

# Customizing Patient Care Starts With State-of-the-Art Diagnostics



How I use the Keratograph® 5M in clinical practice.

BY ROLANDO TOYOS, MD

I am the founder and medical director for a group of six clinics that specialize in medical and surgical ophthalmology, optical, and aesthetics. My personal focus is cataract surgery, refractive surgery, and dry eye disease (DED). We use the tagline, “See better, look better,” because we believe achieving these two goals will maximize our patients’ opportunity to achieve the best quality of life possible.

Regardless of the reason a patient enters our clinics, the goal is always the same—to deliver a customized treatment plan that addresses the patient’s condition and underlying needs. The foundation for this goal is an accurate preoperative examination with state-of-the-art diagnostics.

## OWN YOUR WORKFLOW

All of our clinics are busy, and optimizing workflow is therefore crucial. I have been using the Keratograph® 5M (OCULUS) in my practice for a long time, and every year I find more ways to use the device to improve efficiency.

When I first started with the Keratograph® 5M, I used it mainly as a diagnostic technology to measure noninvasive keratometric breakup time (NIKBT) and the tear meniscus height, as well as for meibography. Over time, and as I evolved as a surgeon, I began to realize that the Keratograph® 5M had even more applications that helped increase our practice’s productivity. We continue to use the device for diagnostics, but we also use it for research studies, which is an important area of focus at our clinics. We now use the meibography to take pictures for some of our research projects and to screen patients for certain studies.

Additionally, as our dry eye practice grew, we learned that we could save time and still be very productive by using the Keratograph® 5M for patients’ baseline workups. Now when I sit down with a patient, I already have background information on the extent of their dry eye. When I review this ahead of their appointment, I have more time to talk to them about other important points, such as their lifestyle, diet, and medication history. The meibography function of the Keratograph® 5M is one feature that I find especially enhances workflow. Most patients who come to our dry eye clinic have meibomian gland dysfunction. Having a good look at their meibography, as well as their NIKBT, before I even walk in the door to talk to them is a game-changer.

## SEEING IS BELIEVING

I also use the images from the Keratograph® 5M as an opportunity to educate patients about their disease and explain to them how we’re going to treat it. Sharing a visual of their unhealthy meibomian glands and comparing it to images of healthy glands, for example, can be powerful. I can also show patients the results of their NIKBT measurements and explain to them how a short NIKBT can lead to irritation and inflammation.

When we can show patients what is going on in their own eyes, they are more apt to undergo treatment. The days of DED treatment exclusively with artificial tears, warm compresses, and lid scrubs are over. DED affects many structures of the eye, including the lid and meibomian glands. Subjective measurements are great, but they are only part of the picture. The Keratograph® 5M gives me the objective information I need to customize patients’ treatment plans. It also allows me to see how my patients are doing with their treatment plan and document how the ocular surface changes over time.

I think for anyone who wants to run a dry eye clinic successfully, the Keratograph® 5M is an essential device to help diagnose the disease and customize treatment plans using state-of-the-art treatments such as intense pulsed light.

## CASE EXAMPLES

► **Case No. 1: Upper lid dropout.** A 66-year-old woman with longstanding DED presented to our clinic. Testing with the Keratograph® 5M showed upper lid dropout (Figure 1).

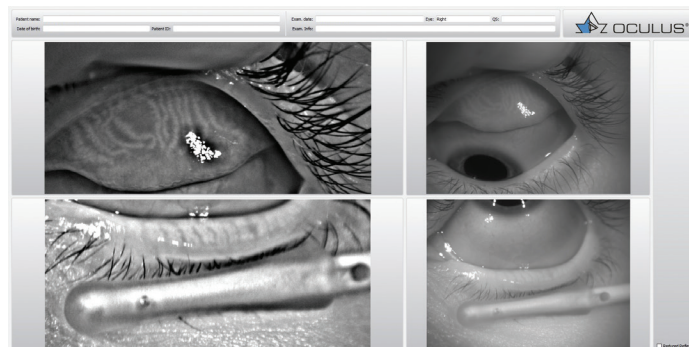


Figure 1. Upper lid dropout.



Figure 2. Changes to the meibomian glands were seen with the Keratograph® 5M.



Figure 3. Meibomian gland dropout.

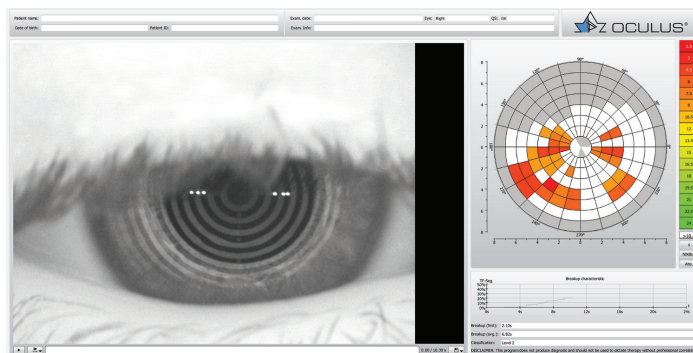


Figure 4. Abnormal NIKBUT.

Treatment with intense pulsed light was initiated to restore the glands. This case is a good example of how DED can change the morphology of the glands.

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► **Case No. 2: Younger patient with mild DED.** A 27-year-old patient presented with changes to the meibomian glands as noted with the Keratograph® 5M (Figure 2). If left untreated, more changes would have occurred over time. The patient was prescribed Tyrvaya (varenicline solution nasal spray 0.03 mg, Oyster Point) and Cequa (cyclosporine ophthalmic solution 0.09%, Sun Ophthalmics) to control the DED.

► **Case No. 3: Meibomian gland dropout, especially the lower lid.** The Keratograph® 5M images (Figure 3) confirmed treatment plans for this patient, who will need a long series of intense pulsed light treatments as well as platelet rich plasma drops.

► **Case No. 4: Abnormal NIKBUT.** When the Keratograph® 5M imaging shows abnormal NIKBUT (Figure 4), this gives me a heads up that the patient possibly has DED with MGD.

#### VALUE ADD

All in all, we see the Keratograph® 5M as a value add for our patients and as a robust technology for clinicians. I urge those who are getting acquainted with the Keratograph® 5M to use it for everything that it has available—learn as much as you can about dry eye and what the disease does to the meibomian glands, lids, and eye. Then, over time, apply the knowledge to other areas of your practice, including clinical trial research. ■

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