Sixth annual ASCRS Clinical Survey

More than 1,000 members responded to the sixth annual ASCRS Clinical Survey, providing clinical opinions and practice patterns that help drive ASCRS education and other member benefits and initiatives.

As the ASCRS Education Committee chair, I am pleased to announce some of the results from the sixth annual ASCRS Clinical Survey, which was composed of 150 questions that were developed and reviewed by members of the ASCRS Clinical Committees and validated by a social science statistician. The survey was taken by more than 1,000 members and generated more than 330 measurable data elements, which were then reviewed and interpreted by the ASCRS Education Committee and Clinical Committee members.

Questions addressed topics within cataract surgery, cornea and ocular surface, corneal refractive surgery, glaucoma, retina, and more. The results from the survey not only shape content at the ASCRS•ASOA Annual Meeting, EyeWorld CME activities, and other meetings sponsored by ASCRS, but they also drive much of our online learning, webinars, and print education. The survey identifies educational content that is either needed by members, wanted by members, or lacking in the ASCRS member population.

This survey also helps identify whether ASCRS education is making a difference; it is a tool to help shape member practice patterns; and it can help identify areas for possible research. ASCRS is the only major association in ophthalmology that performs a comprehensive survey like this, releasing highlights of the results through a supplement. I encourage everyone to continue participating in the survey on a yearly basis because it does provide valuable educational information, not only for ASCRS but for you as a member. It’s our education as ophthalmologists, but ultimately, it benefits our patients and patient outcomes.

Rosa Braga-Mele, MD
ASCRS Education Committee chair
Key findings
According to the survey, same-day bilateral cataract surgery remains a relatively uncommon practice. Only 9% of respondents perform cataract surgery in both eyes on the same day often or sometimes. More will do so in extenuating circumstances, but overall, 63% of respondents said they do not perform same-day bilateral cataract surgery.

IOL power calculations for patients who have had laser vision correction can be challenging. Nearly half of respondents said they use the ASCRS Post-Refractive IOL Calculator for this.

Most respondents, 67%, prefer bimanual anterior vitrectomy through limbal incisions, while others prefer a coaxial technique through the main wound; even fewer will take a pars plana and limbal infusion approach.

“I think that some of the respondents may have their own way of performing IOL power calculations for post-refractive surgery patients. Some biometers, for example, have post-refractive formulas within their software, so it might be easier for these surgeons to use the resource of their biometer rather than take the time to go online and enter individual data points into the ASCRS Post-Refractive IOL Calculator. It’s also been my experience that overall the ASCRS calculator gives better results for the post-keratorefractive eye than intraoperative wavefront aberrometry. With regard to most respondents preferring a bimanual approach through limbal incisions for anterior vitrectomy, this shows that to this day, most anterior segment surgeons are still not entirely comfortable using a pars plana technique.”

—Warren Hill, MD
ASCRS Cataract Clinical Committee

“I think that 5% of non-U.S. ophthalmologists performing same-day bilateral cataract surgery is misleading, at least according to this data. Other data shows a higher percentage of ophthalmologists outside of the U.S. performing immediate sequential bilateral cataract surgery (ISBCS). What’s more, ISBCS is being performed in the U.S., without financial disincentive, in some integrated healthcare delivery systems. Our success with ISBCS goes hand-in-hand with continuous attention to the quality of our biometry and use of current generation formulas. As long as there continues to be a financial penalty for same-day surgery, I do not expect meaningful conversion in the U.S. or other countries where there is a disincentive.”

—Richard (Kent) Stiverson, MD
ASCRS Cataract Clinical Committee
Key findings

Overall, 95% of respondents agree or strongly agree that all patients with clinically significant astigmatism should be offered astigmatism correction at the time of cataract surgery. Respondents, on average, reported that 20% of these patients receive toric IOLs. The most common reasons cited for not implanting a toric IOL, despite the patient being a candidate, were cost to the patient, not enough surgical training, and toric IOLs not being available. More than 65% of respondents think 5 degrees of postop rotation or less is acceptable before it can impact visual quality and acuity.

“As an indication of just how standard toric IOLs have become, nearly all of the respondents think that appropriate patients should be offered astigmatism correction at the time of cataract surgery. Despite this, more than 30% of respondents do not feel sufficiently trained to integrate toric IOLs into their practices. Among American respondents, this number surprisingly jumps to 39%, which may reflect a major knowledge gap in residency training. I would urge every cataract surgeon to become comfortable with toric IOL technology. There are no optical disadvantages to correcting astigmatism; we virtually all concur that appropriate patients deserve the option, and surgeons are additionally compensated for this refractive service, which has a high satisfaction rate.

“How to manage posterior corneal astigmatism (PCA) is a significant knowledge gap. The survey shows that many surgeons still don’t know how to measure or calculate PCA and don’t understand or believe in its significance. As a positive, this survey shows an increasing appreciation of the importance of proper toric IOL alignment when compared to 2017 results.”

—David F. Chang, MD
ASCRS Cataract Clinical Committee
Key findings

If a presbyopic patient without astigmatism desires spectacle independence and has no prior experience with monovision, more than two-thirds of respondents said they would prefer a presbyopia-correcting IOL over other options, such as monovision. However, respondents reported that only 9% of their current cataract surgeries involve presbyopia-correcting IOLs, with concern over quality of vision and additional cost to the patient being the most common barriers. Twenty-one percent of respondents do not use presbyopia-correcting IOLs; however, almost half do plan on using these types of lenses within the next 12 months. Of those who are implanting multifocal or extended depth of focus IOLs, more than 60% think you should be within 0.5 D of target in terms of sphere and cylinder for the best visual quality. Most respondents do not mix presbyopia-correcting IOLs in the same patient (49%).

“Many surgeons have reservations about potential side effects, such as glare, halos, and compromised quality of vision, that may be associated with presbyopia-correcting IOLs. Although lens technology has dramatically improved, we may still have patients who experience these symptoms and this may be difficult to predict. I also thought more U.S. surgeons would be mixing and matching IOLs. I was impressed that the rate was so much higher outside the U.S., however this most likely reflects the greater number of IOL options available internationally.

“As for the results regarding a presbyopia-correcting IOL vs. monovision and other presbyopia-correcting options, I think the defining statement in this question is that the patient does not have prior experience with monovision. I would agree with the group; I would be more inclined to lean toward a presbyopia-correcting lens in patients who want spectacle freedom and who have ‘no experience’ with monovision through LASIK, contacts, or natural asymmetric myopia.”

—Kendall Donaldson, MD
ASCRS Cataract Clinical Committee
Key findings
Only 8% of cataract patients receive femtosecond laser-assisted cataract surgery (FLACS), on average, according to respondents. U.S. respondents perform FLACS more often, with 10% of cataract patients going to U.S. surgeons receiving FLACS vs. 6% seen by non-U.S. surgeons. Seventeen percent of U.S. respondents perform FLACS on 21% or more of their patients needing cataract surgery. As for why some surgeons are not offering FLACS, most cited cost and not enough evidence proving clinical benefits. Of those who do offer FLACS, 62% think it has had a positive financial impact on their practice.

“Adoption of FLACS usually requires an initial capital investment, which can be significant, so surgeons have been reluctant to take the risk that might involve potential loss of capital. In addition, results from large studies have been either ambiguous or have not shown a clear advantage to FLACS over traditional phacoemulsification. The data is still mixed and many of us are waiting for additional data on small subsets of patients in which FLACS may be particularly beneficial (mature cataract, Fuchs’ dystrophy, loose zonules). Those of us who use FLACS think that it makes surgery easier and allows us to put less energy into the eye, even though this may not translate to improvements in refractive results in all cases.”

—Kendall Donaldson, MD
ASCRS Cataract Clinical Committee
Key findings
An overwhelming majority of respondents (90%) at least agree that mild to moderate dry eye significantly impacts keratometry and IOL power calculations, as well as patient satisfaction after cataract or refractive surgery. Nearly 90% at least agree that inflammation and hyperosmolarity are involved in the pathogenesis of dry eye. How and when to test for this condition, however, runs the gamut. Forty-five percent do not incorporate a dry eye questionnaire; 63% perform Schirmer’s on a case-by-case basis; nearly 60% incorporate fluorescein staining at the initial point of care, while 58% incorporate rose bengal or lissamine green staining case by case. In terms of treatment for a patient with moderate ocular surface disease of mixed etiology, most surgeons would prescribe cyclosporine and lid compresses/lid hygiene measures.

“It’s interesting that the respondents feel so strongly about the impact of ocular surface disease on cataract outcomes. I do not think this has always been the case. Over the last few years, we have increased our awareness of the impact of dry eye disease. We have better tools and treatments today, so we are able to diagnose and intervene earlier in the dry eye disease state. Clearly, the efforts of educators, societies such as ASCRS, and collaborative efforts such as the Tear Film & Ocular Surface Society Dry Eye Workshop II (TFOS DEWS II) have made a positive impact.

“Despite many respondents thinking that hyperosmolarity and inflammation are core mechanisms in dry eye disease, more than two-thirds of doctors are not using osmolarity or MMP-9 testing in their practices. I think this speaks to the fact that the reimbursement pathway or practice implementation may be a barrier in clinical practice.”

—Preeya Gupta, MD
ASCRS Cornea Clinical Committee
Most respondents (60%) do not perform corneal collagen crosslinking and have no plans to do so within the next year. U.S. respondents were more likely to take this latter stance (76% compared to 31%). Only 14% of U.S. ophthalmologists are performing crosslinking. Those who are performing this procedure are doing so to treat keratoconus with smaller numbers treating post-refractive ectasia or combining it with a refractive procedure.

“The reimbursement pathway in the U.S. has made it hard for clinicians to incorporate crosslinking into their practice, despite this being a vitally important procedure to help those with advancing keratoconus. Perhaps changes in the insurance landscape and reduction in cost of drugs required to perform the treatment will allow more clinicians to offer this treatment.”

—Preeya Gupta, MD
ASCRS Cornea Clinical Committee
Key findings
Low to moderate intraocular inflammation after cataract surgery can have a significant impact on visual quality, recovery, and patient comfort/satisfaction, according to nearly 90% of respondents. As such, 86% of respondents think that prescribing both corticosteroids and NSAIDs can treat postop inflammation and control pain. Most anti-inflammatory and pain control agents are not given intraoperatively, though nearly 40% said they would consider intraoperative instillation within the next 12 months. Fifty percent of respondents, overall, are giving intracameral or transzonular/intravitreal antibiotics or a combination agent with an antibiotic (43% U.S. and 62% non-U.S.), with moxifloxacin being the preferred agent followed by cefuroxime.

“I think this strong agreement regarding the impact of inflammation shows there is a consensus among surgeons that inflammation after cataract surgery is important, and it can affect not only visual quality but the time it takes to recover vision and even patient comfort. With regard to the use of both NSAIDs and corticosteroids to treat postoperative inflammation, this survey shows strong surgeon agreement with this therapy, which is in line with research that has found NSAIDs and corticosteroids provide significantly better prevention of cystoid macular edema after cataract surgery.

“The survey found that while anti-inflammatory agents are not ones that surgeons are likely to administer intraocularly, many are likely to use intracameral or transzonular/intravitreal injections of antibiotics. The reason for the difference here is there is clear evidence that intracameral antibiotics are effective in preventing infections after surgery compared to even well-used topical antibiotics. The use of intracameral antibiotics in the U.S. is still lower than elsewhere, and I think one of the major reasons is there is not an approved antibiotic for intracameral use in the U.S. This issue prompted ASCRS to put together a prospective study to compare intracameral antibiotics to topical antibiotics. If this study shows positive results like we think it will, we might be able to get an approval from the FDA, and I think that will push the numbers higher.”

—Nick Mamalis, MD
ASCRS Cataract Clinical Committee
Key findings
On average, respondents said they perform about 130 laser vision correction surgeries each year, with non-U.S. respondents performing an average of 173 annually compared to the average of U.S. respondents being 107. Fifty percent of respondents do not perform laser vision correction at all; just over 20% of U.S. respondents had offered laser vision correction but no longer do so. Of respondents who do offer laser vision correction, patient satisfaction postop is measured, most often, by subjective feedback provided by the patient and noted on their chart. Slightly more than 10% use a visual function index validated survey and less than 10% use a survey developed by their practice. Forty-five percent of respondents think femtosecond intrastromal lenticule extraction has the least impact on corneal biomechanics, compared to the creation of a femtosecond LASIK flap, while 38% think there is not a clinically significant difference between the two.

“Having been involved with the research and development and clinical delivery of refractive surgery via the cornea, lens, and phakic IOL technology for the last 28 years, I find this survey to represent my impression of the current state of corneal refractive volumes. I think we see such a range in volumes in this era of refractive surgery because thanks to modern-day lasers and refinements in technology, there are now many general ophthalmologists who are comfortable with refractive surgery. Regarding the findings on corneal biomechanics of different procedures, many feel the anterior third of the cornea provides the most structural support, due to the anatomical nature of the collagen fibrils. Thus, a procedure that cuts the least amount of tissue in the anterior third of the cornea is predicted to leave the cornea in a stronger biomechanical state. I think that with time SMILE will become known as the most biomechanically stable lamellar corneal refractive procedure. I’m a big fan of PRK, LASIK, and SMILE, and I think every patient deserves a thorough discussion on the pluses and minuses of each for a fully informed decision.”

—Vance Thompson, MD
ASCRS Refractive Surgery Clinical Committee

—George Waring IV, MD
ASCRS Refractive Surgery Clinical Committee
Key findings
Nearly half of respondents, overall, perform some form of glaucoma surgery and laser procedures (57% percent of U.S. respondents, 34% of non-U.S. respondents), while 28% of respondents, overall, only offer medical glaucoma practice. Most of those who perform laser trabeculoplasty do so after first-line medications (40%), however, 27% of U.S. physicians will initiate laser trabeculoplasty as a first-line treatment. Nearly 50% of respondents use some form of microinvasive glaucoma surgery (MIGS), but U.S. respondents were almost two times more likely to do so compared to non-U.S. respondents.

“Certainly the attitude about laser trabeculoplasty has shifted over the last 2 decades. When argon laser trabeculoplasty was the only modality available, it was reserved for cases that were usually on medications first; it was rarely used as a primary therapy. With selective laser trabeculoplasty (SLT)—which is more comfortable for patients, doesn’t damage the trabecular meshwork, and is repeatable—there has been an increase in primary use. What’s more, I think people respond better to virgin treatment with SLT than if they had already been on a prostaglandin. With regard to MIGS, I think the survey shows MIGS is here to stay. The bottom line is MIGS is safe and effective, and that message is getting out there. This safety factor is why ophthalmologists are increasingly comfortable using MIGS in the majority of cases.”

—Steven Sarkisian Jr., MD
ASCRS Glaucoma Clinical Committee
Key findings
Respondents, overall, reported performing OCT or fundus autofluorescence (FA) on an average of 31% of diabetic retinopathy patients, where the fundus view is adequate, before cataract surgery. Forty percent of respondents, however, reported performing these diagnostic tests prior to cataract surgery in 100% of diabetic retinopathy patients. Sixty-seven percent of respondents said they will routinely perform OCT preoperatively in all patients who wish to have a multifocal IOL.

“The percentage of diabetic retinopathy patients receiving OCT prior to cataract surgery should be 100%. As for patients receiving anti-VEGF injections for diabetic macular edema, wet age-related macular degeneration, retinal vein occlusion, etc., these should proceed on schedule, independently of cataract surgery indications and timing. Patients should have cataract surgery whenever indicated, midway between anti-VEGF injection dates. If endophthalmitis, toxic anterior segment syndrome, sterile inflammation, or hemorrhagic occlusive retinal vasculitis occur, causation will be assigned appropriately. Next day or simultaneous anti-VEGF injection is inappropriate.”

—Steve Charles, MD
ASCRS Retina Clinical Committee chair

“My opinion on obtaining preoperative macular OCTs on patients being considered for multifocal IOLs has evolved. Currently, I think that 100% of these patients should be imaged in both eyes, simply because there is too much pathology out there that trips up their performance. This pathology can be difficult to see, especially through a cataract and especially if it’s subtle. You have to image both eyes because you need to implant a multifocal in each eye to get the best results. I think any resistance on this issue has to do with who will pay for this testing.”

—Kevin M. Miller, MD
ASCRS Retina Clinical Committee anterior segment liaison