



Co-Management Manual **2019**



THANK YOU FOR ALLOWING US TO PARTICIPATE IN THE CARE OF YOUR PATIENTS.

The purpose of our co-management guidebook is to provide you with all of the necessary information to ensure that together we provide the best care possible for your patients. Inside you will find information for pre and post-operative care for all of your procedures, information on procedures and services we offer, as well as tips and pointers for managing surgery patients.

NOTE FROM THE SURGEONS

Today is an exciting time in ophthalmic surgery. Tremendous advances have been made in refractive and cataract surgery, as well as other procedures. With more options available than ever before, a greater number of people can reduce their dependence on glasses and expect better vision after cataract surgery. With that being said, it is important to give proper advice on which treatment option is best for your patients' specific needs. Our goal is to provide patients with the best possible experience while having the safest and most effective surgical outcome their eyes are capable of achieving. We personally perform all of the eye surgeries and treat every pair of eyes like they are our own. We and our staff work as hard as possible to provide the patients with the best quality of care possible.

With the ability to customize treatments using both lens and laser based options, patient are achieving quality vision that many surgeons, who do not use LASIK and lens surgery together, are not able to accomplish. For us, the most exciting aspect of eye surgery is improving the quality of life for our patients. We look forward to working with each of you individually. Thank you.



Adam Abrams, MD



Paul Dougherty, MD

ADV VISION IS PROUD TO OFFER:

- Refractive & Non-Refractive Cataract Surgery / Refractive Lens Exchange (RLE)
- Pterygium Surgery
- Blepharoplasty & Eyelid Surgery
- Glaucoma MIGS Surgery (iStent) & Lasers (SLT/LPI)
- SMILE / LASIK / PRK
- Implantable Contact Lens (ICL)
- Keratoconus Surgery:
Corneal Cross-Linking & Intacs
- Glaucoma Consultations, Periodic Monitoring, & Proctoring
- All Ophthalmic Consultations

*“Excellence in Vision-**ADV Vision** will be unsurpassed in our strive for excellence and provide inspiring inner and outer vision for our patients, referring providers, employees, and our world.”*

CO-MANAGEMENT OF CATARACT PATIENTS

Policy and Procedure Manual

INTRODUCTION

Patients choosing co-management for their pre and post-operative surgical care experience the benefits of continuity of care by their Primary Eye Care Provider (PECP) as well as geographical convenience. This manual outlines the process that ADV Vision follows for the co-management of cataract and lens implant surgery patients. Together with our co-managing doctors, we will provide the highest quality of care for our shared patients, consistent with patient needs and desires. ADV is pleased to offer primary eye care providers an opportunity to participate in the pre and post-operative portions of the surgical process. These guidelines comply with applicable state and federal statutes and regulations regarding co-management of patient care and referral arrangements.

1. The selection of an operating surgeon for patient referral will be based on providing the best potential outcome for the patient. Financial relationships between providers will not be a factor.
2. The patient's right to choose the method of post-operative care will be recognized and will be consistent with the best medical interest of the patient.
3. Co-managing doctors will be licensed ODs or MDs.
4. The transfer of post-operative care will always be clinically appropriate and depend on the particular facts and circumstances of the surgical event.
5. Following surgery, transfer of care from the operating surgeon to the co-managing provider will occur when clinically appropriate at a mutually agreed upon time or circumstance, and such time will be clearly documented via correspondence and included in the patient's medical record.
6. ADV and the co-managing provider will communicate during the post-operative period to assure the best possible outcome for the patient.
7. Compensation for care will be commensurate with the services provided. Cases involving care for Medicare beneficiaries will reflect the proper use of modifiers and other Medicare billing instructions.

Step-by-step instructions and co-management forms are provided in the following sections of this manual.

STEP-BY-STEP PROCESS FOR CATARACT CO-MANAGEMENT

Patient is seen by his/her Primary Eye Care Provider (PECP or OD) and charged the usual and customary fee for a complete examination. The doctor identifies the patient need for cataract surgery and completes the Pre-Op Examination and Consultation Request Form.

1. The referring optometrist educates the patient regarding the process of cataract surgery.
2. The referring optometrist discusses the typical co-management treatment plan and explains what care will be provided by ADV and the optometrist. The referring optometrist sends the Pre-Op Exam to ADV.
3. The patient may be scheduled for an appointment at ADV by the referring optometrist's office, ADV contacting the patient after receiving the request form, or the patient contacting ADV at their convenience.
4. The patient is examined at ADV and a determination of medical necessity for cataract surgery is made. The patient is educated on which procedure best suits the patient's needs.
5. The patient is scheduled for surgery if indicated. ADV will provide the patient with educational materials on the procedure; give the patient instructions related to post-operative care, and information regarding fees. The patient will complete and sign an Informed Consent and any other necessary forms. If the patient desires to have post-surgical care co-managed, the patient will sign the Co-Management Consent Form.
6. ADV will complete a consultation report reviewing the patient's remarkable findings and transmit the completed documents to the co-managing eye care provider recommending the plan for treatment.
7. When deemed medically appropriate, typically at 24 hours after surgery, ADV completes the Transfer of Care Form and Surgery Report, which includes surgery information and findings as well as recommendations for post-operative care.
8. Following each post-operative visit, the co-managing PECP will transmit a post-operative co-management exam form to ADV.
9. Upon completion of post-operative care, the PECP will submit the appropriate claim to third party payers or prepare patient billing for their portion of the post-operative treatment. The PECP should be a participating provider with Medicare and will bill and be paid directly by Medicare. If you are a Medicare provider, ADV can refer you to a medical billing service to assist you with billing Medicare for the co-managed portion of your care.

We look forward to a partnership with our affiliated co-managing doctors in which we can offer our cataract and lens implant patients the best, most personal, and most convenient care, with direct involvement of their longstanding eye care provider!

CATARACT PATIENT CO-MANAGEMENT TREATMENT PLAN

The Following Information Is Designed For Patients Who Have Been Diagnosed As Having Cataracts And Who Intend To Have Cataract Surgery.

Any surgical procedure contains some element of risk in the post-operative period. For your health and safety, it is imperative that you receive proper follow-up care after your cataract surgery. This fact sheet will explain what follow-up care is, and who is qualified to perform it for you.

WHAT IS FOLLOW-UP CARE?

After your cataract surgery, you will have several appointments with an eye care professional. You should understand that complications may not necessarily occur during surgery, but may occur after the surgery has been performed. For this reason, it is imperative that you have appropriate care by a qualified eye care professional following your surgery. He or she will perform biomicroscope exams on your eyes and provide tests to measure your visual acuity, intraocular pressure and, ultimately, if necessary, fit you for eyeglasses. In addition, your doctor will ensure that any post-surgery complications are detected and treated. This series of visits is called your “follow-up care.”

WHO IS QUALIFIED TO PROVIDE FOLLOW-UP CARE?

It is critical that your follow-up care be performed by a qualified eye care professional familiar with your case. Several different practitioners are qualified to provide this service. You should understand the roles that each may play in your recovery.

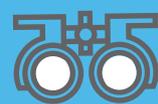


Your Surgeon

Your surgeon is a licensed ophthalmologist, a medical doctor who specializes in ocular surgery.

Your Surgeon or His Associate

will also determine when you can be released from his or her care to return to your optometrist for further follow-up visits.



Your Optometrist

Most patients will return to see their PECP for their post surgical care. Your optometrist is also the vision specialist who will examine and fit you for your glasses, if necessary, after recovery. Your optometrist will be in communication with ADV following each post-operative visit. If problems develop during the post-surgery follow-up period, your optometrist and your surgeon will communicate regarding your care until these have resolved.



Another PECP

If you travel away from home to have surgery and wish to return home soon after surgery, or if you have any other personal reason for not receiving your follow-up care from your surgeon or optometrist, you may decide to see another eye care provider for your follow-up care. We will make arrangements with another provider if you are unable to do your follow up visits with your PECP or ADV.

SUMMARY

We hope this summary has helped to explain some facts about the cataract surgical process. Your optometrist and surgeon will explain the improvements in your vision that you may enjoy after cataract surgery. If you have any questions or concerns, now is the time to raise them. You may contact your optometrist or ADV at any time, before or after surgery, to answer your questions or address concerns.

TREATMENT PROTOCOLS

The volume of cataract surgeries will continue to increase as the baby boom population ages. Therefore, all eye care providers must stay educated in cataract surgery protocols and possible complications. A thorough pre-op exam and treatment of any existing problems may prevent complications from occurring after and even during surgery. Though serious complications are rare, it is also important to know what post-op complications can occur and how you can manage them, and when it is time to refer the patient back to the surgeon.

PRE-OP EXAM General Health

The first key to managing complications is to find ways to avoid them altogether or at least decrease their likelihood. This starts with astute observations during your pre-operative exam, and that starts with a general health history. Understanding the patient's overall health at the time of surgery can help chart the strategy of the procedure. It can also help predict and explain the prognosis and course of recovery. Such considerations apply to all types of eye surgery. Ask about systemic diseases that affect healing after cataract surgery, particularly **autoimmune diseases such as Rheumatoid Arthritis (RA), collagen vascular and metabolic diseases**, Lupus (SLE) and Diabetes. Patients with RA are at risk for abnormal healing/melting of the corneal incision. Examine the patient's hands for telltale signs of disfigured digits. Lupus or other autoimmune diseases may increase the inflammatory response after surgery, resulting in pronounced post-op inflammation, high intraocular pressure, cystoid macular edema or even a corneal melt near the incision.

If the history is positive for any of these diseases, you have some options to help provide that patient with a normal post-op healing course. The surgeon could consider more inert intraocular lenses (IOLs) made of acrylic instead of silicone, which would reduce a potential source of inflammation. Be prepared for the need to increase the steroid dosing early in the post-op period to control the ensuing inflammatory response. If the autoimmune disease is active, we recommend referring the patient to their rheumatologist prior to surgery for treatment and clearance.

There are some concerns specific to **Diabetes**: poor wound healing, increased dry eye syndrome, and the risk of exacerbating existing proliferative retinopathy and diabetic macular edema. Diabetics with poor blood sugar control may have a slower recovery following surgery. Some may benefit from delaying surgery until their diabetes is under control. Diabetics often have denser cataracts and may be more prone to corneal edema and early IOP spikes after surgery.

Immunocompromised Patients, such as those undergoing cancer chemotherapy, may be at increased risk of postoperative infection. It is critical that the patient's treating physician medically clear such patients for surgery and assure that the patient's cell counts are adequate to protect against infection.

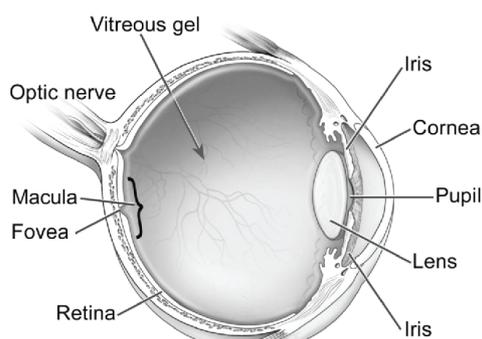
Pregnancy and nursing are contraindications to many types of elective surgery, unless there are extenuating circumstances. Pregnancy is an immunocompromised state which may increase infection risk. In addition, the temporary hormonal changes associated with pregnancy and nursing can alter pre-operative biometry and postoperative outcomes. There are also concerns regarding transmission of medications and anesthetic agents to the fetus.

Another important systemic issue in cataract surgery or RLE is the patient exposure to a class of medications for prostate disease in males and bladder incontinence in females. Use of these very common medications (Flomax/Tamsulosin, Cardura/Doxazosin, Saw Palmetto), increase the risk of **Intraoperative Floppy Iris Syndrome (IFIS)**. IFIS limits pupillary dilation and integrity during cataract surgery, which can lead to damage to the iris or increased corneal edema. Stopping these medications does not reduce the risk; even one

dose many years ago can result in IFIS. Please inform the surgeon prior to surgery if your patient is on one of these medications. We have developed effective techniques to deal with IFIS intraocular epinephrine and intraoperative iris rings.

Anticoagulants, including Warfarin (Coumadin), Proxal, Eloxin, and NSAIDs (Aspirin, Ibuprofen, Naproxen) do not need to be stopped prior to cataract or refractive surgery. On the other hand, for all other eye surgeries, such as pterygium, strabismus, blepharoplasty, and miscellaneous eyelid surgeries, it is critical that anticoagulants be stopped prior to surgery. For these surgeries, Warfarin must be stopped 3 days prior to surgery, Proxal/Eloxin stopped 5 days prior, and NSAIDs stopped 10 days prior. These medications can be resumed 24 hours after surgery. Acetaminophen (Tylenol) does not affect clotting and does not need to be stopped. It is critical that the patient's primary care provider or cardiologist be involved in the decision to suspend anticoagulation and determine that the benefits of the proposed eye surgery outweigh the risk of vascular complications in each case.

Dental cleaning and dental procedures are notorious for leaching bacteria into the blood stream. Therefore, there is a theoretical increased infection risk of having any type of surgery immediately before or after dental work. It is recommended to not have eye surgery less than one week after dental work, and no less than two weeks before dental work. Eye surgeries are considered "clean" surgeries and do not typically require systemic antibiotic prophylaxis in patients who have artificial heart valves or other surgical prosthetics.



ANTERIOR SEGMENT CONCERNS

Examination of the eyelids prior to cataract, refractive, pterygium, and strabismus surgery should not be overlooked. The leading cause of endophthalmitis is the introduction of bacteria into the eye, intraoperatively or postoperatively, from the conjunctiva and ocular adnexa. It's important to diagnose and manage **blepharitis/meibomitis** prior to cataract surgery. Also, look for other lid conditions such as **entropion, ectropion and lower lid laxity** which can negatively

impact healing and dry eye. Improper apposition of the lower eyelid can contribute to an inadequate clearing of bacteria, which also increases the risk of endophthalmitis. Patients with **cranial nerve dysfunction** such as a seventh-nerve palsy, which results in an incomplete blink, are also at risk for corneal exposure problems and poor wound healing after cataract surgery. Frequent artificial tears and lubricating ointments can help prepare these patients for eye surgery. In some cases, eyelid abnormalities must be corrected surgically before proceeding to additional eye surgery.

Pterygia, epithelial basement membrane dystrophy, Salzmann's nodular dystrophy or band keratopathy can prevent accurate cataract surgery measurements and limit postop vision results. To accurately assess the cornea for proper intraocular lens (IOL) power calculations, crisp and regular mires on the keratometer or topographer are essential. Discuss this with the patient prior to surgery to help manage post-op visual expectations. These patients may benefit from corrective surgery or aggressive treatment of the ocular surface with medications and lubricants (i.e., Restasis, Xiidra, steroids, artificial tears and ointments, Vitamin A ointment) prior to the cataract procedure, which would provide for better corneal measurements and improved corneal transparency. **Epithelial Basement Membrane Dystrophy** (e.g., Map-Dot-Fingerprint Dystrophy) is extremely common and frequently missed on exam. EBMD can lead to an increased risk of epithelial defects, corneal edema, or surface irregularities following surgery, which can slow vision recovery and require a bandage contact lens.

Two additional corneal conditions to consider in counseling patients:

- **Fuchs' dystrophy.** Due to the strain that cataract surgery can put on already debilitated endothelial cells, eyes with moderate to advanced Fuchs' are at risk of permanent corneal edema following cataract surgery, which might ultimately require corneal transplantation. Postoperative corneal edema is expected after cataract surgery on Fuchs' eyes, and may even last for months and still resolve fully. Patients with moderate to advanced Fuchs' should be counseled to expect slower visual recovery. In addition, it is advantageous to perform cataract surgery earlier in such patients, prior to Fuchs' becoming more severe. Fuchs' is also one of the situations where Femtosecond Laser-Assisted Cataract Surgery (FLACS) has a significant advantage over manual cataract surgery as it causes less trauma to the cornea.
- **Herpes simplex keratitis.** The Herpetic Eye Disease Study (HEDS) and other studies have shown that previous episodes of herpes simplex stromal keratitis are the single greatest contributing factor to subsequent bouts of recurrence. Trauma may also trigger recurrence. Because surgery involves some trauma to the eye, the surgeon may consider treating these patients prophylactically with oral and/or topical antivirals before and after surgery. Cataract surgery may be contraindicated if an episode of HSV keratitis has occurred within the last 6-12 months.

ADDITIONAL PRE-OP CONCERNS

Counsel patients with conditions which can result in weak zonular fibers and, in turn, increase the risk of a capsular rupture or tear, or IOL decentration. These include **Marfan's syndrome, Ehlers-Danlos syndrome, previous trauma and Pseudoexfoliation (PXF)**. Pseudoexfoliation is the most common of these conditions, and can be present unilaterally or bilaterally, typically in patients of Northern European heritage. The surgeon will usually be prepared for potentially suturing the IOL in place or consider using a capsular tension ring, which might aid in centration of the IOL within the capsular bag. PXF also places the patient at higher risk for an IOP spike after surgery. Patients with a traumatic cataract secondary to an impact injury are also at heightened risk of capsular rupture or zonular dehiscence. FLACS is preferred in PXF, Post-traumatic eyes, and in setting of connective tissue disorders since it causes less trauma to the zonules.

Dense cataracts, brunescient or white, require longer and increased ultrasound energy for removal. This results in increased intraoperative risk of capsular rupture and more post-operative corneal edema. This is another setting where FLACS is preferred as the laser can break up the cataract more quickly, with less total energy, and less trauma to intraocular structures.

Perform a thorough dilated fundus examination to identify any pathology that may limit best visual acuity postoperatively or contribute to retinal tears or detachments following surgery. Consider referring patients with peripheral areas of weakness (e.g, lattice degeneration or atrophic holes) for prophylactic treatment by a retina surgeon prior to cataract surgery. Warn patients with a history of toxoplasmosis or histoplasmosis of the risk that the conditions could reactivate following cataract extraction. Also, look carefully for the presence of epi-retinal membranes that can limit vision after surgery and can increase the risk of postoperative CME. Eyes with ERM's requiring pre-operative, and extended post-operative NSAID drops to lessen risk of CME.

POST-OP VISITS

During these visits you need to assess the early stages of recovery and rule out any serious problems. Most complications after cataract surgery present early in the post-op period

and will be resolved by the time the patient is released by the surgeon. Review the post-op medication regimen that is prescribed, confirm compliance and clarify any questions the patient may have about his or her recovery. Prescriptions for drops will have been provided to the patient, or a compounded combination drop dispensed by ADV. Patients are given thorough pre-operative and post-operative instructions by both video and in writing, which include details about restrictions in activities post-op.

DROPLESS CATARACT SURGERY

ADV is happy to provide the more convenient and cost-effective new technology of dropless cataract surgery. The drug is formulated at a compounding pharmacy under strict regulations. At the end of cataract surgery, Trimoxil, a suspension containing Triamcinolone and Moxifloxacin is injected into the patient's anterior vitreous. This injection significantly reduces the need for post-operative drops. Dropless cataract surgery has shown to decrease incidence of endophthalmitis and CME. Trimoxil is supplemented with one-week course of generic antibiotic-steroid drops to reduce the incidence of break-through inflammation. Eyes with ERM or diabetic retinopathy must have this regimen supplemented with NSAID drops preoperatively and postoperatively. In cases of increased corneal edema or breakthrough inflammation following surgery, topical steroids may need to be increased or continued longer. Certain patients, due to anatomic issues of the capsule that cannot be diagnosed prior to surgery, are not candidates for the dropless injection. In addition, a decision to avoid dropless injection may be made preoperatively due to advanced glaucoma (due to risk of extended steroid response), in younger patients desiring faster visual recovery over convenience and cost (which includes most Refractive Lens Exchange patients), and per co-managing optometrist preference. For the first few days following surgery you may notice a faint white cloud on slit lamp examination and the patient may complain of a hazy vision and/or peripheral floaters. This is a normal finding which is caused by the injection settling down. Trimoxil will slow vision recovery during the first few days, but the majority of patients and providers have preferred this over the significant increased cost, inconvenience, reduced compliance, and lesser safety profile of 3-4 weeks of multiple drops. ADV will communicate if a patient has undergone dropless or non-dropless cataract surgery, and specify any adjunct drops such as NSAIDs.

KEY EXAM AREAS

During your post-op exams, pay careful attention to these key areas:

Visual Acuity. It is not unusual for the patient to have reasonably good acuity immediately post-op. More dense cataracts (usually seen in older patients), however, can often result in a delayed return of acuity. This is due to corneal edema from the higher levels of ultrasound energy used during the procedure. Increased levels of corneal edema are much more common in patients with corneal guttata or Fuchs' dystrophy. Corneal edema, in fact, is the most common cause of decreased vision on the first post-op day for all cataract surgeries, and should not be a cause for alarm. Please reassure that patient that this will clear over a few days or weeks.

Given the variety of correction strategies available, including monovision corrections and multifocal IOLs, you should know what corrective strategy or targeted refraction the patient chose before you examine the patient. The refractive goal is documented on co-management paperwork provided you by ADV.

The Incision. Carefully inspect the incision for any evidence of poor healing or a wound leak. Signs associated with this problem are a shallow anterior chamber, an IOP of less than 5 mmHg, and some degree of corneal edema. A Seidel's test with fluorescein can help

you verify a wound leak. Wound leaks are a serious issue. Not only do they delay visual recovery, but they put the patient at risk of intraocular infection or choroidal hemorrhaging due to the low IOP. Wound leaks require expedited consultation with the surgeon. Significant wound leaks may require suturing for repair, while smaller leaks can usually be controlled by temporarily reducing the steroid medication and applying a bandage contact lens for a few days.

Corneal Integrity. Assessment of the cornea's overall status can help you anticipate when the patient will recover best visual acuity. Though rare, corneal abrasions can develop immediately following cataract surgery. This can result from a toxic effect from the topical anesthetic gel used for surgery, and is more likely in eyes with EBMD. We can usually resolve this problem with a bandage contact lens for one or two days. Also, we can temporarily decrease steroid dosing to allow for improved epithelial migration; this can help the abrasion resolve quickly. Stromal and epithelial herpetic keratitis can recur after cataract surgery, and masquerade as a corneal abrasion. Cataract surgery may be contraindicated if an episode of HSV keratitis has occurred within the last 6-12 months.

Corneal Edema. Depending on the difficulty and length of the surgery, the cornea can respond with varying degrees of edema and endothelial folds. In an uncompromised cornea, swelling will limit vision early on, but this tends to dissipate within the first week post-op, resulting in improved acuity. Patients with compromised corneal endothelial cell function or Fuchs' dystrophy can expect corneal edema to diminish more slowly, but they still tend to do well long-term. Whenever you note significant corneal edema, be sure to consider IOP. A cloudy cornea with signs of microcystic edema is often a sign of elevated IOP following cataract surgery. Treat elevated IOP and increase the dosing or duration of steroid drops if the corneal edema is significant or persistent. In persistent edema lasting more than a week, hypertonic saline drops (Muro 128 5%) QID is helpful.

Anterior Chamber Status. At day one the anterior chamber should appear well formed with moderate cellular reaction. A flat or shallow chamber may indicate a wound leak. The cellular reaction can be more pronounced in difficult cases, but fibrin within the anterior chamber or the presence of hypopyon is never normal. A dense anterior chamber reaction with visual obscuration of the anterior segment anatomy indicates bacterial endophthalmitis, which requires immediate intervention and culturing.

IOL Status Within the Capsular Bag. IOL decentration/dislocation is not common with uncomplicated surgery but does occur. Most IOL dislocations result from accidental trauma by the patient, known zonular weakness or in association with a tear in the posterior or anterior capsule. Dislocations often occur months to years after the original procedure, but may be seen the next day. Review any evidence of IOL dislocation with ADV. The surgeon may need to reposition the IOL place it within the ciliary sulcus, suture the implant in place, or even explant and exchange the IOL. Besides examining the implant location, carefully inspect the integrity of the capsular bag.

Posterior Capsule. Early wrinkles within the posterior capsule can cause minor visual distortion or streaking of lights. Fortunately, these tend to fade throughout the early post-operative period as the capsule shrink-wraps around the IOL. In cases of posterior subcapsular cataracts, it is not uncommon to have early post-operative opacification of the posterior capsule. This is due to a higher degree of remaining lens epithelial cells that adhere to the posterior capsule after surgery. On occasion, the posterior capsule has primary opacification that cannot be polished. Such cases will be corrected by YAG laser capsulotomy.

It is preferable to delay YAG capsulotomy to 3 months postop. Early YAG capsulotomy can trigger CME. YAG capsulotomy can also cause IOP spikes, and also carries a slight long-term risk of retinal tear or detachment. It is important to rule out other causes of reduced vision in the early post-op period, such as refractive error and CME, before blaming posterior capsule opacification. Early YAG capsulotomy can be considered at 4-6 weeks post-op in select cases, but risks should be weighed against benefits. Several research studies are investigating different IOL designs and materials that will hopefully reduce the incidence of posterior capsule opacification.

Intraoperative posterior capsule rupture has been cited in up to 4.1% of all cataract surgeries. Tears of the posterior capsule that occur during surgery require special care to prevent loss of lens fragments within the eye. Evidence of free lens fragments postoperatively should be referred back to the surgeon. These loose particles can lead to chronic inflammation and IOP elevation, and thus need to be dealt with carefully. Small fragments of cortex adjacent to the IOL or in the anterior chamber are often tolerated and dissolve without complication, but such cases must be monitored closely for increased inflammation and IOP elevation.

Intraocular Pressure. IOP spikes in the immediate post-op period occur in 5-14% of all cataract surgeries, regardless of technique. Several studies have linked the viscoelastic substance used to fill the anterior chamber with the incidence of a 24-hour post-op pressure spike. While the surgeon makes every attempt to remove the viscoelastic, complete removal is nearly impossible.

Patients who present on postoperative day one with pressures higher than 30mm Hg may complain of a dull headache or pain in and around the eye. A steamy cornea that indicates diffuse microcystic edema typically manifests with pressures at or above this level. If the IOP is above 35 or the patient is symptomatic, you may need to refer this patient back to ADV for an anterior chamber tap through the operative incision to immediately reduce IOP. If the patient already has significant pre-existing glaucomatous optic nerve damage, the threshold for referring back should be lowered, and closer monitoring is critical. If the anterior chamber tap is not an option (particularly after one-week postop), you can prescribe a topical pressure-lowering agent such as a beta-blocker, an alpha adrenergic agonist or a carbonic anhydrase inhibitor--either alone or in combination--to reduce the pressure. (Of course, beta blockers are contraindicated in patients with any history of respiratory problems or slow heart rate). It is better to avoid Prostaglandins since theoretically they may increase intraocular inflammation and incidence of CME. Once IOP is within normal limits, recheck the patient in 24-48 hours to rule out a rebound spike. Typically, IOP will have stabilized at the one-week visit, and it will be safe to discontinue the pressure-lowering drops. Rarely, IOP elevations persist or manifest later in the postop period. Such cases may represent steroid responders, or represent patients with known or unmasked glaucoma where the aqueous outflow facility is already compromised and becomes overwhelmed in the setting of inflammation. Studies have shown that the rate of postoperative IOP elevation with intravitreal Timoxi injection for dropleless cataract surgery is no higher than traditional cataract surgery.

SERIOUS COMPLICATIONS

Some of the more serious, though infrequent, complications associated with cataract surgery include: **Endophthalmitis.** This bacterial intraocular infection occurs in about 0.05-0.7% of cataract surgeries. The usual source of infection is the patient's own ocular surface, and most cultures grow gram-positive organisms that represent common skin flora. Although rare, endophthalmitis is the biggest emergency we face. Early diagnosis and treatment is critical. Without prompt treatment, the patient could lose an eye. A patient

with endophthalmitis presents with a red, photophobic eye, usually within a few days after surgery. One important symptom is the presence of unusual pain and blurred vision early in the post-op period. Upon slit-lamp examination there will be a marked anterior chamber reaction with possible fibrin and hypopyon. The cornea is often edematous. Endophthalmitis is an emergency and requires immediate referral to a retina specialist for intraocular culturing, intraocular antibiotics, and possible vitrectomy.

Cystoid Macular Edema (CME) often presents with unexplained decreased acuity within the first few weeks or months after surgery. At times, it can present nearly a month after surgery and persist for several months before it spontaneously resolves. CME is more common in the setting of ERM or diabetes. CME may be difficult to detect on fundus examination alone. Therefore decreased visual acuity without other explanation should warrant an OCT. CME is treated by increasing steroid and NSAID drops. Referral to a retina specialist is recommended as additional treatments may be required.

Retinal Detachment. The likelihood of retinal detachment after uncomplicated cataract surgery is less than 1%. Complicated cases involving posterior capsule rupture and vitreous loss increase the likelihood of retinal problems after surgery. The incidence of RD after cataract surgery is higher in highly myopic eyes – particularly males and patients with a family history of RD. Such patients require detailed preoperative retinal examination and prophylactic treatment of lesions that could contribute to a retinal detachment.

ADV Vision is committed to providing Continuing Education for the pre and post-operative management of surgical patients. We have provided an overview of treatment protocols in this manual. However, we encourage you to attend our Continuing Education seminars for more detailed discussions regarding these protocols. Please contact our office if you have any questions regarding patients you are co-managing.



CATARACT CO-MANAGEMENT BILLING FOR MEDICARE

As per guidelines published by Medicare in 1992, specific components of major surgery were defined as the “global surgery package.” The components they identified included pre-operative care, intraoperative services, post-operative care (90 days), and in-office care for any postoperative complications. In addition, the value of post-operative care for surgical procedures was standardized and post-operative care for ophthalmic surgery was valued at 20% of the global surgery package. Medicare also published instructions to Medicare carriers on split billing of post-operative care, also known as post-operative co-management, within eye care. These instructions incorporated the following points, which are further defined in this section of our co-management manual:

1

Co-management requires a written transfer agreement between the surgeon and the receiving doctor(s).

2

Specific modifiers must be used on claims (54 - surgical care only; 55 - postoperative management only).

3

The receiving doctor cannot bill for any part of the service included in the global period until he/she has provided at least one service.

WRITTEN TRANSFER AGREEMENT

The transfer agreement between the surgeon and the co-managing doctor (optometrist) contains the surgeon’s discharge instructions and the effective transfer date. According to current Medicare policy, the transfer date is “*determined by the date of the physician’s transfer order.*” The responsibility for post-operative care may be transferred on or before the patient’s appointment for the subsequent follow-up visit with the receiving doctor, who may submit a claim for services once he has seen the patient. The split of post-operative care cannot be done or pre-arranged in advance of the surgery. Instead, a unique transfer agreement should be constructed for each patient.

Essential elements of the transfer agreement from the optometrist should include the following:

- **Patient Name**
- **Operative Eye**
- **Nature of Operation**
- **Transfer Date**
- **Results of First Post-Operative Visit**
- **Both doctors should retain copies of this documentation as part of the patient’s permanent records. They may also serve as a useful attachment on claims, as necessary.**

MODIFIERS FOR CLAIMS SUBMISSION

Immediately following surgery, the surgeon can submit a claim for the surgical component of care using the appropriate CPT Code, i.e. 66984, and Modifier 54. This modifier is used to indicate the surgical event in a co-managed case. Medicare assigns 80% of the global fee to the intraoperative service. Later the surgeon will submit a claim for his/her portion of post-operative care. In order for this claim to be accurate, the surgeon needs to know the date the optometrist assumed responsibility for the remaining post-operative care (the transfer date noted above). This claim will be filed using the appropriate CPT Code, i.e. 66984, and Modifier 55, which indicates post-operative management only. After the optometrist has seen the patient for post-operative care, he/she will submit a claim for the post-operative care provided, using the appropriate CPT Code, i.e. 66984, and Modifier 55. Again, in order for the claim to be accurate the optometrist must know the date he/she assumed responsibility for post-operative care (the transfer date). Medicare uses chronology and number of days to calculate payment for care rendered by each doctor during the post-operative period (90 days). The fees submitted by the surgeon and optometrist will be different, depending on the number of days of post-operative care each one provided. An example of billing by the surgeon and optometrist follows. If you would like assistance with billing of Medicare for your post-operative care, we have a medical billing service that can assist you.

When submitting claims, many Medicare carriers instruct providers to write a comment in the body of the claim form, as follows:

Surgeon | Assumed post-operative care on January 2, relinquished care on January 10.

Optometrist | Assumed post-operative care on January 11, relinquished care on April 1.

OVERLAPPING POST-OPERATIVE CO-MANAGEMENT

Many patients will have cataract surgery performed on the second eye shortly after their first surgery, in which case post-operative care may overlap temporarily. When these patients are co-managed, claims for each surgery are handled separately. The surgeon will file the second claim with Modifier 79, to indicate the second surgery is unrelated to the first (different eye). Both surgery claims will also be filed using Modifier 54, to indicate post-operative care is being co-managed. The post-op care claims will include both Modifiers 55 and 79 for the surgeon and the optometrist.

The chronology and windows of time on which payment is determined (as outlined above) are still relevant and the claims will be concurrent. The surgeon will determine if the transfer of care for the first surgery occurs before or after the second surgery. If the transfer of care for the first surgery occurs before the second surgery, then two transfer-of-care letters or forms and transfer agreement letters must be prepared, establishing a unique transfer date for each surgery.

The comments provided herein relate to billing for cataract co-management for Medicare patients. Commercial carrier policies will vary. Should you have questions about a specific carrier's policy, we recommend you contact them directly. Also, if you have questions related to Medicare billing procedures, you can visit their website, www.cms.gov, or contact our office for assistance.

GENERAL PRACTICE INFORMATION

For a complete list of our patient services, directions, maps, information about co-management of cataracts, and referral or management of other ophthalmic diseases and surgeries, please visit ADVisioncenters.com and access the doctor's portal.

CATARACT

OD Post-Operative Visit Instructions

1 DAY POST OP

- UCVA
- SLE - record cells/flare, corneal edema, and lens position
- IOP - must perform on all patients

1 WEEK POST OP

- UCVA
- Refraction with BCVA
- Refraction - on all patients
- SLE
- IOP

1 MONTH POST OP

- UCVA
- Refraction with BCVA
- Refraction - on all patients
- SLE
- IOP
- DFE - if patient has poor BCVA or complaints associated with retinal detachment

3 MONTH POST OP

- UCVA
- Refraction with BCVA
- Refraction - on all patients
- SLE
- IOP
- DFE - if patient has poor BCVA or complaints associated with retinal detachment

6 MONTH POST OP

- Refraction

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

- If the patient has a stable residual Rx or PCO and needs a retreatment, please refer back to ADV after three months.
- If the cornea is clear, glasses or soft contact lenses may be prescribed if necessary to improve vision, as soon as 1-2 weeks after surgery.

Trouble Shooting

- **Increased IOP POD#1** - Above 24, have patient start IOP drop (NOT prostaglandin) and see back the next day. If over 35, then send back to ADV same day for aqueous release. Lower thresholds if pre-existing severe glaucomatous optic nerve damage.
- **Persistent increased IOP at one week** - Treat with glaucoma drops and monitor. The ocular hypertension is usually temporary.
- **Corneal edema** - Mild, no need for further treatment. Moderate to severe, increase steroid to 2 hours and see back a few days later. Add Muro128 if persists.
- **Decentered lens** - Refer back to ADV.
- **Severe pain, vision loss, hypopyon** - Refer to retina specialist stat, or ADV if uncertain.
- **Poor BCVA** - Verify Refraction, then dilate and check for CME. If patient has decreased BCVA mild CME can be easily missed so we advise doing an OCT. If you do not have access to one, please send back to ADV.

REFRACTIVE LENS EXCHANGE (RLE)

OD Post-Operative Visit Instructions

See Cataract section as well as most information applies to both cataract surgery and RLE.

1 DAY POST OP

- UCVA
- SLE - record cells/flare, corneal edema, and lens position
- IOP - must perform on all patients

1 WEEK POST OP

- UCVA
- Refraction - on all patients, with BCVA
- SLE
- IOP

1 MONTH POST OP

- UCVA
- Refraction - on all patients, with BCVA
- SLE
- IOP
- DFE - if patient has poor BCVA or complaints associated with retinal detachment

3 MONTH POST OP

- UCVA
- Refraction - on all patients with BCVA
- SLE
- IOP
- DFE - if patient has poor BCVA or complaints associated with retinal detachment

6 MONTH POST OP

- As you see fit

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

- If the patient has a stable residual Rx or PCO and needs a retreatment, please refer back to ADV after three months.
- If the cornea is clear, glasses or soft contact lenses may be prescribed, to improve vision if complaining, as soon as 1-2 weeks after surgery.

Trouble Shooting

- **Increased IOP POD#1** - Above 24, have patient start IOP drop (NOT prostaglandin) and see back the next day. If over 35, then send back to ADV same day for aqueous release.
- **Persistent increased IOP at one week** - Treat with glaucoma drops and monitor. The ocular hypertension is usually temporary.
- **Corneal edema** - Mild, no need for further treatment. Moderate to severe, increase steroid to 2 hours and see back a few days later. Add Muro128 if persists.
- **Decentered lens** - Refer back to ADV.
- **Severe pain, vision loss, hypopyon** - Refer to retina specialist stat, or ADV if uncertain.
- **Poor BCVA** - Verify Refraction, then dilate and check for CME. If patient has decreased BCVA mild CME can be easily missed so we advise doing an OCT. If you do not have access to one, please send back to ADV.

PTERYGIUM SURGERY

OD Referral and Management Instructions

OVERVIEW

Surgical excision of pterygia is quick procedure, usually done at one of the local surgery centers. ADV has the capability to perform this surgery in-house at our Santa Maria office in occasional cases where patients prefer to avoid facility and anesthesia charges due to high insurance deductibles, or lack of insurance coverage. Surgery at a surgery center is preferable as IV sedation can be administered. With older techniques, pterygium surgery was notorious for having a very high recurrence rate of over 50%. ADV routinely performs this surgery with conjunctival autografting and application of Mitomycin-C intraoperatively, which reduces recurrence rates to about 10%. Amniotic membrane grafting is used for recurrent cases.

INDICATIONS/CONTRAINDICATIONS

- Progression
- Recurrence
- Symptomatic – chronic or recurrent redness, foreign body sensation, pain, etc
- Suspicious for neoplasia
- Interference with contact lens wear or refractive correction (irregular astigmatism)
- Interference with other surgery (refractive, cataract)
- Cosmetic (not billable to insurance)
- May interfere with prior incisional glaucoma surgery (Trabeculectomy, Ahmed Valve)

PROTOCOL

- **3-10 days Pre-op:** Stop all anticoagulation therapy (interval determined by specific medication taking) after clearance by patient's primary care provider or cardiologist.
- Maxitrol or Tobradex ointment QID x 28 days. May substitute drops after 2 weeks if cornea exam completely normal (no dellen or epithelial irregularity)
- Patched x 24 hours post-op
- **1 Day Post-op:** Follow-up ADV
- **1 Month Post-op:** Follow-up ADV. Surgery on second eye if bilateral at 4-6 weeks
- **3-6 Months Post-op:** Follow-up with OD

BLEPHAROPLASTY SURGERY

OD Referral and Management Instructions

OVERVIEW

Bilateral Upper Lid Blepharoplasty (BULB) is one of the most commonly performed surgeries in the US. The procedure is considered functional, not cosmetic, and therefore billable to insurance if strict criteria are met. The procedure is usually performed at a local surgery center under IV sedation. BULB can be combined with levator aponeurosis repair if co-existing lid ptosis is present. If there is significant brow ptosis, referral should be made to an Oculoplastics specialist as a brow lift procedure, with or without concurrent BULB, is required.

INDICATIONS/CONTRAINDICATIONS

- Functional BULB – all the following required:
 - Patient has complaints of eyelids interfering with upper field of vision or “weighing” on lids, creating eyelid foreign body or heaviness sensation
 - Significant dermatochalasis, with excess upper eyelid skin over-hanging upper lid margin (photos documenting will be taken at ADV)
 - Upper field of vision limited to 20 degrees, at least on one side, as demonstrated by Tangent Screen visual field testing (will be done at ADV)
 - Advanced Beneficiary Notice signed by patient – stating insurer reserves the right to deny payment if surgery determined to be cosmetic
- Cosmetic BULB (not billable to insurance)
- Lower eyelid blepharoplasty (not billable to insurance)
- No significant brow ptosis

PROTOCOL

- **Initial Consultation:** Visual field testing, photographs, discussion of procedure, surgery scheduled
- **3-10 Days Pre-op:** Stop all anticoagulation therapy (interval determined by specific medication taking) after clearance by patient’s primary care provider or cardiologist.
- Maxitrol or Tobradex ointment to incisions BID x 2-3 weeks.
- **10-14 Days Post-op:** Follow-up ADV for suture removal. Ointment to incisions continued BID x 7 days more.
- **4 Weeks Post-op:** No heavy exertion. This is a hard rule as BULB incisions are notoriously prone to dehiscence due to thin skin, traction, and constant lid movement.
- **4-8 Weeks Post-op:** Artificial Tears +/- bedtime ointment as eyes are initially prone to Dry Eye and nocturnal exposure due to increased interpalpebral fissure and mild lagophthalmos
- Follow-up with referring OD as scheduled

MISCELLANEOUS EYELID SURGERY

OD Referral and Management Instructions

EYELID LESIONS

Many suspicious eyelid lesions turn out to be cancerous or pre-cancerous/borderline. Basal Cell Carcinomas are particularly common on the eyelids. Rather than monitoring such lesions for change, it is usually safer to refer for excision and formal Pathology. The majority of these procedures can be performed in the office with local anesthesia. In many cases, anticoagulants must be put on hold prior to these procedures, after clearance from the patient's primary care provider or cardiologist. Removal of lid lesions is covered by insurance if the lesion is symptomatic, growing, bleeding, interfering with lid function, or showing other signs of suspicious pathology.

ECTROPION/ENTROPION

If significant, causing symptoms or secondary ocular pathology, the surgery may be required. Mild cases of punctal ectropion or mild entropion can often be treated with a brief office surgery under local anesthesia. More severe cases need to be done in the operating room with IV sedation. Cicatricial Ectropion/Entropion which involve age-related or inflammatory causes of periocular skin traction will usually require referral to an Oculoplastics specialist for skin grafting procedures. Anticoagulants must be put on hold for these procedures, after clearance from the patient's primary care provider or cardiologist.

RECURRENT TRICHIASIS

Patients who require repeated frequent forceps epilation can often be handled more effectively and permanently with laser ablation of lash hair follicles. This is a quick procedure that is performed in the office under local anesthesia. The trick with this procedure is to identify which specific area of the eyelid is regrowing in-turned lashes. The more detailed and specific information identifying this the better (a diagram is helpful). It is often necessary to perform forceps epilation multiple times over an extended period of time to accurately identify the problem area or areas. Laser ablation often needs to be repeated several times before all problem follicles are fully treated. The end result is a huge and lasting relief from a very uncomfortable symptom.

SELECTIVE LASER TRABECULOPLASTY (SLT)

OD Referral and Management Instructions

OVERVIEW

ADV offers in-house SLT, performed at each of our offices on a regular basis. SLT has a long track record as a very efficacious treatment modality for primary open angle glaucoma. SLT is increasingly becoming a preferred first-line treatment for glaucoma. It is an acceptable, and often preferable, primary treatment for newly diagnosed glaucoma in patients who prefer to not require a chronic eyedrop medication. It is also an excellent option to replace or avoid multiple glaucoma medications in established glaucoma patients. SLT is very effective in replacing or avoiding one glaucoma medication. In cases where patients are not controlled on maximal glaucoma medication, SLT can lower the pressure enough to avoid more invasive surgical intervention.

ADVANTAGES OF SLT

1. The safety and efficacy profile of SLT easily rivals any class of medication currently available on the market. We expect 20-30% pressure reductions from baseline in 75-85% of patients with almost no side effects (with the exception of the rare and transient IOP spike or blurry vision for a few days).
2. 50% of patients on drops have a significant degree of non-compliance based on pharmacy record studies. SLT takes away the concern for compliance with drops (or at least limits them).
3. Drops frequently have side effects including cosmetic concerns for the PGAs, heart/lung contraindications and fatigue/depression concerns and adverse lipid effects for Beta-Blockers, fatigue/dry mouth/allergy concerns with Alpha-Agonists, and lack of long term efficacy (tachyphylaxis)/allergy concerns with CAs. SLT avoids these considerations.
4. Many of our patients find the lifestyle modification required by taking drops daily (work schedule disruption, contact lens wear disruption, etc) a big inconvenience. SLT gives your patients a chance to avoid the inconvenience.
5. Cost. With insurance coverage for medications becoming less and less appealing to our patients, SLT frequently presents a savings of hundreds, even thousands, of dollars per year over medications.

With our protocol, SLT has a failure rate of only a few percent. SLT “unclogs” the trabecular meshwork by stimulating the immune system. There are no holes, burns, nor identifiable permanent physical changes to the eye. Therefore, SLT is repeatable. Repeat SLT does not typically lower pressure further than the initial treatment, but is the preferred treatment if the effect of a prior SLT, more than 6 months ago, has worn off. There is no way to predict how long SLT will last. We have many cases where SLT has remained effective for more than 10 years, but occasionally the effect is lost in less than 6 months. One or both eyes can be treated, but treatment on both eyes is synergistic

(i.e., treatment on the second eye results in additional effect on first eye due to immune system effects).

INDICATIONS

- POAG
- Not NTG
- No narrow angle
- No active uveitis
- No SLT < 6 months ago
- Both Phakic and Pseudophakic OK

PROTOCOL

- **Initial Consultation:** Pt examined, including gonioscopy and any necessary ancillary testing. Pt educated and counseled about SLT. Please send glaucoma medication history, any available copies of Visual Field, Nerve OCT, Pachymetry, etc. SLT scheduled.
- SLT performed 360 degrees on first eye. No effect expected for 30 days. Therefore, no change in glaucoma meds
- **1 Month:** SLT performed 360 degrees on second eye. Glaucoma drops reduced on first eye.
- **2 Months:** Effect of SLT assessed. Typically, glaucoma drops reduced on second eye.
- **3 Months:** Follow-up with OD (This is a billable visit). Confirm both eyes at Target IOP. Consider re-consult if response inadequate. Proceed with standard glaucoma follow-up every 3-4 months. Counsel patient that SLT is not a cure and that regular follow-up is mandatory, just as if the patient was on glaucoma medication.

LASER PERIPHERAL IRIDOTOMY (LPI)

OD Referral and Management Instructions

OVERVIEW

ADV offers in-house YAG LPI at our SLO office, as well as area surgery centers. Narrow angle should be considered in all new patients, established glaucoma patients, and cases of acute or new ocular hypertension. All new and established glaucoma-suspect and glaucoma patients should have an initial and yearly gonioscopy. If an angle is found to be possibly narrow or “occludable”, even in an asymptomatic patient with normal IOP, then referral for possible LPI is indicated. If a patient has acutely elevated IOP and is in possible angle-closure, then LPI referral should be made emergently. Avoid dilating any eye with possible narrow angle until consultation and protective LPI completed. If there is even a suspicion of narrow angle, it is prudent to refer for consultation as an angle-closure episode can result in extreme pain and irreversible loss of vision.

The LPI procedure is affected greatly by iris anatomy. Thin (typically blue) irises may only require 1-2 laser shots and such eyes will have minimal inflammation or risk of post-op IOP elevation. Thick irises (typically darkly pigmented) may require multiple laser shots and have more postop inflammation and risk of IOP elevation. Some of these latter cases may not successfully result in a fully patent LPI after one procedure, and LPI may need to be repeated. It is not possible to determine iris thickness on SLE alone.

Approximately 50% of eyes with narrow angles go on at some point to require glaucoma medication even after LPI. Therefore, LPI often does not eliminate the need for pre-existing glaucoma drops. LPI, however, usually eliminates the narrow angle component which may at least reduce glaucoma drops, prevent additional glaucoma drops, and reduce risk of acute angle closure.

An alternative treatment option for narrow angle is cataract surgery (even refractive lens exchange) as removing the natural lens creates a lot of space in the AC deepening the angle, and in many cases removing the main risk factor for, or cause of, glaucoma. These cases can be co-managed as any other cataract referral to ADV and include refractive options for optimal vision after surgery.

INDICATIONS

- Narrow or Occludable angle (More prevalent in Hyperopes and Asians)
- Glaucoma
- Glaucoma - suspect
- Ocular Hypertension
- Angle-closure-acute or chronic
- Asymptomatic with normal IOP

PROTOCOL

- **Initial Consultation:** Pt examined, including gonioscopy and any necessary ancillary testing. Pt educated and counseled about LPI. Please send glaucoma medication history, any available copies of Visual Field, Nerve OCT, Pachymetry, etc. LPI scheduled on one or both eyes as indicated.
- LPI performed on first eye. Patient started postop on Prednisolone Acetate 1% q1-2 hours x 1-3 days (depending on number of laser shots required to penetrate iris) then QID x 7days. No change in glaucoma meds until postop exam.
- **1 Day:** IOP, inflammation, and LPI patency evaluated. Glaucoma drops adjusted as necessary.
- **1 Week:** IOP, inflammation, and LPI patency evaluated. Glaucoma drops adjusted as necessary. If indicated, LPI scheduled for second eye in 1-2 weeks.
- **1 Month:** Follow-up with OD (This is a billable visit). IOP, inflammation, and LPI patency evaluated. Glaucoma drops adjusted as necessary.
- Continue glaucoma follow-ups with OD as usual, or as indicated by IOP or any medication adjustments. Continue to monitor LPI patency as it can close over time. Re-consult with any concerns.

MICRO-INVASIVE GLAUCOMA SURGERY (MIGS) – ISTENT

OD Referral and Management Instructions

OVERVIEW

IStent is only approved for use on a phakic eye undergoing cataract surgery provided there is a diagnosis of open angle glaucoma being treated with glaucoma drops. Nevertheless, it is indicated for nearly all eyes undergoing cataract surgery that are on glaucoma treatment. The procedure adds little time, and minimal to no risk to the cataract surgery, and offers a high chance of eliminating one glaucoma drop, or improving control on existing treatment. IStent is covered by Medicare and nearly all commercial medical insurance carriers. The cataract surgery can be co-managed whether or not iStent is utilized. Not all iStents result in improved glaucoma control. Furthermore, the procedure is affected by patient anatomy and the device cannot be placed successfully in all cases. At this time, Medicare covers only a single iStent implantation. The new-generation iStent Inject system allows implantation of two iStents at the same time. The second iStent may be offered to some patients, at their own expense, for a more robust effect.

INDICATIONS

- POAG or LTG on glaucoma treatment, or instead of glaucoma treatment
- Phakic, undergoing cataract surgery
- Refractive and non-refractive cataract surgery, regardless of IOL type
- Prior SLT OK
- Prior refractive surgery OK
- Not pseudophakic
- Not as a standalone procedure

PROTOCOL

- Initial Consultation: Indication for iStent determined at initial cataract consultation. Patient educated and additional consent forms completed. Cataract surgery comangement process and paperwork not affected.
- Co-management paperwork completed after surgery indicates whether iStent successfully placed or aborted.
- Unless a rapid reduction in IOP is found, glaucoma drops are not usually adjusted (if at all) until about one month after surgery. Postoperative inflammation following cataract surgery is often enough to overwhelm the effectiveness of iStent in what is possibly an already compromised trabecular meshwork during the initial weeks.
- Follow-up schedule with OD occurs at the usual cataract surgery interval unless dictated otherwise by IOP or change in glaucoma meds. IStent may or may not be visible on SLE (at nasal limbus).
- OD continues to follow patient for glaucoma as previously, but may refer back to ADV at any time if additional evaluation or monitoring is desired.

GLAUCOMA TIPS

NARROW ANGLES

Narrow angles and Narrow Angle Glaucoma are among the most under/misdiagnosed ocular conditions. The following are tips to avoid missing this relatively common condition:

1. Perform Gonioscopy or anterior segment OCT on all suspicious patients, especially hyperopes, Asians, Hispanics.
2. Perform Gonioscopy in ALL patients who are suspicious for glaucoma, ocular hypertensives, or hyperopes.
3. When in doubt, refer patient for a quick second opinion. Much better to be safe given the terrible potential consequences of an acute narrow angle episode.
4. Avoid dilating narrow angle patients if possible until they have had protective/preventive iridotomy performed.

NORMAL TENSION GLAUCOMA

Up to 1/3 of glaucoma patients in major studies (particular in middle aged female patients) have NTG. These patients tend to have sight threatening visual field loss much earlier than standard POAG patients. Here are some tips to avoid missing NTG:

1. Consider a baseline OCT nerves or optic nerve photo (or both) in all patients explaining to them the need to set a normal baseline and screen for the common condition of glaucoma. It is invaluable to have baseline comparison if you become suspicious in the future.
2. Be extra vigilant in examining the optic nerves of female patients in the 35-60 age group with a history of Migraine headaches, Raynaud's phenomenon, anemia, or low blood pressure annually. Consider including these questions in your history intake questionnaires to screen for those at highest risk.
3. When in doubt, send the patient in for a one time second opinion to protect yourself from liability and your patient from the potential harm of delayed diagnosis.

GENERAL GLAUCOMA TIPS

Since glaucoma is a common eye condition, having an index of suspicion in your at risk patients and always being on the lookout is important. Based on your patient's profile at the time of exam, you can determine what type of glaucoma each is at highest risk for and focus in on your exam to be most efficient. As a general rule, here are common risk factors to look for:

1. **POAG** - Myopes, African Americans (and other non-whites), the elderly, thin corneas, family history.
2. **Pigment Dispersion** - Young myopic males > females. Don't forget pupil illumination to check for iris transillumination and checking the corneal endothelium for a Krukenberg Spindle on all myopes to screen for this condition.
3. **Pseudoexfoliation** - Those of Scandinavian or Russian descent. Look for deposits on lens once dilated.
4. **Narrow Angles** - Asian and Hispanic hyperopic females are at highest risk. Family history sometimes present. All hyperopes should undergo either gonioscopy or anterior section OCT to screen given the high incidence in this population. When in doubt, refer for second opinion given the potentially devastating consequences of missing this diagnosis. Every case of Acute Narrow Angle Glaucoma can be prevented with early detection and preventive LPI.
5. **Normal Tension Glaucoma** - Middle aged females with a history of Migraines, Raynaud's phenomenon, low blood pressure, anemia, or thyroid problems are at highest risk. It is highly recommended this information be solicited from your patients on your history questionnaires to screen those at highest risk.

LASIK

OD Post-Operative Visit Instructions

1 DAY POST OP

- UCVA
- SLE - make sure no infection, DLK, and flap is clear and smooth and centered

1 WEEK POST OP

- UCVA
- Refraction - if patient is complaining

1 MONTH POST OP

- UCVA
- Refraction - on all patients
- SLE

3 MONTH POST OP

- UCVA
- Refraction - on all patients
- SLE

6 MONTH POST OP

- UCVA
- Refraction - only if necessary
- SLE

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

If the patient has a stable residual Rx and needs a retreatment, please refer back to DLV after three months.

Trouble Shooting

- **DLK (Diffuse Lamellar Keratitis)** - If trace to mild, increase steroid to one drop every hour and see back the following day. If moderate or worse, refer back to DLV or ADV IMMEDIATELY. In all cases, if DLK moves centrally or there is loss of vision at day 3, refer the patient back to DLV or ADV IMMEDIATELY to wash out the flap. Waiting beyond day 3 could result in permanent haze and loss of best corrected vision.
- **Flap Straie** - Refer back to DLV or ADV immediately.
- **Severe Dry Eye/SPK** - If persists more than a few days, increase ATs to one drop every 30 minutes, start on Restasis/Cyclosporine/Xiidra, and/or temporary plugs.



OD Post-Operative Visit Instructions

1 DAY POST OP

(Patient Will Be Wearing A Bandage Contact Lens)

- UCVA
- SLE - make sure no infection, contact lens is in place, and no significant stromal haze

1 WEEK POST OP

- UCVA
- SLE - make sure no epithelial defects
- Remove contact lens
- Repeat SLE - after contact lens off, to make sure no infection and no significant stromal haze

1 MONTH POST OP

- UCVA
- Refraction
- SLE - make sure no infection, and no significant stromal haze

3 MONTH POST OP

- UCVA
- Refraction
- SLE

6 MONTH POST OP

- UCVA
- Refraction
- SLE

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

- If the patient has a stable residual Rx and needs a retreatment, please refer back to DLV or ADV after three months.
- Moderate stromal haze - increase steroid to QID for the first month. May need to increase further if stromal haze is severe.

SMILE

OD Post-Operative Visit Instructions (DLV)

1 DAY POST OP

- UCVA
- SLE - make sure no infection, DLK, focal inflammatory keratitis and cap is clear and smooth

1 WEEK POST OP

- UCVA
- Refraction - if patient is complaining

1 MONTH POST OP

- UCVA
- Refraction - on all patients
- SLE

3 MONTH POST OP

- UCVA
- Refraction - on all patients
- SLE

6 MONTH POST OP

- UCVA
- Refraction - only if necessary
- SLE

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

If the patient has a stable residual Rx and needs a retreatment, please refer back to DLV after three months.

Trouble Shooting

- **DLK** - (Diffuse Lamellar Keratitis) - If trace to mild increase steroid to one drop every hour and see back the following day. If moderate or worse increase refer back to DLV or ADV IMMEDIATELY. In all cases, if DLK moves centrally or there is loss of BCVA at day 3, refer the patient back to DLV or ADV IMMEDIATELY to wash out the cap. Waiting beyond day 3 could result in permanent haze and loss of best corrected vision.
- **Focal Inflammatory Keratitis** - If trace to mild, increase steroid to one drop every hour and see back the following day. If worse, refer back to DLV or ADV IMMEDIATELY. In all cases, if FIK moves centrally or there is loss of vision at day 3, refer the patient back to DLV or ADV IMMEDIATELY to wash out the cap. Waiting beyond day 3 could result in permanent haze and loss of best corrected vision.
- **Cap Straie** - Refer back to DLV or ADV immediately.
- **Severe Dry Eye/Spk** - If persists more than a few days increase ATs to one drop every 30 minutes, start on Restasis/Cyclosporine/Xiidra, and/or temporary plugs.

IMPLANTABLE CONTACT LENS (ICL)

OD Post-Operative Visit Instructions (DLV)

1 DAY POST OP

- UCVA
- SLE - record cell/flare, corneal edema, PI patency, and lens vault
- IOP - must perform on all patients

1 WEEK POST OP

- UCVA
- Refraction - on all patients
- SLE
- IOP

1 MONTH POST OP

- UCVA
- Refraction - on all patients
- SLE
- IOP
- DFE - if patient has poor BCVA or complaints associated with retinal detachment

3 MONTH POST OP

- UCVA
- Refraction - on all patients
- SLE
- IOP
- DFE - if patient has poor BCVA or complaints associated with retinal detachment

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

If the patient has a stable residual Rx and needs an enhancement, please refer back to DLV or ADV after three months.

Trouble Shooting

- **Increased IOP** - Above 25, refer back to DLV or ADV.
- **Corneal Edema** - Mild, no need for further treatment. Moderate to severe, increase steroid to 6-8 times per day and see back a few days later.
- **Blocked PI** - Refer back to DLV or ADV.
- **Hyphema** - Refer back to DLV or ADV. Scattered red blood cells in the anterior chamber are okay.
- **Low IOP** - Below 6, check for leaking wound. If anterior chamber is well formed then can see back the next day. If low IOP or wound leak persists for more than 3 days, can put a contact lens on to help tamponade wound, or send back to DLV or ADV for a suture.

EPI-ON CORNEAL CROSS LINKING (CXL)

OD Post-Operative Visit Instructions (DLV)

1 DAY POST OP

(Patient Will Be Wearing A Bandage Contact Lens)

- UCVA
- SLE - make sure no infection, contact lens is in place, no significant stromal haze

1 MONTH POST OP

- UCVA
- Refraction
- SLE - make sure no infection, no significant, and no significant stromal haze
- IOP

3-7 DAYS POST OP

- UCVA
- SLE - make sure no epithelial defects
- Remove contact lens
- Refraction/BCVA
- Repeat SLE - after contact lens off to make sure no infection and no significant stromal haze
- When epithelium healed and patient is comfortable, soft/RGP/Scleral CTL may be placed back on the eye for vision correction as soon as day 3

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

When epithelium healed and patient is comfortable, soft/RGP/Scleral CTL may be placed back on the eye for vision correction as soon as day 3.

CORNEAL CROSS LINKING AND INTACS

OD Post-Operative Visit Instructions (DLV)

1 DAY POST OP

(Patient Will Be Wearing A Bandage Contact Lens)

- UCVA
- SLE - make sure no infection, contact lens is in place, no significant stromal haze, and Intacs are at approximately 75% stromal depth

1 WEEK POST OP

- UCVA
- SLE - make sure no epithelial defects
- Remove contact lens
- Refraction / BCVA
- Repeat SLE - after contact lens off to make sure no infection, no significant stromal haze, and Intacs are at approximately 75% stromal depth

1 MONTH POST OP

- UCVA
- Refraction
- SLE - make sure no infection, no significant stromal haze, and Intacs are at approximately 75% stromal depth
- IOP

YEARLY EYE EXAMS AT YOUR OFFICE (BILLABLE)

Tips/Pointers

When epithelium healed and patient is comfortable, soft/RGP/Scleral CTL may be placed back on the eye for vision correction as soon as day 7-14.



WHY CO-MANAGE WITH ADV VISION

805.987.5300 • advvisioncenters.com • info@doughertylaservision.com

ADV sends NEW patients to your practice for primary eye care and co-management of surgery

NO OPTICAL DISPENSARY & NO RECALL OF YOUR PATIENTS in ANY MARKET

- Continually refers out new patients to OD network
- Does not take VISION PLANS
- Supports Optometry 100% in ALL markets companywide

ONLY group with THREE Refractive Lens Packages

- ADV Offer's Softec HDO -VOTED Eye Care Provider's #1 CHOICE of Premium Lens by DLV Vision's Optometry ADVISORY Board Panel

HIGHEST Conversion Rates in the United States (Converting over 80% of patients to an economy or premium package)

- (Yielding **50-60%** more **co-management dollars** per cataract patient sent)

ADV Vision SUPPORTS your practice by offering Custom Tailored Marketing Plans to Optimize Position on Yelp & Google

- ADV Vision does not have an Optometrist listing on ANY web page (IE Google and Yelp)
- ADV Vision focuses on growing your practice in alignment with ours

Dr. Adam Abroms MD & ADV is focused on EXCELLENCE in patient care, patient outcome and co-management

ADV is invested in state of the art technology for improved and optimized surgical care

Dr. Abroms is pleased to offer the following services:

- Glaucoma treatment including SLT and iStent
- Pterygium, Blespharoplasty, and Strabismus surgeries
- Dropless cataract surgery
- Mobile laser assisted cataract surgery Z8 at ALL surgery locations

WHY DR. ABROMS

- Board certified Ophthalmology
- Top of his class in medical school
- Subspecialty trained at premier strabismus fellowship
- Chief resident in his ophthalmology program
- Degree in Physics from Harvard
- Fluent in Spanish
- Easily accessible anytime to our Optometry network

**** TO REFER, CALL 805-987-5300 ****



REFRACTIVE SURGERY GUIDELINES

805.987.5300 • advvisioncenters.com • info@doughertylaservision.com

Myopic LASIK

Up to -6 to -8

Hyperopic LASIK

Up to +3

Toric LASIK

Up to -6

PRK/LASEK

thin K, up to -3

SMILE

-1 to -8

Visian ICL

-3 to -16

Visian ICL (International)

Any Rx

Lensectomy

>45 yo, high +/-

Keratoconus

Intacs, CXL



ADV VISION

CATARACT SURGERY REFRACTIVE PACKAGES

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PACKAGES	LENS DESCRIPTION	COST	NEED FOR GLASSES OR CONTACT LENSES	LASER ENHANCEMENT (COST) **IF NEEDED	ASTIGMATISM TREATMENT INCLUDED	MONOVISION	LASER ASSISTED CATARACT SURGERY OPTIONAL	CoManagement
BASIC IOL PACKAGE	<ul style="list-style-type: none"> • Basic IOL • Non-Aspheric 	Medicare Covered + Co-Ins. + Deductible	YES For Reading, Computer and Likely Distance	\$2995/Eye	NO	NO	NO	YES-Ins Payment
ENHANCE IOL PACKAGE	<ul style="list-style-type: none"> • Aspheric IOL 	\$1495 Plus Medicare Covered + Co-ins. + Deductible	YES For Near and Computer, Unless Monovision	\$995/Eye	YES	YES	YES \$1500 Extra Per Eye	YES-Ins + Eco Package Payment
PREMIUM IOL PACKAGE	<ul style="list-style-type: none"> • Softec HDO (Eye Care Provider's #1 CHOICE of Premium Lens) • Tecnis MF • Symfony • Symfony Toric • AMO Toric • Alcon Toric 	\$2995 Plus Medicare Covered + Co-ins. + Deductible	NO In Some Cases Just For Reading and Possibly Computer If No Monovision	Included	YES	YES	YES \$3495 Extra Per Eye	YES-Ins + Pre Package Payment



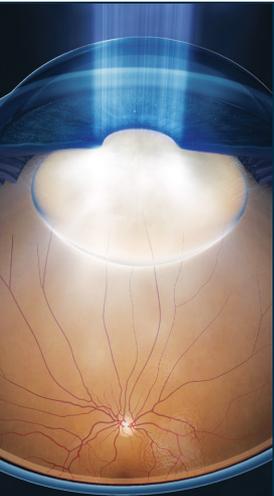
WHICH PACKAGE IS BETTER FOR ME?

805.987.5300 • advvisioncenters.com • info@doughertylaservision.com

REFERENCE PACKAGE	UP CLOSE READING	INTERMEDIATE/ COMPUTER	DISTANCE VISION	LASIK DISCOUNTED	LASIK INCLUDED	ASTIGMATISM CORRECTION	MONOVISION
STANDARD							
ENHANCED							
PREMIUM							



The Cataract Procedure



1.

Incision

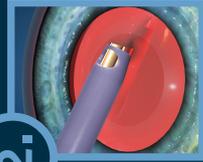
A small incision is made to allow an instrument to pass into the eye.



2.

Removing the Cataract

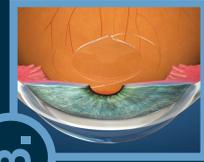
Ultrasonic waves are used to break the cataract into small pieces to be suctioned away.



3.

Inserting the New Lens

The new lens is inserted into the capsular bag inside the eye where the cloudy natural lens was once located.



ADVisionCenters.com
CALL (805) 987-5300
TEXT (805) 621-7737

What exactly is a cataract?

A cataract is a clouding of the normally clear lens in your eye. Though painless, cataracts can blur your vision by restricting the amount of light that enters your eye.

In addition to hazy vision, indications of cataracts include increasing glare, poor night vision, **difficulty reading small print, and a change in how your eyes perceive colors.**

Your Lens Options



Monofocal

- Standard lens option
- Will require glasses at all distances



Astigmatism

- Addresses astigmatism
- Great quality distance vision
- Will require glasses for near vision unless monovision employed



Multifocal

- Splits light into distance and near components
- **Offers the potential for freedom from glasses**
- Glare and halo will occur at night and low light situations



Softec HD

- Increased depth of focus
- Great quality of vision
- Will require glasses for near vision unless monovision employed



Aspheric

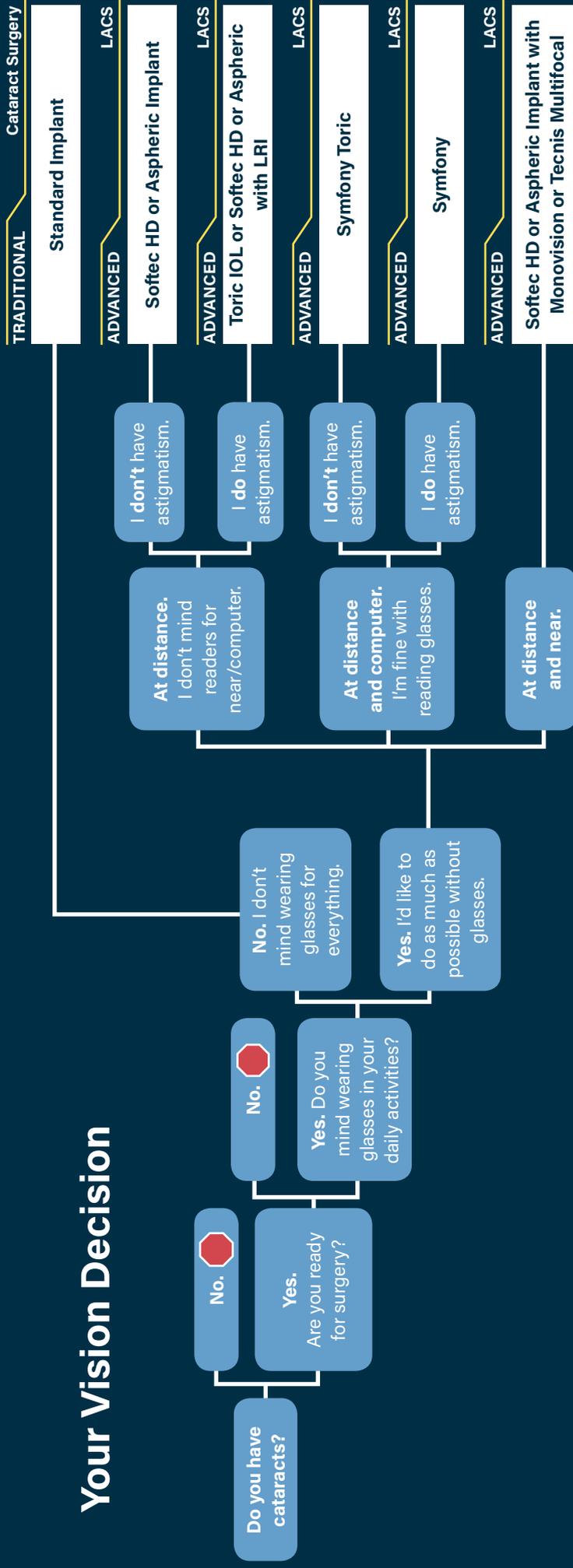
- No increased depth of focus
- Great quality of vision
- Will require glasses for near vision unless monovision employed

Paso Robles
 104 Gateway Center, Suite B
 Paso Robles, CA 93446

Santa Maria
 821 E Chapel Street #102
 Santa Maria, CA 93454

San Luis Obispo
 835 Aerovista Park #110
 San Luis Obispo, CA 93401

Your Vision Decision



Is cataract surgery right for me?

1. Are you frustrated with your vision?

2. Do you feel like your lifestyle is impaired by your vision?

3. Do you have trouble seeing while driving (especially at night)?

4. Do you experience glare or halos at night?

5. Is your vision level getting worse?

Laser-Assisted Cataract Surgery

- Ziemer Z8 Laser-Assisted Cataract Surgery (LACS) is a **custom, blade-free** cataract removal procedure now offered at ADV Vision.
- Surgeons experience **more control and precision**, plus LACS features real-time tools for an accurate visual of what's going on inside the eye.
- LACS and a variety of intraocular lenses may give patients even **more visual freedom** after cataract surgery, helping them **remain active for decades**.
- **Limbal Relaxing Incisions (LRI)**, for control of astigmatism, are made even more accurate with the laser.



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