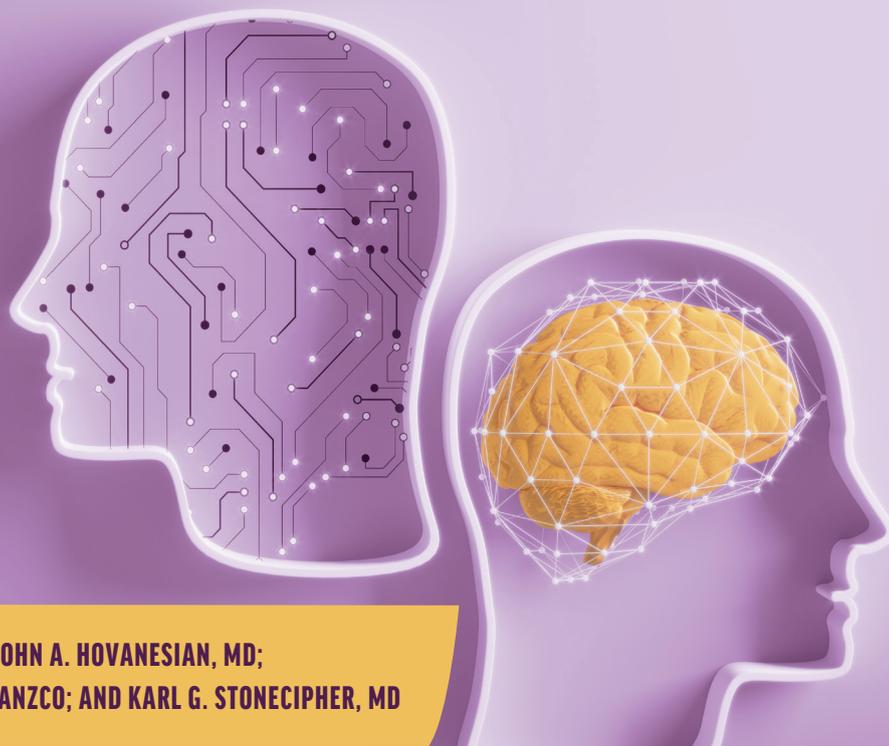


# PREOPERATIVE Surgical Planning



BY DAIN BROOKS, MD; NICOLE R. FRAM, MD; IVAN GABRIĆ, MD; JOHN A. HOVANESIAN, MD; FLORIAN T.A. KRETZ, MD, FEBO; MATTHEW RUSSELL, MBCHB, FRANZCO; AND KARL G. STONECIPHER, MD

Surgeons share their processes and pearls.

## THE 90-MINUTE CATARACT EVALUATION

DAIN BROOKS, MD

Looking toward the future of cataract surgery, many ophthalmology clinics are shifting to a more efficient, premium patient experience. In a nutshell, we need to see more patients in less time and help them understand the benefits of advanced technology IOLs.

Our practice has one surgeon and two optometrists. We conduct an average of 20 cataract evaluations daily and perform approximately 70 surgeries a week; the majority of our patients choose an advanced technology lens. We've streamlined several processes to achieve these levels, and we are always pressing forward to improve the patient experience and our outcomes.

The biggest shift in our patient experience has been what we call the *90-minute cataract evaluation*. This concept grew out of necessity; our clinic has grown rapidly and required structure. We came up with a system that allows us to work efficiently, maximize the quality of time we have with our patients, and decrease patients' fatigue at the end of the evaluation. The 90-minute cataract evaluation has also helped us to increase patients' interest in advanced technology IOLs.

### THE PLAN

Once we knew approximately how long an evaluation should take, we then

determined how many patients we could reasonably see in a clinic block and how we needed to staff the clinic.

We divide our technician staff into two teams, which we call the *diagnostic department* and *workup department*. The diagnostic technicians are responsible for testing and calculations. Having the same staff members perform the same tests improves the accuracy and precision of our measurements because they know how to get the best scans quickly.

We also limit the number of tests performed during the evaluation. We now perform only topography (OPD-3, Nidek) and OCT of the macula

and retinal nerve fiber layer. These measurements help me determine how much astigmatism needs to be corrected, the size of the pupils as it relates to a pinhole effect or halo concerns, the health of the macula, and signs of underlying glaucoma. If glaucoma is a concern, I often plan a combined cataract/MIGS procedure. These tests also help me quickly and accurately determine the patient's candidacy for advanced technology IOLs.

**COMMUNICATING WITH PATIENTS**

The other part of successfully implementing the 90-minute cataract evaluation is the discussion with patients. The more involved patients are in customizing the treatment plan, the more interested they become in advanced technology IOLs. Listening to their vision goals and making a strong lens recommendation based on their ocular health and lifestyle is crucial. We have found that we don't need to spend more than 5 to 10 minutes with patients to understand how best to fix their problems.

Timing is everything in the 90-minute cataract evaluation. As I wrap up the discussion with patients, our scribe messages a counselor to join us in the examination room. The counselor

listens to the last part of the conversation and moves the discussion in a natural way to their office for scheduling. This segue keeps me from running behind and allows patients to move along in the process. We have three counselors to ensure patients don't have to wait to schedule surgery or discuss insurance questions.

**CONCLUSION**

Your patients value their time as much as they value yours. If patients spend 3 to 4 hours in your office for an evaluation, by the end, they are likely tired, hungry, and ready to leave. By taking steps to decrease the time it takes to complete the initial cataract surgery evaluations, patients will leave your office feeling energetic and excited about gaining the vision they have always wanted.

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- Financial disclosure: None acknowledged

THREE KEY CONSIDERATIONS FOR OPTIMIZING PATIENT CARE

**NICOLE R. FRAM, MD**

The cataract patient journey starts with the first impression. Patients feel a tremendous amount of anxiety about their vision as well as COVID-19, so how my staff and I alleviate those issues are paramount to the visual rehabilitation process.

**STREAMLINING INTAKE**

The only blessing of the COVID-19 pandemic in our office has been the implementation of a prefill call for all new patients to decrease office time and the chance of exposure.

Figures 1-4 courtesy of Nicole R. Fram, MD

**Surgical History**  
None

|   |  |
|---|--|
| <b>Exam:</b><br>An examination was performed<br>OD External: normal lid position, nasolacrimal and orbital exam<br>OD Lid Margin: <b>trace meibomian gland dysfunction</b><br>OD Conjunctiva: <b>subconjunctival hemorrhage nasally, nasal and temporal pinguecula</b><br>Slit lamp examination OD:<br>OD Cornea: <b>No EBMD and No guttata</b><br>OD Anterior Chamber: deep and quiet anterior chamber<br>OD Iris: normal iris without rubeosis<br>OD Dilated Pupil Size: 5.0 mm<br>OD Lens: 1+ cortical and 2+ nuclear sclerosis No Pseudofoliation<br>A dilated exam of the optic disc was performed OD.<br>Ophthalmoscopic examination of optic disc OD:<br>OD: CD ratio 0.35<br>OD Optic Disc: flat and normal disc<br>Lens Used: 90D<br>A dilated fundus exam was performed OD.<br>Ophthalmoscopic examination of retina and vessels OD:<br>OD Vitreous: vitreous clear without hemorrhage, cells or pigment<br>OD Vessels: vessels with normal contour, caliber without neovascularization<br>OD Macula: macula normal contour without heme, edema, drusen or exudate<br>OD Periphery: periphery normal appearance without retinal tears, breaks, holes or mass<br>Lens Used: 90D<br>General Appearance of the patient is well nourished.<br>Orientation: alert and oriented x 3.<br>Mood and affect: no acute distress. | OS External: normal lid position, nasolacrimal and orbital exam<br>OS Lid Margin: <b>trace meibomian gland dysfunction</b><br>OS Conjunctiva: <b>prominent pinguecula</b><br>Slit lamp examination OS:<br>OS Cornea: <b>No EBMD and No guttata</b><br>OS Anterior Chamber: deep and quiet anterior chamber<br>OS Iris: normal iris without rubeosis<br>OS Dilated Pupil Size: 5.0 mm<br>OS Lens: 2+ cortical and 2+ nuclear sclerosis No Pseudofoliation<br>A dilated exam of the optic disc was performed OS.<br>Ophthalmoscopic examination of optic disc OS:<br>OS: CD ratio 0.35<br>OS Optic Disc: flat and normal disc<br>Lens Used: 90D<br>A dilated fundus exam was performed OS.<br>Ophthalmoscopic examination of retina and vessels OS:<br>OS Vitreous: <b>vitreous detachment</b><br>OS Vessels: vessels with normal contour, caliber without neovascularization<br>OS Macula: macula normal contour without heme, edema, drusen or exudate<br>OS Periphery: periphery normal appearance without retinal tears, breaks, holes or mass<br>Lens Used: 90D |
|---|--|

Figure 1. The documentation of pertinent positives and negatives assists with cataract surgery planning, such as the order of cases and time blocking.

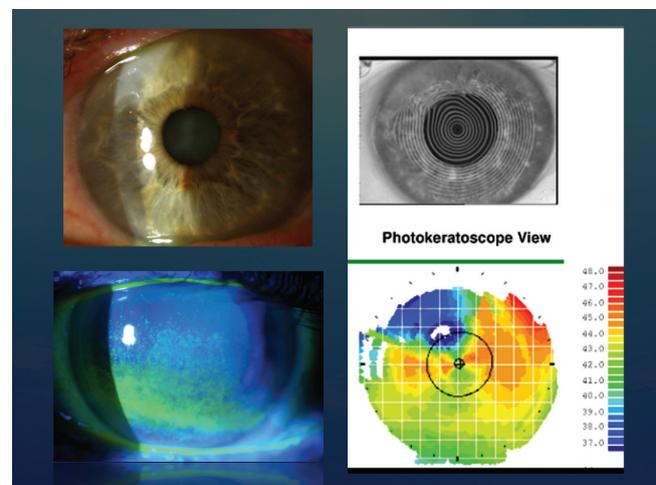


Figure 2. Slit-lamp photographs of a Salzmennodule (top left) and punctate epithelial staining from dry eye disease (bottom left). Corneal topography shows irregular astigmatism and superior flattening from a Salzmennodule (bottom right). A thorough examination of the ocular surface and corneal topography with Placido imaging helps to determine if a patient is ready for cataract surgery or if additional treatment to optimize the ocular surface is required.

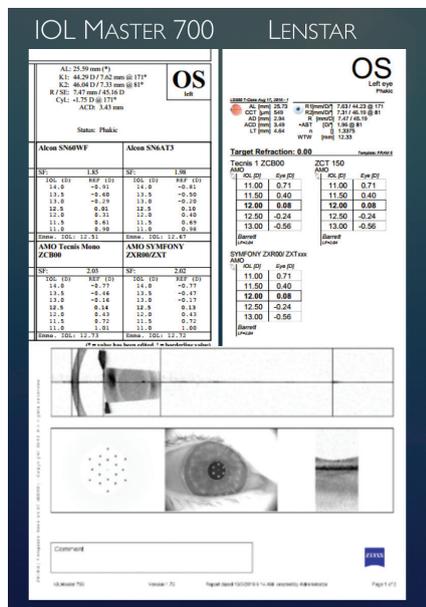


Figure 3. Preoperative biometry using the IOLMaster 700 with swept-source OCT, keratometry quality, and macular OCT (top left and bottom). Recommended K readings and integrated toric IOL recommendation on the Lenstar (Haag-Streit, top right).

A phone call is made 1 to 2 days before the scheduled visit, at which time the chief complaint, medical history, patient questionnaire responses, medications, allergies, and insurance information are all entered into the patient's chart. Additionally, patients receive an email with information and links to educational videos explaining cataract surgery, if applicable. Lastly, patients are prepared in advance that the preoperative visit with biometry can take up to 2 hours, which facilitates realistic expectations and preparation. With this prefill, patients' overall time in the office is reduced, preoperative testing is expedited, flow is efficient, and patients feel cared for and safe.

### TESTING

The following are performed before patients enter the exam room: refraction, glasses prescription check, autorefractometry, biometry, iTrace (Tracey Technologies), corneal topography, macular OCT, Retinal Acuity Meter (AMA Optics), and glare tests. If corneal topography reveals an irregular Placido disc image, the technician alerts the

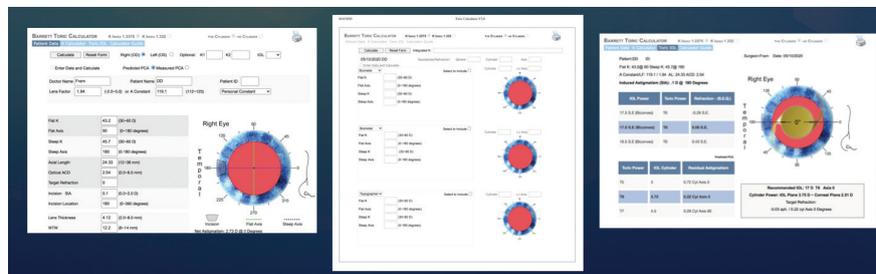


Figure 4. The Barrett Integrated Keratometry screen allows the integration of multiple K readings, which can improve the accuracy of toric IOL selection.

doctor, pupillary dilation is deferred, and the ocular surface is carefully evaluated and managed.

During the examination, critical findings such as dry eye disease, epithelial basement membrane disease, corneal guttae, degree of pupillary dilation, anterior chamber depth, quality and density of the cataract, and the presence of pseudoexfoliation are noted. These pertinent findings help to determine the order of cases on the day of surgery and signal whether extra time and/or counseling is required (Figures 1 and 2).

### IOL SELECTION

**During the examination.** I use a separate screen to display test results and educate patients in real time about their ocular anatomy. It is at this point in the examination that I ask patients about their lives, occupations, work, hobbies, and goals. I take this information into account when recommending the best technology to meet their needs safely. I explain that all IOL technologies have drawbacks and that their anatomy and preexisting conditions may dictate the best choice. For example, a patient with an epiretinal membrane or age-related macular degeneration is generally not a candidate for a diffractive technology in our practice.

Surgical planning begins in the room. I review the corneal topography and biometry before I begin a discussion of astigmatism correction with patients, during which I also assess their willingness to wear spectacles. If they have more than 0.75 D against-the-rule astigmatism or more than 1.25 D with-the-rule astigmatism, I often

recommend a toric IOL to achieve the best quality of uncorrected vision.

The availability of trifocal and extended depth of focus IOLs has caused a major shift in how we recommend lenses to patients in our practice. We find that these lenses are performing well compared to previous generations of presbyopia-correcting IOLs. These current IOLs are finally meeting patient expectations and are associated with fewer nighttime diffractive dysphotopsias. We refer to these IOLs as *lifestyle lenses*. However, we emphasize that these IOLs are not perfect but generally give patients a great degree of spectacle independence. We perform an evaluation of higher-order aberrations such as coma and angle kappa to identify patients who may have trouble with diffractive IOL technology. Throughout the IOL selection process, I reassure patients that an IOL exchange will be performed if they cannot tolerate a given technology.

The Light Adjustable Lens (RxSight) has also increased our success in achieving on-target, customized, and quality vision in patients with a history of successful monovision and those with a history of LASIK or radial keratotomy. In the past, IOL calculations after LASIK and radial keratotomy were daunting and required a tremendous amount of patient counseling regarding outcomes. After implementing the Light Adjustable Lens, the targeting is rarely an issue and quality of vision is significantly improved.

**After the examination.** My first assessment of the test results is quality control. When evaluating corneal

topography, I look at the quality of the Placido image and the regularity of the astigmatism. Next, I evaluate the amount of astigmatism while focusing on the reproducibility of both power and axis with at least two technologies. Biometry also has quality control measures with regard to the signal ratio, keratometry (K) readings, and a posterior segment OCT scan (IOLMaster 700, Carl Zeiss Meditec; Figure 3). When a toric IOL will be implanted, I use the Barrett integrated K readings, Barrett Toric Calculator (Figure 4), and the biometry-suggested K readings (Figure 3, top right).

We recently began using Veracity Surgical (Carl Zeiss Meditec) in our practice to help streamline surgical planning. This software displays innovative methods of IOL calculation such as the Barrett True-K and Hill-RBF formulas and integrated K readings. The software also allows me to change the target without going back to the biometer and printing out new calculations. The staff and patients appreciate this prepared approach.

#### CONCLUSION

A thorough evaluation, compulsive testing, and a streamlined process allow

us to optimize patient care. We are reminded every day that it is a privilege to care for our patients. The more thorough and efficient we make the process, the better our outcomes.

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## SURGICAL PLANNING IN 10 STEPS

IVAN GABRIĆ, MD

Svetlost is an ophthalmology chain of six centers in Southeastern Europe with more than 200 employees and 70 ophthalmologists. It is a challenge to ensure that the quality of care and patient experience are optimal across the board. On average, more than 10,000 eye surgeries are performed at our centers per year; of these, approximately 4,000 are laser vision correction procedures, and approximately 3,000 are refractive lens surgeries. Maintaining an excellent standard of care requires executing many carefully planned steps.

#### MARKETING

Surgical planning starts before patients arrive for their first appointment. The trick is in the marketing. I have heard many doctors complain that it's hard to recruit patients from their general practice to undergo refractive procedures. Almost 100% of our refractive surgery patients arrive wanting refractive surgery because they have seen our marketing materials.

Through those efforts, patients come to our offices already knowing which

procedure they want and the expected end result. We don't have to convince them of the merits of the refractive surgical procedures we offer.

This approach is preferable to the following scenario. A 60-year-old patient wearing presbyopia-correcting glasses presents for a routine eye examination. The doctor and staff attempt to convince the patient to undergo refractive lens exchange. They spend an enormous amount of energy on the effort. The patient undergoes the procedure. A problem is encountered later, and the doctor and staff are blamed for corraling the patient into surgery.

#### 10 STEPS

A compelling marketing campaign promotes the benefits for patients. We don't sell excimer laser surgery or multifocal IOLs. Instead, we promote the improvement in quality of life that patients can expect after surgery, and we do it in 10 steps.

► **Step No. 1: Contact.** Once patients decide a procedure or technology is something they want, they contact the office. Our staff is familiar with

the basics of patient selection for each offering, so they can make a preliminary determination of candidacy and respond appropriately to patients. Pricing is also made clear from the outset so that patients will not waste their (and our) time if they can't afford the desired procedure.

► **Step No. 2: Timeliness.** As a rule, all examinations are performed within 7 days of patients' first calls for an appointment. Longer waits can decrease their level of motivation.

► **Step No. 3: Testing.** Patients have a brief conversation with a doctor, who assesses their needs and wishes and orders the examinations that should be performed. Generally, patients receive multiple objective examinations. For example, if they are interested in and are candidates for laser vision correction, they undergo corneal analysis with the Pentacam, aberrometry, topography, axial length measurement, OCT, and a full ophthalmologic examination. Patients who are interested in and candidates for IOL surgery receive this same battery of tests in addition to ultrasound, specular microscopy, and IOL calculation.

► **Step No. 4: Review of results.** The doctor reviews the results of all the objective tests before patients return. As a result, the doctor is aware of which options are most suitable and can better guide the consultation.

► **Step No. 5: Consultation.** The benefits and compromises of each option are explained to patients. We never promise what we will not be able to deliver. We follow the common credo: Underpromise and overdeliver.

► **Step No. 6: Scheduling.** Surgery is scheduled as soon as possible, again to keep patients' motivation high.

► **Step No. 7: Bilateral surgery.** For lens-based surgery, we perform immediate sequential bilateral cataract surgery in 95% of cases because it is easier for patients to

organize their work obligations around a single recovery period. To prevent infection, all draping, gloves, and instruments are changed between eyes.

► **Step No. 8: Postoperative day 1.**

To promote patient confidence and satisfaction, our goal is for their visual recovery to be 90% complete by their visit on postoperative day 1.

► **Step No. 9: Postoperative day 7.** Our goal is for more than 99% of patients to return to their daily routines with minimal limitations by this visit.

► **Step No. 10: Enhancement.** If a refractive surprise is encountered with refractive laser or lens surgery, all enhancement procedures are performed in-house at no cost to the patient.

## CONCLUSION

At Svjetlost, we perform about 10,000 procedures per year. A 1% complication rate potentially would equate to 100 unhappy patients each year. We have been in business for 23 years—but we have not seen 2,300 unhappy patients. This is because we have optimized our processes so that our complication rate is below 0.1%. Even when a complication does occur, we correct it quickly and at no additional cost to the patient.

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## LENS CHOICE IS AN IMPORTANT CONSIDERATION

JOHN A. HOVANESIAN, MD

The importance of preoperative planning in cataract surgery should not be underestimated. Innovations that help me to improve efficiency and enhance surgical planning and outcomes are welcome additions to my workflow. Most recently, I have integrated a cloud-based surgical planning app that allows me to transfer preoperative measurements and data between the clinic and the OR.

The Smart Cataract Planner app (Alcon) is used mainly to help deliver optimal postoperative outcomes with the company's IOLs. This tool enables me to streamline the back-office work, integrate measurements from multiple diagnostic devices, incorporate patient lifestyle information, and analyze and optimize my plan for surgery (Figure 5). The app has an eleven-box grid of different lens implant options

that facilitates my consideration of a variety of IOL options based on target refraction, design, and power and helps me to determine how each would affect the predicted outcome.

Built-in toric calculators on the Smart Cataract Planner app also help me to optimize cylinder correction. More than 70% of my patients have 0.50 D or more of astigmatism and receive a toric IOL. Having instant access to all of the most advanced formulas streamlines IOL calculations and eliminates the need to transfer data by hand from another website or software.

I also appreciate that the app is customizable. Because I work with a group of 16 doctors, the ability to create preferences and save them in the Smart Suite is essential.

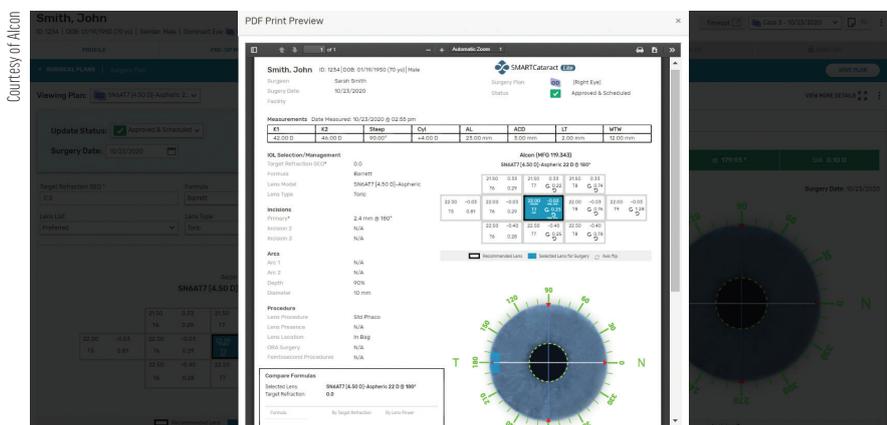
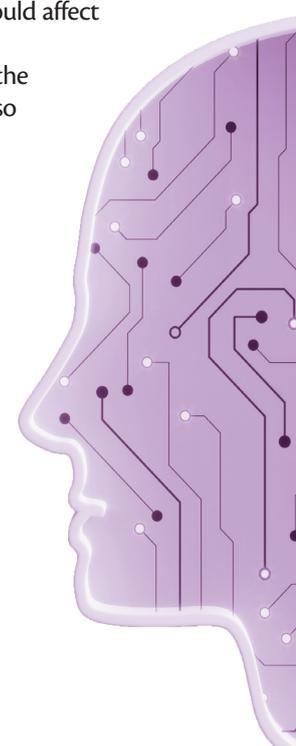


Figure 7. PDF print view of a Smart Cataract Planner surgical plan.



### CONCLUSION

Ultimately with cataract surgery, we surgeons are not after diopters—we're after happy patients. The Smart Cataract Planner app allows me to plan surgery while keeping patients' needs in mind. It also improves the

patient experience by helping me to think ahead.

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## THREE KEYS TO PRACTICE EFFICIENCY

### FLORIAN T.A. KRETZ, MD, FEBO

Optimizing processes is the key to continuously improving outcomes. If this wasn't clear before, it certainly has become so during the COVID-19 pandemic. I perform surgery at three different centers. Proper time management, surgical planning, and workflow optimization are essential to my ability to complete my schedule, run the businesses, conduct research, and spend time with my family.

#### PROPER TIME MANAGEMENT

Both my time and patients' time must be managed. Before the current pandemic, my staff and I monitored the time required of patients for each treatment, procedure, and diagnostic test, but analysis stopped when patients finished this process rather than when they left the building. Spatial restrictions related to COVID-19 prompted us to limit how long a patient is permitted to be in each clinic area and designate a departure time. This change has dramatically increased practice efficiency.

After successful cataract or refractive surgery, patients leave the OR, receive counseling, and exit the facility with a paper bag filled with a drink (water, sparkling wine, or beer; Figure 6), a sandwich, sunglasses, and postoperative instructions. Two hours later, they receive a phone call to confirm that they understand all of the information provided, ask if they are experiencing problems, describe what to expect during the next

24 hours, and confirm their follow-up appointment for the next day.

#### SURGICAL PLANNING

Surgical planning is probably the process that changes most frequently at our facilities. Incoming patients are treated by a team of technicians and counselors. The technicians make sure that the measurements are accurate. The counselors find the surgical procedure or IOL choice for each patient depending on individual needs. Afterward, technicians calculate all parameters for the surgery, such as IOL power, toricity, and ablation zone for laser vision correction procedures. The patient and data are presented to the doctor, who can change the parameters online during the examination and who confirms the decision at the end. No printouts are required because everything is online and saved in the electronic medical record (EMR) system. Next, supplies are ordered, and the data are transferred to the OR. I receive a notification, usually by telegram messenger or email, to log into a virtual private network to review and confirm the case if a second opinion is needed.

The implementation of Forum and EQ Workplace (both from Carl Zeiss Meditec) has been enormously helpful for our clinics in northwestern Germany. All of our devices manufactured by the company are connected here. IOL calculations can be performed directly in the software,

and the necessary data are sent to the Callisto eye (Carl Zeiss Meditec). In southern Germany, we use custom software to import patients' diagnostic data, calculate IOL power and astigmatic correction, and account for surgically induced astigmatism through positioning of the cataract incision. Full online integration of patient data makes changes quick and repeatable and saves time.



Figures 6-8 courtesy of Florian T.A. Kretz, MD, FEBO

Figure 6. Patients treated at Dr. Kretz's clinics receive a beverage of their choice with a custom label.



Figure 7. Dr. Kretz's setup in his practice's Erlangen facility.

### WORKFLOW OPTIMIZATION

Another important step is grouping different surgical procedures and patients into one surgical day. The three locations where I perform surgery have completely different setups. A femtosecond laser for cataract surgery is available at each location, but they are from different manufacturers. Each OR is equipped with a different surgical guidance system and different phaco machine. This may sound crazy, but it is intentional and works well. Equipment has been selected to meet the needs at each location.

The Erlangen facility has only one OR for refractive and intraocular surgery. The OR has the Bausch + Lomb suite consisting of a Teneo excimer laser and a Victus femtosecond laser, which I also use for laser cataract surgery. Both machines stand in the back of the room, and I operate in front of them (Figure 7).

Another reason for this setup is that these lasers have a fixed patient bed. My routine is to perform two to three cases of standard cataract surgery followed by one laser cataract surgery procedure. Patients walk through the OR to receive laser treatment. This scheduling allows the femtosecond laser to be programmed while I perform standard surgery. Also, we have to push the microscope, my



Figure 8. Dr. Kretz's setup in his practice's Rheine facility.

chair, and the footpedals away for patients to walk through comfortably. If laser cataract procedures were performed back-to-back, we would lose a lot of time just moving the microscope, my chair, and the footpedals back into place.

The Rheine facility is different. It has four ORs, one of which is dedicated to procedures using the Lensar Laser System (Lensar; Figure 8). I switch among the other three ORs for surgery. This setup allows me to perform laser treatments in between my other surgeries. After laser treatment is complete, the staff brings the patient to one of the free ORs. Another benefit of three ORs is greater surgical efficiency because minimal changing time is required.

### CONCLUSION

In my experience, most major manufacturers offer products of similar quality. The key is to analyze the practice's current setup and workflow and to optimize what is easy to change and adapt to.

#### FLORIAN T.A. KRETZ, MD, FEBO

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## TAKE ADVANTAGE OF THE DIGITIZED CARE PATHWAY

### MATTHEW RUSSELL, MBCHB, FRANZCO

Cataract surgery requires precise planning and execution to achieve optimal refractive results. My daily surgical planning routine for cataract surgery begins with a conversation. It is important to talk with patients about their surgical options and determine whether a premium IOL or a monofocal IOL will be implanted. We then select an implant together while still in the examination room. Because my practice has completely digitized the care pathway for patients through the use of EMRs and other technologies, I can complete this

process quickly and in real time. Multiple time-consuming manual processes are condensed into simple steps with the EQ Workplace, a digital surgery planning tool.

### HOW IT'S USED

**In the clinic.** Seamless data transfer from diagnostic devices with the EQ Workplace avoids transcription errors because the data appear in the relevant fields for IOL power calculations and IOL selection (Figure 9) without requiring

Figures 9 and 10 courtesy of Matthew Russell, MBChB, FRANZCO

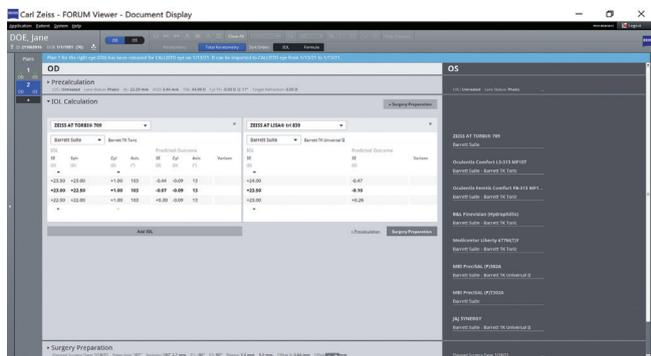


Figure 9. IOL selection with the EQ Workflow.

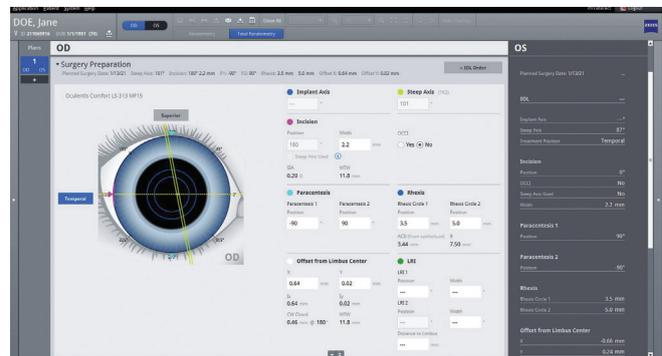


Figure 10. Surgery planning with the EQ Workflow.

manual data entry. I can also produce a PDF that can be used to order an IOL from the manufacturer.

**In the OR.** EQ Workplace connects to a computer-assisted cataract surgery platform (Callisto eye) in the OR via a mobile device interface (EQ Mobile, Carl Zeiss Meditec) using a secure cloud. All relevant patient and IOL information as well as assistant functions for surgery (eg, capsulorhexis, incisions, and target axis for toric IOLs) are preset before the patient enters the OR.

I can compare the IOL in my hands with the IOL that was selected preoperatively by scanning the barcode on the IOL package.

I can access all biometric and IOL data from the computer-assisted cataract surgery platform without needing to change rooms or print diagnostic readings. I use a heads-up display in the microscope to align the IOL, so I no longer need to mark the eye before surgery for toric IOL alignment.

### CONCLUSION

This digitized care pathway has markedly increased practice efficiency, reduced the number of unfinished tasks that must be addressed outside of clinic time, and significantly decreased the labor costs associated with nonpatient-facing activities.

My colleagues and I are conducting a prospective study of how the use of this digital surgery planning tool (Figure 10) and computer-assisted cataract surgery platform have affected practice efficiency in the management of patients who receive toric IOLs. Our interim results show a 50% to 60% reduction in physician time and an even greater reduction in allied staff time (unpublished data, M.R.).

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## SUCCESSFUL STRATEGIES FOR REFRACTIVE SURGERY AND REFRACTIVE CATARACT SURGERY

### KARL G. STONECIPHER, MD

Steve Jobs once said, “Quality is better than quantity. One home run is much better than two doubles.” Along those lines, I am a firm believer in treating every patient like a member of my family—and I have operated on my mother, mother-in-law, father, father-in-law, aunt, brother, nephews, nieces, and more. Treating patients like family steers me well, even when a complication arises. All of my patients have an opportunity to select the best I have to offer,

and all of them undergo the same preoperative workup.

### THE WORKUP

Every patient undergoes a 90-second workup by my staff that includes screening with the Ocular Surface Disease Index followed by fluorescein staining to evaluate tear breakup time and lissamine green staining to evaluate the conjunctiva. If the findings are positive for ocular surface disease (OSD), the consultation goes forward, but the examination is limited. Surgery is

scheduled, and OSD treatment is initiated.

The Prospective Health Assessment of Cataract Patients’ Ocular Surface (PHACO) study demonstrated that many patients presenting for refractive cataract surgery have significant dry eye disease.<sup>1</sup> The same is true of a significant number of patients presenting for refractive surgery.

### REFRACTIVE SURGERY

The COVID-19 pandemic led my staff and me to change our approach

Courtesy of Karl G. Stonecipher, MD



Figure 11. A retinal evaluation (A) performed with the Centervue DRSplus Fundus Imaging System (B) may be performed without dilation.

to the preoperative evaluation. The wavefront and manifest refractions are obtained after topography, tomography, and wavefront diagnostics are performed. Instead of a cycloplegic examination, we use the Centervue DRSplus Fundus Imaging System (Icare) for the retinal evaluation in the majority of patients (Figure 11), but we will perform cycloplegia for patients with more than -8.00 D myopia, those with mixed astigmatism, and those with hyperopia.<sup>2</sup>

The 1-week and 1-month postoperative visits are conducted as telehealth appointments. At the 3-month visit, a complete examination is performed for nomogram maintenance.

### REFRACTIVE CATARACT SURGERY

All patients are treated as if they have selected a premium-channel package, and I explain to them how I would proceed if they were members of my family. A patient care coordinator then breaks down the pricing models for them. More than 80% of my patients choose a premium channel, whether that includes the use of a femtosecond laser, the Ocular Response Analyzer (Reichert), or premium IOLs.<sup>3,4</sup>

All patients are evaluated with OCT of the optic nerve and retina, biometry, wavefront analysis, and topography—before seeing me—and animations are used to educate them about the process and their options.<sup>5</sup> All of this

diagnostic information is entered into an EMR system and shown to patients during their examination. We use the CheckedUp Patient Engagement Platform (CheckedUp) to educate patients, and we provide them with QR codes so that they can access the information remotely to discuss with their families.

I follow lens power guidelines developed by Jack Holladay, MD, MSEE, FACS, and Warren E. Hill, MD, FACS (scan the QR codes now for related videos), and attribute my successful outcomes to them. My staff and I scrutinize angles alpha and kappa, keratometric standard deviations, root mean square higher-order aberrations, and corneal surface irregularities. Patients who have an irregular corneal surface are not offered an extended depth of focus or trifocal IOL. I personalize my lens constants and use the fourth-generation IOL power calculation formulas developed by Graham D. Barrett, MB BCh SAF, FRACO, FRACS, Dr. Hill, and Dr. Holladay for all patients. Residual refractive errors and postoperative OSD are treated aggressively.

My current enhancement rate for the premium IOL channel is 1.6%. Data collection is an important part of my refractive cataract practice.<sup>6</sup>

### CONCLUSION

I currently comanage patients with more than 500 physicians.

These providers understand that I am dedicated to treating their patients just as if I were operating on them or one of their family members. Actually, many of my referring doctors have given me the opportunity to operate on them or their families. With a committed staff and a committed surgeon, delivering 20/happy results can be routine. ■



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- Financial disclosure: None acknowledged