



TECNIS Symphony
Extended Range
Of Vision IOL

- Page 2



California From OPTOS
The Ultra-Widefield Technology

- Page 7



Amico Yasna Pars

Ophthalmology Newsletter

What's Inside

Customer Satisfaction
Page 1

Tecnis® Symphony
Page 2

Tecnis® Symphony
Page 3

Tecnis® Toric
Page 4

Tecnis® Toric
Page 5

WhiteStar Signature PRO
Page 6

Optos California
Page 7

Optos California
Page 8

**"I've learned that people will forget what you said,
people will forget what you did, but people will
never forget how you made them feel."**

Maya Angelou

Dear valued partner

Human beings seek pleasurable experiences and avoid painful ones, tend to return to companies that meet or exceed their requirements whilst shunning organizations that fail to meet them. This self-evident truth is most easily described by the phrase "customer satisfaction and loyalty". Customers whose needs are met or exceeded by an organization from favorable attitudes about it. Since people's attitudes drive their future behaviors, highly satisfied customers usually display loyal behaviors such as staying with the company longer and recommending it – all of which are highly important to the company concerns therefore in Amico Yasna Pars we always try our best to act this way, to create a pleasant experience for our greatest asset, our valuable customers.

In Amico we believe that for individuals, character is destiny and for organizations culture is destiny.

Our destiny, our culture is working among our satisfied customers.

Leader in Healthcare Specialty Markets

www.amicoyasnapars.com



A NEW EXTENDED-RANGE-OF-VISION IOL

In the US clinical trial, the Symfony IOL provided a high degree of spectacle independence with no compromise in distance vision.

BY JASON J. JONES, MD



I recently participated as a clinical investigator at one of 15 sites in the US clinical trial of the Tecnis Symfony IOL (ZXR00; Abbott), the first in the new category of extended-range-of-vision IOLs. The lens is different from a traditional multifocal IOL in that it does not split light between near and distant focal points. Rather, a diffractive echelette design feature extends the

range of vision, while achromatic technology reduces chromatic aberration to increase contrast sensitivity and enhance quality of vision. This article shares pivotal FDA trial data on visual outcomes that I presented at the 2016 meeting of the American Society of Cataract and Refractive Surgery.¹

In the prospective, randomized, subject- and evaluator-masked study, 148 subjects received the Symfony lens bilaterally and 150 the ZCB00 Tecnis monofocal lens (Abbott). Mean age and sex were similar in both groups.

STUDY RESULTS

Figure 1 shows patients' uncorrected binocular visual acuity results at 6 months. Monocular and binocular distance visual acuities for the Symfony group were clinically comparable to those of the monofocal control lens group. Monocular intermediate visual acuity with the Symfony lens was 1.7 lines (uncorrected) to 2.4 lines (distance corrected) better than in the control group. Mean binocular UCVA at intermediate distance (66 cm) was 20/20 (0.002 LogMAR) at 6 months, and mean binocular UCVA at near (40 cm) was between 20/25 and 20/32 (0.146 LogMAR).

My colleagues and I performed robust defocus testing on a subset of the patients in this study; we deliberately defocused them and tested their vision from +2.00 to -4.00 D of defocus. I was encouraged to see that the resulting defocus curve (Figure 2) is almost identical to what was predicted by the optical bench testing of this lens as well as to defocus testing done in other studies.

REDUCED SPECTACLE USE

A secondary effectiveness endpoint in the clinical trial was a reduction in spectacle wear. The study data show that 85% of Symfony subjects reported wearing glasses "none" or "a

little bit" of the time (Figure 3). The majority (63%) reported never wearing glasses, which was nearly twice as many as in the monofocal control group. Still masked to which lens they received and without the benefit of any enhancements to correct residual refractive error, 92% of Symfony patients said they would choose the same IOL again.

I have to admit that I was impressed by how well my patients were able to function without glasses for near activities when they were targeted for distance. Of my 21 study patients, 10 received bilateral Symfony lenses. Most of my patients reported using reading glasses only once or twice per week or even less, so this lens provides fairly robust uncorrected acuity at all distances, something I had not expected to see without some mini-monovision.

NIGHT VISION SYMPTOMS

The Symfony lens spreads light over an extended range instead of directing it to two distinct focal points. This means there is no second focal point that must be suppressed by the brain, as was reflected by the low rate of visual symptoms in the US clinical trial.

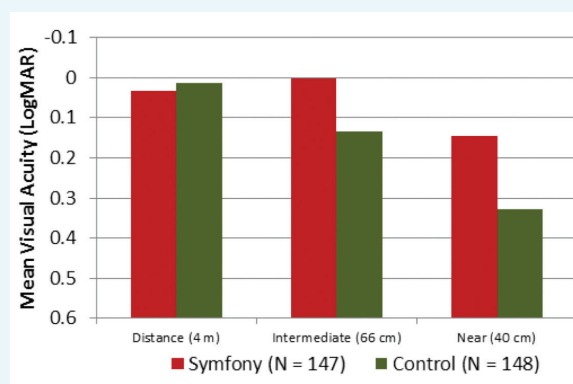


Figure 1. Based on 6-month results from the US clinical trial, patients who receive the Symfony IOL can expect uncorrected binocular results for distance and intermediate of approximately 20/20 and near results between 20/25 and 20/32.

Discussion

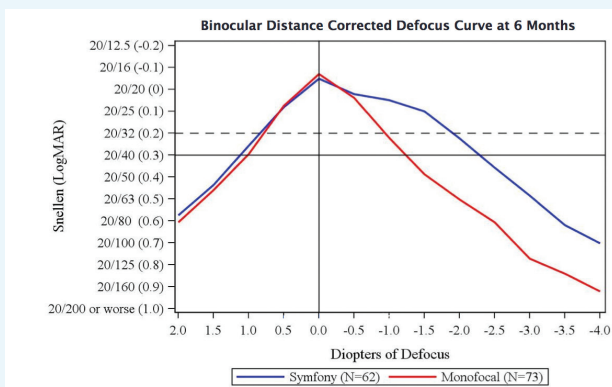


Figure 2. In the US clinical trial, mean binocular visual acuities remained above 20/32 for the Symfony group through intermediate defocus values of 1.50 D (66 cm) while maintaining a 1- to 2-line acuity difference over the monofocal group through 4.00 D of defocus.

On a nondirected symptom questionnaire, the vast majority of subjects in the US clinical trial reported mild or no halos (90%), glare (98%), or starbursts (95%). Of those who did report symptoms, most experienced a moderate rather than a severe level.

I would expect the incidence of unwanted visual phenomena to be even lower outside the clinical trial, when enhancements can be performed, because residual refractive error is the greatest source of glare and halos. I think it is still important to inform patients about the potential for halo formation, but the symptoms my patients described seemed to be less intense than what I have observed in the past with multifocal IOLs; patients deemed symptoms acceptable when they noted them at all.

WHERE THE LENS FITS INTO THE ARMAMENTARIUM

I think the Symfony IOL is going to be a solid performer for patients who desire presbyopic correction. Although my

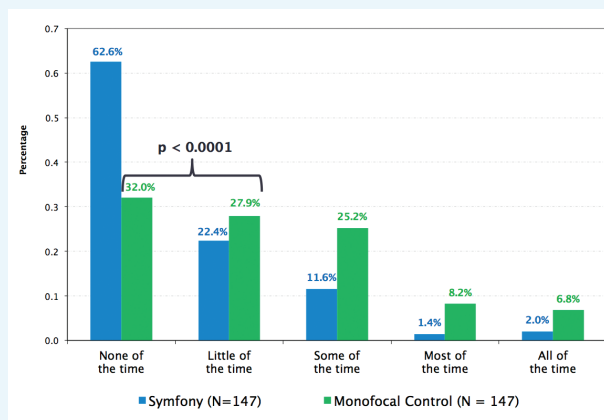


Figure 3. In the US clinical trial, a statistically significantly ($P < .001$) greater proportion of Symfony subjects compared to controls reported wearing glasses “none/a little of the time.”

patients were quite satisfied with the degree of spectacle independence, I might also consider targeting the nondominant eye for micromonovision, or I might place a Symfony lens in the dominant eye and a low-add multifocal lens in the nondominant eye to get even more reliable near vision. At the 2016 meeting of the American Society of Cataract and Refractive Surgery, Black reported on intentional micromonovision with the Symfony IOL in both eyes but a -0.50 D target in one eye. This approach provided just a bit more near vision without detracting from distance acuity.² Although more studies are needed, I think surgeons will have effective options for refractive targeting or mixing and matching within the Tecnis family of lenses to provide patients with seamless blended vision.

I also think the excellent distance vision that the Symfony IOL provides—equivalent to that of a monofocal IOL—opens up the possibility of using this lens in patients in whom I might hesitate to implant a multifocal IOL such as those with mild corneal aberrations or retinal issues. Based on my experience, the Symfony IOL represents an excellent option for improving near and intermediate vision on a very stable lens platform that is no different to implant or monitor than a monofocal IOL. The robust quality of vision and ability to tolerate certain aberrations may also make the Symfony lens a desirable option for post-LASIK eyes in my practice. ■

1. Jones J. Visual Outcomes of a New Extended Range of Vision IOL. Paper presented at: ASCRS/ASOA Symposium & Congress; May 8, 2016; New Orleans, LA.

2. Black D. Evaluation of reading speed using an extended range of vision presbyopia-correcting IOL. Paper presented at: ASCRS/ASOA Symposium & Congress; May 7, 2016; New Orleans, LA.

Jason J. Jones, MD

- medical director, Jones Eye Clinic, Sioux City, Iowa
- (712) 239-3937; jasonjonesmd@mac.com
- financial disclosure: consultant to Abbott and paid investigator for the FDA clinical trial of the Tecnis Symfony IOL

SUCCESSING WITH TORIC IOLs IN HIGH ASTIGMATISM

Both leading acrylic IOL platforms now offer a full range of toric correction.

BY FRANCIS S. MAH, MD



Although more than one-third of the population has greater than 1.00 D of astigmatism, toric IOLs represent only 7% of all IOLs implanted,¹ so there is definitely room for growth. In patients with high amounts of astigmatism, a toric IOL offers the only chance of achieving spectacle independence for distance. Approximately 9% of the population has more than 2.00 D of astigmatism,² and until recently, surgeons had few options to correct significantly more than 2.00 D.

Abbott Medical Optics has introduced three new cylinder powers (Table); these single-piece acrylic IOLs are now available to correct astigmatism ranging from 1.50 to 6.00 D or up to about 4.75 D at the corneal plane. Because there are differences between the toric IOL platforms and nontoric IOLs in general in terms of index of refraction and, for example, chromophore that might be detectable to the patient, many surgeons prefer to implant the same type of lens in both eyes of a given patient whether toric or not. For those who prefer Tecnis lenses (Abbott Medical Optics), as I do, the expanded range means we can proceed with our lens of choice knowing that we will later be able to match it for the second eye, regardless of the amount of astigmatism. Other toric options, including the STAAR Toric silicone plate lens (STAAR Surgical) and the Trulign modified plate haptic lens (Bausch + Lomb) can correct up to about 2.50 D of astigmatism at the corneal plane.

PERSONAL EXPERIENCE

I used the Tecnis with the highest cylinder power (ZCT600) on the first day it became available, and I have been obtaining excellent results with it since then, with about 90% of eyes having a UCVA 20/25 or better after surgery. Nearly 95% of the eyes that I have implanted with these lenses have had residual astigmatism of less than or equal to 0.50 D after cataract surgery. I have not had to explant or rotate any of the lenses.

I recently performed surgery on a 67-year-old patient who had a manifest refraction of $-5.75 +5.75 \times 019$ with keratometry readings of 41.25 D @ 109° and 45.00 D @ 19° OD and $-8.50 +7.00 \times 006$ with keratometry readings of 41.25 @ 94° and 45.75 D @ 004° OS. I operated on the left eye first, and I implanted a +14.50 D ZCT600 lens. For the right eye, after using the toric calculator, I used a ZCT525 +18.00 D lens. The

“ These features reduce chromatic aberration and help to maintain good contrast sensitivity and quality of vision in dim light.”

patient had less than 0.50 D of astigmatism postoperatively and was thrilled with the results after a lifetime of correction for the significant astigmatism she had. Any eye care professional can readily imagine what an impact correcting this much cylinder can have, just like prescribing glasses or contact lenses with this much astigmatism correction for the first time.

In addition, in my experience, the Tecnis Multifocal is a very stable lens that performs well in low light, owing to the low index of refraction and high Abbe number that are characteristic of this line of lenses. These features reduce chromatic aberration and help to maintain good contrast sensitivity and quality of vision in dim light. Practically speaking, I like that the entire Tecnis line of IOLs has exactly the same A-constant; it makes choosing the appropriate IOL power easy, even for a surgeon just getting started with toric lenses, high-cylinder toric IOLs, or multifocal IOLs.

TAKING CARE OF PATIENTS

Preoperatively, I always have a significant level of suspicion of ocular pathology when there is high cylinder. It is important to ensure that the astigmatism is regular, especially in the central cornea, and to look carefully for corneal disease and ocular surface problems that could be contributing to or masquerading as high astigmatism. I prefer to use an advanced topography or anterior segment tomography device such as the Orbscan (Bausch + Lomb), Pentacam Comprehensive Eye Scanner (Oculus Surgical), or Visante (Carl Zeiss Meditec) to carefully evaluate the cornea.

I also take extra care with preoperative marking and

CYLINDER POWER OPTIONS

Lens Model	ZCT100	ZCT150	ZCT225	ZCT300	ZCT375	ZCT450	ZCT525	ZCT600	ZCT700	ZCT800
Cylinder Power										
IOL Plane	1.00 D	1.50 D	2.25 D	3.00 D	3.75 D	4.50 D	5.25 D	6.00 D	7.00 D	8.00 D
Corneal Plane	0.69 D	1.03 D	1.54 D	2.06 D	2.57 D	3.08 D	3.60 D	4.11 D	4.80 D	5.48 D
Corneal Astigmatism Correction Range	0.50 D – 0.75 D	0.75 D – 1.50 D	1.50 D – 2.00 D	2.00 D – 2.50 D	2.50 D – 3.00 D	3.00 D – 3.50 D	3.50 D – 4.00 D	4.00 D – 4.75 D	4.75 D – 5.50 D	5.50 D – 6.25 D

Table. The range of cylinder powers now available in the Tecnis Toric IOL.

intraoperative alignment. There is a 3.3% loss of effect of the toric IOL power for each degree of cyclorotation of the lens.³ At lower levels of astigmatism, being off axis may reduce the correction but still leave the patient with satisfactory visual acuity. That is not likely to be the case with a 10° rotational error in a patient with 4.00 D of astigmatism.

The rewards of correcting high cylinder are well worth a little extra effort. Postoperatively, these patients are some of the happiest in my practice.

START SIMPLY

Intraoperative aberrometry and surgical guidance systems such as the ORA System and Verion (both from Alcon), the TrueVision 3D Visualization and Guidance System (TrueVision Systems), Cassini Total Corneal Astigmatism (i-Optics), or Callisto Eye (Carl Zeiss Meditec) are certainly useful for refining toric IOL outcomes, but not having access to these devices should not be considered a barrier to the implantation of toric IOLs. Just a few simple steps can ensure successful outcomes:

- **Be consistent.** It is a good idea to measure astigmatism using several different methods, but surgeons should choose a primary method for determining the magnitude and axis of astigmatism and consistently use that method to personalize nomograms and lens constants. I rely on my Atlas 9000 topographer (Carl Zeiss Meditec) for the axis but use the keratometry readings from my optical biometry device (I have a Lenstar [Haag-Streit] in one office and an IOLMaster [Carl Zeiss Meditec] in another) for the magnitude of astigmatism.
- **Use the toric calculator.** Each manufacturer offers an online calculator for its toric lenses. I use www.tecnis-toriccalc.com to calculate the optimal IOL cylinder value based on axial length and personalized A-constants. This calculator will soon incorporate an algorithm for posterior corneal astigmatism, eliminating the need for me to also check the Barrett calculator on the American Society of Cataract and Refractive Surgery's website.
- **Mark preoperatively with the patient sitting up.** Ask the patient to look off in the distance over your

shoulder to minimize cyclorotation. I like to mark the eye at 3, 6, and 9 o'clock with a fine-tipped marking pen on a dry cornea if I am not using the ORA System.

- **Use an axial marker to mark the exact axis of astigmatism on the table, after draping but before instilling any drops.** An old radial keratotomomy or limbal relaxing incision marker will suffice, or an inexpensive tool for this purpose can be purchased such as a Mendez Degree Gauge. Simply align the corneal marker with the 90°/180° (6, 3- and 9-o'clock) marks, and then find the exact axis of astigmatism. Mark the axis and intended incision location. Then, after phacoemulsification, simply rotate the IOL in the bag to align it with the corneal axis marks.
- **Perform careful surgery.** Overly aggressive cortical cleanup is not necessary in general for toric IOLs, but be sure to remove all the cortical material and viscoelastic by irrigating and aspirating behind the lens if necessary. Try to leave the eye at physiologic pressure rather than overfill it. Check that wounds are watertight, and inspect incisions and IOL placement one last time at the end of surgery.

CONCLUSION

The tools and steps needed to achieve excellent results with high-cylinder toric lenses are minimal. Although there are relatively few patients who fall into the high ranges of astigmatism, the rewards of offering them toric correction at the time of cataract surgery are great. ■

1. Market Scope. Comprehensive Report on Global IOL Market. 2013.
2. Osti C, Falck L, Boberg Ans G, Kessel L. The need for toric intraocular lens implantation in public ophthalmology departments. *Acta Ophthalmol* 2015;93:e396-397.
3. Rho CR, Joo CK. Effects of steep meridian incision on corneal astigmatism in phacoemulsification cataract surgery. *J Cataract Refract Surg*. 2012;38(4):666-671.

Francis S. Mah, MD

- director of cornea and external diseases and codirector of refractive surgery at the Scripps Clinic Torrey Pines in La Jolla, California
- (858) 554-7996; mah.frankis@scrippshealth.org
- financial disclosure: consultant to Abbott Medical Optics, Alcon, and Bausch + Lomb

Phaco with novel system yields excellent cutting efficiency, chamber stability

Bakersfield, CA—A novel phacoemulsification system offers state-of-the-art fluidics and phacoemulsification technology and could fill a niche as an upgrade for users who prefer the value of a system to the expense of a high-end system.

“[The manufacturer] has taken a multi-pronged approach to cataract surgery, allowing surgeons to decide what system suits their surgical and operational needs instead of just having one cataract system for everyone,” said Daniel H. Chang, MD, Empire Eye and Laser Center, Bakersfield, CA, who has experience with the new device.

The new system has the its energy modulation feature (Ellips FX handpiece, AMO). The tip of the handpiece moves both longitudinally and transversally, so the combined movements produce an elliptical pattern. The elliptical pattern improves cutting efficiency. The tip cuts smoothly on both hard and soft lenses and also minimizes heat from strain forces because the stress on the phacoemulsification needle during ultrasound generation is concentrated at the hub rather than distributed along the entire shaft. Since the entire circumference of the tip is in motion—not just the off-axis portion. This can help to ease nuclear removal and to reduce phacoemulsification time.

“Since the hub never touches the wound, you gain thermal protection at the incision,” Dr. Chang said. “This couples well with the energy modulation abilities of the Whitestar technology.”

ELLIPS FX
TRANSVERSAL ULTRASOUND

As important as the Ellips FX technology is the chamber stability provided by the machine, Dr. Chang said.

“Compared with a number of other systems, it has much less surge because of various implementations in the fluidics,” he explained.

These features include physical modifications like smaller-bore tubing as well as software-based technology (Occlusion Mode and Chamber Stabilization Environment [CASE]).

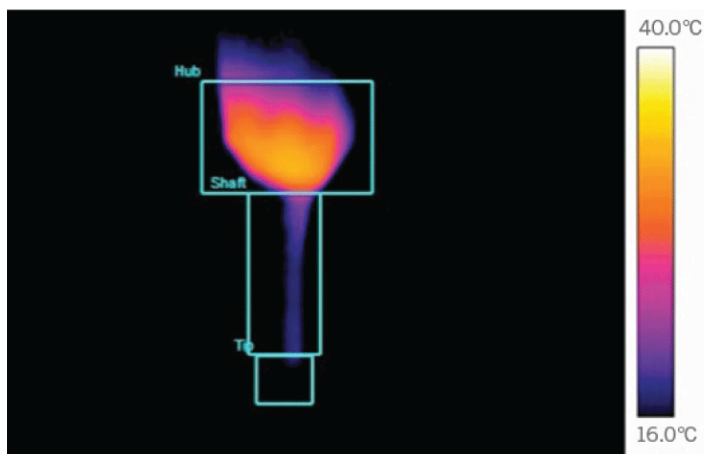
These proprietary computer algorithms help to maintain IOP by proactively adjusting vacuum settings in the milliseconds after sensing an occlusion. The fluidics system gives the surgeon intra-operative intraocular control and the ability to adjust vacuum, flow rate, and rise time in order to maximize chamber stability.

User-friendly accessories

Accessories include an advanced linear foot pedal, a wireless remote control, a high-speed vitreous cutter, and an auto-loading tube pack and one-step prime/tune for easy operating room setup.

Daniel H. Chang, MD

ELLIPS® FX ULTRASOUND THERMAL PROFILE⁵



Heat is concentrated at the shaft, **away from** the incision



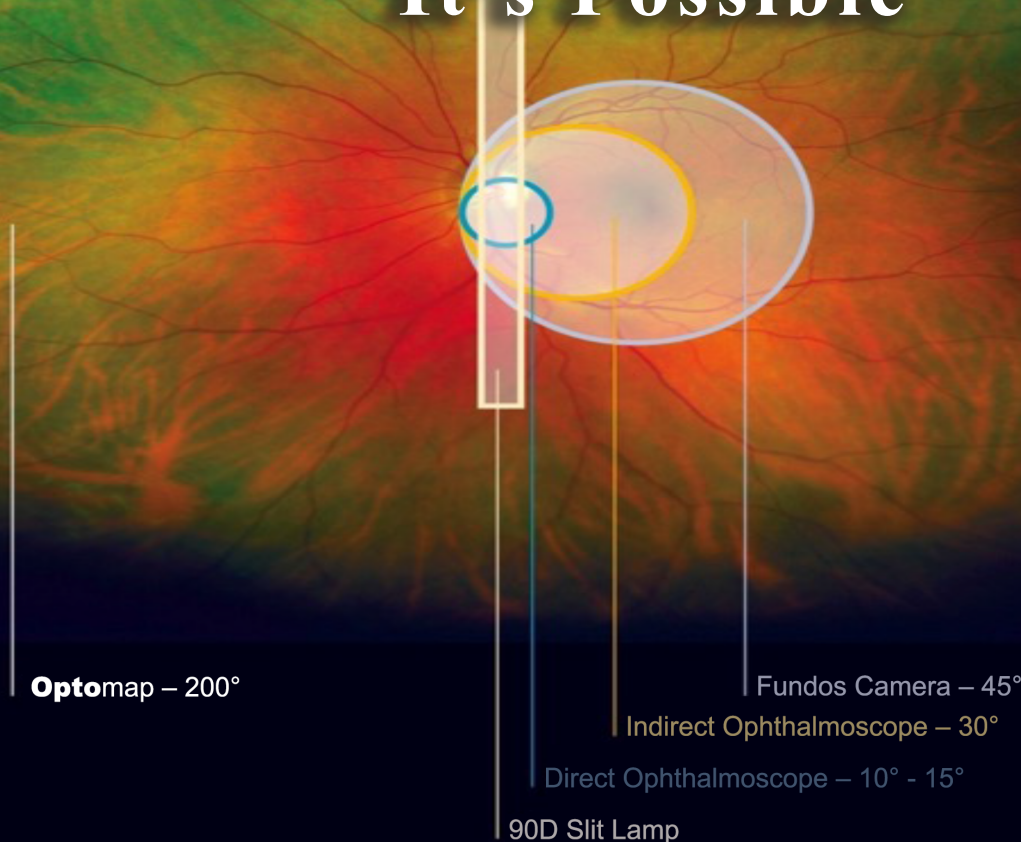
24 hours a day, 7 days a week Ophthalmology Technical Support Hotline



All of our valuable users can count on our special support and call our product specialists
Any time with this number: **+98 901 615 28 40**

Retinal Imaging

Expanding Your View To Ora serrata Through 2mm Pupil It's Possible



- Only optomap® provides up to a 200° view of the retina in a single capture
- The only ultra-widefield, ultra-high definition color, autofluorescence, red-free, retinal imaging device

- Simultaneous evaluation of the peripheral and central retina
- Clinically supported by 300+ peer reviewed studies



PIONEERING TECHNOLOGY

Optos introduces its latest ultra-widefield (UWF™) imaging device, California, designed to be customizable for use in multiple eyecare settings. With this new device, Optos now offers ultra-widefield indocyanine green angiography (icg) in combination with:

- Composite color
- Red-free
- Autofluorescence (*af*)
- Fluorescein angiography (*fa*)

Images are now presented in ProView™ which displays optomap in a consistent geometry that accurately represents anatomical features in the retina. Further, ProView enables automatic image registration for tracking over time and inter-modality image comparison.

The new optical design optimizes and maintains resolution of the optomap images throughout the scan of the retina resulting in more clarity in the far periphery.

Image overlay enables comparison between composite color images and red-free, *af*, *fa*, or *icg* images. Additionally, comparisons can be made between different images or different dates by scrolling through all stored images from the current or prior visit.

Diagnostics



California Ultra-widefield Retinal Imaging

California



B E N E F I T S

- California is designed as a compact, table-top model to reduce space requirements. Further, the new design leads to ease of use and faster image capture.
- Non-mydratic, high resolution imaging through many cataracts and/or 2mm pupils saves time in busy practices.
- Comprehensive retinal analysis through multiple wavelengths and image modalities, all in UWF.
- Composite color images can be viewed in their separate laser channels to show specific depths of the retina:
 - Green (532 nm) “red-free” visualizes the sensory retina to the RPE
 - Red (635 nm) shows deeper structures of the retina (RPE to choroid)
 - Infrared (802 nm) provides images at the choroid level
 - Blue (488 nm) is used during *fa* procedures
- Innovative OptosAdvance review platform that simplifies workflow while enabling comparison overlay between image modalities and different dates, over time.
- Browser-based image review enables simple integration and easy access to your data from any connected PC or tablet in a HIPPA compliant environment.
- Interweaved Angiography enables capture of *fa* and *icg* images without manually switching between imaging modalities.
- With UWF views of 200 degrees or up to 82% of the retina, eyecare professionals can see 50% more of the retina when compared to other conventional imaging devices¹.

Upcomming Events

23-26 November 2016

Italian Society Of
Ophthalmology 96th
National Congress 2016

Roma, Italy

24 – 25 November 2016

World Ophthalmology
Conference

Melbourne, Australia

5-6 December 2016

7th European Ophthalmology
Congress

Madrid, Spain

12 - 15 December 2016

26th Annual Congress of the
Iranian Society of
Ophthalmology

Tehran, Iran



Amico Yasna Pars (Pr.J.S.Co)

2nd floor, No.1698, Shariati Ave.,Tehran, Iran
Email: amicoyasnapars@amicogroup.com

Postal Code: 1914744755
Website: www.amicoyasnapars.com

Tel: +9821-22645870-71

Fax: +9821-22645872