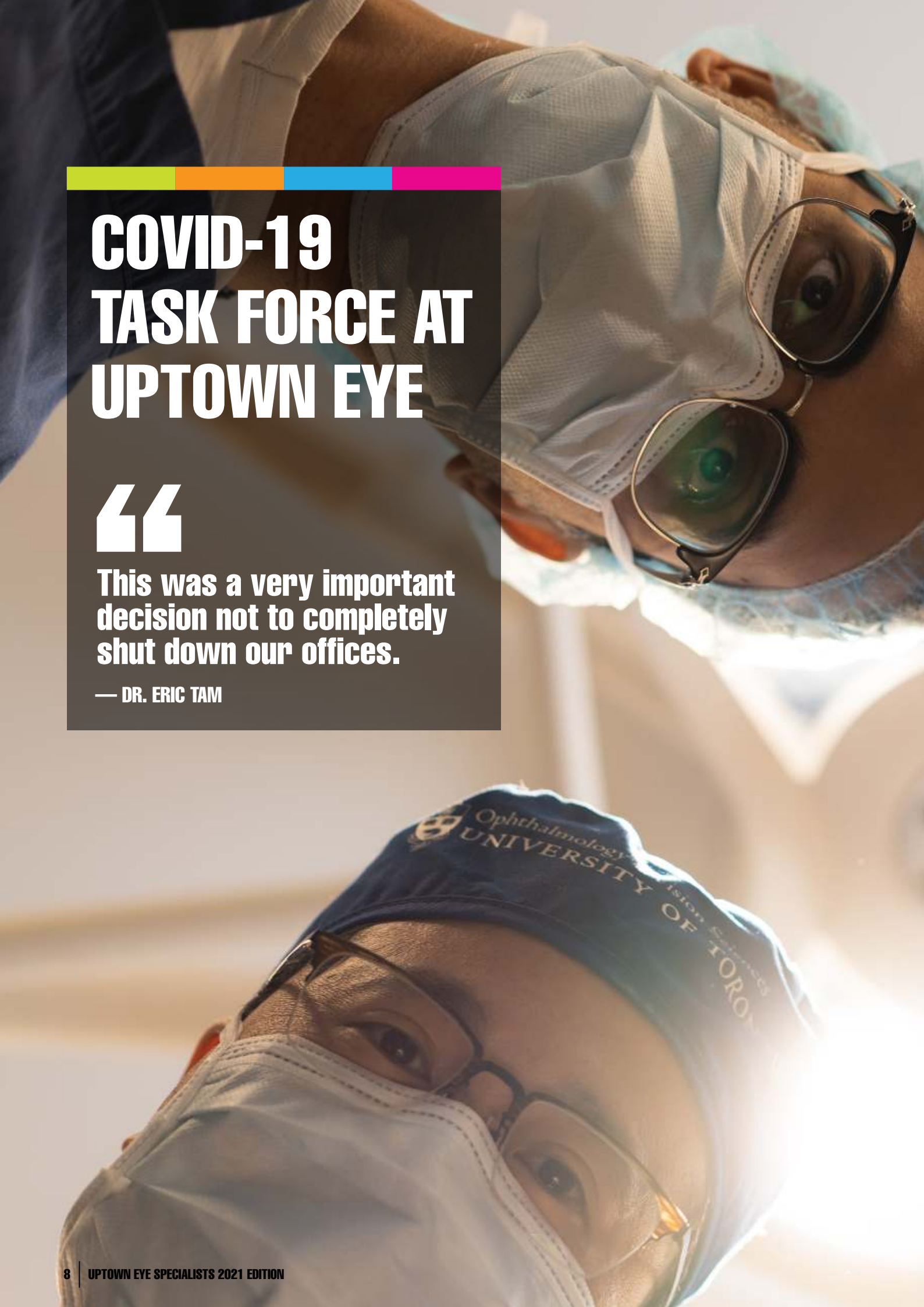
the May-June 2020 edition of Ophthalmology Glaucoma. The study was unique in that it encompassed ocular hypertension and all severities of glaucoma (including treatment-naïve and well-sighted eyes) and all types of glaucoma (including normal-tension glaucoma). 399 MPCPC surgeries, on 342 eyes of 214 patients, were analyzed between a 2-year period. The end point of 20% or more mean IOP reduction from baseline was achieved in 68% of treated eyes sustained to one year. The safety profile was excellent in that no patients demonstrated any of the feared complications typically associated with standard CPC.

"It's a total game-changer," she says. "It's completely revolutionized what we think of CPC."

Although standard CPC has traditionally been perceived as a last-resort treatment for poorly-sighted eyes, MicroPulse technology has turned CPC into a procedure that can be used earlier in the glaucoma treatment

paradigm. "It gives us another tool in our toolbox," Dr. Yuen says. Dr. Yuen's work contributes to the growing body of evidence in support of the effectiveness and safety of MPCPC.

Dr. Yuen and the team at Uptown Eye Specialists welcome the opportunity to improve the vision of glaucoma patients and, by extension, their quality of life.

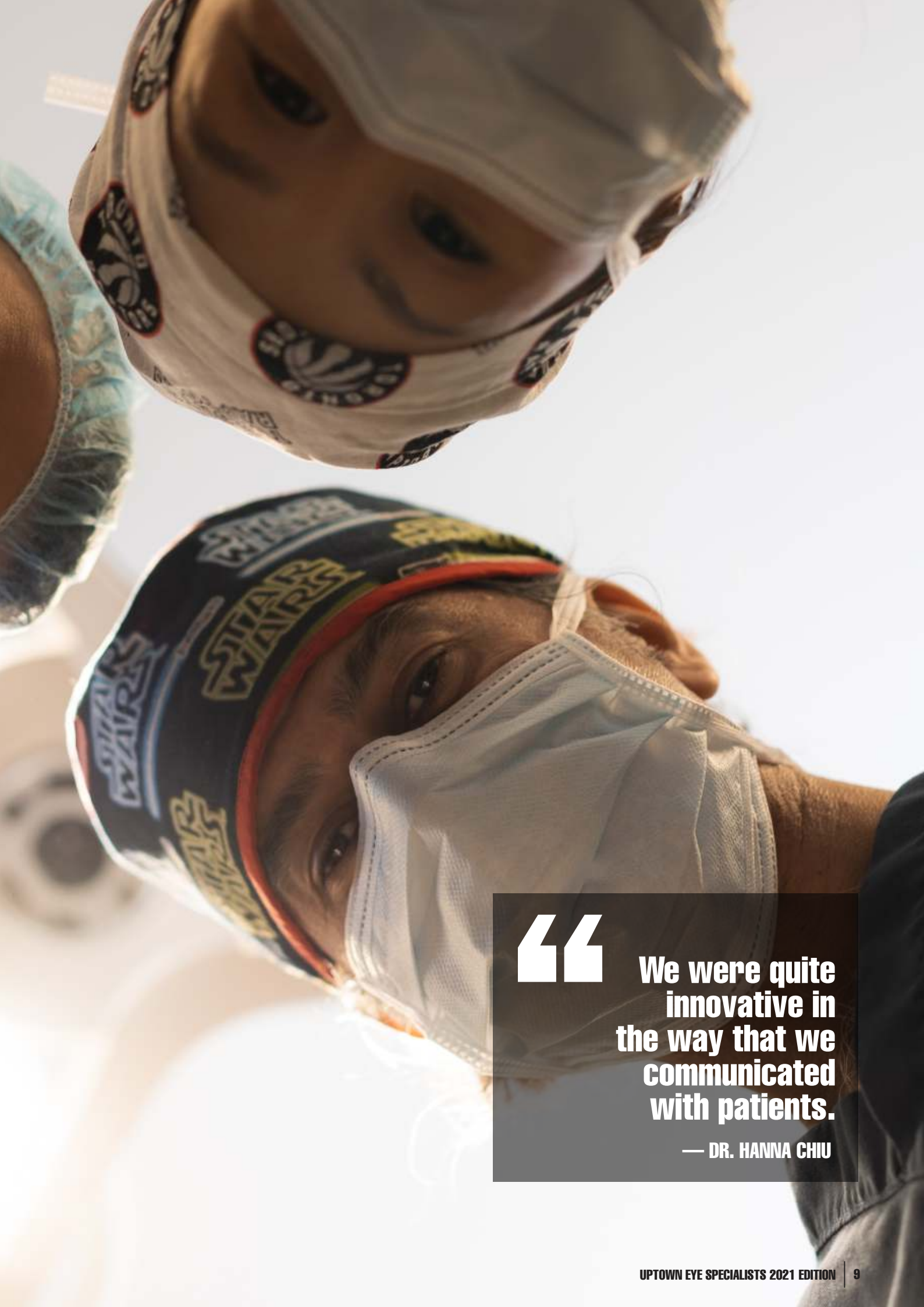


COVID-19 TASK FORCE AT UPTOWN EYE

“

This was a very important
decision not to completely
shut down our offices.

— DR. ERIC TAM



“

**We were quite
innovative in
the way that we
communicated
with patients.**

— DR. HANNA CHIU

COVID-19 TASK FORCE AT UPTOWN EYE: ENSURING CONTINUITY OF PATIENT CARE

On March 17, 2020, Premier Doug Ford responded to the coronavirus crisis by declaring a state of emergency in Ontario, prompting businesses across the province to close their doors for an indefinite period. Many healthcare services, including ophthalmology clinics, followed suit. Uptown Eye Specialists was not one of them. Instead of temporarily closing, medical directors Dr. Eric Tam and Dr. Sohel Somani worked with management personnel to create a COVID-19 task force that would ensure rapid and efficient access and care for patients during the crisis. “This was a very important decision not to completely shut down our offices,” says Dr. Tam. “The range of patients that we see includes not only routine follow-up care and chronic eye problems, but also more severe eye problems that require monthly checks. If they are left unchecked, there is a very high chance of these patients being progressed to loss of vision or blindness.”

According to Dr. Hannah Chiu, one of the first steps was to create an instant messaging system so that a team approach to patient care remained in place despite the lockdown.

“At the beginning, we had weekly meetings to talk about best practices for patients. What that involved was looking at patients who absolutely needed to come in so that they wouldn’t be going to the emergency department or suffering irreversible loss of vision because they weren’t able to be seen by one of us. For patients whose in-clinic appointments were cancelled or postponed, we offered a virtual appointment if they wanted to discuss their concerns.”

The Uptown Eye team had to quickly triage patients and determine which ones absolutely needed regular in-clinic treatment. They included those who required regular injections to treat vision-threatening retinal diseases and patients who recently had eye surgery.

Patients concerned about their vision received access to a website that let them check their visual acuity at home. The results would be emailed to the clinic, along with photos of the patients’ eyes, allowing the doctors to get an idea of what the issue might be. Although the online assessment yielded more limited results compared to an in-person examination, it provided a stronger baseline than a phone conversation would have yielded.

Uptown Eye Specialists implemented the use of personal protective equipment (PPE) to ensure a safe experience for both clinic staff and the patients who needed urgent care. Doctors and staff wore surgical masks, gloves, gowns, and eye protection.

Within the clinic, the intake process and exam lines were streamlined to eliminate all the touch points that used to be in place.

“The entire patient journey in the office had to be completely rethought because of the need to maintain social distancing and keep the patient transit time within the office to the minimum,” says Dr. Tam.

When a patient arrived at the reception desk, a team member screened them and took their temperature before directing them to an exam lane, where a technician would get their history and visual acuity. The doctor would then enter the exam lane. Afterwards, staff cleaned and disinfected any surfaces touched.



“

The amount of resilience they had during this time was amazing. It was a very hard time for everybody. Not just in the job sense, but life as well.

— Jenna Cranmer, Operations Manager



Dr. Eric Tam and Dr. Sohel Somani worked with management personnel to create a COVID-19 task force that would ensure rapid and efficient access and care for patients during the crisis.

It was a smoothly-maintained process that limited patient exposure to other surfaces and people and kept everyone safer.

"We were quite innovative in the way that we communicated with patients," Dr. Chiu says. To limit the time that everyone had to remain together in an enclosed space, the doctors would make follow-up calls to patients for more detailed discussions about their assessment and treatment plan. The COVID-19 response by Uptown Eye Specialists was a tremendous benefit to both clinic patients and the community. Patients who needed urgent care were treated by ophthalmologists who knew them and had easy access to their case histories, resulting in a continuity of care that maximized treatment results.

They also avoided the exposure risk of an ER visit. Hospitals benefited because the load on their emergency departments was alleviated.

"I felt so relieved and privileged that we have spent a lot of resources and a lot of effort to organize all of our clinics in such a way that makes us very responsive to any emergency situation," Dr. Tam says. "A pandemic is something that nobody anticipated, but being prepared for any disaster is important."

Jenna Cranmer, operations manager at Uptown Eye, has high praise for the entire team.

"The amount of resilience they had during this time was amazing. It was a very hard time for everybody. Not just in the job sense, but life as well. So many people were affected so

negatively, but our staff really came together. They volunteered to do a certain task that they don't normally do. We had people communicating really well, and all were pitching in to help out with different aspects. I couldn't be more proud of them." Although no one could have anticipated COVID-19, the dedication shown to patients and the community during a time of crisis confirms that Uptown Eye Specialists is a practice committed to making quality eye care available under all circumstances.

BLEPHAROPLASTY: HELPING YOU LOOK AS YOUNG AS YOU FEEL

There's a saying that goes, "You're only as old as you feel." However, as we age, our eyes change in ways that put our appearance at odds with our inner youth. Advancing years, along with factors like heredity and environment, can significantly impact the eye area. Puffiness, discolouration, and crepey skin all make a person look tired and older than they really are. If the skin around the eyes starts to droop, it can even impact vision. At Uptown Eye Specialists, the ocular plastic surgery team can restore the youthful look of the eyes using blepharoplasty, a popular and effective procedure designed to transform an aging appearance, renew confidence, and deliver life-changing results.

WHAT IS BLEPHAROPLASTY?

Commonly referred to as an eyelid lift, blepharoplasty is a popular and safe form of cosmetic surgery that recaptures the youthful appearance of the eye by eliminating problems like under-eye bags, drooping lids, and excess skin. During an upper lid blepharoplasty, a discreet incision is made in the natural crease of the upper eyelid to remove excess skin, tighten muscles, and remove or reposition fat deposits. The goal is to improve the contour of the lid and achieve attractive, long-lasting aesthetic results. The procedure can be combined with ptosis surgery, which corrects excessive drooping of the upper eyelid. Lower lid blepharoplasty, which removes eyelid bags and restores a youthful contour to the area, is done using a transconjunctival or a subciliary approach. With the first, a tiny incision is made inside the lower eyelid to remove or redistribute the fat responsible for the puffy appear-



ance. With the second, an incision is made below the lash line to eliminate excess skin and tighten muscles. After the surgery is over, patients should rest as much as possible and avoid strenuous activity. It is also recommended that for the first several days, they avoid reading, watching television, or otherwise straining their eyes. However, recovery tends to be fast, with most patients being able to return to work and resume regular activities in as little as seven to ten days.

WHO IS A CANDIDATE FOR BLEPHAROPLASTY?

Most blepharoplasty patients are over 40 years old, but what ultimately matters is the condition of the skin around the eyes. Depending on heredity and lifestyle, a patient can be as young as 35. Results are optimal when they are in good health and do not smoke. If they have a pre-existing medical condition like diabetes or glaucoma, an alternative solution to eyelid surgery may be recommended.

At Uptown Eye Specialists, each pa-

tient's procedure is carefully tailored to address their concerns and achieve their appearance goals.

"Blepharoplasties are no longer about skin removal and tightening, but rather a bespoke form of rejuvenation tailored to each individual," says Dr. Raj Maini, who has performed several thousand eyelid surgeries. He adds that many patients also report feeling lighter after excess skin is removed. Blepharoplasty continues to be one of the most popular cosmetic surgery procedures due to its relatively low risks, minimal recovery time, and high patient satisfaction. How we look and feel about ourselves affects every area of our lives, from relationships to work and beyond. The amount of confidence a successful eyelid surgery can bestow has value beyond measure.

Dr. Raj Maini has special interests and extensive experience in corneal transplantation, cataract, laser refractive surgery and plastic surgery around the eye.



“

Blepharoplasties are no longer about skin removal and tightening, but rather a bespoke form of rejuvenation tailored to each individual.

— DR. RAJ MAINI

MANAGEMENT OF RETINAL DISEASES AT UPTOWN EYE SPECIALISTS

If one thinks of the eye as a camera, the retina is much like the film paper in the camera. Light entering the eye is focused by the cornea and lens onto the retina, which lines the back of the inside of the eye, processing the incoming light so that one can see. The optic nerve is the cable that attaches the eye to the brain so that one can further develop the light processed by the retina, resulting in a visual image.

When the retina is damaged by disease, it can severely impact vision. Common retinal disorders include age-related macular degeneration, diabetic retinopathy and diabetic macular edema, retinal vein occlusion, and retinal detachment.

MANAGEMENT OF RETINAL DISEASES AT UPTOWN

Age-related macular degeneration (AMD) is a retinal condition that causes central vision loss. It affects the macula, the central part of the retina responsible for our clear central vision and is a leading cause of blindness in individuals over 55 years of age. Symptoms include blurry vision, difficulty reading, and distortion in vision. There are two forms of the disease:

DRY AMD

The majority of AMD patients have this version. It occurs when cellular debris known as drusen collects under the macula. As the disease progresses, the macula degenerates, leading to a loss of central visual acuity. Although the damage caused by dry AMD cannot be reversed, progression is usually slow. The risk of progression and vision loss may be reduced by taking specially-formulated high-dose vitamins, as studied in the Age-Related Eye Disease Study (AREDS).

WET AMD

This form of the disease, which only affects 15% of AMD patients, occurs when there is bleeding or swelling in the macula due to growth of abnormal blood vessels under the retina. Treatment involves regular injections of anti-vascular endothelial growth factor (anti-VEGF) agents into the eye to control the disease. Anti-VEGF treatment, which is a safe in-office procedure, stabilizes vision in 90 to 95% of patients, and 30 to 40% may report significant improvement in vision.



The visual outcomes using intravitreal medication is much improved beyond what it used to be.

— Dr. Daniel Weisbrod

MANAGEMENT OF RETINAL DISEASES AT UPTOWN

Diabetic retinopathy occurs secondary to progressive damage to the retinal blood vessels by diabetes. The risk of diabetic retinopathy increases the longer one has the disease; as such, all patients with diabetes need to be screened for diabetic retinopathy with a dilated eye exam at regular intervals. Diabetic macular edema (DME) is the most common cause of vision loss in diabetic patients. It results when fluid builds up in the centre of the macula, causing it to swell and thicken, ultimately leading to central vision loss. Standard treatment consists of anti-VEGF therapy, but adjunctive treatment may include intravitreal steroid injections and/or macular laser.

In advanced cases of diabetic retinopathy, patients may develop proliferative diabetic retinopathy (PDR) as the circulation of blood to the retina becomes heavily compromised. PDR results when poor circulation stimulates the development of new blood vessels in the retina. As a result, vision loss can occur from vitreous hemorrhage, bleeding from these new blood vessels into the central vitreous cavity, or from retinal detachment. At this stage, laser panretinal photocoagulation (PRP) can reduce the risk of vision loss by in PDR patients, and may be accompanied by treatment with anti-VEGF injections. Some patients may even require surgery at this stage.

RETINAL DETACHMENT

Retinal detachment occurs when the retina separates from the back of the eye. This is often due to a tear in the retina which results from syneresis or aging of the vitreous gel that fills the eye. When one is younger, the vitreous gel is normally firmly adherent to the underlying retina. As the vitreous ages, it liquefies and separates from the retina in a process called a posterior vitreous detachment (PVD).

Patients with new onset symptoms of floaters (tiny specks in the vision) and/or flashes of light should be assessed as soon as possible for a PVD to rule out a retinal tear or retinal detachment. This is due to the fact that as the vitreous separates from the retina, it can tug on the retina, leading to a retinal tear, which can ultimately lead to a retinal detachment. Symptoms of a retinal detachment are similar and include new onset of floaters, flashes of light and/or a dark curtain progressing over the visual field corresponding to the detached retina. Without timely treatment, permanent vision loss may ensue.

Laser retinopexy is the preferred treatment for a retinal tear, the precursor to a retinal detachment. It should be noted that using laser to treat retinal tears will not eliminate the accompanying floaters. Floaters usually improve or may disappear over time without treatment. If a retinal detachment is diagnosed, patients will need to be referred to a surgical retinal specialist for reattachment of the retina.

RETINAL VEIN OCCLUSION (RVO)

There are two types of retinal vein occlusion:

- Central retinal vein occlusion (CRVO): occurs when blood flow through the central retinal vein is blocked.
- Branch retinal vein occlusion (BRVO): occurs when blood flow through one of the branches of the central retinal vein is blocked.

Both conditions can cause vision loss due to retinal hemorrhage, macular ischemia (loss of blood flow to the macula), and/or macular edema.



Dr. Daniel Weisbrod is fellowship trained in Medical Retina with expertise in numerous diseases of the retina and vitreous including age-related macular degeneration and diabetic retinopathy.

When patients present to our clinic with retinal diseases, they may require further diagnostic testing. Optical coherence tomography (OCT) is a non-invasive, diagnostic test performed on site. It allows for a rapid capture of a cross-sectional, structural image of the retina. It is used to diagnose and monitor patients with many of the diseases discussed above, including AMD, DME and macular edema secondary to a retinal vein occlusion. Some patients with retinal diseases will require intravenous fluorescein angiography (IVFA). IVFA is a diagnostic test that involves the injection of a dye intravenously in the arm. Images of the back of the eye are captured with a camera using special filters to highlight the dye as it circulates through the blood vessels in the eye. IVFA is used to diagnose many retinal conditions, including wet AMD, and in some situations it is used to guide treatment. Sometimes we recommend that photographs be taken of the back of the eye without any dye injection to document or help manage certain retinal conditions. Finally, OCT angiography (OCTA) is another test performed on site that is used in the

management of retinal diseases. It not only assesses retinal structural changes in anatomy but generates sequential images of the retinal blood vessels to assess blood flow at the back of the eye. Although there are limitations to OCTA, it may provide a safe and non-invasive alternative to IVFA without the added risk of a dye injection. According to Dr. Daniel Weisbrod, who specializes in the treatment of vitreoretinal diseases at Uptown Eye, diagnostic tests like OCT and injectable eye medications like anti-VEGF have revolutionized the treatment of retinal diseases. "The visual outcomes using intravitreal medication is much improved beyond what it used to be," he says. "For example, in the past a patient with wet AMD would continue to lose vision over time despite treatment or even go blind. Nowadays we can maintain and sometimes improve vision with these treatments." Retinal diseases is one area that continues to inspire high volumes of research. As new breakthroughs occur and therapies become increasingly sophisticated, Uptown Eye patients can look forward to reaping benefits like restored vision and a brighter future.



DOCTORS AT UPTOWN EYE USE

INNOVATIVE LASER TECHNOLOGY TO TREAT ASTIGMATISM

Millions of Canadians suffer from cataracts, but no two sets of eyes are exactly the same. This is why the specialist team at Uptown Eye offers a revolutionary new laser technology that delivers more precise results during cataract surgery and has the ability to correct some astigmatism.

Ultraview ReLACS™ (Refractive Laser Assisted Cataract Surgery) is an advanced, computer-driven laser platform that allows eye surgeries to be carried out to highly accurate and individualized specifications. When combined with intraocular lenses (IOLs), it can also restore patient near and distance vision, eliminating the need for glasses or contacts. Traditional Cataract Surgery vs. ReLACS™ Traditional cataract surgery has always involved the use of a blade to create small incisions. With ReLACS™, these cataract incisions are made with a femtosecond laser, similar to the type used in all laser

LASIK vision correction surgery (aka femtoLASIK or UltraView LASIK), and made in a way that supports self-sealing after surgery: there is no need for stitches.

In laser cataract surgery, the surgeon creates a precise surgical plan for the corneal incision with a sophisticated 3D image of the eye called an OCT (optical coherence tomography). The OCT enables greater accuracy and better centering of the intraocular lens, which is a critical factor in a successful outcome.

Once the front portion of the capsule is removed, the laser softens and breaks up the cataract, making it easier to extract. An intraocular lens is then implanted. Many patients can resume their normal activities the day after surgery and, as they heal, enjoy crisper and clearer vision.

ReLACS™ and Astigmatism The ReLACS™ advantage is especially significant for patients dealing with astigmatism, an irregularity in the cornea's shape that distorts vision and cannot be corrected using

a standard lens. While traditional cataract surgery with a monofocal IOL may have a positive impact on distance vision, astigmatism still leaves the majority of patients needing glasses.

To reduce astigmatism, small incisions can be made via laser around the more curved meridian of the cornea. As they heal, the meridian levels slightly to create a more symmetrical shape. This procedure, known as limbal relaxing incisions (LRI) or astigmatic keratotomy (AK), can be planned with greater accuracy using the OCT image, increasing the probability that the patient may have reduced glasses dependency after their cataract surgery if coupled with an appropriate intraocular lens. Uptown Eye Specialists was an early adopter of UltraView ReLACS™ and has used it to achieve impressive results for patients, even those with conventionally challenging eye conditions. Last year, the doctors at Uptown Eye Specialists led a landmark study that compared the effects of

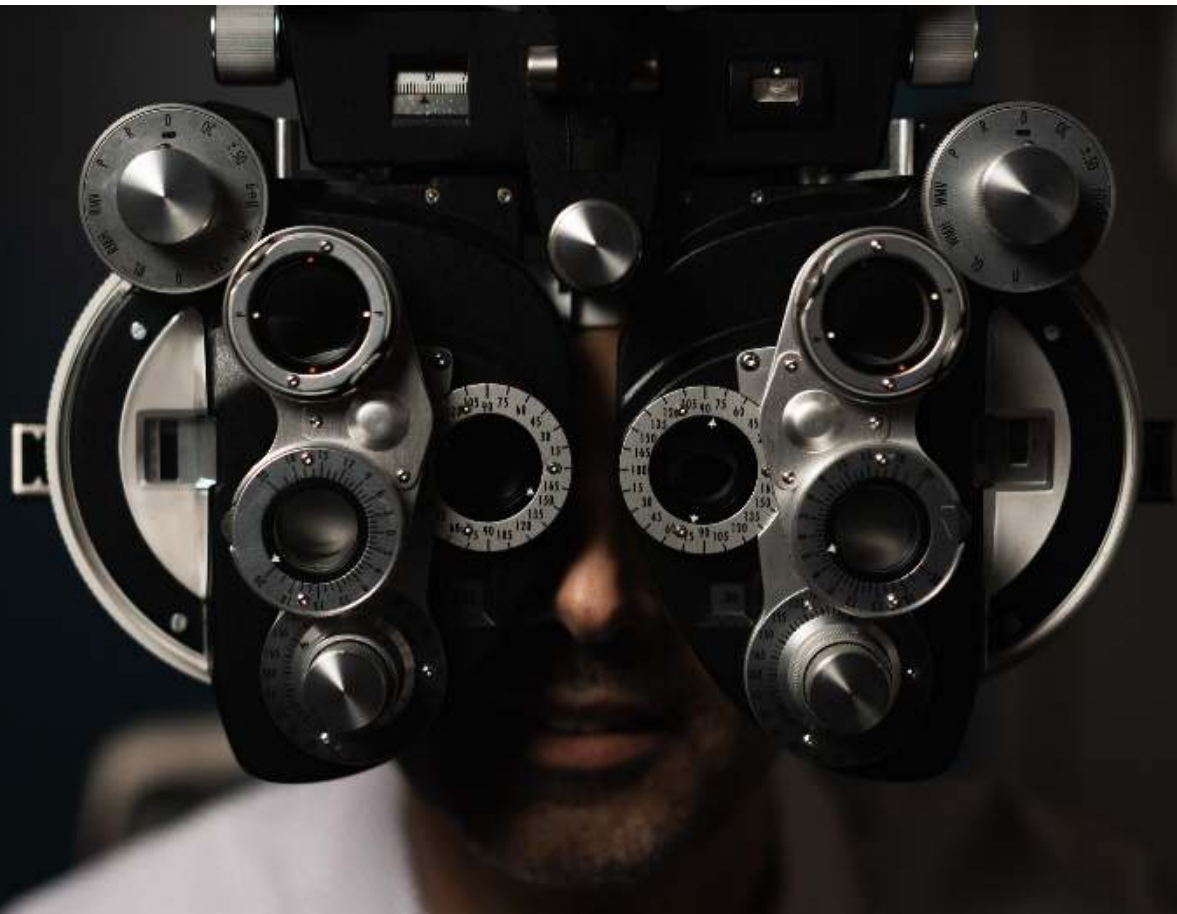
“ The paper represents our philosophy at Uptown Eye Specialists, namely, to take an academic approach in critically examining our clinical protocols. We will continue to raise the bar.

— DR. SOHEL SOMANI

ReLACS™ to traditional cataract surgery and concluded that it had several distinct benefits, including successful treatment of more difficult eye issues. This year, Doctors Soheli Somani, Hannah H. Chiu, Raj Maini, and Eric S. Tam collaborated with Dr. Carter W. Lim from the Faculty of Medicine, University of Ottawa, on a study that reviewed the astigmatic outcomes of single, non-paired intrastromal limbal relaxing incisions during femtosecond laser-assisted cataract surgery based

on a custom nomogram. The study, which appeared in the journal Clinical Ophthalmology, found that patients with against-the-rule astigmatism (which has a steep corneal axis at the 180° meridian) demonstrated a significant reduction in astigmatism. “ReLACS is a viable and safe treatment for astigmatism,” Dr. Somani says. “The paper represents our philosophy at Uptown Eye Specialists, namely, to take an academic approach in critically examining our clinical protocols.

We will continue to raise the bar. It’s a testimony to our academic rigor.” Uptown Eye Specialists is dedicated to superior patient care, so its team will continue to study the possibilities represented by advanced techniques like UltraView ReLACS™. Whether a patient’s issues are due to presbyopia (natural aging), cataracts, or astigmatism, the goal will always be to help them turn back the clock and keep enjoying a healthy and active lifestyle.



Dr. Soheli Somani has performed over 20,000 cataract, laser and anterior segment procedures using the latest technologies, techniques and lens implants.

PATIENT STORY: UPTOWN EYE DOCTORS

PROVIDE PATIENT WITH GIFT OF SIGHT

For as long as he could remember, Dean Zarubin had been dealing with severe astigmatism. Even while wearing thick-lensed corrective eyewear, he constantly strained to focus, which triggered painful and debilitating migraines. Although accustomed to discomfort, Dean knew something was wrong when he began experiencing reduced peripheral vision and distortions that resembled lightning flashes. He visited an eye specialist, who diagnosed a detached retina in his left eye and referred him to Dr. Efram Mandelcorn at Western Hospital.

Although retinal detachment can potentially cause blindness, Dr. Mandelcorn put his patient at ease. “He was so reassuring,” Dean recalls. “Dr. Mandelcorn saved my left eye vision. He saved me from becoming blind.”

Dr. Mandelcorn performed a vitrectomy to repair the retinal detachment, but Dean’s vision problems weren’t over. Cataracts that were not significant at the time became more evident after the vitrectomy. Although a common outcome, it meant that he needed cataract surgery a year later.

Dr. Soheli Somani at Uptown Eye Specialists had a considerable task ahead of him. Dean’s cataracts were complex due to their density and

hardness, his prior surgical history, and high myopia. He also didn’t want to wear distance glasses, so a custom solution was called for.

“I think Dr. Somani is a hero,” Dean says. “When changing and updating the type of lens upgrades that he felt was best suited for me, he actually asked me what I thought. He incorporated my request for far distance priority.”

Dean underwent Ultraview ReLACS™ to eliminate the dense cataracts and receive intraocular lenses designed to correct his myopia. Uptown Eye pioneered the use of UltraView ReLACS™ in Canada and has used it to help patients overcome extremely challenging vision problems.

Dean was no exception: both cataract surgeries (one for each eye) were huge successes. Not only was there dramatic improvement in acuity in both eyes, but for the first time in his life, he did not depend on glasses for distance sight. For a person with high myopia who had relied on so-called ‘Coke bottle glasses,’ achieving this dream was incredible, especially since he had faced blindness in his left eye due to retinal detachment. Even now, Dean becomes emotional when he talks about it.



Dean Zarubin, Uptown Eye patient of both Dr. Mandelcorn and Dr. Somani.

“I’m not as articulate as I could be,” he admits. “But it is an emotional experience to realize that they restored and coordinated that beautiful improvement of vision between the left and right eye that is so noticeable to me. I can actually even read with my right eye.”

“It goes without saying that all patients undergoing surgery have high expectations,” Dr. Somani says. “However, it is extremely gratifying to be able to deliver these ultra-accurate results in complex, higher risk eyes with the tools and teamwork at hand.”

Dean says that he will always be grateful to the team at Uptown Eye Specialists for first saving his eyesight and then making it better than ever.



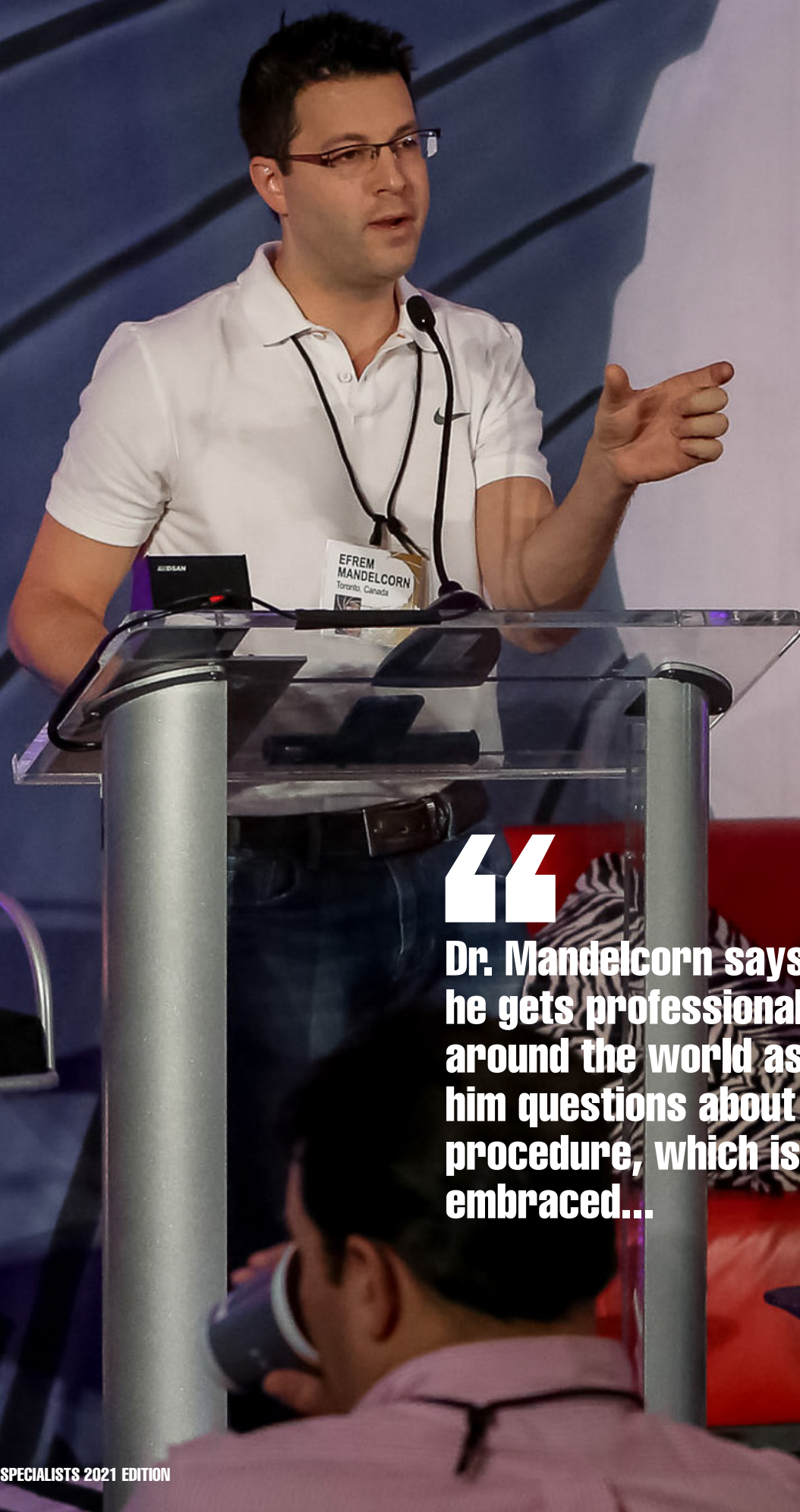
Dr. Mandelcorn and Dr. Somani are heroes to me. I couldn't have ever received better care, and I never had this quality of vision, not from the time I was a toddler. My visual acuity is much better, and so is my quality of life.

— DEAN ZARUBIN, PATIENT



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Dr. Mandelcorn says that he gets professionals around the world asking him questions about this procedure, which is being embraced...

MACULAR HOLE CORRECTION THROUGH ADVANCED VITREORETINAL SURGERY

Vision irregularities are a common part of the aging process, but when the abnormalities only affect the central visual field, the cause may be a macular hole. Macular holes are small breaks in the centre of the macula, which is an area of the retina responsible for crisp and clear eyesight. They affect women more than men and tend to be an issue for those over 60, although macular holes have been diagnosed in younger patients.

Macular holes commonly occur when the vitreous, a gel-like substance that helps the eye maintain a round shape, slowly shrinks with age. If it is firmly attached to the retina when it pulls away, the retinal surface can tear and lead to a hole. As the hole develops, symptoms include blurriness, distortions (straight lines appearing wavy) and small shadows. Most cases, however, are idiopathic, meaning that they suddenly develop without an obvious cause. For this reason, there is presently no effective way to prevent their formation and development, but the surgical team at Uptown Eye Specialists has access to innovative technologies and treatments that can close the hole, correct patient vision, and enable them to resume their normal active lives.

VITREORETINAL SURGERY: AN OVERVIEW

According to Dr. Efreem Mandelcorn, macular holes are treated using a surgical procedure called a vitrectomy. Three tiny incisions are made in the eye: one to remove the vitreous, a second to replace it with an infusion that keeps the eye inflated, and a third to light the interior of the eye during surgery. These holes close and heal quickly on their own, without any

need for stitches.

After the thin retinal membrane surrounding the macular hole is carefully peeled away, the eye is filled with a special inert gas that keeps the hole pressed against the wall of the eye so it can heal and close. As the body slowly absorbs the gas bubble, the vitreous cavity refills with natural eye fluids.

At one time, macular hole surgery was challenging because patients had to lie face down for days or even weeks after the procedure, to ensure that the hole stayed in contact with the macula as the gas rose. With the modern techniques used at Uptown Eye Specialists, this difficult recovery regimen is a thing of the past.

“Generally, it’s keep your chin down for three days and then sleep on your side for the week,” Dr. Mandelcorn says.

Depending on the size and age of the hole, the success rate is generally 85% to 90% on the first try. If a case is particularly complicated, Uptown Eye Specialists specializes in advanced techniques like macular hole hydrodissection.

MACULAR HOLE HYDRODISSECTION FOR ADVANCED CASES

Dr. Mandelcorn, who published a paper on the subject last year in *Retina, The Journal of Retinal and Vitreous Diseases*, says that hydrodissection is a viable treatment for persistent, chronic, and large macular holes. “What happens sometimes is that the hole is stuck to a layer called the retinal pigment epithelium (RPE). If there’s an adhesion there, the edges of the hole won’t come together even if you put in a gas bubble. One can use water to dissect the adhesions between the hole and the RPE layer to allow the hole to be more compliant



Dr. Efreem Mandelcorn has extensive experience in vitreoretinal surgeries and surgical retinal procedures designed to correct retinal conditions.

and come together to close.”

His published study reviewed the effects of hydrodissection on holes that were chronic or large (over 400 microns), as well as those that resisted earlier surgical correction. The result was complete hole closure in 87.2% of the 39 patients studied and vision improvement in 94.9%, which is comparable to the treatment success rate for standard small macular holes.

Dr. Mandelcorn says that he gets professionals around the world asking him questions about this procedure, which is being embraced as an adjuvant that can increase the success rate of standard macular hole surgery. This recognition, which can improve the lives of macular hole patients everywhere, is additional proof that at Uptown Eye Specialists, innovation and research will always be a priority.

SELECTIVE LASER TRABECULOPLASTY



ADVANCED GLAUCOMA TREATMENT AT UPTOWN EYE

Glaucoma is the leading cause of irreversible blindness. It affects more than 70 million people worldwide and is characterized by eye changes that prevent fluid from draining properly. As pressure builds up inside the eye, the result is progressive damage to the optic nerve.

In most cases, glaucoma is initially treated with eye drops that lower intraocular pressure (IOP), instead of laser because in the past, laser treatment was seen as a comparatively risky therapy. While it is true that original laser therapies like argon laser trabeculoplasty (ALT) presented a risk of structural damage and had higher complication rates, the technology has evolved, and is now a mainstream treatment for glaucoma.

At Uptown Eye Specialists, glaucoma patients are treated with selective laser trabeculoplasty (SLT), a pain-free, safe, and repeatable in-office procedure that is highly effective in reducing intraocular pressure (IOP) in the eye.

HOW SELECTIVE LASER TRABECULOPLASTY WORKS

During SLT treatment, the laser is applied to the eye's drainage system through a special contact lens. It selectively thermolyzes the pigmented, melanin-containing tissue in the trabecular meshwork to stimulate and improve fluid outflow from the eye. Studies have shown that on average, SLT treatment is successful in over 90% of patients and can reduce IOP by 20 to 30%. The results, which are comparable to the most effective eye drops, can last from three to five years, at which point SLT can be repeated.

Unlike ALT, SLT has an excellent safety profile. Consequently, it is more frequently being offered as a primary therapy for glaucoma patients. In the rare instances when complications arise, they tend to be mild and short in duration. The most common side effects such as inflammation or a pressure spike can be successfully treated with medication.

SLT VS. EYE DROPS

Recently, a large-scale study compared SLT versus eye drops as primary therapies for glaucoma and found similar effects between both patient groups. After 36 months, 74.2% of the patients in the SLT group did not need drops to maintain their IOP at target levels and were within target IOP pressure at more visits (93%) than the patients who received eye drops (91.3%). While none of the SLT patients eventually required glaucoma surgery, 11 patients in the eye drops group ended up receiving surgical treatment. Some SLT patients still required eye drops after treatment, but fewer drops were necessary to control their glaucoma. As a treatment, eye drops can be difficult for patients to maintain. Nearly half of patients fail to regularly use their medications as prescribed, attributable to difficulty instilling eyedrops, forgetfulness, and complicated eye drop schedules if on multiple medications.

“ When factors like allergies, side effects, and medication costs are also taken into account, SLT presents a clear advantage for those who are candidates for the procedure.

— DR. KAY LAM

WHO IS A CANDIDATE FOR SLT?

According to Dr. Kay Lam at Uptown Eye Specialists, practically any patient with open-angle glaucoma can benefit from SLT.

“There are exceptions, obviously, to every rule,” she adds. “If intraocular pressure is too high, we might have to start with eye drops to bring it down to a safe level prior to laser treatment.” As a first-line treatment for glaucoma,

SLT can deliver similar results to eye drops, without the need for daily use. The need for invasive eye surgery is reduced, along with the progression rate of glaucoma, which delivers a tremendous boost to patient quality of life.

“I offer it to my patients because of its excellent safety profile,” Dr. Lam says.

“It’s a very safe treatment and very well-tolerated.”

Dr. Kay Lam specializes in the diagnosis and management of glaucoma, cataract, refractive surgery, and comprehensive ophthalmology.



DRY EYE CLINIC: ADVANCED TREATMENTS FOR CHRONIC DRY EYE

Dry eye is an uncomfortable and even painful ocular disease that occurs when a person can't produce the tears needed to lubricate and nourish their eyes. It affects millions of people across North America: according to some studies, 33% of patients in U.S. eye care clinics present with complaints related to the condition. Dry eye is a multifactorial disease, but known causes include aging, medical conditions like diabetes and lupus, certain medications, and tear glands damaged by inflammation or radiation. Symptoms range in severity from mild itchiness to light sensitivity, vision fluctuations, and

painful feelings of grittiness or burning in the eyes. Without appropriate treatment, it can cause vision damage and negatively impact quality of life.

TREATMENTS FOR DRY EYE

Many people try to treat their symptoms with over-the-counter eye drops. While drops can deliver short-term relief, they don't address the underlying causes of the disease. A clinical examination is necessary to diagnose the nature and extent of a patient's condition and create a customized therapy plan that relieves their symptoms and corrects the cause.

Uptown Eye Specialists has long been at the forefront of dry eye treat-

ment. At the Dry Eye Clinic, advanced diagnostics and leading-edge therapies are combined to create a personalized and effective care regimen for patients that may include meibomian gland procedures, medications, and devices designed specifically for dry eye.

MEIBOMIAN GLAND PROCEDURES

The meibomian gland produces an oily substance called meibum, which prevents the eye's tear film from evaporating. When the gland openings are clogged, less oil reaches the eye surface and the water layer dries out too quickly.

At Uptown Eye Specialists, mild to



moderate dry eye due to meibomian gland dysfunction is generally treated in one of two ways:

- Deep compression on the lower eyelid to release accumulated meibum and encourage oil production.
- Using a handheld device called an iLux to compress and gently warm the eyelid to improve meibum flow.

Another form of treatment that the team may suggest is the Dry Eye Laser (DEL), a pulsed light therapy, which uses a series of gentle light pulses to liquify and drain hardened oil. Uptown Eye Specialists is one of the first Canadian centres to develop a dry eye laser program, and has used the technology to treat hundreds of patients since 2017.

MEDICATIONS

Depending on patient condition, medications for dry eye include preservative-free drops. Uptown Eye has innovative medication-based treatments for dry eye cases that resist other therapies. Platelet Rich Plasma (PRP) uses nutrient-rich eye drops created from the patient's own blood. These drops promote healing and tissue regeneration while Autologous Serum consists of eye drops made from blood serum that contains natural growth factors. These drops are naturally preservative free and, since they are created from the patient's own blood, there is no risk of sensitivity or allergic reactions.

DEVICES

When indicated, Uptown Eye Specialists uses therapeutic devices like the following to treat dry eye:

- **Punctal plugs:** artificial plugs placed in the tear duct to prevent tear drainage.
- **Scleral contact lenses:** contact lenses that create a tear-filled vault over the cornea, ensuring constant hydration.

"We have quite a few people coming in who have had chronic dry eye for years," says Jenna Cranmer, operations manager at Uptown Eye Specialists. "We started the treatment and it has improved their quality of life."



“We are very proud to be offering our patients seamless care for treatment of their dry eyes.”
— DR. HANNAH CHIU

"At Uptown Eye Specialists, we are very proud to be offering our patients seamless care for treatment of their dry eyes," says Dr. Hannah Chiu, who is currently a senior author in a study for dry eye.

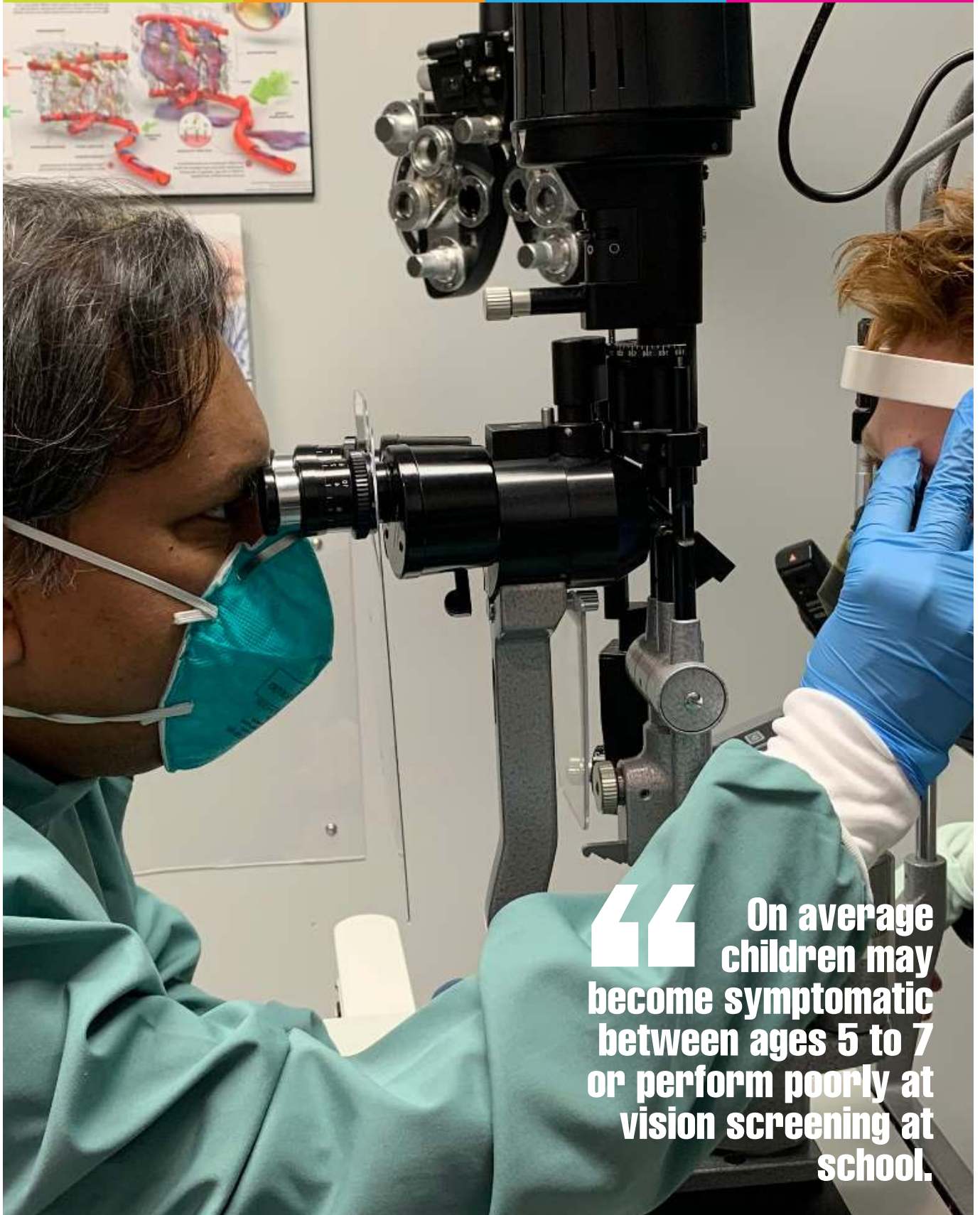
She adds that patients who have their dry eyes optimized prior to surgery have better visual outcomes because it improves the accuracy of pre-surgery eye measurements. They also have a better postoperative recovery with fewer dry eye symptoms.

"More importantly, at Uptown Eye Specialists, we are focused on providing the best evidence-based care for patients, and we have a parallel research program studying the factors that determine the success of dry

eye treatment and we hope that our research findings will impact not only our patients but future ophthalmic care," she says.

At the Dry Eye Clinic, patients benefit from access to eye care specialists whose caring attention and professional expertise can relieve their painful symptoms and even save their eyesight. For most of them, treatment has made it possible for them to enjoy a brighter - and more comfortable - future.

CLEARER FUTURE: TREATING PROGRESSIVE MYOPIA IN CHILDREN



“ On average children may become symptomatic between ages 5 to 7 or perform poorly at vision screening at school.

Myopia, more commonly known as nearsightedness, is becoming much more prevalent. After examining current trends, studies are suggesting that by 2050, over half of the world's population will be myopic and one-tenth will have high myopia, which is defined as nearsightedness of -5.00 to -6.00 D or higher indicated on an eyeglass prescription. Myopia happens when the eye is either longer than average or has an excessively steep cornea, causing light rays to focus in front of the retina instead of on it. Consequently, people will see clearly up close but objects in the distance are blurry.

With progressive myopia, the nearsightedness worsens year after year. Left untreated, patients are at a higher risk of developing eye conditions associated with eye elongation and retinal stretching, such as retinal detachment, glaucoma, cataracts, and myopic macular degeneration.

PROGRESSIVE MYOPIA IN CHILDREN: TRENDS AND CAUSES

A growing number of children are presenting with myopia. In the UK, an estimated 20% of children now have the condition and, in South Korea, 96.5% of 19-year-old males are myopic. As the condition progresses, it can be detrimental to their higher education and future career prospects. However, identifying those young patients who are at risk of myopia makes it possible to delay or prevent progression of the condition, thereby improving their future.

According to Dr. Dexter Furlonge, who specializes in paediatric ocular conditions at Uptown Eye Specialists, parents can play a critical role in early myopia detection. "On average children may become symptomatic between ages 5 to seven or perform poorly at vision screening at school," he says. He

adds that behavioural indicators include standing too close to the television and not recognizing familiar faces at a distance. If one eye is highly myopic and the other isn't, parents may notice that the highly myopic eye may be deviated to one side.

"A lot of parents are also well-informed, especially if they're aware that there's a genetic predisposition to becoming myopic," he says. "They will be very proactive and take their child for screening very early on."

EFFECTIVE MYOPIA TREATMENTS FOR CHILDREN

Given the connection between progressive myopia and other ocular conditions, parents of children at risk for the condition should be made aware of all viable options for myopia control, including vision training, specialized glasses or contact lenses, and even pharmaceutical intervention with atropine drops that have been modified to slow the eyeball growth and decrease the progression of myopia.

In many cases, glasses are the preferred form of therapy. Although some children may resist the idea of wearing glasses, Dr. Furlonge has found that the proper encouragement and reinforcement can yield positive results.

Sunlight has a known protective effect on the eye and retina, suggesting that outdoor activities can have a beneficial effect on eyesight.

One study done in China found that children who spent 40 minutes longer than usual outdoors slowed their development of myopia by 23 to 50%.

Other guidelines for parents of myopic children include:

- Setting limits on how much time their children spend in front of TV and computer screens.
- Keeping screen brightness and contrast at comfortable levels.
- Keeping computers and smartphones 18 to 24 inches away from the face.
- Teaching them the 20-20-20 rule: for every 20 minutes spent looking at a screen, look 20 feet away for 20 seconds.

Since there is a genetic predisposition to myopia, it is not possible to totally prevent it. However, parents who have their child's eyes tested early and support the recommended treatment plans will play a valuable role in lessening its impact on the child's quality of life.

Dr. Dexter Furlonge's practice includes myopia and strabismus treatment in both adults and children.

With some kids, if they've had decreased vision or poor vision and you put them in glasses, sometimes the behavior changes positively. So I've had parents who have come in and tell me, 'I put glasses on them and my kid is a different kid now.'

— DR. DEXTER FURLONGE

For many of us, time out of the office means unplugging, relaxing, or taking a long-awaited trip. For others, however, it's an opportunity for community service. Dr. Fariba Nazemi has spent the last 10 years making quality eye care available to those living in underprivileged communities across the world. She uses her expertise in paediatric ophthalmology and glaucoma subspecialties to benefit both patients and fellow professionals, the latter of whom don't always have access to the latest research.

In 2013, after the Bohol region in the Philippines was devastated by an earthquake and typhoon, she flew there to provide affected residents with sight-saving vision care. Locally, she has worked to provide patients in rural Ontario with access to the same quality of service available to those in the Greater Toronto Area. More recently, Dr. Nazemi travelled to Kenya. Many years ago, a missionary from a Christian charity organization started an ophthalmology clinic in Mombasa. It was originally in his house, but over

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It's quite a big center and they do a lot of good work, but still they depend on volunteers like me to help do surgeries.

time, it developed into a full-service vision care clinic with an operating room and committed staff and volunteers. The University of Nairobi presently sends its ophthalmology residents there for training.

“It's quite a big center and they do a lot of good work, but still they depend on volunteers like me to help do surgeries and teach the residents and staff,” Dr. Nazemi says.

This clinic makes quality eye care services to people who would otherwise not have access to it, many of whom are children. Several of them have had their lives changed by Dr. Nazemi's expertise in paediatric ophthalmology. She recalled the case of a 10 year old boy who had been hit in the eye by a stick while playing with his friends. He didn't tell his parents, but days later, a white cataract had formed, so they brought him to the clinic. “The cataract completely blocked his vision, but luckily, he didn't get an infection,” she says. “I was able to remove the cataract and he got his vision back.”

Dr. Nazemi pointed out that with children, timing is of the essence when addressing cataracts and other eye conditions. “If they lose vision during the time that their brain is developing, they can't get it back even if the cataract is removed years later and they receive the best care. The developmental stage has passed. So it's critical to treat eye diseases while they are still kids.” She also finds the information exchange between her





UPTOWN EYE DOCTOR MAKES QUALITY VISION CARE AVAILABLE IN KENYA



and travelling to help those in need, Dr. Nazemi educates ophthalmology professionals in a wide range of countries, sharing ground-breaking research and innovative techniques pioneered by Uptown Eye. Dr. Nazemi also teaches ophthalmology to the students, residents and fellows at the University of Toronto. These are all traditions she is

committed to maintaining for many years to come.

Dr. Fariba Nazemi's practice includes cataract and glaucoma, ocular surface diseases and strabismus surgery in both adults and children.

team and the Kenyan eye care professionals to be extremely enriching. "We learn from each other. We teach them the way we do things and they teach us the way they do things. I think this exchange is really valuable." Dr. Nazemi confirmed that she will continue to help make quality eye care available across the globe.

"I know it is good for patients, but it also helps me reach my own personal growth. Patients don't know it, but they are helping me grow as a person." When not taking care of her patients at Uptown Eye Specialists



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