

**The Optometric Trends Discovery Group's  
2023 Report on**

# **Glaucoma: INSIGHTS & TRENDS**

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**Glaucoma** is a chronic eye condition that affects the optic nerve and can lead to permanent vision loss if left untreated. Glaucoma is often associated with increased intraocular pressure, although it can occur even with normal or low intraocular pressure. Early diagnosis and treatment of glaucoma are critical to preserving vision and preventing further damage to the optic nerve. Treatment options for glaucoma include eye drops, laser surgery, and surgical procedures, and the choice of treatment depends on the type and severity of the condition.

Here we'll review data from the 2023 Optometric Trends Discovery Group (OTDG) Survey to better understand clinical practice patterns and opinions of US optometrists as they relate to the diagnosis and treatment of glaucoma.

## Glaucoma Diagnosis

Visual field testing remains a critical tool in the diagnosis of glaucoma (Figure 1). However, it's important to note that early glaucoma can occur without a visual field defect. For this reason, I believe that retinal ganglion cell analysis along with retinal nerve fiber OCT technology are incredibly useful in detecting early glaucoma, and we will continue to see advancements in ganglion cell analysis and retinal nerve fiber analysis to identify glaucoma earlier. Additionally, the use of OCT angiography is gaining momentum in the literature and may become a valuable tool for early diagnosis in the future. Ophthalmoscopy, pachymetry, and gonioscopy

round out the list of the most popular tools in diagnosing and managing glaucoma.

It's important to keep in mind that even with how promising each of these tools is, there is no single definitive tool that can diagnose glaucoma on its own. Instead, glaucoma diagnosis is like a complex puzzle and requires the use of different technologies, such as intraocular pressure measurement, evaluation of the optic nerve head, corneal thickness, corneal hysteresis, family history, and more, to piece together the diagnosis accurately.

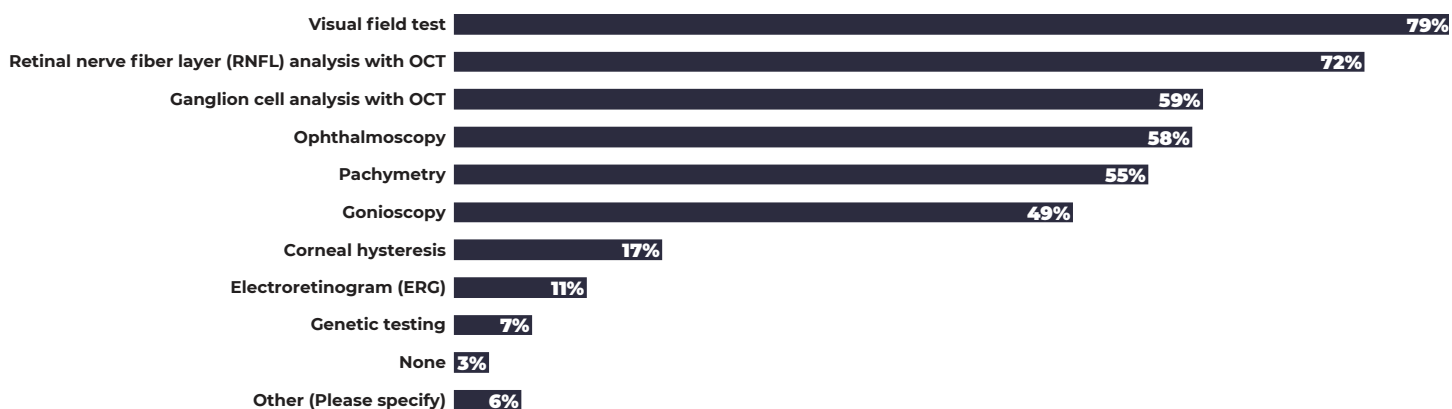


FIGURE 1. Beyond intraocular pressure which of the following do you primarily use to diagnose early-stage glaucoma? (Select all that apply.)

## Glaucoma Treatment

When it comes to treating glaucoma, there are many options available and, of course, each has its own pros and cons. As shown in Figure 2, medication is by far the most commonly used first-line treatment for glaucoma. Selective laser trabeculoplasty (SLT) is one option that I believe should increasingly be seen as a first-line treatment. The LiGHT study now has three- and six-year data showing the benefits of using SLT for the treatment of glaucoma.<sup>1, 2</sup> In my practice, I offer both drops and SLT. The majority of my patients, around 70%, still choose to go on a drop, typically a prostaglandin, but the remaining 30-35% will opt for SLT.

Among prescription medications prostaglandin analogs remain the most commonly prescribed treatment option for glaucoma (Figure 3). Other treatments available for glaucoma include glaucoma drug delivery such as bimatoprost pellet that can be implanted one time per indication. It is a great option for patients who may be experiencing ocular surface disease or issues from their topical agents, as it allows them to take a break from their usual prostaglandin analogs.

Rho kinase inhibitors are another class of medication that works well in a variety of different glaucoma presentations and has a unique mechanism of action. These medications work by increasing outflow through the trabecular meshwork and decreasing episcleral venous pressure. However, one downside to these medications is that they can cause conjunctival hyperemia. It is important to educate patients about this side effect before prescribing these medications.

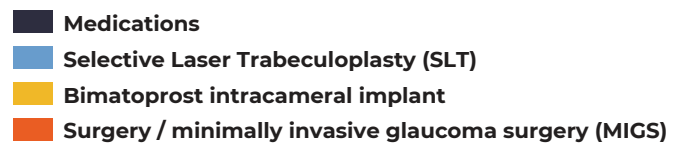
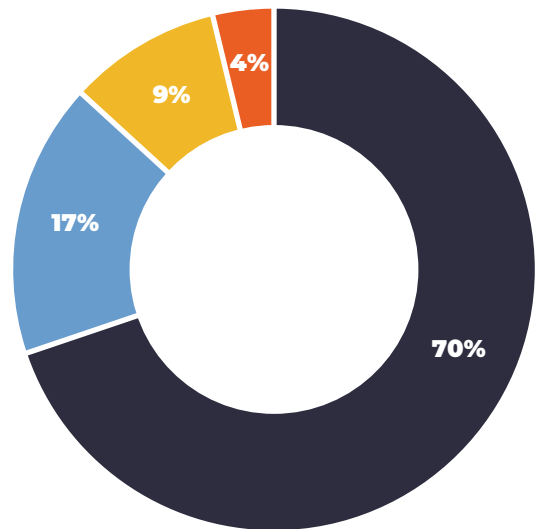


FIGURE 2. What is your typical first-line therapy for newly diagnosed glaucoma?

*“When it comes to treating glaucoma, there are many options available and, of course, each has its own pros and cons.”*

1. Gazzard, G., Konstantakopoulou, E., Garway-Heath, D., Garg, A., Vickerstaff, V., Hunter, R., ... & Zhu, H. (2019). Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomised controlled trial. *The Lancet*, 393(10180), 1505-1516.

2. Gazzard, G., Konstantakopoulou, E., Garway-Heath, D., Adeleke, M., Vickerstaff, V., Ambler, G., ... & Barton, K. (2023). Laser in Glaucoma and Ocular Hypertension (LiGHT) Trial: Six-Year Results of Primary Selective Laser Trabeculoplasty versus Eye Drops for the Treatment of Glaucoma and Ocular Hypertension. *Ophthalmology*, 130(2), 139-151.

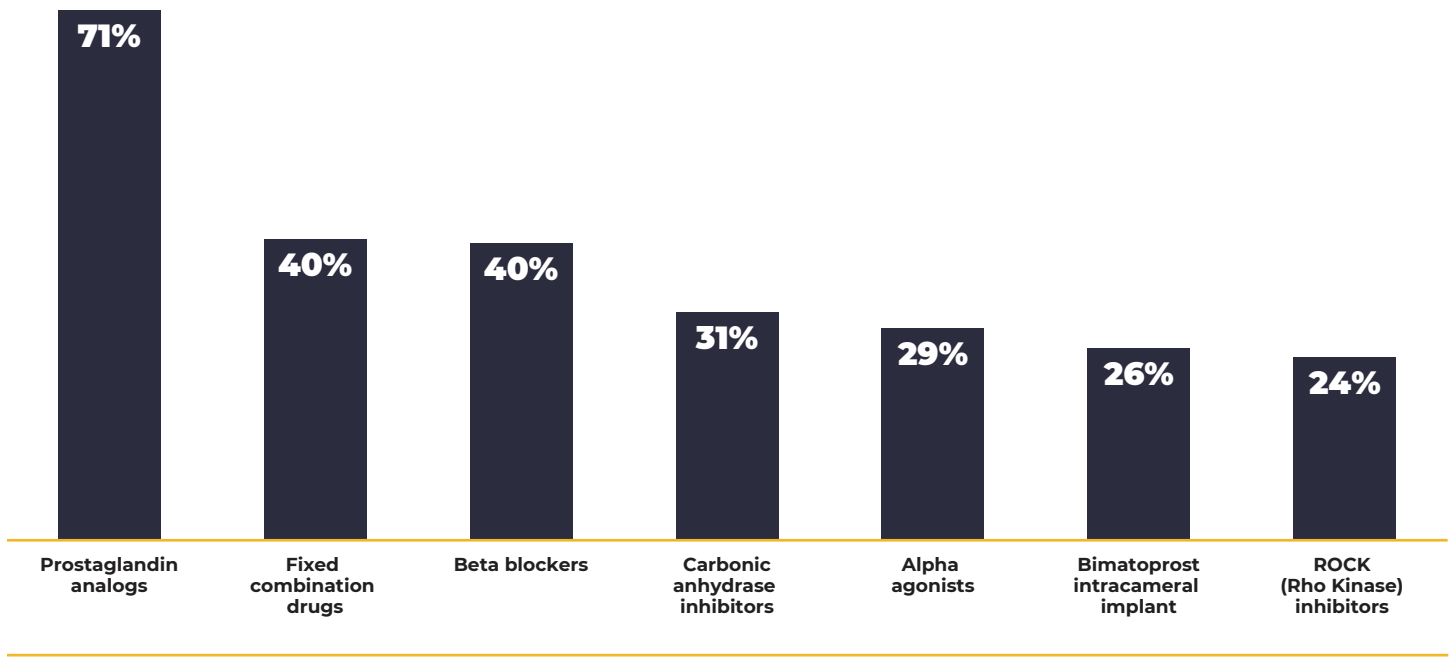


FIGURE 3. In what percentage of glaucoma patients do you prescribe the following for long-term IOP management?

*“Optometrists must be willing to embrace innovation and stay up-to-date with the latest developments in glaucoma management”*

### Patient Compliance

The main challenge for optometrists in managing glaucoma patients is compliance. OTDG Survey respondents believe that 30% of their glaucoma patients are non-compliant whether they’re taking one or more than one medication. Optometrists can consider a variety of approaches that reduce the reliance on patient compliance through the use of procedures like SLT and the selection of efficacious medications that allow for mono-therapy. Additionally, advancements in glaucoma drug delivery systems and the development of sustained-release drug delivery technologies, hold great promise for improving patient compliance and adherence. To make the most of these new technologies, optometrists must be willing to embrace innovation and stay up-to-date with the latest developments in glaucoma management.

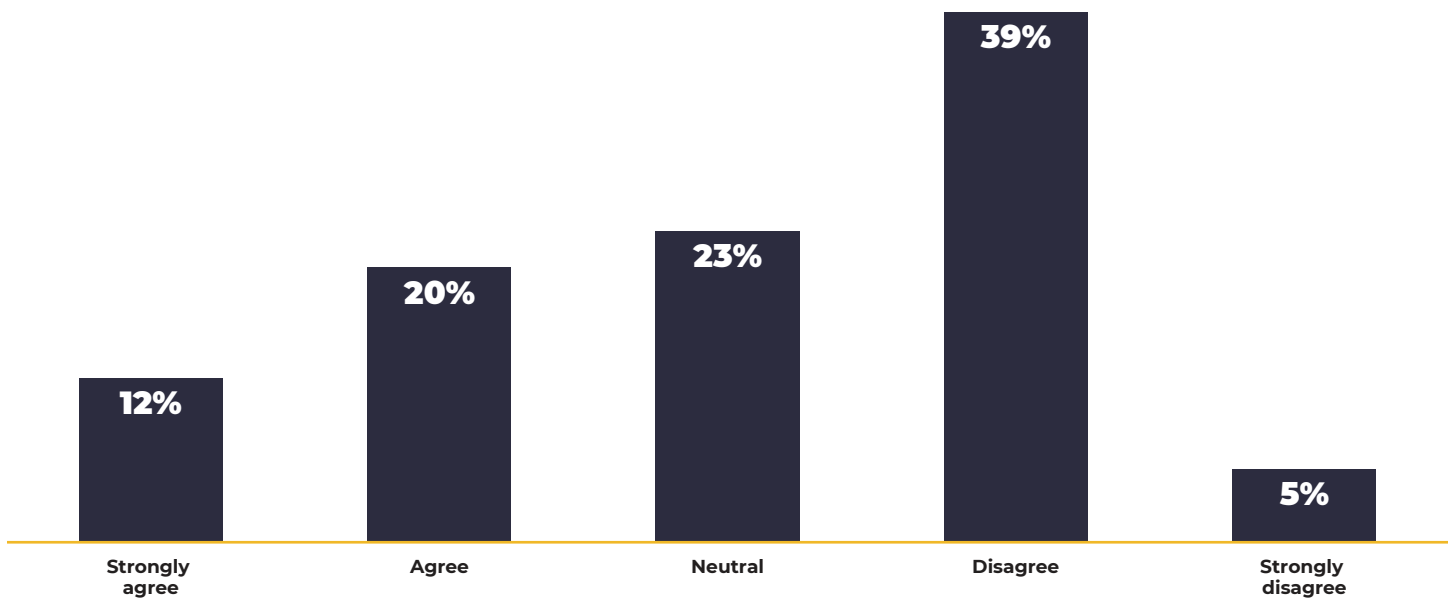


FIGURE 4. Please rate your level of agreement with the following statement: “Surgery should be a last resort when managing mild-to-moderate glaucoma patients.”

## Minimally Invasive Glaucoma Surgery (MIGS)

MIGS has become increasingly popular in recent years, as it offers a less invasive option for glaucoma patients. Typically, MIGS use tiny incisions to implant devices or create small channels in the eye to lower intraocular pressure and reduce the need for glaucoma medication. They can be especially beneficial for patients with visually significant cataracts and mild to moderate glaucoma, as surgeons can perform a MIGS procedure while already inside the eye to remove the cataract, reducing the need for additional surgeries.

According to survey results, on average respondents believe that 22% of glaucoma patients are MIGS candidates, but only 4% of respondents use MIGS as a first-line treatment (Figure 2) and on average, respondents comanage/refer just 10 MIGS patients each year. From a managed care perspective, utilizing MIGS as a first-line treatment for glaucoma can be difficult, as it requires the patient to already be on medication. Patients who have never been treated and

present with a visually significant cataract can undergo cataract surgery, but obtaining coverage for the MIGS procedure may be challenging. It’s important to consider MIGS procedures for pseudophakes, particularly those who have difficulty with medication compliance or ocular surface disease. These factors may explain why 32% of survey respondents agree or strongly agree with the statement that “Surgery should be a last resort when managing mild-to-moderate glaucoma patients” (Figure 4).

## Conclusions

Overall, when it comes to treating glaucoma, it is important to have a wide range of diagnostic tools and treatment options, as there is no one-size-fits-all option at each step. A multimodal approach is key to accurately diagnosing glaucoma and an arsenal of treatment options are required to tailor the treatment to the patient. And of course, it is important to have discussions with patients about the pros and cons of each option to determine the best course of treatment for each individual case.

# Did you KNOW?



**16**  
number of glaucoma patients seen each month



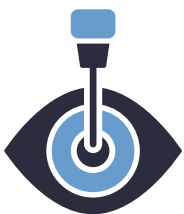
**10**  
number of MIGS patients co-managed/referred each year



**30%**  
of patients currently prescribed one topical medication to control their glaucoma are not compliant



**30%**  
of patients currently prescribed more than two topical medications to control their glaucoma are not compliant



**22%**  
of patients are estimated to be candidates for MIGS procedure, though estimates varied widely



**61%**  
are confident in their level of understanding of MIGS procedures



Only **32%** agree with the statement that surgery should be a last resort when managing mild-to-moderate glaucoma patients

# The Optometric Trends Discovery Group

(OTDG) Survey was launched on February 4, 2023. The survey included 141 questions developed and reviewed with the OTDG leadership board. The survey questions explored doctors' understanding and current practice patterns across a number of areas of optometric care, including presbyopia, astigmatism, corneal therapeutics, ocular surface disease, glaucoma, lid management, corneal refractive surgery, dry AMD and geographic atrophy, and myopia management.



Nearly 300 optometrists responded to the survey which was closed in mid-March 2023. You can access interpretive reports on additional OTDG topics as they are released by visiting [otdg.tfgeducation.com](https://otdg.tfgeducation.com) or scanning the QR code.



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