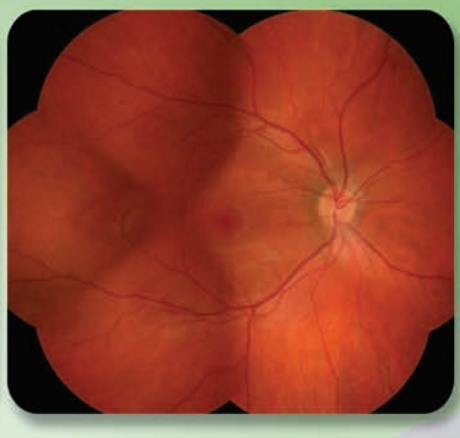
OPTOMETRIC Management
AUGUST 2012

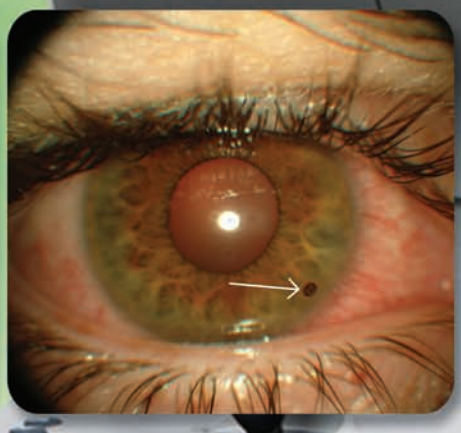
Picture a Simple Solution

If you've been struggling with an older fundus camera, or how to integrate a camera into your practice, now there's a solution.

The AFC-330 provides:

- Functional simplicity
- Landmark automation
- Improved efficiency
- Enhanced image quality





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Make Retinal Cameras Easy to Use

THE CHALLENGE

You want to obtain great images with your retinal camera. You want to get these images in a reasonably short amount of time so your practice can run smoothly and profitably. And you don't want to be forced to take the pictures yourself. Unfortunately, this wish list is frustrating to many doctors who have older retinal cameras.

"Old retinal cameras are primarily manual, and their image capture sequences are very involved," says John Warren, OD, owner of Warren Eye Care in Racine, Wisc.

Kim Castleberry, OD, president and CEO of Plano Eye Associates in Plano, Texas, adds, "Most retinal cameras aren't very automated. They require significant training for optimal results."

These doctors' experiences point to a key theme in retinal cameras and a host of other imaging technologies: automation not only makes testing faster, but it also improves quality and ensures consistency.

"The cameras we had in the past were very technician dependent. The speed, efficiency, and quality of the images varied based on the experience of the technician," says Carleton Fong, OD, co-owner of Eyecare West OC, with offices in Foothill Ranch and Lake Forest, Calif.

Clearly, training was the key. Older retinal cameras require a great deal of it — either from technicians or from you.

"One challenge of our last retinal camera is that everything on the camera was manual. We had to focus manually, even for a normal screening retina photo. It was complicated for the technicians to use, so it was hard to obtain good pictures," says Gerald Geist, OD, owner of Geist Optometry in Selinsgrove, Pa. "If the case was too complicated, then I had to get the more sophisticated pictures I wanted myself, such as a 3D image of the optic nerve head or panoramic pictures around the retina. These were difficult shots to get, and techs could never accomplish it. It took up too much of my time."

April Jasper, OD, FAAO, owner of Advanced Eyecare Specialists in West Palm Beach, Fla., has had the same problem with older retinal cameras, but she knows how to fix it. "It's hard taking photos with some retinal cameras because it's a manual process that's very technician dependent. The cameras aren't user friendly and they require a very cooperative patient and a very good technician, which we don't always have," she says. "As a result, I look for ease of use. The most efficient camera can be used by just about anyone in the office."

THE SOLUTION

Ease of use. It's a much-used phrase that has broad practical implications. It's true that smart, well-trained people can learn to use difficult instruments quickly with good results. Doctors do it all the time. But it's not true of everything, including older retinal cameras. With newer devices, your techs — not you — can obtain great images rapidly because of ease of use.

So, is your new device easy to use? Your first clue comes on training day. Dr. Geist recently purchased the AFC-330. "I've had this camera almost a month. Everything about it is automated, so technician training took only 5 or 10 minutes. It's as easy to use as our Marco autorefractor, which uses the same tracking technology. Technicians simply place the patient on the chinrest, get the camera close to the eye, and then the camera automatically tracks, focuses, and takes the picture. It takes the work out of their hands."

The AFC-330's user interface guides operators every step of the way with simple to identify icons and on-screen patient position indicators.

Save time, money, and headaches with retinal cameras that excel in their automation and ease of use.

(A) The AFC-330 provides the operator with exam review capabilities and can be easily networked to other equipment. (B) The compact design requires no messy wiring and saves space by not requiring a PC in the testing area.

It even does the work that Dr. Geist used to handle himself. "The specialized 3D and panoramic shots that I didn't have time to take before are now captured by technicians who just press a button. The rest is automatic," he says. You can set the camera's automatic features to fully automatic, semi-automatic or manual, but he sets it for automated use for his technicians. "This camera doesn't require a highly trained technician. In fact, my 16-year-old daughter fills in sometimes, and she does the screening photos as well as the sophisticated ones."

Anthony Huang, OD, is owner of Eyecare West and co-owner of Eyecare West OC, with offices in Foothill Ranch and Lake Forest, Calif., where they recently purchased the AFC-330, as well. "Marco's camera is easier to use than our old camera. The staff thinks so, too, which makes them more motivated to take the image. I've only had to get involved with image capture in a few cases of patients with extremely small pupils — less than 3 millimeters," he says. "The software package for viewing the images is also fairly simple and easier to use than some of the other cameras."

Ease of use was the goal all along at Eyecare West OC, according to the practice's co-owner, Dr. Fong. "We were looking for a camera that obtained quality images and was easy to use. The new camera has done that for us. It was very easy for everyone in the office to learn how to use the device, and it takes quality images quickly and efficiently," he explains. "Everyone should be able to take good images regardless of experience. Just line up the camera and let it do what it was designed to do. When fully automated, the camera won't take an image if it detects a patient blinking."

Dr. Warren had a similar experience with training his staff. "The AFC-330 has been the easiest clinical addition I've made to the practice. I actually unboxed it and trained the staff myself before the trainer got there. It's that easy to use. And my staff loves it because it's so quick and so much easier to use than the old camera," he says. "We actually take a screening photo now as part of our pre-test. It provides me with a baseline to compare against in the future, and it has a side benefit of giving patients that 'wow factor' when they see it."

That "wow factor" may not be the only side benefit of getting an easy-to-use retinal camera. Consider how your technicians felt in the past, when they had difficulty obtaining quality images, sometimes needing you to take over the image capture. With a new camera, they'll be able to take great images nearly every time.

Ease of use also saves time, which means the schedule runs smoothly, so patients don't wait and your staff members are relaxed, as well.

Furthermore, you'll be happier if your technicians are taking the images so you don't have to.

Deliver Better Image Quality

THE CHALLENGE

Off the tops of their heads, optometrists name several frustrations with older retinal cameras. They say retinal cameras are complex instruments, and that complexity makes them time-consuming to use. Time costs money and ties up the schedule. But the instrument's complexity and reliance on manual adjustments creates another problem that's just as distressing. The images leave doctors wishing for better quality.

"The quality of images we could get with the old cameras was a problem," says April Jasper, OD, FAAO, owner of Advanced Eyecare Specialists in West Palm Beach, Fla. "There were really two issues: quality in terms of clarity and resolution, and quality in terms of the success of technicians in capturing the best images that the camera could produce. It may be possible to get a great image with an older camera, but you get images of limited quality because the camera requires larger pupils or a very experienced technician."

The quality of images you can consistently expect from older retinal cameras is frustrating, and there's really no alternative technology. John Warren, OD, owner of Warren Eye Care in Racine, Wisc., explains, "My biggest issues with previous retinal cameras were that they took too long and the resolution wasn't good. And other retinal measuring devices, such as the retinal thickness analyzer, are good for structural analysis, macular thickness and optic nerve analysis, but they're somewhat lacking as a camera."

The complexity of the image capture process isn't the only factor affecting the image quality doctors get with older retinal cameras. Some cameras have built-in limitations that even the most talented operator cannot overcome.

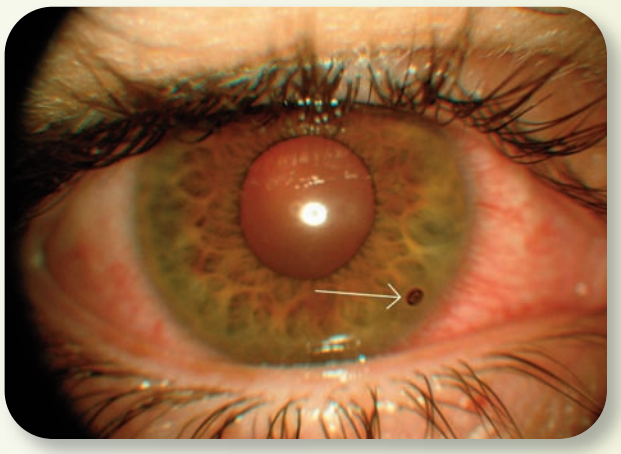
"Traditional retinal cameras are overly dependent on dilation and provide minimal fields of view. Reduced fields of view provide reduced documentation and observation for peripheral retina issues," says Kim Castleberry, OD, president and CEO of Plano Eye Associates in Plano, Texas. He specializes in medical optometry, with a primary interest in senior eye disorders and complicated vision problems. "Non-mydriatic cameras historically don't provide optimum images and are tricky to get on the second eye. Moreover, traditional retinal cameras don't document the peripheral retina."

THE SOLUTION

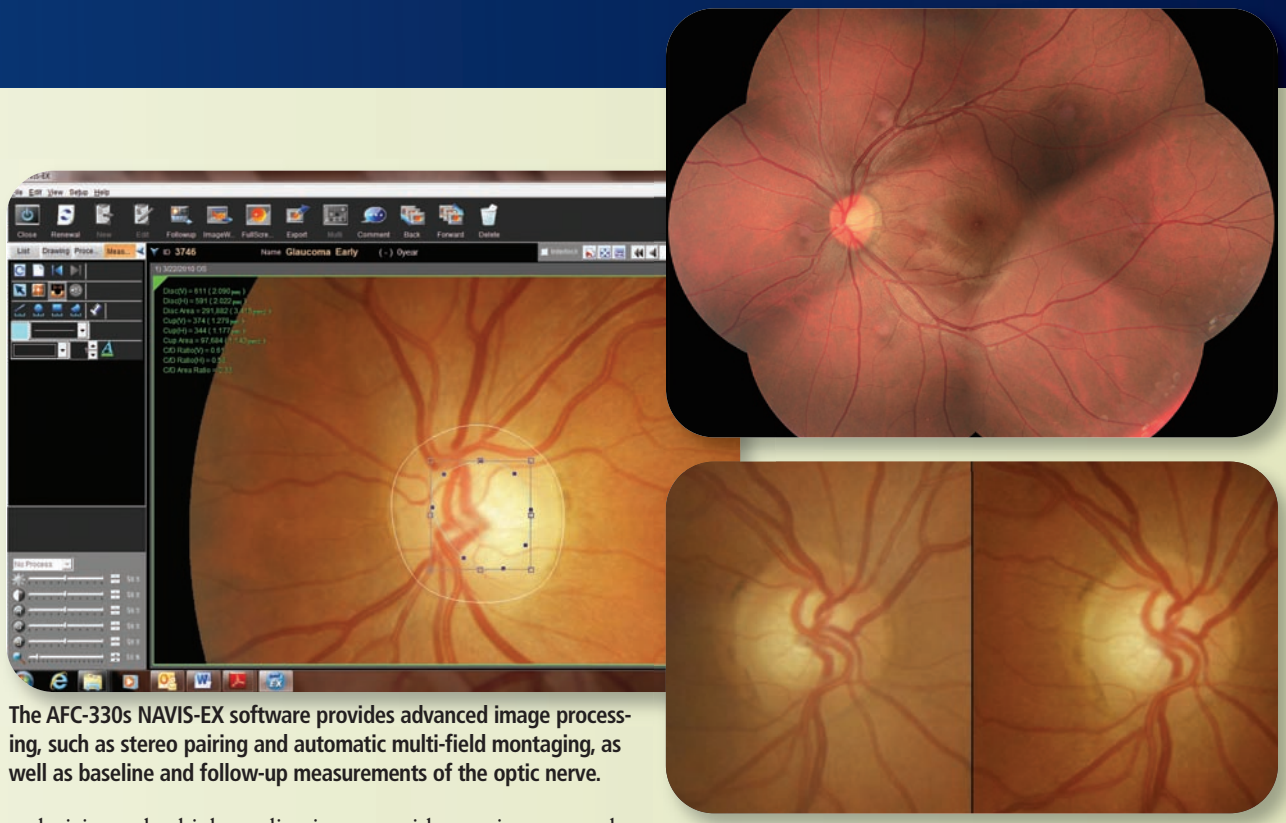
New retinal cameras have overcome some of their predecessors' limitations. Automation makes it easy to align a set of images taken today, as well as images taken at later visits. There are no manual pieces of the puzzle that could potentially compromise the images. And sophisticated software pulls all of the data together graphically, making it easy for you to detect problems or changes.

Dr. Warren now uses the AFC-330. "With this device, once you get it looking at the pupil, it takes over. You get aligned images from all three axes. That allows me to take screening photos now, so I can compare the patient's status going forward. It also takes good external photos for conditions such as corneal scars and lid problems," he says.

The AFC-330 has a higher level of automation than other retinal cameras, including such automated functions as triaxial X-Y-Z (3-D) auto-tracking, autofocus on the fundus and auto-switching from anterior to posterior. On its screen, the device's anterior eye monitor, focus split indicator and image capture interval indicator, and live anterior eye display on the fundus shooting screen all help the



A new automated retinal camera offers better images with less work, in less time.



The AFC-330s NAVIS-EX software provides advanced image processing, such as stereo pairing and automatic multi-field montaging, as well as baseline and follow-up measurements of the optic nerve.

technician take high-quality images with consistency and confidence. These kinds of features enable technicians — even those with limited training — to use the camera to its fullest capabilities. In other words, this solves both of the frustrations cited by Dr. Jasper: "quality in terms of clarity and resolution and quality in terms of the success of technicians."

Gerald Geist, OD, owner of Geist Optometry in Selinsgrove, Pa., shares Dr. Warren's enthusiasm for the image quality he's getting with the AFC-330. "The software is much more sophisticated than my last camera. It has everything I want, letting me measure the optic nerve and changes from exam to exam. It shows the changes graphically, and I can draw on and measure photos," he says. "To me, this is as good as it gets with a camera. I think it's going to become the gold standard retinal camera. Not only does it take excellent retina photos, but it also takes surprisingly good images of the outside of the eye. I was going to invest in a new slit lamp to take photos of problems such as foreign bodies, for example, but now I don't need to buy a separate camera."

Automation and speed no doubt help new retinal cameras produce better images than some of their predecessors. Obtaining images as part of complex undertakings for special cases are now screening tests performed by technicians.

Operators of the 12-megapixel AFC-330 camera typically use automatic shooting (autocapture) of a single eye, but they also have the option to perform a stereo shooting procedure for glaucoma management or an automatic panorama shooting procedure very quickly and easily. The doctor doesn't have to be the one to acquire these complex images. Furthermore, all images are automatically registered, so you can track changes and disease progression over time. You view the results in a graphical interface that helps you spot problems.

The image quality and the way the software presents the data are designed for optimal hands-on practicality, enhancing doctors' confidence as they diagnose and track disease. Consider also the host of efficiencies that this kind of technology adds to your practice, from smooth patient flow to smart use of people's time (including yours). With all of these benefits, you should consider adding the AFC-330 to your toolbox for finding disease early, treating it effectively and providing patients with the best possible care.

Gain Optimal Efficiency

THE CHALLENGE

Asked what frustrates them about their retinal cameras, most optometrists say "time." Acquiring quality images takes too much time, and that impairs the practice's efficiency. What's more, many older cameras compound the inefficiency because they don't interface with the practice's EMR system.

"Traditional retinal cameras require dependence on dilation and require trained technical staff. Those time delays for dilation reduce efficiency and profitability," points out Kim Castleberry, OD, president and CEO of Plano Eye Associates in Plano, Texas.

"My old retinal camera took about 7 to 10 minutes per patient, depending on their cooperation and how challenging it was to obtain a clear image," says John Warren, OD, owner of Warren Eye Care in Racine, Wisc.

The time required to obtain good images isn't just measured in ticks of the clock. It's measured in dollars and cents, especially because the doctor — not the technician — often takes the particularly important or complex images.

Gerald Geist, OD, is owner of Geist Optometry in Selinsgrove, Pa. "If you want to get really good images on an older camera, it takes time, and I usually have to do that myself," he says. "When I've got a patient waiting in another exam room, I don't have much time to spare. It's very difficult to manage time."

All the activities that accompany actually "snapping the shot" take valuable time as well. Carleton Fong, OD, co-owner of Eyecare West OC, with offices in Foothill Ranch and Lake Forest, Calif., explains, "The camera we had before was very inefficient. It would take about 4 to 5 minutes per eye just to obtain a few good images. That time includes entering patient data, getting the patient properly positioned, and then taking the pictures."

This points to another inefficiency in the process. In a practice with an EMR system, why are technicians entering demographics?

April Jasper, OD, FAAO, owner of Advanced Eyecare Specialists in West Palm Beach, Fla., has had retinal cameras that can't even be networked. "Some of the older cameras required a dedicated computer, and we could only save images on the one computer that attached to the camera," she says. "There was no ability to save data on a server or cloud."

Even older cameras that can be networked may not be ready for an EMR. "If your device doesn't integrate with your EMR, you'll find yourself moving demographic data to the camera software and images to the EMR, and then you're entering demographics and printing data for paper charts. That takes a lot of time," says Dr. Geist. "I owned my last retinal camera for 10 years and took a quarter million pictures. EMR integration is the number one feature I look for because we don't have time to enter demographics for all of those historical images."

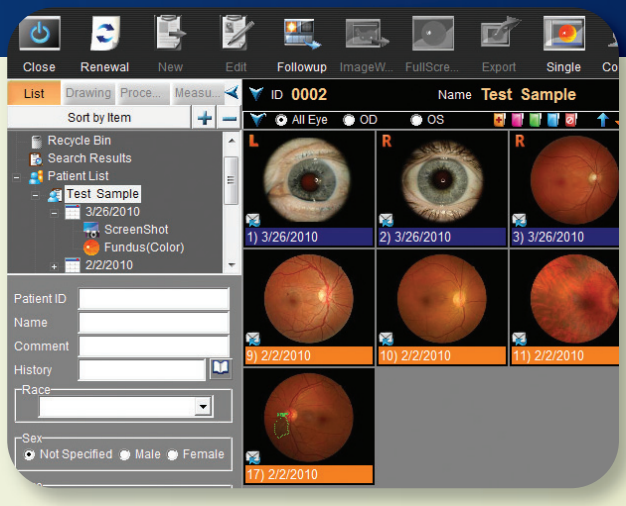
THE SOLUTION

Doctors want to get great images faster than they could in the past, and they want the added and indispensible efficiency of full integration with the EMR. Thankfully, both solutions are available.

"New cameras have excellent image quality, ease of use and a good process for data backup," Dr. Jasper says. "Many are fully integrated with EMRs as well. We don't have to re-enter demographic data, which saves time and ensures that records are consistent and accurate."

New retina imaging technologies cut down on time by automating a process that used to be very technician-dependent. With the AFC-330, techs simply aim the device at the pupil; then the device takes over and gets all the images the doctor requires, and all images are perfectly aligned. Dr. Geist replaced his older retinal camera with an AFC-330. In addition to the ease of use of the new

Older retinal cameras take too long. The two-pronged answer: automated image capture and full EMR connectivity.



The AFC-330 with NAVIS-EX delivers all of the tools necessary for efficient chronological review of patient photos within the exam lanes.

machine, he says its automated features help save time by enabling the techs to get it right the first time, which saves time for his busy practice.

"During workup, we take an undilated screening photo of the retina. This requires a pupil that's at least 4 mm in a dark room. But when we photograph the first eye, the light causes the other eye to constrict, so we have to wait a minute or longer before the pupil relaxes again and we can take the second picture. If we don't wait, the image comes out dark and we can't see the retina," he explains. "In our high-volume practice, the techs would feel rushed and wouldn't wait long enough. So, we'd end up with a good image of the first eye but we'd have to retake the second eye after the exam."

His new retinal camera has built-in protection against this very problem. "The AFC-330 has an onscreen interval timer which indicates when it's best to proceed to the undilated patient's second eye. Since we began using it, we've had perfect pictures of both eyes. This is a huge benefit for me because we take so many pictures, and the extra time we used to need at the end for re-takes really added up."

The AFC-330 retinal camera obtains images very quickly and keeps patient moving, according to Dr. Warren. "It takes about 45 seconds. It's amazing! As a result, it doesn't create any patient flow backlog like our older system did." For Dr. Warren, the device is saving time and money — and adding new money. He explains, "Because this new technology is so much easier and faster to use, I'm ordering imaging in cases that I may not have in the past due to the time required to capture and review the images. The length of time to acquire images previously may not have been justified given the reimbursement, especially for OCT imaging. And it's important to note that doctors will see higher reimbursement when they perform photography versus OCT when either technology is indicated and clinically useful."

Dr. Fong is also pleased with how much more efficient the AFC-330 is compared to his practice's previous retinal camera, as well as how easily it integrates with his practice's EMR. "With the new camera, we take quality images in half the time with less discomfort for the patient," he says. Anthony Huang, OD, owner of Eyecare West and co-owner of Eyecare West OC with Dr. Fong, agrees. "With our old camera, it was challenging and more time-consuming to obtain quality images. There were times that I had to assist the staff with capturing the images or retaking a series of images from the beginning. The AFC-330 is certainly faster in obtaining the pictures we need," he says. "I also think the integrated software is a really nice way to communicate with patients and show them the results."

By automating an image capture process that used to be complex and time-consuming, new retinal cameras like the AFC-330 allow doctors to stop doing tech work so they can focus on being doctors. Furthermore, the AFC-330 provides quality images of the retina. Added to that, new retinal cameras are EMR compatible. No more entering demographic information, wasting time and potentially introducing errors. When you add up all of that saved time over the course of a day or a month, it translates into real dollars. Plus when testing moves quickly, practice schedules run smoothly and everybody is happier — you, your techs, and your patients.

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