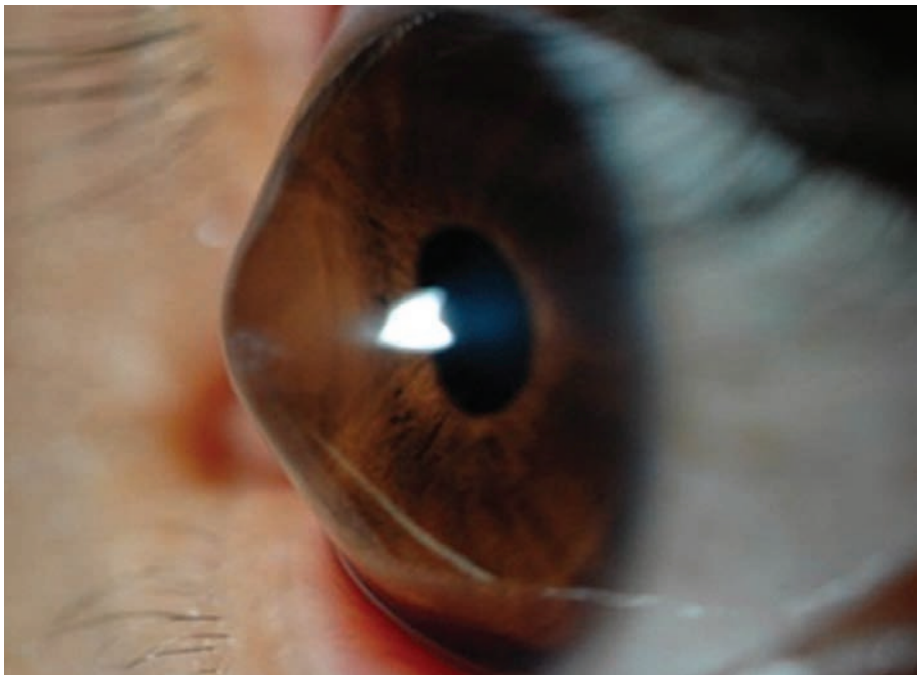


Expanding Your Lens Options for

Irregular Corneas



Experts discuss a customized soft lens that delivers visual acuity and comfort.

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Expanding Your Lens Options for Irregular Corneas

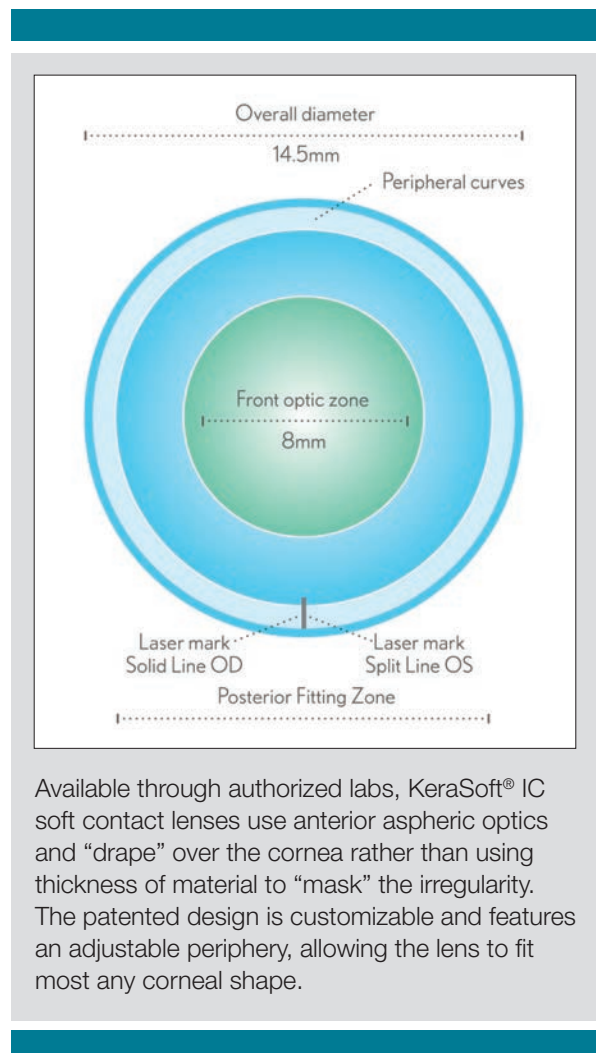
Mr. Norman: Eyecare practitioners have various contact lens options for patients who have keratoconus, pellucid marginal degeneration (PMD) or corneas that have been altered by surgery or trauma. Our panelists have extensive experience fitting these challenging corneas, using all of the available options. Let's briefly review the designs you typically use in your practices.

Dr. Su: Depending on the extent of a patient's condition, the type of lenses he's currently wearing and any issues he may be having with those lenses, I may try a small-diameter GP lens or a larger-diameter semi-scleral lens. Some of my patients are wearing hybrid lenses, and some are wearing piggyback lenses. I also use custom soft lenses for patients who are intolerant of the large-diameter GP lenses and hybrids.

Dr. Reeder: I predominantly use scleral lenses and custom soft lenses. The KeraSoft® IC lens (Bausch + Lomb) has really been a game changer for me. Many of my patients are moving into this lens because they're intolerant of their corneal lenses. I also appreciate having the KeraSoft IC lens available as an alternative to scleral lenses for my patients who have PMD.

Mr. Norman: Has there been a decrease in the number of corneal lenses being used for irregular corneas in your practice?

Dr. Reeder: Absolutely. We're definitely trending toward larger-diameter lenses and specialty soft lenses.



Available through authorized labs, KeraSoft® IC soft contact lenses use anterior aspheric optics and “drape” over the cornea rather than using thickness of material to “mask” the irregularity. The patented design is customizable and features an adjustable periphery, allowing the lens to fit most any corneal shape.

Dr. Ryan: I concur. I've seen a decrease in the overall number of corneal lenses we use in our practice for initial fits and refits of irregular corneas. Patients who have had to deal with the limitations of corneal lenses for years now have alternatives.

Mr. Norman: Let's discuss which patients you consider good candidates for KeraSoft® IC lenses.

PATIENT SELECTION

Dr. Reeder: KeraSoft IC lenses are appropriate for a vast variety of patients. In addition to using them for PMD and all stages of keratoconus, I've also fit patients who have corneal irregularities after refractive surgery. I've had success with some ectasias, and I've even fit patients with plateau-shaped grafts after penetrating keratoplasty. I try to steer clear of people who have extremely delicate corneas. I like to use sclerals in those cases.

Dr. Su: KeraSoft IC lenses are also a great option for patients with significant cylinder when traditional custom lenses haven't been successful. Many patients we've put in KeraSoft IC lenses have been intolerant to other lenses. I had a student whose GP lenses kept popping out at night. He has early keratoconus and has been very successful with KeraSoft IC, in terms of comfort and vision.

Dr. Ryan: I've used the KeraSoft IC lens with excellent results for several other conditions. A patient with unilateral keratectasia, for example, did well with this lens, and another patient who had struggled for years with limbal stem cell deficiency has settled nicely into this product. I echo the sentiments of the other panelists. If you have a patient with an irregular cornea, it makes sense to try a KeraSoft IC lens.

Mr. Norman: How does the KeraSoft IC lens fit into your fitting philosophy?

Dr. Ryan: I'm a tried and true GP fitter, so this lens required a mindset change for me. But seeing how the lens performs, I now consider it among my first options. I haven't abandoned rigid corneal lenses, because I think they're still a viable option for some patients, but if an individual is particularly active or works in an environment where debris is likely to get under the lens, or if lens stability or comfort is an issue, I usually try the KeraSoft IC lens first.

Dr. Reeder: I've been fitting corneal GPs for a long time with great success, and I was surprised by how well patients were seeing with the

KeraSoft IC lens. If I have a patient with early or mild keratoconus, especially one who is refractable, I offer the KeraSoft IC lens as a first choice.

FITTING PROCESS

Mr. Norman: Dr. Su, tell us about your experience with fitting KeraSoft IC lenses. Do you have any tips to share?

Dr. Su: I would give the same advice that I give to anyone fitting GP lenses: Listen to your patients. You may feel it's a perfect fit, and the lens may look beautiful on the eye, but if the patient is uncomfortable, you wouldn't dispense that lens. It's the same with KeraSoft IC lenses. If a lens looks nice on the eye but the patient has fluctuating vision upon the blink, you'll want to modify the lens to stabilize the vision. The endpoint is comfort and vision.

Mr. Norman: This lens is fit differently. For example, for a cornea that's 50D, you might incorrectly reach for the steepest base curve in the fitting set because that's what you do in the GP world. That's a mistake with KeraSoft IC. Were you surprised by how the lens behaved on the eye?

Dr. Su: I had to get accustomed to having up to 2 mm of movement. My fitting process has improved. Now that I know the patient is comfortable and seeing well with all that movement, I've been able to reduce the number of visits I have with my patients.

Mr. Norman: I agree. We live in a disposable lens world, where we think a lens that moves just 0.1 mm is too loose. The vision result you described is interesting, in that it's not just the endpoint on a Snellen chart. It's really what's happening post blink when some variability can occur. Often, that suggests a lens is slightly too steep or too flat by one base curve. Dr. Ryan, what are your thoughts on the fitting process?

Dr. Ryan: Using the MoRoCCo VA — movement, rotation, centration, comfort and visual acuity — approach is critical to fitting success. I think it's worthwhile for practitioners who are just starting to fit this lens to take the time to evaluate a base curve on either side of what they believe is optimum — one step steeper and one step flatter — to increase their knowledge base and comfort level. Our beliefs and experiences with traditional soft lenses tell us that steeper lenses tend to be tight lenses and flatter lenses tend to be loose. With the KeraSoft IC lens, steep lenses may appear to be loose. The clinical response is almost paradoxical.

Mr. Norman: Dr. Su, when you started using

Support When You Need It

Mr. Norman: Dr. Reeder, tell us about your experience with the KeraSoft® IC online training.

Dr. Reeder: The training is quite helpful, because fitting this lens is somewhat counterintuitive to standard soft lenses, particularly when evaluating movement. Learning the MoRoCCo VA — movement, rotation, centration, comfort and visual acuity — approach is important. It enables you to follow the fitting guide and speak the same language as your laboratory.

Mr. Norman: Dr. Su, do you work with the laboratory consultants when ordering lenses?

Dr. Su: Yes. I usually contact a consultant to confirm the lens to order when I'm incorporating a patient's over-refraction and any rotation.

Dr. Reeder: I also use the consultants, especially for Sector Management Control. If I need a steeper or flatter periphery based on the corneal profile, but it's not in my fitting set, I'll take a picture to share. I'll tell the consultant if the patient is seeing well with a lens, what the parameters are, if it's fluting and so on. Then, I'll send a video clip, so the consultant can see what it's doing and confirm that it makes sense.

KeraSoft IC lenses, did you follow the fitting guide?

Dr. Su: Yes. This lens is so different that you have to start there. Once you understand the concept, you can fine-tune your fitting process. I find myself going back to the fitting guide when I have a difficult case. It's a good reference, because sometimes modifications aren't as intuitive as you would think.

Mr. Norman: Dr. Reeder, the fitting guide suggests looking at the lens on the eye within 5 minutes, which is very quick compared to today's disposable soft lenses, to determine if it's really steep or flat. Do you abide by that?

Dr. Reeder: I typically do. I'm a big fan of the MoRoCCo VA, and I love the fitting guide. I also think getting an over-refraction and seeing what's happening after the blink is crucial to reinforce what you're seeing. I go through those steps with each lens.

I've also found that 1 mm to 2 mm of movement is critical. I'm fitting this lens flatter than I ever expected to, but when I do that, not only

does it become more comfortable and move more, the vision improves dramatically. Anyone who has never fit customized soft lenses before and is used to disposables will need to become familiar with how this lens moves and behaves on the eye.

Mr. Norman: Dr. Su, when you're satisfied with the fit, what do you do next?

Dr. Su: After 5 minutes, I perform a quick over-refraction for the patient to get a feel for where he's at visually, then I let the lens settle and take another look to make sure that's the lens I want. I then conduct a more detailed over-refraction and let the patient sit with the trial frame on.

Dr. Reeder: I initially use an autorefractor, which reduces my chair time dramatically. Then I put the trial frame on the patient, walk him out of the examination room and find out if he can function as well in the real world as he did reading the Snellen chart.

Mr. Norman: Dr. Reeder, is the first lens you order usually your final lens, or do you need to make adjustments?

Dr. Reeder: My biggest challenge is the patient whose over-refraction was huge and I know there's cylinder, but I just can't get it. I often have to reorder those lenses, because now that I have the lens in the proper spherical power, I can fine-tune the astigmatic correction.

Dr. Su: I usually have to refine high prescriptions. Often, the correction is better than what patients have been wearing, so they have functional vision and can leave with the lenses. Generally, I need to order another lens when they return.

MODIFIABLE PERIPHERIES

Mr. Norman: One of the differences of KeraSoft IC is not just the relatively flat base curve and the use of draping over the cornea rather than masking with thickness, but that it has a modifiable periphery. The entire periphery of a KeraSoft IC lens can be steepened or flattened independent of the overall base curve. Alternatively, up to two sectors of the periphery can be modified independent of each other, using Sector Management Control. Dr. Ryan, what is your experience with modifying this lens?

Dr. Ryan: The designers of this lens did their homework. There's a reason they put a particular peripheral curve system with a particular base curve, and it works quite well for most patients. Keeping that in mind, I limit the peripheral curve changes to those situations where they're really needed.

Lens Care and Handling Techniques

Mr. Norman: What lens care regimen do you recommend for KeraSoft® IC lenses?

Dr. Su: The majority of my patients use a hydrogen peroxide system. Some may add a daily cleaner if they are prone to deposits.

Dr. Reeder: Most of my patients use a peroxide system, as well. Occasionally, I recommend a multipurpose product for patients who can't do a 6-hour soak — someone who wants to go swimming and then reapply his lenses, for example.

Mr. Norman: Have you or your staff developed any techniques to help patients apply KeraSoft IC lenses?

Dr. Su: We place a mirror flat on a table and have the patient lean over it, similar to applying a scleral lens. We recommend that they make a tripod with their fingers on which to balance the lens.

Dr. Reeder: We suggest two fingers. If a patient has poor dexterity, we cut off the tip of a plunger and have him balance the lens on it. That way, he can look through it instead of trying to look at the lens.

Mr. Norman: What techniques do your patients use to remove their lenses?

Dr. Reeder: Pinching off the lens works well for patients. A few patients have to remove it more like a GP lens by manipulating the lids to pop it out, using the “6 & 12” technique.



A patient removes a KeraSoft IC lens.

Mr. Norman: Relative to lens application and removal, how would you compare KeraSoft IC lenses with scleral lenses?

Dr. Reeder: I think applying the KeraSoft IC lens is easier. Patients who wear scleral lenses have to learn to fill the bowl correctly to avoid having a bubble under the lens. That's not an issue with the KeraSoft IC.

Dr. Su: I agree. In fact, some of my patients who transitioned from scleral lenses to KeraSoft IC lenses told me lens application and removal is much easier for them.

PHOTO COURTESY OF PHILIP E. WALLING, OD

Mr. Norman: Are there any specific indications for a steeper periphery?

Dr. Ryan: The fitting guide suggests some specific designs for certain cone morphologies, so I use those as my starting point. I use the standard peripheral curve relationship for my initial approach.

Dr. Reeder: The corneal profile is key. When a cornea looks like a ski slope in the periphery, the fitting guide recommends the flat periphery lens. When I'm fitting a patient with PMD or a graft with a plateau shape, the steeper periphery is beneficial.

Mr. Norman: Can you provide a specific example in which you would use Sector Management Control?

Dr. Reeder: If I have significant fluting, I won't get the visual endpoint I expect with a lens. In

that case, I order Sector Management Control. Once the fluting is gone and the lens is in place, it's amazing how much the vision improves.

One of my patients has severe PMD and was showing signs of hypoxia with her piggyback lenses. I refitted her into KeraSoft IC lenses and ordered Sector Management Control because her corneas are extremely steep inferiorly. With the KeraSoft IC lenses, her visual acuities are the same as they were with her piggyback lenses, and the signs of hypoxia have resolved.

VISION + COMFORT = QUALITY OF LIFE

Mr. Norman: We often hear that patients give up some visual acuity with soft contact lenses. Has that been your experience with the KeraSoft IC lens?

Refitting From GP Lenses

Mr. Norman: Dr. Ryan, do you have any advice for practitioners who want to refit patients from GP lenses into KeraSoft® IC lenses?

Dr. Ryan: Patients who have been wearing corneal GP lenses are likely to have some corneal molding, so it's important to allow time for the cornea to relax out. We also need to have reasonable expectations, because sometimes in our eagerness to rehabilitate these patients, we may reorder lenses too quickly.

Mr. Norman: If you're transitioning a patient with bilateral keratoconus, do you change both lenses at the same time?

Dr. Ryan: Depending on the patient's present situation, I may recommend changing one lens at a time, so the patient will have functional vision during the transition.

Dr. Reeder: That has not been my experience. I've actually had patients see better, which blew my mind. For most patients, the vision is comparable, maybe a couple of letters more or less.

Dr. Su: I've also been surprised that some patients see better than they do with their GP lenses. Of course, some patients, even though they have keratoconus, are keen observers, and they want crisp vision. In those cases, I may fit a GP lens on one eye and a KeraSoft IC lens on the other eye.

Mr. Norman: Dr. Ryan, how much less acuity would you accept from a soft lens compared with a GP lens?

Dr. Ryan: If we're looking only at what patients can read on the Snellen chart, we're losing sight of the big picture. In my opinion, if patients can function well in their day, then it's a win. Many of our patients are struggling with some debilitating visual aberrations, even though they can read 20/25 on the Snellen chart. I think the real advantage of the KeraSoft IC lens lies in the overall quality of the vision derived from its generous optic zone. It's a huge benefit for our patients who have been wearing corneal lenses or other designs with aspheric or very limited optic zones.

Dr. Reeder: Quality of life and reduction in aberrations are huge benefits for these patients.

Mr. Norman: In patients you have refit from other lens modalities, have you seen any changes in staining and bulbar injection, or any other differences?

Dr. Reeder: I've seen a decrease in central corneal staining, and for those keratoconic patients with allergies. I've seen some reduction in papillary changes as well.

Mr. Norman: What aspect of the KeraSoft IC lens are patients most satisfied with? Is it increased wearing time or comfort?

Dr. Su: It's a combination of both. One of my patients, a nursing student, came in a little sheepish and told me he had worn his lenses 24 hours straight. He didn't sleep in them, but he stayed awake because he had exams and papers due. That's how comfortable this lens is for him. Being able to wear their lenses comfortably for longer periods improves quality of life for these patients.

CHANGE THEIR WORLD

Mr. Norman: How would you describe your patients' overall satisfaction with KeraSoft IC lenses?

Dr. Su: The majority of my patients are very happy with this lens, not just with their vision, but also with the comfort and their ability to function well.

Dr. Ryan: It's a liberating lens for our patients who have struggled with a myriad of options. It truly is game changing.

Dr. Reeder: Patients love this lens. They feel more normal. They have a spare lens. They don't need to wear two different lenses and keep two cases and two different care systems for piggy-back lenses. Many of my patients have increased their wearing times to 12, 14, even 16 hours with KeraSoft IC lenses. They're getting a full day of good vision, and they're comfortable. That's huge.

I'd like to share a case that really brought this home for me. One of my patients had undergone corneal collagen crosslinking for keratoconus, and we were slowly trying various vision-correction options, starting with corneal GPs, then sclerals, hybrids and piggy-backs. He was 15 years old, and he was mad at the world. He wouldn't even talk to me. After being fitted with KeraSoft IC lenses, he was like a different person. At his last visit, he was joking with the interns and had a big smile on his face. He looked at me and said, "These lenses changed my world." You just can't argue with that. ■

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