# A Comprehensive Surgical Approach to Open-Angle Glaucoma

The OMNI® Surgical System targets three areas of resistance with an implant-free MIGS procedure performed with or without cataract surgery

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Interventional glaucoma is a philosophy that has developed over the last years, accelerated by the adoption of minimally invasive glaucoma surgery (MIGS). While the concept of early intervention is gaining popularity, we currently do not have a consensus on what it means in practice. Essentially, it's a mindset, and I believe if you're a glaucoma surgeon, you're already practicing interventional glaucoma. You don't wait for the disease to progress before you step in, and you choose the least invasive intervention that will achieve the maximum benefit.

In my practice, canaloplasty, trabeculotomy, and any form of MIGS that acts early to reduce IOP and prevent disease progression represents the interventional glaucoma mindset. To that end, the OMNI® Surgical System (Sight Sciences) has become an important part of my armamentarium, as it enables me to perform canaloplasty and trabeculotomy for an implant-free MIGS approach with or without cataract surgery.

## FLEXIBILITY TO INDIVIDUALIZE TREATMENT

Essentially, there are three areas of resistance to aqueous outflow in glaucoma: the trabecular meshwork, Schlemm's canal, and the collector channels; however, we currently do not have a test that shows us exactly which parts of the conventional outflow pathway are occluded, narrow, or dysfunctional. Therefore, it makes sense to attempt to rejuvenate or reestablish outflow pathways by treating all three areas of resistance in one intervention for maximum efficacy.

With the OMNI® Surgical System, not only can we access up to 360 degrees of Schlemm's canal, we also have the option of following canaloplasty with trabeculotomy to excise as many clock hours of the trabecular meshwork as we wish in order to increase aqueous outflow. For instance, you might want to be somewhat more aggressive for a patient who has more advanced glaucoma and a lower target pressure, whereas you might want to be a little less invasive and leave structures intact in someone with a higher target pressure. Having this flexibility is key, as it enables us to tailor our treatment to the individual patient.

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Importantly, when we use OMNI, we are keeping all of our options open for future interventions. If we intervene early enough, patients may be spared from needing further surgery in the future, but when patients do require additional surgery further down the line, many other possible options remain available to us.

## A FOCUS ON EARLY INTERVENTION

While the OMNI® Surgical System can be used to treat mild, moderate, or even advanced open-angle glaucoma,[1] my goal is to intervene early in the disease process before permanent damage occurs. Thus, I use the OMNI most often to treat patients who have mild-to-moderate glaucoma. By and large, these are patients who have high IOP owing to reduced aqueous outflow in the conventional pathway. Their anatomy is already compromised, but, potentially, it is still possible to restore this natural outflow pathway.

The OMNI also can be effective to treat more advanced types of glaucoma. I would consider using it in certain circumstances—when hypotony is a concern, for example, when a more invasive surgery might be problematic—but the majority of my OMNI patients have mild-to-moderate disease and are struggling with eye drops, or they may have had selective laser trabeculoplasty (SLT) which was either unsuccessful or else is no longer effective.

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## "THIS IS A UNIQUE OPPORTUNITY TO ADDRESS PATIENTS' CATARACTS WHILE ALSO HELPING THEM TO POTENTIALLY REDUCE OR ELIMINATE THE NEED FOR IOP LOWERING DROPS AND AVOIDING THE SIDE EFFECTS THAT OFTEN ACCOMPANY THEM."

### AN OPTION WITH OR WITHOUT CATARACT SURGERY

About 90% of my OMNI cases are combined with cataract surgery. This is a unique opportunity to address patients' cataracts while also helping them to potentially reduce or eliminate the need for IOP lowering drops and avoiding the side effects that often accompany them.

By working through the same clear corneal incision created for the cataract surgery and adding just a few additional operating steps, the surgeon is able to lower the patient's IOP, rejuvenate functionality in the anatomical structures of outflow, and reduce or, in many cases, even eliminate the need for IOP-lowering drops for years to come.[2]

About 10% of my OMNI cases are standalone. Among them are pseudophakic patients who have limited options for MIGS. I find that they are, by default, perhaps more straightforward candidates for the procedure because they already have IOLs. I have also used OMNI occasionally to treat phakic patients who do not yet require cataract surgery. Often these patients come to me specifically because they don't want a device or a foreign body implanted in their eye.

## NOTE TO CATARACT SURGEONS AND COMPREHENSIVE OPHTHALMOLOGISTS

The concept of intervening early in glaucoma is not necessarily all about surgery. It's about thinking more flexibly. We now have the option of offering SLT as a first-line treatment, and we'll continue to need IOP-lowering drops, particularly in preservative-free form, perhaps as a bridge between one procedure and another.

Interventional glaucoma that involves performing procedures such as canaloplasty and trabeculotomy has an important place in the treatment armamentarium of glaucoma surgeons like myself, but it is also relevant for comprehensive ophthalmologists and cataract surgeons. Most patients who have early glaucoma and are using one or two drops don't come to see me. They will go to their community ophthalmologist for cataract surgery, and they will see their community optometrist for general eye care. Interventional glaucoma encourages a new way of thinking. Rather than just treating a glaucoma patient's cataracts without thinking otherwise, or just prescribing drops for early glaucoma, doctors can ask these patients, "How are the drops affecting you?" You'll likely hear that they're experiencing redness and discomfort from chronic dry eyes, and some patients may admit that they've stopped using their drops to avoid these symptoms. You can then explain, "If you're having cataract surgery, there may be an opportunity to eliminate those drops." This conversation is really important when we are educating patients. This is the new mindset that we are talking about.

### CONCLUSION

The fundamental message I want to convey is that we should move away from the old-fashioned approach of just thinking in a straight line, starting our glaucoma patients on drops and then adding more and more drops. We now have evidence,[2] real-world outcomes, our own experiences and those of peers whom we trust that by intervening early with a minimally invasive approach such as MIGS with OMNI, we have the opportunity to relieve patients of their medication burden, help them avoid more invasive procedures, and potentially slow glaucoma progression in the future. ■

1. Yadgarov A, Dentice K, Aljabi Q. Real-World Outcomes of Canaloplasty and Trabeculotomy Combined with Cataract Surgery in Eyes with All Stages of Open-Angle Glaucoma. *Clin Ophthalmol*. 2023;17:2609-2617.
2. Murphy Iii JT, Terveen DC, Aminlari AE, Dhamdhere K, Dickerson JE Jr; ROMEO Study Group. A Multicenter 12-Month Retrospective Evaluation of Canaloplasty and Trabeculotomy in Patients with Open-Angle Glaucoma: The ROMEO 2 Study. *Clin Ophthalmol*. 2022;16:3043-3052.

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**Important Product Information**

This information is intended solely for healthcare professionals located in the UK and EU. Patients should direct questions to their healthcare professional.

INDICATIONS FOR USE: The OMNI Surgical System is indicated for the catheterization and transluminal viscodilation of Schlemm's canal and the cutting of trabecular meshwork to reduce intraocular pressure in adult patients with open-angle glaucoma.

For important product information including cautions and adverse events, please refer to the full instructions for use available at omnisurgical.com/international

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