



Tech Spotlight: OCULUS Keratograph 5M

by Arun C. Gulani, M.D., M.S.

Almost every day, I have patients referred to my practice by excellent refractive surgeons with complaints about fluctuating vision. Many a times they have undergone cataract surgery or a refractive procedure and are unhappy with the outcome.

Guess what? Most of the time those patients just have different kinds of dry eye. Their surgeon did a great job, but their ocular surface is at fault.



To help me better diagnose and treat my patients' dry eye syndrome (DES), six months ago I added the OCULUS Keratograph® 5M to my exam lane. Here is a closer look at the device and my experience with it.

About the Keratograph 5M



The OCULUS Keratograph 5M combines corneal topography and dry eye analysis in one machine. The machine uses Placido disc illumination to take measurements of the ocular surface, and different colors of light emitting diodes (LEDs) are used depending on the application. The Keratograph 5M offers Meibo-

Scan for meibography of the upper and lower eyelid to check for Meibomian Gland Dysfunction (MGD), TF-Scan for evaluation of the tear film break-up time, and R-Scan for automatic bulbar redness classification.

The Keratograph 5M features a high-definition color camera that can take both images and video. And the device's built-in software lets me view 2D and 3D images as needed.

Patient & Practice Benefits

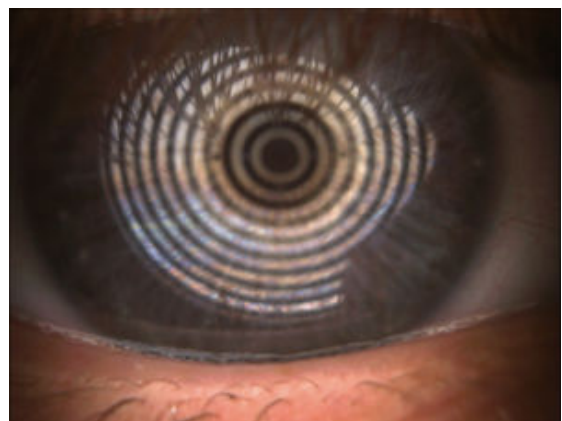
One benefit of the Keratograph 5M is that it is a very user-friendly device. The corneal topography portion of the test is non-contact, and the majority of the dry eye tests are as well — you can use a cotton swab on the eyelid during the meibomian gland topography.

Through the Keratograph 5M, I'm provided with an immediate topography with an ocular surface review. It objectively and subjectively shows me the ocular surface, which is an important part of the refractive outcome. And the device produces a color topography that allows me to catch issues such as astigmatisms and irregular tear film break-up that could be correlated to dry eye. Once I have a patient's data from the Keratograph 5M, I can walk into the exam room with a concrete foundation for the treatment plan that would be best for them.

Another big benefit is that it helps fill the void between diagnosing and educating patients about their ocular surface. The device provides me with a simple-to-understand color map and report that patients can look at and take home with them. This allows me to enroll patients in their own care and provide them with an exact treatment plan for their particular ocular needs.

Dry Eye is a Science

To me, dry eye is a science. It's not "Here's a few eye drops, take this and go home." The Keratograph 5M not only detects and diagnoses dry eye, but it breaks down the diagnosis to what exact type of dry eye it is — is it the Meibomian glands or maybe it's the tear meniscus volume. And once you know the kind of dry eye, you're unfolding the plan of how you're going to treat it.



In my practice that sees complex and complicated refractive and premium cataract surgery cases where I perform the whole spectrum of Kerato-Lenticulo-Refractive surgeries, the data produced from the Keratograph 5M helps me decide which direction I should go — should I stay on the ocular surface or should I go inside the eye to operate.

In a time-efficient manner, you can get so much important data that can be used to not only analyze what's going on with your patient, but also help you plan the direction you should take. To me, the Keratograph 5M is an important addition to a practice's suite of refractive diagnostics and allows eye care providers to raise their ability to take each patient to a satisfied outcome.

Dr. Arun Gulani is the founding director and chief surgeon of the internationally famous Gulani Vision Institute in Jacksonville, Fla. Listed in FORBES (goldline research) among the Top Ten Laser Vision Surgeons in the U.S., Dr. Gulani is super-specialized in advanced LASIK, custom corneal and premium cataract surgery, and is internationally renown for his inventions, ground-breaking, innovative surgical techniques and publications. He is also the former chief of cornea and refractive surgery at the University of Florida. His practice is at <http://gulanivision.com>