

20/20

Pressing Questions and Unmet Needs for 2021 and Beyond

Where will interventional glaucoma go in the near and distant future?

BY XIONGFEI LIU, MD; MICHAEL D. GREENWOOD, MD; DANIEL LEE, MD; JOHN T. LIND, MD, MS; ALENA REZNIK, MD; OLUWATOSIN SMITH, MD; HUSAM ANSARI, MD, PHD; LARISSA CAMEJO, MD; AND SHAKEEL SHAREEF, MD



XIONGFEI LIU, MD

The year 2020 has proven to be a time of resilience and adaptation. The year 2021 will likely be a time of exploration with the hope of returning somewhat to prepandemic normalcy. In 2021, more established patients will return to ophthalmic practices, some of whom were lost to follow-up in 2020. A pressing question for interventional glaucoma

in 2021 and beyond is how to alter the treatment plan for those patients who were previously lost to follow-up. Further, as the Preserflo MicroShunt (Santen) will likely be an available tool in the United States, for whom and when should surgeons use this device, especially under the circumstances of 2021? Last but not least, interventional glaucoma's ethos is to

utilize up-to-date treatment therapy to alter the course of glaucoma. That said, bench and clinical research is paramount. In 2021, how do we maintain that innovative spirit in bench research while reestablishing a rapport with patients and encouraging them to enroll in clinical trials amid uncertainty they feel regarding their safety?



MICHAEL D. GREENWOOD, MD

To me, the most pressing question related to interventional glaucoma is when will sustained-delivery medications (and perhaps

MIGS) become the preferred first-line therapy? I believe that topical medications have a place in glaucoma care, but in the not-so-distant future

they will likely become supplemental to other interventions that are longer-lasting and more preferable from a patient lifestyle standpoint.



DANIEL LEE, MD

Our clinical mindsets must evolve alongside our surgical tools. Glaucoma surgeries have become much safer, but many practitioners have yet to adjust their treatment algorithms, despite mounting evidence that earlier intervention may, on average, yield improved outcomes. On the other hand, there is a nonzero risk of vision loss from complications associated with these procedures, our payment models incentivize more treatment, and the risk of overutilization is real. A balance must therefore be struck. What are some of the metrics or warning signs we should be looking out for to ensure

"GLAUCOMA SURGERIES HAVE BECOME MUCH SAFER, BUT MANY PRACTITIONERS HAVE YET TO ADJUST THEIR TREATMENT ALGORITHMS, DESPITE MOUNTING EVIDENCE THAT EARLIER INTERVENTION MAY, ON AVERAGE, YIELD IMPROVED OUTCOMES."

that the pendulum has not swung too far in favor of intervention? What

tools will we use to determine which surgery is ideal for which patient?



JOHN T. LIND, MD, MS

Interventional glaucoma is patient-centric care that incorporates vision-preserving diagnostics and therapeutics to enhance outcomes. As we approach 2021, advances in glaucoma care will include improved mechanisms of diagnosis and

enhanced understanding of how to interpret diagnostic findings; in turn, this will ultimately help us determine which patients require more aggressive treatment and which treatments will maximize efficacy while minimizing risk. Opportunities

in 2021 include incorporating AI into our clinics, advancing IOP monitoring and assessments, enhancing diagnostics, expanding our understanding of advances in medical therapy, and optimizing our surgical outcomes.



ALENA REZNIK, MD

In the future, I will likely intervene earlier to prevent glaucomatous progression in my patients because a

few individuals experienced disease progression while avoiding office visits during the COVID-19 pandemic.

Additionally, we need a safe stepwise approach to standalone MIGS as well as new drug-eluting devices.



OLUWATOSIN SMITH, MD

"The term interventional glaucoma refers to more than simply technology. It is a mindset that the available technologies bring to us as surgeons and clinicians. Instead of being passive and watchful, waiting for our patients to progress, interventional glaucoma allows us to be actively involved in their care by providing interventional therapies that change the course of the disease. I am very excited

about interventional glaucoma and how it shapes the future of glaucoma care."
—Iqbal Ike K. Ahmed, MD, FRCSC

Looking at Ike's remarks in this article excerpt, I know that intervention allows active involvement in glaucoma care to change the disease course by avoiding a passive and watchful approach. However, I look forward to a time when improved

disease monitoring can provide better insights into our interventional decisions. With new technologies on the horizon, how do we plan to employ other aspects of care to optimize the multiple interventional glaucoma options that continue to become available to us?

1. Ahmed IIK, Gallardo MJ, Khaimi MA, et al. Interventional glaucoma: SLT and MIGS. *Cataract & Refractive Surgery Today*. August 2018. Accessed December 2, 2020. https://crstoday.com/wp-content/uploads/sites/4/2018/08/CRST0818_EllexABIC_Supplement.pdf



HUSAM ANSARI, MD, PHD

When considering the future of interventional glaucoma care, several key questions emerge. When can we

start repairing and protecting the optic nerve? When will we be free from patient self-administration of glaucoma

treatment? When will we have glaucoma surgery that is as safe, effective, and predictable as cataract surgery?



LARISSA CAMEJO, MD

As we approach a new year, several pressing questions remain. Which of the surgeries on the horizon will be the most effective in patients with the strongest episcleral fibrosis? Will material or lumen modifications make

a difference? Will the future indications for MIGS, currently indicated for use in combination with cataract surgery, include IOP lowering in pseudophakes? Which of the drug delivery systems, both existing and in the pipeline, will

be the strongest candidates based on safety, efficacy, and repeatability? Just as the past 5 to 10 years have drastically changed the glaucoma space, I think the next 5 to 10 years will bring a significant leap in progress.



SHAKEEL SHAREEF, MD

MIGS has revolutionized the field of glaucoma and has grown exponentially over the past 2 decades. It is important to conduct prospective randomized head-to-head studies

in the MIGS space to see which procedures and devices provide the best IOP lowering for patients. This is especially crucial in the developing world, where patients do not have

access to such procedures due to economic constraints. We must take into consideration the cost factor in providing affordable glaucoma care not only locally but also globally. ■

HUSAM ANSARI, MD, PHD

- Ophthalmic Consultants of Boston
- hansari@eyeboston.com
- Financial disclosure: None

LARISSA CAMEJO, MD

- Cataract and glaucoma specialist, CEO, and Founder at Larissa Camejo MD, Jupiter, Florida
- Member, *Glaucoma Today* Editorial Advisory Board
- larissacamejo@me.com
- Financial disclosure: None

MICHAEL D. GREENWOOD, MD

- Glaucoma, cornea, cataract, and refractive surgery, Vance Thompson Vision, Fargo, North Dakota
- michael.greenwood@vancethompsonvision.com; Twitter @migreenw
- Financial disclosure: None

DANIEL LEE, MD

- Glaucoma specialist and Director of the Glaucoma Research Center, Wills Eye Hospital, Philadelphia
- daniellee@willseye.org
- Financial disclosure: None

JOHN T. LIND, MD, MS

- Associate Professor of Ophthalmology and Director of Adult Clinical Ophthalmology, Glick Eye Institute, Indiana University School of Medicine, Indianapolis
- jlind@iu.edu
- Financial disclosure: None

XIONGFEI LIU, MD

- Glaucoma specialist, Sacramento Eye Consultants, California
- xiongfei.liu1@gmail.com
- Financial disclosure: None

ALENA REZNIK, MD

- Glaucoma specialist, Southern California Eye Institute, Los Angeles
- areznik@sceyes.org
- Financial disclosure: None

SHAKEEL SHAREEF, MD

- Director, Glaucoma Service, Case Western Reserve University School of Medicine, Cleveland, Ohio
- shklshrf@gmail.com
- Financial disclosure: None

OLUWATOSIN SMITH, MD

- Partner Physician, Glaucoma Associates of Texas, Houston
- tsmith@glaucomaassociates.com
- Financial disclosure: None