

ADVANCED RETINAL IMAGING BECOMES PART OF ROUTINE CARE

One retinal practice is using the iCare EIDON Ultra-Widefield Module for every patient workup



By Sharam Danesh, MD

As a specialist in a multi-office retina practice located in the greater Phoenix area, I know that time is an invaluable asset when it comes to providing the highest level of care for our patients. We strive to make sure our patients are well-informed about their conditions, helping to increase the likelihood they will comply with our disease management plans.

Explaining everything thoroughly and answering all of the patients' questions so they leave with a greater understanding of their condition is important and not something that happens in an instant. Technology that gives us back time with our patients is extremely desirable. As it turns out, a family of iCare EIDON imaging systems we purchased two years ago to improve our diagnostic capabilities was so effective at helping us identify and monitor pathology, it ended up giving us more time to spend with our patients. The images we obtain from these imaging devices have become integral to our daily practice and we include them as part of routine patient workups.

INTRODUCING ULTRA-WIDEFIELD IMAGING

In August 2022, we made the decision to install the iCare EIDON Ultra-Widefield (UWF) Module. The technology provided us a much wider field of view of the retina than our previous imaging device and now offers up to 200° of superior image quality. We immediately noticed a difference in our ability to view the periphery of the retina on the crystal clear, high-resolution images delivered by the iCare EIDON UWF's TrueColor Confocal Technology. Two years later, my EIDON devices still yield the best image quality that I have found.

Our offices see a large volume of cases involving macular degeneration and diabetic retinopathy, along with other conditions

such as epiretinal membranes, macular holes, and retinal detachments. Without question, the iCare EIDON UWF has made a monumental difference in following these kinds of pathologies involving the peripheral retina. For example, in diabetic retinopathy, we can clearly view pathology in the peripheral retina. We can better detect retinal tears. And we can see changes occurring in the periphery of the retina, even in macular degeneration. This aids in our ability to identify and treat progressive diseases earlier and acute manifestations more expediently.

TECHNOLOGY OFFERS A CLINICAL LEAP FORWARD

I believe the TrueColor Confocal Technology built into iCare EIDON devices provides even better diagnostic capability than a clinical exam. For example, very subtle findings, such as microaneurysms or tiny drusen that are difficult to detect on other images and which could go missed on clinical exams, can be seen with sharp clarity. We are able to document those findings and more optimally monitor patients.

The "flicker" feature, which enables image comparison over time, has helped us analyze especially challenging cases. It's critical to be able to see subtle progression of disease, particularly in geographic atrophy cases, or increasing microaneurysm presentations in diabetic retinopathy. Relying on clinical exams alone or less advanced imaging is not good enough. Using the flicker function to compare high-resolution images can show us the slightest progression of disease.

ADDITIONAL ICARE EIDON SYSTEMS

Another modality we have incorporated and routinely use in prac-

CASE #1: RETINAL DETACHMENT

FIGURE 1



FIGURE 1A



Figure 1. iCare EIDON Ultra-Widefield Module revealed the retinal detachment temporally OD. **Figure 1A.** Shows area where fluid has crossed the laser barrier.

A 54-year-old female patient came to me for a second opinion for a retinal detachment. She had been diagnosed with a peripheral retinal detachment and treated with laser demarcation.

The iCare EIDON UWF Module revealed the retinal detachment along with evidence of the laser procedure. The image further showed that fluid was crossing the laser barrier temporally, indicating the laser was failing and the patient needed surgery.

The patient subsequently underwent a vitrectomy and recovered very well. Imaging using the iCare EIDON UWF Module enabled us to promptly detect the failure of the laser demarcation performed by another physician so we could quickly intervene.

tice is the iCare EIDON FA confocal fundus imaging system. The system provides a dynamic widefield view of retinal vasculature and circulation mechanisms, with video acquisition functionality capable of capturing a clear detailed video to the periphery for an active view of pathology.

In addition, our iCare EIDON AF offers exceptional images in pupils as small as 2.5 mm. Its automation makes it easy for all of my staff to run tests. We use the AF modality to follow geographic atrophy now that some treatments are available to reduce the disease's progression rate.

TECHNOLOGY WITH A POSITIVE ROI

Unquestionably, our iCare EIDON systems have been a worthwhile investment. The images they produce have such high reso-

lution and help us in detecting the smallest pathology that we spend less time on examination and more time speaking to patients. In turn, we have happier patients and can see a larger volume of patients. The wait times have also decreased due to the automated image acquisition and the fact that we can rapidly take images with ease.

Our iCare EIDON imaging system is so fundamental to our daily practice that every patient who comes in for an exam also gets an iCare EIDON UWF photo to help us diagnose and treat patients faster. This has streamlined our workflow and allowed us to see more patients and spend more time with them so we can deliver better patient care. Gaining additional time with our patients is an investment that is hard to quantify but which continues to pay us back daily in our practice.

CASE #2: DIABETIC RETINOPATHY

FIGURE 1

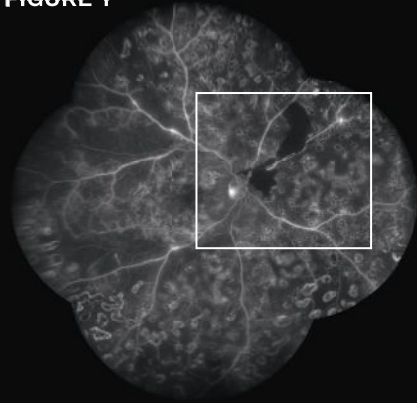


FIGURE 1A

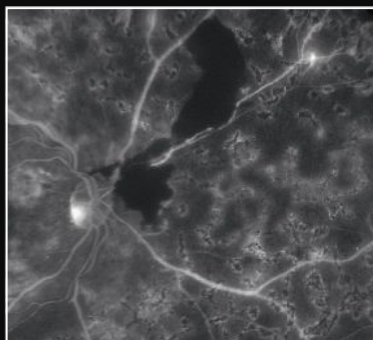


FIGURE 1B

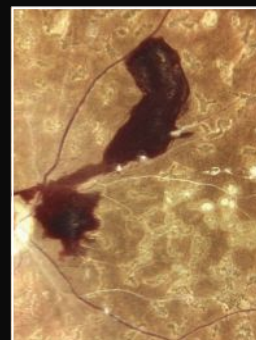


FIGURE 2

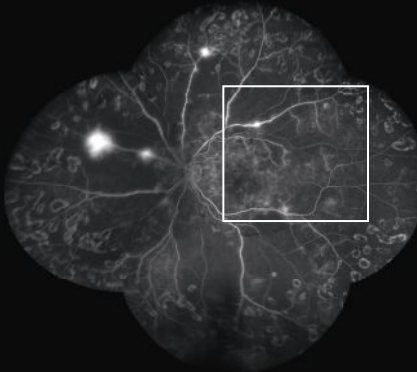


FIGURE 2A

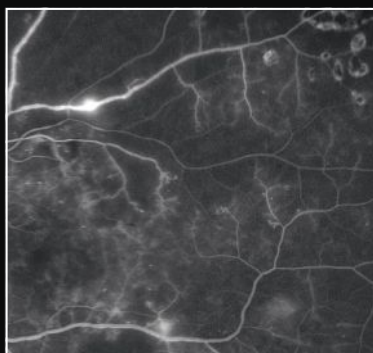


Figure 1. iCare EIDON FA - OD revealed extensive ischemia, evidenced by capillary dropout. **Figure 1A.** iCare EIDON FA shows the same area. **Figure 1B.** iCare EIDON color revealed recurrent pre-retinal hemorrhage nasal. **Figure 2.** iCare EIDON FA - OS revealed extensive ischemia, evidenced by capillary dropout. **Figure 2A.** Enlarged to show extent of ischemia.

This case involved a 31-year-old type 1 diabetic patient with a long history of diabetic retinopathy, who had been treated extensively with PRP laser.

With iCare EIDON confocal color imaging, we could see a recurrent pre-retinal hemorrhage nasal OD extending into the superior and inferior arcades. This suggested recurrent disease activity, increased risk, and the patient may

need to be treated.

Findings using iCare EIDON FA uncovered in both eyes extensive ischemia, evidenced by capillary dropout, and areas of neovascularization leaking along major vessels.

It was clear this patient needed treatment so they were treated with injections of Avastin.