

UPTOWN EYE SPECIALISTS | 2020 EDITION

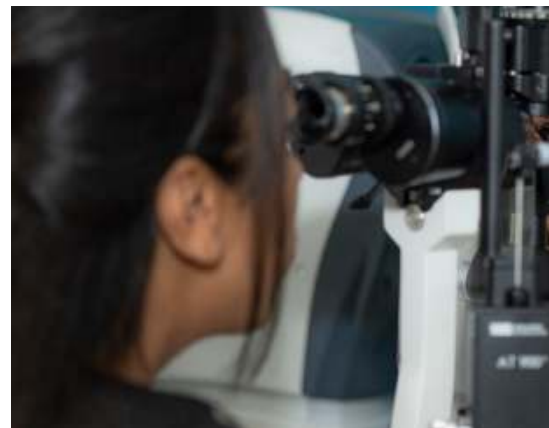
VISIONARY



**NEW
OPERATING
ROOM**

**LASER
ACHIEVEMENT**

**GROUND-BREAKING
RESEARCH**



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In this inaugural issue of Visionary, you'll read powerful patient stories, receive a guided overview of our state-of-the-art treatments, and learn about the breakthroughs in ocular disease research at Uptown Eye Specialists.



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A MESSAGE FROM THE CLINIC

It is time. Time to reflect on how far we've come since our humble beginnings over 15 years ago, examine where we are today, and plan for the future.

Welcome to the inaugural issue of Visionary. Our goal is to introduce Uptown Eye Specialists and its accomplished, committed team, encapsulate our journey over the past year, and share our goals and strategies for the future.

In this issue, we will reveal and celebrate the milestones that we've achieved. They include completion of the 10,000th ReLACS™ case at U Surgical Centre, a feat that confirms our position as experts in the field of cataract surgery, and our adoption of advanced treatments for keratoconus, dry eye, and glaucoma.

We also celebrate our successes with patients. You will read about how two of our doctors saved one elderly woman's badly injured eyes and another has spent over 10 years bringing quality vision care services to underprivileged patients across the world. You will also learn about the new surgical facilities we opened in the eastern region of the GTA to reduce wait times for critical eye surgeries.

Outside these pages, we welcome the opportunity to continue our dialogue through our educational symposia: the Fall Classic and our local Spring Classics. We also encourage you to connect with Uptown Eye Specialists and its team on Twitter (@uptown_eye) and LinkedIn (Uptown Eye Specialists), where we provide real-time updates for our research and educational endeavours. To get a feel for our organization's energetic and welcoming culture and vibe, be sure to follow us on Instagram (@uptown_eye) and Facebook (Uptown Eye Specialists).

Regardless of the medium, it's important to look forward to further advancements in our field: advancements that will enhance our patients' quality of life, advancements that we embrace together as we march forward.

Time to look forward.

Welcome to Uptown Eye Specialists, where we are proud to be *visionary*.

FROM EARTHQUAKES IN CEBU TO SCARCITY IN RURAL ONTARIO: HELPING THE DISADVANTAGED GET QUALITY EYE CARE

Dr. Fariba Nazemi has dedicated time in the past 10 years to helping underprivileged patients in Ontario and across the world.

The 2013 Bohol earthquake in the Philippines measured 7.2 on the Richter scale and claimed over 200 lives while devastating two cities. Over 70,000 buildings were damaged, 15,000 of which totally were destroyed, including key medical facilities. Only three weeks after the earthquake, a major typhoon hit the area, bringing further death and destruction to the region. Following such natural disasters, preventable diseases rise and access to health care becomes very difficult, including eye care. Dr. Nazemi and a team went out to the Philippines to combat preventable blindness and eye diseases. *“What mattered more to the patients we were helping was that we were present on the ground. They felt like there was an international community that cared for them and their well-being,”* Dr. Nazemi

added.

A passion of Dr. Nazemi is to increase the quality of eye care across the world. She does this by dedicating her time to educating ophthalmology professionals in multiple countries, from the Far East to the Caribbean, and many in between. Local doctors around the world are experienced, well-trained and highly skilled. However, they are not always afforded the educational opportunities and access to cutting-edge technology that Dr. Nazemi has acquired at Uptown Eye Specialists and elsewhere. This privilege is not lost on her as she seeks to travel the world to pursue teaching. Dr. Nazemi’s expertise in the pediatric ophthalmology and glaucoma subspecialties can provide doctors around the world with new skills that can be put to use immediately, while long stints of work focus on developing skills that benefit the doctors long term.

A major benefit of this work is what she learned from the many fantastic professionals she interacted with.

Their responses to unique local problems, attempts to resolve issues on a tight budget, and their passion for the profession have been enriching for Dr. Nazemi. Her most prolific work has been in rural Ontario. *“Patients there do not have the same access as those in the Greater Toronto Area. If they need cataract surgery, for example, they do not have local doctors to help them. It is hard for the elderly and those on low budgets to get the eye care they deserve.”*

Working with the Canadian Institute of the Blind, she travels to areas of Ontario where patients do not have access to ophthalmologists. Some have to travel hours, and even catch flights, just to see a doctor. This is especially difficult for procedures that require multiple visits to a clinic.

“I have been all over Ontario. I go wherever and whenever my schedule allows me to travel.” Dr. Nazemi said.

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



A HARROWING TALE OF A SENIORS BRUSH WITH TRAUMA

When Mary Zentena's 94-year-old mother called for help, she thought that this was just a normal call from her ageing mother. She packed her bags and drove to her mother's house, completely unprepared for what she was about to see.

"There was blood everywhere," Zetena recalls. "On the walls, on the floor and on the stairs. I looked for my mom, only to find her with one of her eyes almost hanging out. I was shocked, I was shaking, I feared the worst."

Zentena immediately called an ambulance and her brother. While waiting for them to arrive, she tried to figure out exactly what had happened so that she could inform the doctors, thus giving them the best chance possible of treating the eye.

It was hard to get information from her mother since she was in no state to provide it. Going through the house, trying to retrace her mother's steps was difficult. The event was made worse by the fact that her mother takes blood thinners, which prevented the bleeding from stopping like it otherwise would.

There was blood throughout the house, and she couldn't piece together what happened. When the paramedics arrived, they actually panicked when they saw the eye. They have never seen such an injury and didn't know what they could do to help on the scene, so they decided to load her up and take her to the hospital as quickly as possible.

Zentena's mother has always enjoyed a sense of independence, which she maintained even as she entered her 90's. She felt free living by herself

and being able to do most daily tasks independently. It was this sense of freedom that was most at risk should she lose her vision.

"THE MOMENT I SAW DR. SOMANI WALK INTO THE ROOM, I SUDDENLY FELT AT EASE."

As they arrived at the hospital emergency room, the staff immediately recognized the seriousness of the injury and sent her directly to the on-duty doctor. The ER doc was not an eye specialist and attempted to make sense of the injury while paging the on-call eye specialist.

By this point Zentena's mother had lost so much blood that the doctors were beginning to worry not only about her eye, but also her life. *"This was the lowest point for us. We were totally devastated; we did not know what will happen."* Zentena remembers.

There was a long and anxious wait, and an extended period of silence. Then Dr. Sohel Somani, of Uptown Eye Specialists, walked in. *"The moment I saw Dr. Somani walk into the room, I suddenly felt at ease,"* said, Zentena.

The family knew Dr. Somani. He had operated on their mother's eye a few years earlier, and their memories of him were positive. Dr. Somani recognized the family and asked what had happened.

The doctors at Uptown Eye Specialists are recognized as being among the best eye care professionals in the greater Toronto Area. Most of them are affiliated with neighbouring or regional hospitals and are called in on serious eye injuries that the hospital can't handle. This could be general consultations, or as in this case, emergency situations.

Dr. Somani told the family that he was going to investigate the eye and determine what should be done next. He was upbeat and put the family at ease. When he completed the investigation, he explained to them the extent of the injury and emphasized that it was quite complex due to the severe damage to multiple different important structures.

He went on to perform the primary repair of the eye right there in the emergency room, and then arranged a referral to a colleague who specialized in this type of procedure to follow up with additional care. Dr. Raj Maini was called in to assess the patient at the nearby Uptown Eye Specialist office. After an evaluation, he performed a secondary surgical repair in order to save the eye.



Thanks to the fast response of the paramedics, hospital doctors, Dr. Somani, Dr. Maini, and the rest of the medical teams, Mary's mother's vision was saved. Just two weeks after the surgery, her stitches were removed, and her recovery was progressing nicely.

"We are so grateful that my mom looked normal," Zentena said, "When I show pictures to people of that night, they are totally surprised that my mom looks so normal. I am so thankful to Dr. Somani, Dr. Maini and all the other doctors who helped."

**"DOCTORS FROM
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EXPERTISE TO
TREAT A PATIENT."**

UPTOWN'S NEW OPERATING ROOM WILL HELP REDUCE WAIT TIMES

Uptown Eye Specialists proudly opened its doors to a new, state-of-the-art, operating room in Scarborough. This new facility will reduce waiting times, increase accessibility to patients, and provide world-class care.

The greater Toronto area lacked a world-class operating room in the eastern regions of the city. Patients, who are often elderly and needing family members to support them, had to commute as far out as Vaughan in order to receive the care they needed. When factoring in consultations, surgical visits, and follow-up care, this often became five or more trips over the course of a few months, which was very difficult for patients and their families.

High demand for Uptown Eye Specialists' doctors drove the clinic to open the new operating room with hope that it will cut the waiting and commute times down dramatically for patients throughout the region. Opening an operating room is one of the most complex tasks that a clinic could embark on. The heroes who made this OR a reality are Jennifer Marinas and Maureen Meneses.

In their role as operating room nurse managers, Jennifer and Maureen were tasked with preparing for yet another expansion at Uptown Eye Specialists, but this one would be unlike all the others. Preparing for a state-of-the-art operating room was a major undertaking. The two brought their combined experience together to help bring the U Surgical Centre Scarborough to life from the ground up.

The logistics involved in this process were quite complex and required months of planning to create a good

plan of action. As the process rolled through the various stages from construction to procurement to equipment setup, and more, both nurse managers felt right in their element. Poised, confident, and ready for any hurdles thrown their way.

Although building an operating room from scratch and managing one are totally different skill sets, both Jennifer and Maureen realized that both relied on one important element for success – attention to detail. This is a characteristic that they both naturally possessed, and that has led them to be world-class nurse managers in their existing facility where they have coordinated thousands of surgeries.

"We built the Scarborough operating room to be a reflection of the very efficient and flawless operating room at our Vaughan site," they both echoed.

All surgical centres in Ontario are regulated by the College of Physicians and Surgeons of Ontario (CPSO) – a process that often takes six months to complete. This process, albeit lengthy and labor intensive, ensures that all Ontario Surgical Centres meet certain minimal procedural and policy standards for patient safety.

The aim of U Surgical Centre Scarborough, however, was to significantly exceed the minimal standards by building a centre that becomes the pinnacle of excellence. To that end, both the Vaughan and the newly minted Scarborough Operating Rooms have the highest CPSO Out-of-Hospital Program (OHP) designation: OHP Level 3.

Building something this profound with

the aim of being the best operating room in the GTA (if not all of Canada) provided both nurse managers with their fair share of stress. However, they were both fortunate to work with a team of highly experienced medical directors who themselves brought years of medical and surgical leadership to the table.

The two managed their stress by working as a coherent team and kept in mind that there was a large team of surgeons (and many patients) who depended on the success of this project. This proved to be enough inspiration for both Jennifer and Maureen to see this project through to completion.

Jennifer admits, "It was six months of sleepless waiting for the CPSO regulations and certification process." Her worry was understandable: without this process, the surgery centre could not start operations.

Cataracts are one of the most common causes of vision impairment. As such there may be long waiting lists for cataract surgery across the GTA. Patients who live with cataracts face challenges with their visual disability ranging from the inability to drive to reduced functionality when it comes to day to day activities. Both of these things can lead to a dramatic reduction

**"IT GIVES
SENIORS MORE
TIME TO ENJOY
THEIR LIVES."**



in overall quality of life.

"They [patients] cannot function without their eyesight – it's a life necessity," observes Maureen.

There may be further heightened challenges when a patient needs surgery for cataracts in both their eyes. Patients may suffer a sense of imbalance in their eyesight for months as they wait for each eye to be operated on individually, sometimes a month apart.

The CPSO approval finally came in March of 2019, and U Surgical Centre Scarborough soon celebrated its official opening in April of 2019.

When the team saw the first patient walk through the doors, it was a moment of joy. *"It was actually a happy day. I remember that day, April 15. It is amazing when you put so much work into something and you see it finally complete and more importantly, benefiting patients,"* Maureen went on.

On April 15th, everything went according to plan. The Scarborough operating room continues to run efficiently and safely. Both Operating Room Nurse Managers pride themselves on a 'safety-first' and 'patient-centred' focus – the principle

on which the organization rests.

Drs. Somani and Tam, both of whom serve as Uptown Eye Specialists Medical Directors, tell them often that they need to pat themselves on the back, and not to forget this achievement. The impact of the new ambulatory surgery centre will be felt across the Greater Toronto Area for many years to come.

Waiting times for Uptown Eye Specialists have already been cut by up to 75%. With new doctors joining the organization, waiting times will continue to be reduced. Patients who will see the biggest impact of the newest Scarborough operating room will fall in the central and eastern catchment areas of GTA. The most immediate benefit will be the reduction in their commute times and waiting times for cataract surgery.

"It gives seniors more time to enjoy their lives in addition to the natural improvement in quality of life."

Thousands of patients whose lives got better will never know that these unsung heroes are the drivers behind it. But Jennifer and Maureen don't mind.

WAS IT WORTH IT?

"Oh, yes! Especially when the patients come in, and right after their cataract surgery, they say, oh I can see, I can see you guys!"

They now consider this among the biggest professional achievements of their lives. *"So far,"* they jointly added. However, they both quickly pointed out that having each other was critical to making this project a success.

"Having each other to lean on is an understatement," Maureen observed. *"Having her there eased my stress,"* Jennifer quickly added.

Although the centre is approved and functional, there are many tasks that lay ahead. The most important task is now to hire a team of surgeons and councilors to operate the room. I think it's fair to say – the newly minted U Surgical Centre Scarborough is something special for everyone, and more importantly, offers value to all stakeholders. The investment of resources, time, and energy into the new surgical room has been worth it. The new centre is truly priceless.



**“THIS IS A WORLD-
LEADING SOLUTION
OFFERED AT A FEW PLACES
IN NORTH AMERICA.”**

UPTOWN AT FOREFRONT OF REVOLUTIONARY PROCEDURE TO TREAT KERATOCONUS

Uptown Eye Specialists is one of the first clinics in North America to adopt advanced Keratoconus treatments. This is radically changing the lives of patients who suffer from this common disease in the greater Toronto area.

Keratoconus is a progressive eye disease where the normally spherical cornea thins and begins to bulge into a cone-like shape. When light hits the cornea normally, it is focused on the retina at the back of the eye. In a patient with Keratoconus, the light scatters instead of reaching the retina.

Keratoconus is relatively common, affecting about one out of 1000 people. There is no known cause of the condition, but it can be hereditary. Although Keratoconus does not result in blindness, it can cause severely blurred and distorted vision.

Normal glasses cannot effectively treat Keratoconus. Initially, patients require a rigid gas permeable contact lens to recreate the spherical cornea shape. If the disease has progressed further, however, it may be necessary to use specialized scleral contact lenses. If the disease progresses to the point where the cornea bulges excessively, a corneal transplant becomes the only option.

If Keratoconus is recognized early, Uptown Eye Specialists can offer the Accelerated UltraView Xlinking™ Procedure. This is a world-leading solution offered at just a few locations in North America. The state-of-the-art laser technology allows experienced corneal surgeons to halt progression of the thin, weak, or deformed corneal shape.

UltraView Xlinking's treatment takes just 18 minutes per eye, which is significantly less than the one hour per eye that was common with previous treatments. The Accelerated treatments at Uptown Eye Specialists have seen no healing complications in the past four years.

Dr. Raj Maini explains, *"During the procedure the cornea is treated with vitamin B medication and a special laser light. This treatment strengthens the cornea and locks the shape, effectively halting the progression of the Keratoconus."*

One of the things that makes this treatment option superior is the fact that very few patients ever require additional treatment. In addition, UltraView Xlinking™ is performed under local anesthesia, so patients do not experience any pain. Improvement is typically seen within 3-6 months.

Uptown Eye Specialists is proud to be one of the first clinics in North America to offer this revolutionary procedure.

In conjunction with Xlinking™, Uptown Eye Specialists offers Intacs surgery to the select group of patients who are likely to benefit from it. If a patient requires invasive surgery, deep anterior Lamellar Keratoplasty is a better alternative as it results in a less traumatic wound and reduces the risk of rejection of the transplant.

Intacs surgery involves inserting a small segment of contact lens material into the cornea to reduce the size and shape of the cone.

"We have extensive experience in corneal transplants, which allows us to offer the best possible transplant."

The cornea consists of three layers; the skin layer (epithelium), the middle thicker layer (stroma) and the inner layer (endothelium). The inner layer is unaffected by Keratoconus. Therefore, if a transplant is required, Uptown Eye Specialists are able to offer deep anterior Lamellar Keratoplasty surgery.

The advantage of deep anterior Lamellar Keratoplasty is that the inner layer is not transplanted. Not only does this help to reduce the risk of rejection, but it can also reduce recovery times by as much as one half.

Dr. Maini adds, *"We have extensive experience in corneal transplants at Uptown Eye Specialists, which allows us to offer our patients the best possible style of treatment, as required."*

UltraView XLINKING™

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



UPTOWN EYE SPECIALISTS PRIDES ITSELF ON WORLD-LEADING RESEARCH



INNOVATIVE **XEN GEL** IMPLANT GLAUCOMA TREATMENT NOW AVAILABLE AT UPTOWN

Dr. Darana Yuen of Uptown Eye Specialists is one of the limited number of surgeons qualified to offer the innovative XEN Gel Stent implant, which is safe, effective, and reduces waiting time for treatment.

DR. YUEN HOPES THAT SURGEONS ACROSS THE WORLD START ADOPTING HER GAME-CHANGING METHODOLOGY.

Dr. Yuen co-authored an award-winning paper titled “Slit Lamp Implantation of a Gel Microstent,” which was presented at the American Society of Cataract and Refractive Surgery’s (ASCRS) 2019 conference.

The novel approach to the insertion of XEN Gel Stent is a gamechanger, according to Dr. Yuen.

The XEN is a surgical implant designed to lower high eye pressure in open-angle glaucoma patients who could not be helped by medications and previous surgical treatment. The implant allows fluid inside the eye to drain to the outside, thereby lowering eye pressure.

XEN has traditionally been performed in a surgical theatre via an internal application (ab-interno). Access into the eye is via corneal incisions which need to be sutured closed at the end of the procedure.

The new technique that Dr. Yuen and her team developed in 2018 allows XEN to be externally applied to the eye (ab-externo) at the slit-lamp, in an off-label fashion. An operating room is not required and no cuts are made to the eye. All of these aspects make the ab-externo approach much less invasive.

In their study, the success rate of the implantation was 95.5% (21/22) after one attempt and 100% (22/22) after a second attempt. No serious adverse events were reported. Eye pressure reduction and glaucoma medication reduction were equivalent to the traditional approach. The treatment also reduced the need for postoperative interventions such as needling by up to 75%.

Because the procedure is minimally invasive, patients won’t have to wait for surgical facilities to become available. Operating rooms will be freed up, decreasing wait times for other procedures.

Dr. Yuen’s co-authored paper was presented at ASCRS in April 2019 and won two glaucoma awards: The Best Paper Presentation and Runner-Up for the film festival. Her work was also presented at the Canadian Ophthalmological Society’s annual meeting in June 2019.

Dr. Yuen and the team are the first surgeons in the world to conduct this new procedure. Since they started sharing their technique, other medical professionals across the globe are starting to adopt it.

“One of the newest improvements to my practice is an evolution in how I apply the XEN Gel Stent,” said Dr. Nathan Radcliffe, MD, of the New York Eye Surgery Center. “I’ve been applying the procedure ab-interno, which is how the device is approved. I’ve had good results, but I had to needle a lot of patients and became a little wary of that because it can interfere with practice flow.”

“In January 2019, I switched to an ab-externo approach. I find that I have more control with this technique. I am able to address the site of fibrosis and scarring. My outcomes have been dramatically better.”

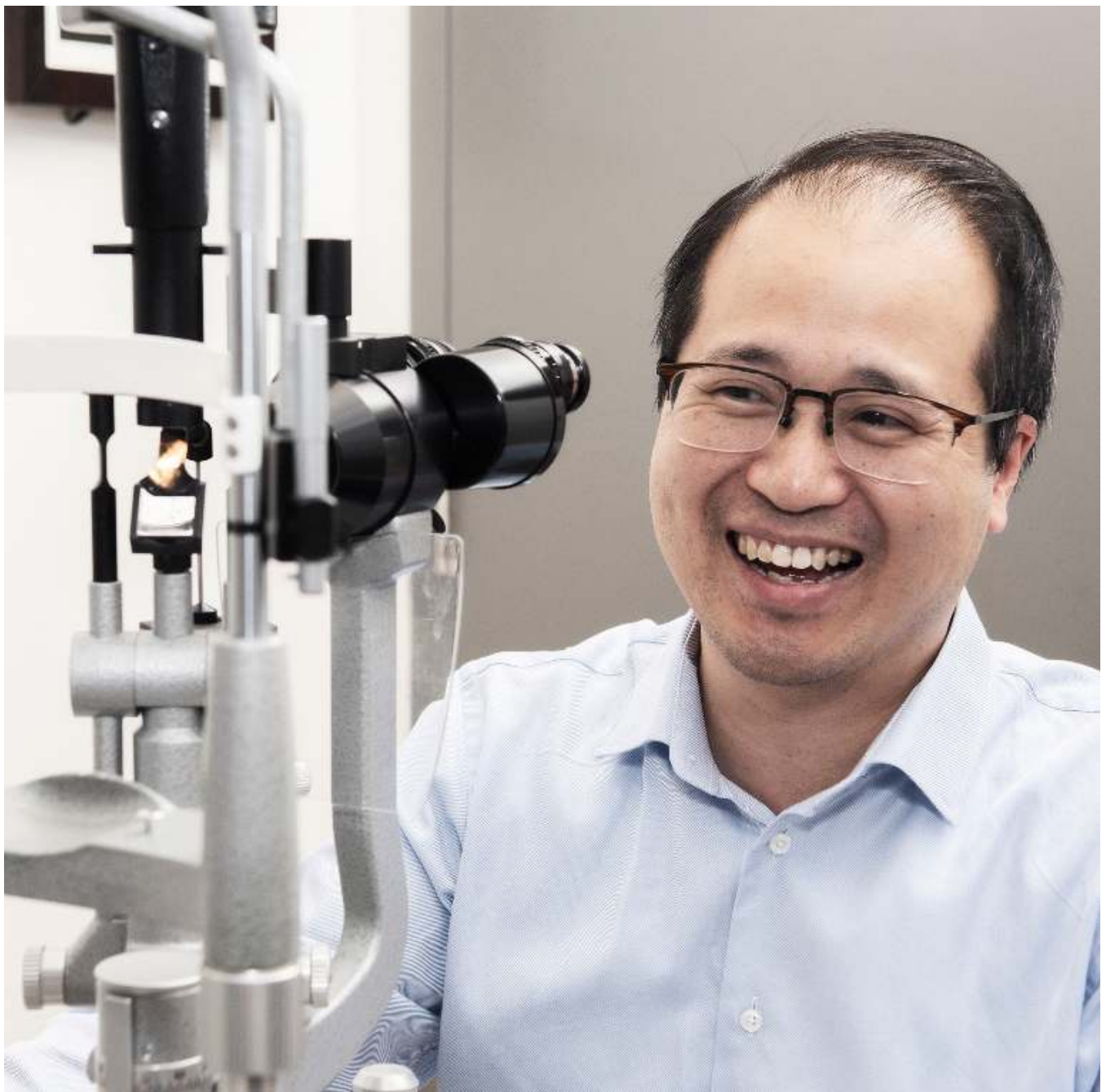
Dr. Yuen is one of only three doctors in Canada who are qualified to offer this revolutionary new treatment.

DR. YUEN IS ONE OF ONLY THREE DOCTORS IN CANADA WHO ARE TRAINED AND SKILLED IN THIS NEW PROCEDURE.

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.



UPTOWN EYE SPECIALISTS PRIDES ITSELF ON INDUSTRY-LEADING RESULTS



LASER TREATMENT AT UPTOWN CAN GET YOU PERFECT VISION

**“WE CAN IMPROVE
THE SHARPNESS
AND CLARITY OF
THEIR VISION
BEYOND WHAT
GLASSES OR
CONTACT LENS
CAN DO.”**

“We can improve the sharpness and clarity of their vision beyond what glasses or contact lenses can do.”

New data released by Uptown Eye Specialists reveals that patients’ 20/15 vision nearly doubled following LASIK™ surgery at the clinic.

Uptown Eye Specialists released new data showing that the number of LASIK™ patients at the clinic who achieved 20/15 vision without glasses increased to 27%. Only 14% of patients had 20/15 vision before the operation, even while wearing glasses.

“This is an incredible result,” said Dr. Eric Tam, who heads the Refractive Laser Vision Correction Program at Uptown Eye Specialists. “We are not only helping patients gain freedom from dependence on glasses or contact lenses. We are also helping them improve the sharpness and clarity of their natural unaided vision beyond what glasses or contact lenses can do.”

Results for 20/20 vision after LASIK™ are equally impressive. Nearly 80% of patients achieve 20/20 vision or better after surgery, without the aid of glasses or contacts.

Uptown Eye Specialists credits their results to the state-of-the art technology at the clinic and the large, diverse team of doctors who bring their unique expertise to the table.

Uptown Eye Specialists spent a lot of time researching the platform to develop LASIK™, a mature technology that has been in the market for 20 years.

“We chose a state-of-the-art technology. We prioritized the best quality outcome and made all our technological decisions to meet that goal,” Dr. Tam added. “The clinic does not offer anything but the best with our LASIK™ technology.”

The clinic believes that diversity has become a major contributor to their success. Uptown Eye Specialists offers a wide range of surgical eye services, so its team covers all specialties regarding the eye.

“This allows us to develop ideas and solutions that take a comprehensive view of the eye,” Dr. Tam said. “Our emphasis on quality is what sets us apart from other clinics across North America. We have an exceedingly high number of patients who not only no longer need their glasses, but now have eyesight that now exceeds 20/20 vision uncorrected.”

Dr. Tam has treated over 10,000 patients for laser corrective vision. His current focus is on developing the LASIK™ program further.

Uptown Eye Specialists is also aiming to find and integrate technology that reduces the trauma to the cornea during the operation. It is closely monitoring the SMILE technology, which is in the pilot phase and claims to minimize this trauma. However, it is yet to be determined if the SMILE results are comparable to LASIK™ in terms of end product.

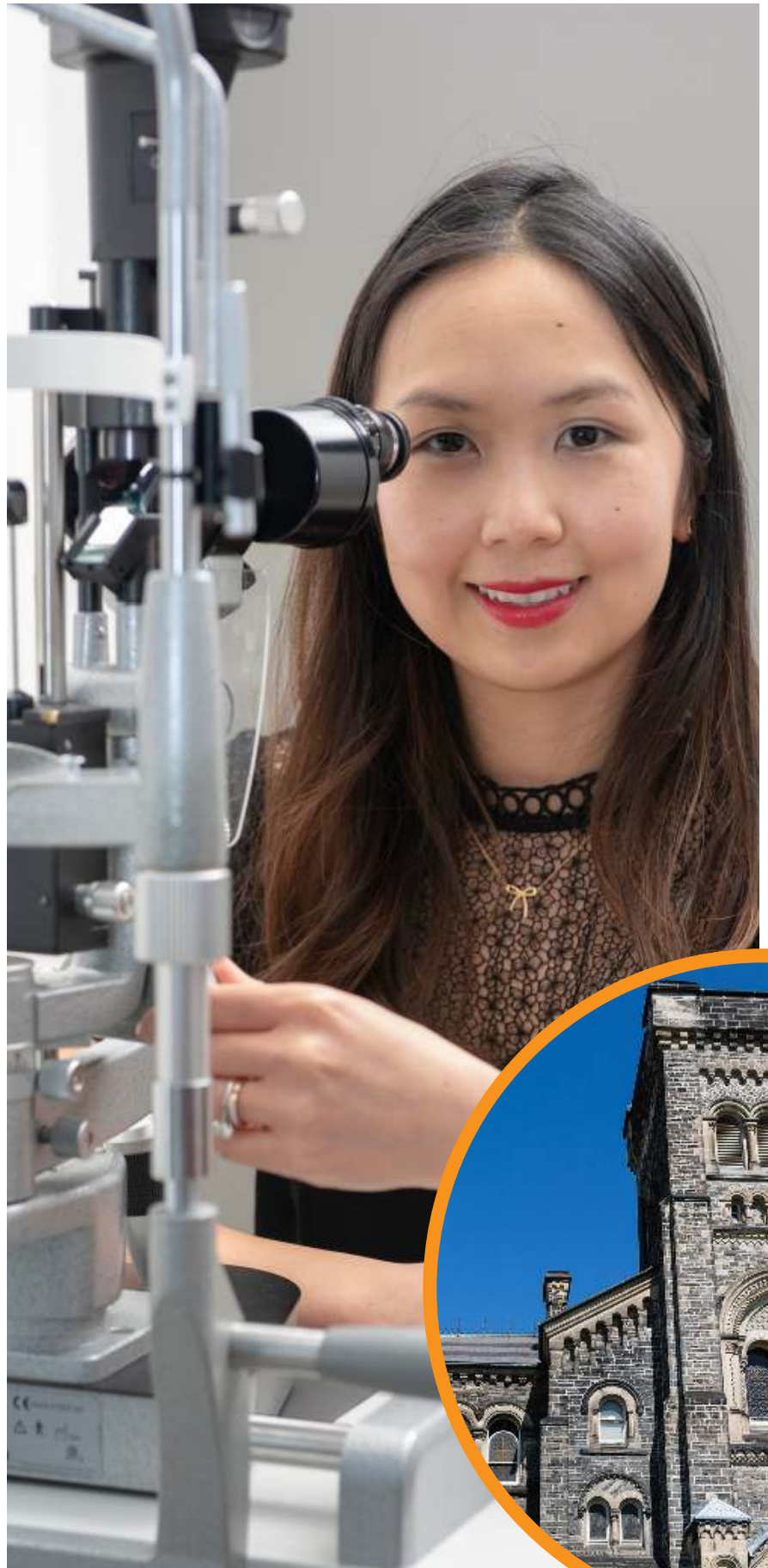
“We are happy to be able to enhance our patients’ lives,” Dr. Tam concluded. “Not just by getting rid of their glasses and contact lenses, but by giving them the best vision that they can enjoy. Over the years, we have come across patients who consult with us and recommend us to their relatives.”

UltraView
LASIK™

Dr. Eric Tam has specialized interest and extensive experience in laser-assisted cataract surgery and laser refractive surgery, with over 20,000 ocular procedures performed.



**UPTOWN EYE
SPECIALISTS
DELIVERS
QUALITY
PATIENT CARE
ACROSS THE
GTA**

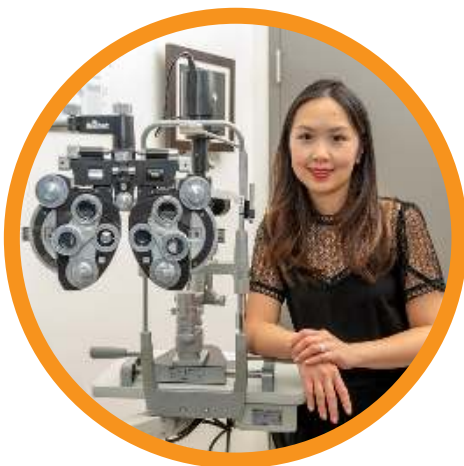


DR. CHIU REVOLUTIONIZES OPHTHALMOLOGY TRAINING AT THE UNIVERSITY OF TORONTO

In 2017, Uptown doctor Dr. Hannah Chiu revolutionized how ophthalmology was taught at the University of Toronto. Her new approach led to more medical students developing an interest in ophthalmology, reporting higher learning satisfaction, and ultimately delivering better patient care.

Dr. Chiu was invited to Harvard University to discuss the impact of her radical transformation of how Canada's top 250 medical students learn ophthalmology. The new model was a switch from traditional lecture-based teaching to a platform where students play an active role, learning through self-direction and interaction.

Satisfaction ratings by medical students in the ophthalmology curriculum shot up to 4.3 out of 5, up from 3.9 under the old system. The impact will be felt directly by patients as better ophthalmology training results in better care for their eyes.



Dr. Hannah Chiu was the recipient of the highest honour for graduating ophthalmology residents: the Duncan Jamieson Memorial Prize and the Woywitka Cup.

"Even if students don't end up pursuing ophthalmology, which the majority will not," Dr. Chiu observed, "they will encounter ophthalmology in the emergency room, family doctor's office, and other situations in their careers. Being comfortable and familiar with the basics of ophthalmic diseases and the treatment of those diseases ultimately helps patients."

This change comes in the wake of concern among new doctors about their knowledge of the eye. A recent survey of Canadian medical students suggests that students have a low baseline level of ophthalmic knowledge, and very limited exposure to the field.

Other reports have alluded to the challenges that newly trained generalists face in demonstrating adequate understanding of ocular anatomy, common causes of vision loss, and the relationship between the eye and systemic diseases.

Dr. Chiu's curriculum utilized seven new techniques for educating students. They included pre-recorded online lectures, topic-based self-learning e-modules, interactive live lectures, case-based learning sessions that were student-led and faculty-led, the Eye Dissection Lab, a Preclerkship Handbook, and clinical skills sessions.

Dr. Chiu was inspired to undertake this change when she was a scholar at the Harvard Macy Institute at Harvard University, soaking up knowledge from other deans and faculties of medicine across the world.

Her work at the University of Toronto was recognized when she was recently invited back to Harvard. As a selected Returning Scholar Faculty, she shared her unique educational achievements with Canadian, US, and international medical educators.

Her work has been submitted for review at the Canadian Journal of Ophthalmology.

SATISFACTION RATING

Reported satisfaction from medical students increased from 3.9 to 4.3 out of 5

PATIENT CARE

A better understanding of ophthalmology improves eyecare for all patients

INFLUENCE

Dr. Chiu continues to inspire medical students to specialize in ophthalmology



DOCTORS AT UPTOWN LEAD LANDMARK STUDY SHOWING BENEFITS OF RELACS™ COMPARED TO MANUAL CATARACT SURGERY

In a landmark 3000-patient study, doctors at Uptown Eye Specialists demonstrated that UltraView ReLACS™ is safer, more effective and has a distinct benefit in treating more difficult eyes.

Cataract surgery is by far the most common ocular surgery performed worldwide – and any improvements to the delivery of the surgery can have a profound impact on millions of lives.

Doctors at Uptown Eye Specialists found themselves in a position to contribute to the understanding of cataract surgery, as the clinic was an early adopter of UltraView ReLACS™, a new technique to perform cataract surgery. It performed ReLACS™ procedures at a high-enough volume to yield scientifically significant results that can be critically evaluated.

Dr. Sohel Somani, the lead author of the study, said, *“Being pioneers and early adopters in the ReLACS™ revolution has allowed us to gain expertise, experience, and confidence in dealing with all types of cataracts, including those that are conventionally difficult.”*

This mammoth study of 3000 patients was published in the American Journal of Ophthalmology. The study critically examined the impact of an emerging and cutting-edge cataract surgery technique called *“Refractive Laser Assisted Cataract Surgery”* (ReLACS™), and compared it to conventional or traditional manual cataract surgery (MCS).

It looked at both visual and anatomical outcomes of pre-operative characteristics, post-operative results and complication rates. The results not only demonstrate that ReLACS™ is both safe and efficacious, in line with other published reports, but more importantly, ReLACS™ has a distinct benefit compared to MCS in treating more difficult eyes. *“We were able to critically evaluate our results, refine our procedures, and ultimately, share our in-depth knowledge and leading expertise with the wider ophthalmological community,”* Dr. Somani added.

UltraView ReLACS™ is one of Uptown Eye Specialists’ champion procedures (in addition to UltraView LASIK™, UltraView DEL, and UltraView LASIK™) and is gaining popularity as the premium technique in cataract surgery.

The fundamental basis of UltraView ReLACS™ is the use of a femtosecond laser, the fastest laser used in any surgery (10^{-15} seconds), to achieve four key surgical benefits over MCS:

- Minimally invasive – The use of precise femtosecond lasers replaces the needs for blades or other sharp instruments, resulting in greater precision, accuracy and, ultimately, more predictable outcomes.
- Greater patient comfort – Femtosecond lasers do not exert heat or ultrasound energy, yielding a gentler experience with greater patient comfort and efficient recovery.
- Reduced surgical time – By delivering its effect in femtoseconds, Ultraview ReLACS™ creates an exponentially faster completion rate of certain steps of the surgery compared to manual surgery.
- Customized surgical experience – By incorporating patient-specific corneal measurements in the laser planning, Ultraview ReLACS™ is able to reduce the overall corneal astigmatism load, leading to improved uncorrected visual acuity.

One of the key pillars of Uptown Eye Specialists is the commitment to patient-centred care and providing an educational resource for the community and, specifically, the referring optometric network. Research into groundbreaking techniques continues to be an Uptown Eye Specialists focus, especially those techniques that are truly revolutionary – UltraView ReLACS™ being a classic example.

“I am fortunate to work in an environment that stimulates discussion, discovery and innovation, and work with colleagues and co-authors who are as passionate about research and education as I am. This truly makes Uptown Eye Specialists a unique leader in eyecare delivery,” Dr. Somani said.

Uptown Eye Specialists doctors who were involved in this study are Dr. Somani, Dr. Raj Maini, Dr. Fariba Nazemi, and Dr. Eric Tam. The American Journal of Ophthalmology is a prestigious, peer-reviewed, scientific publication that only publishes original, previously unpublished manuscripts.

UltraView ReLACS™

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



UPTOWN UNIVERSITY: SUPERIOR EYE CARE THROUGH **CONTINUOUS EDUCATION**



Eye care is an ever-evolving field. Cognizant of this fact, Uptown Eye Specialists established a university for its team, so that doctors and staff alike could learn and share the technologies and best practices needed to offer the highest standards in eye healthcare.

Uptown Eye Specialists is one of the few medical clinics in North America to invest in this level of in-house professional development. It is also home to some of the world's most accomplished and respected eye specialists and regularly deals with the most complex cases in Canada.

"In my opinion, this is the best way to maintain our world-class reputation when it comes to delivery of patient care," Dr. Eric Tam explained. "We work on a lot of difficult cases, and Uptown University is a forum for our doctors to share what they learn with the rest of the team."

In addition to sharing recent breakthroughs in the field of eye care, the university includes courses designed to improve teamwork and cross-clinic communication.

According to Tanya Miller, manager at the Brampton site and one of the university's organizers, the goal is to combine healthcare knowledge and first-class team principles to deliver a superior patient experience.

She acknowledged that the program's success is mainly due to the dedication, efficiency, and expertise of Uptown Eye Specialists' staff.

"We have an excellent team. They're talented, motivated, and committed to delivering knowledgeable and quality patient care. When Uptown University was established, everyone embraced the opportunity to make it an instant success that keeps improving every year."

Ultimately, patients are reaping the benefits, which include a team approach to their case, expedited care due to better communication and knowledge sharing, and a more focused, effective team approach to treatment.

**"UPTOWN UNIVERSITY
IS A FORUM FOR OUR
DOCTORS TO SHARE WHAT
THEY LEARN WITH THE
REST OF THE TEAM."**

Uptown Eye Specialists has a multidisciplinary team, with each member specializing in a specific aspect of eye health and care. The resulting knowledge exchange has created a 'brain trust' that becomes stronger and more effective as everyone pursues professional development in their respective fields. *"It's a situation where the whole is more than the sum of its parts,"* Dr. Tam added. *"This is what makes us world-class and ensures that we continue to be leaders in our field."*

Tanya Miller has over 15 years of experience in healthcare. She works with the team at Uptown Eye Specialists to ensure high quality patient-focused care.



UPTOWN EYE CLINIC'S GROUND-BREAKING WORK WITH OCT

It is difficult to spot swelling at the back of the eye, yet swelling may delay the intended outcome of cataract surgery or increase the chance of failure. If you can identify those who are at risk of developing swelling, you can minimize the need for extra procedures and interventions, and increase the chances of success in cataract surgery.

Uptown Eye Specialists has been one of the early adopter clinics to acquire OCT (Optical Coherence Tomography) angiography technology to characterize blood vessels in the retina that are responsible for swelling in the eye. The clinic is conducting a study that looks into which diabetic patients are at the greatest risk of developing swelling.

"For retinal disease such as diabetes or macular degeneration, we are looking for abnormal swelling or leakage from compromised vessels," explained Dr. Peng Yan, one of the lead authors of an OCT angiography study at Uptown Eye Specialists. "Now, with the advancement of OCT technology, we are now only looking for earlier signs of disease occurring. In particular, we are looking for signs of vascular remodelling - early vessel changes - that will predict which patients will manifest the disease, meaning we can monitor and intervene early, specifically for diabetics and other retinal vascular diseases."

OCT angiography is a new technology that builds on prior OCT technology. It is a non-invasive procedure that visualizes the retinal and choroidal vascular system – a first in ophthalmology and medicine in general.

Current methods of imaging the retinal vessels involve the injection of fluorescein dye intravenously coupled with camera images, a procedure known as fluorescein angiography. OCT angiography negates the need for intravenous injections and gives the ability to visualize blood flow of the back of the eye in real-time.



Dr. Yan said, *"It is known that patients with diabetes have problems with the back of the eye, but we wanted to know how this gets worse and how these vessels change at an earlier stage. By identifying earlier markers within the vessels, OCT angiography may be able to prove to be an excellent tool, and the work done in this area is both novel and exciting."*

OCT angiography typically detects the flow within vessels, which means that, prior to cataract surgery, doctors may now be able to look at various characteristics of these vessels to determine risk factors and, furthermore, be able to diagnose swelling after cataract surgery.

OCT technology has been around for over 10 years, but the technology continues to evolve quickly, and now provides the ability to look at small vessels at the back of the eye.

Uptown Eye Specialists continues to use the most up-to-date, modern, and advanced OCT and OCT angiography technology available. The ultimate goal is that patients not only receive the most advanced treatment, but also the most advanced tools aimed at disease prevention.

Dr. Yan said, *"We now have the ability to image deep within the eye, to the core layers. This technology is rapidly advancing, so I'm confident it will have a profound impact on our profession. Furthermore, this technology has revolutionized our current practice, and I look forward to it providing a better understanding of certain diseases and ultimately guiding their respective treatments."*

Dr. Peng Yan's clinic interests include eye trauma, retinal detachment, epi-retinal membrane, macular hole, and complications of diabetic retinopathy.



LASER TREATMENT IS HIGHLY EFFECTIVE IN COMBATING DRY EYES ON CATARACT PATIENTS

Dry Eye Laser (DEL) is a novel form of intense pulsed light therapy that is emerging in the treatment of dry eye, which is a chronic and pervasive disease with no cure. Uptown Eye Specialists is at the forefront of dry eye therapy and is among the first Canadian centres to develop a DEL program. Uptown Eye Specialists has treated hundreds of patients with DEL since 2017.

DEL uses a particular wavelength of light to treat the meibomian glands within the eyelids. If the meibomian glands are malfunctioning, it can cause a deficiency of oil within the tear film and lead to its premature evaporation. This is the most common type of dry eye condition.

DEL has been shown to be highly effective in treating dry eye. Some patients experience evaporative dry eye symptoms after cataract surgery and assume that the surgery was the cause, which is not the case.

Dr. Raj Maini, who leads a working group on DEL, explained, *“When we identify patients with these symptoms before cataract surgery, we can then treat them beforehand and alleviate or minimize their dry eye problem. This means patients can have the best possible outcome from the surgery with fewer dry eye symptoms afterwards.”*

**“PATIENTS CAN
HAVE THE BEST POSSIBLE
OUTCOME WITH FEWER
DRY EYE SYMPTOMS
AFTERWARDS.”**

DEL is a new technology and has seen exceptional results. It has the added benefit of protecting the eye with a shield during the procedure, making it safe. The near-painless procedure is completed in approximately 10 minutes. The patient can resume their normal activities almost immediately afterwards.

“As one of the earliest adopters of this technology in North America, we are providing an excellent service for our patients, which could add incredible value to their lives,” said Dr. Maini.

Dr. Maini was one of the senior authors of the Uptown Eye Specialists DEL research study. He presented their experience at the Canadian Ophthalmological Society Annual meeting in Toronto in June 2018.

Patients undergo a full assessment once referred to the Uptown Eye Specialists Dry Eye Clinic, including seven different objective tests. These tests determine the extent of the problem and unearth any confounding issues. The service uniquely integrates three specialists:

- **Clinical eyecare providers** – These Uptown Eye Specialists doctors are able to analyse and diagnose the cause and extent of the dry eye.
- **Diagnostic technicians** – Uptown Eye Specialists technicians are able to conduct various tests to analyse and quantify the degree and type of dry eye.
- **DEL Laser specialist** – Uptown Eye Specialists-affiliated plastic surgeons with extensive expertise in intense pulse light therapy are able to safely deliver the DEL treatment.

Uptown Eye Specialists hopes that further research and development within the Dry Eye Program will continue to benefit all types of dry eye patients – especially those undergoing eye surgery.

UltraView
D E L

A photograph of two female medical professionals standing in an operating room. The woman on the left is wearing blue scrubs with a logo that says "EYE SPECIAL". The woman on the right is wearing dark grey scrubs. They are both smiling at the camera. In the background, there are surgical lights, a microscope, and medical equipment. A large white text box is overlaid on the image, containing the quote: "AS ONE OF THE EARLIEST ADOPTERS IN NORTH AMERICA, WE ARE PROVIDING AN EXCELLENT SERVICE FOR OUR PATIENTS."

**“AS ONE OF THE
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FOR OUR PATIENTS.”**

L A S I K

The most advanced wavefront-guided, all-laser LASIK™ procedure. The result is an exceptional uncorrected vision that is often better than 20/20.

R e L A C S

An outpatient cataract procedure performed with a computer-driven, imaging-guided femtosecond laser. The result is unprecedented precision and accuracy of vision.



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PATIENT REFERRALS

If you are a healthcare professional, and would like to refer your patient to one of our clinics for consultation, please visit www.uptowneye.ca/referring-doctor/ for referral directions



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