STATE BOARD OF OPTOMETRY
2450 DEL PASO ROAD, SUITE 105, SACRAMENTO, CA 95834
P (916) 575-7170 F (916) 575-7292 www.optometry .ca.gov

Continuing Education Course Approval Checklist

Title: Symfony and Symfony Toric: Extended Range of Technology

Provider Name: Coastal Vision Medical Group c/o Ms. Gina Valdemar

☑Completed Application
Open to all Optometrists? ☑Yes ☐No
Maintain Record Agreement? ☑Yes ☐No

☑Correct Application Fee

☑Detailed Course Summary

☑Detailed Course Outline

☑PowerPoint and/or other Presentation Materials

☐Advertising (optional)

☑CV for EACH Course Instructor

☑License Verification for Each Course Instructor
Disciplinary History? ☐Yes ☑No

BUSINESS, CONSUMER SERVICES, AND HOUSING AGENCY — GOVERNOR EDMUND G. BROWN JR.

CALIFORNIA STATE BOARD OF OPTOMETRY

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CONTINUING EDUCATION COURSE APPROVAL APPLICATION

$50 Mandatory

$50 Paid

Pursuant to California Code of Regulations (CCR) § 1536, the Board will approve continuing education (CE) courses after receiving the applicable fee, the requested information below and it has been determined that the course meets criteria specified in CCR § 1536(g).

In addition to the information requested below, please attach a copy of the course schedule and topical outline of the subject matter. Applications must be submitted 45 days prior to the course presentation date.

Please type or print clearly.

Course Title	**Course Presentation Date**
Symfony and Symfony toric : Extended range of Technology	06/21/2017

Course Provider Contact Information

Provider Name Coastal Vision Medical Group

Gina (First) Valdemar (Last) (Middle)

Provider Mailing Address

Street 293 S. Main St. #100 **City** Orange **State** CA **Zip** 92868

Provider Email Address ginavaldemar@coastal-vision.com

Will the proposed course be open to all California licensed optometrists?	☒ YES ☐ NO
Do you agree to maintain and furnish to the Board and/or attending licensee such records of course content and attendance as the Board requires, for a period of at least three years from the date of course presentation?	☒ YES ☐ NO

Course Instructor Information

Please provide the information below and attach the curriculum vitae for each instructor or lecturer involved in the course. If there are more instructors in the course, please provide the requested information on a separate sheet of paper.

Instructor Name

Lisa (First) Garbutt (Last) (Middle)

License Number 90909	**License Type** MD
Phone Number (714) 746 4679	**Email Address** ginavaldemar@coastal-vision.com

I declare under penalty of perjury under the laws of the State of California that all the information submitted on this form and on any accompanying attachments submitted is true and correct.

Signature of Course Provider Dan Tran, MD Medical Director

Date 5-9-17

Form CE-01, Rev. 2/16

Course Title: Symfony and Symfony Toric: Extended Range of Technology

Course Presentation date: 6/21/17

Speaker: Lisa Garbutt, MD

Target Audience: This lecture is intended for optometrist seeking continuing education

Course Description:

This lecture seeks to provide optometrists with insight regarding new IOL options for RLE or cataract surgery patients. Wider range of technology improves potential patient lifestyle outcomes with new extended depth of focus lenses. Case presentations review patient pre-operative ocular history and lifestyle needs and pairing with a new type of technology to assist in reducing patient reported symptoms with IOL surgery. This lecture assists the attendee with discussions regarding potential options for their patients that are need of lens replacement surgery.

CE Credit: 1 CE Unit

1 **Symfony and Symfony Toric: Extended Range of Technology**

Lisa D. Garbutt, M.D.
Coastal Vision Medical Group

2 **Symfony and Symfony Toric**

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-
- The first Extended Depth of Focus (EDOF) Presbyopia -Correcting IOL for patients with and without Astigmatism

3 **Proprietary Technology**

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-
- Echelette Design - Extends the depth of focus
- Achromatic Technology - Corrects chromatic aberration for enhanced image contrast

4 **Extended Depth of Focus**

-
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-
- The echelette design introduces a pattern of light diffraction that elongates the focus of the eye
- The height, spacing, and profile of the echelettes are optimized to create a diffractive pattern for an elongated focus

5 **Elongated focus**

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-
- Glare and halo comparable to a monofocal

6 **Correction of Chromatic Aberration**

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- Achromatic technology is optimized to counteract the chromatic aberraton of the cornea, improving contrast sensitivity

7 **Achromatic Technology Results in Improved Contrast Sensitivity**

8 **Continuous Vision**

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- 20/20 or better from distance to 1.5D of defocus
- 20/40 or better from distance to 2.5D of defocus

9 **Continuous Vision**

- Delivers sustained mean visual acuity of 20/25 or better through 1.5D of defocus
- Increase of 1.0D of range of vision throughout the defocus curve compared to a monofocal

10 **Symfony Toric**

- Symfony Toric also delivers the same continuous range of vision as the Symfony IOL
- Cylinder powers at Corneal Plane: 0.69, 1.03, 1.54, 2.06, 2.57, 3.08,3.60, 4.11

11 **Symfony Toric**

- Specifications

12 **Great Vision At All Distances**

- Monofocal Distance vision with Symfony improved 2.4 lines for intermediate vision and 2.2 lines for near vision compared to the monofocal control

13 **Vision at all distances**

14 **Vision at all distances**

- At 3 months, almost all Symfony patients experienced high spectacle independence at far, intermediate and near distances
- Symfony subjects reported no significant difference in glare or halo occurence compared to a monofocal IOL

15 **Patient Satisfaction**

- 97% of the 31 subjects implanted with the Symfony IOL would elect to have the lens implanted again

16 **EDOF**

- EDOF is an emerging class of IOL
- Hallmark of this type of IOL is that it gives cataract patients a somewhat expanded depth of field without the drawbacks associated with a multifocal visual system
- Maximizes the patient's range of vision by tackling chromatic aberration

17 **EDOF**

- This type of lens aims to bridge the gap between multifocals and monofocals and allow more vision at different distances while minimizing visual side effects

18 **EDOF**

- The EDOF lens will perform better at near than the monofocal, but not as well at near as the multifocal
- Halos and glare will be comparable to the monofocal

19 **Night Symptoms**
6 months post op

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-
- 6 months post op data

20 **Haloes vs. Starbursts**

-
-
-
- Starbursts vs. haloes

21 **EDOF**

- With optics you can't gain an expanded range of vision without losing something in terms of the sharpness of vision
- However, by correcting chromatic aberration, even without using diffractive optics to expand the visual range, the lens would have extremely sharp distance vision on the order of 20/10 to 20/12
- Since the lens correcting chromatic aberration starts off so sharp, the vision will then only degrade to 20/20 after adding the diffractive optics to expand the range of vision

22 **Symfony FDA trial basics**

- 20/20 or better at distance over a range of about 1.50D
- 20/40 or better over a range of 2.5D
- 96% of patients had 20/25 or better vision at intermediate
- 92% of patients had 20/40 or better vision at near
- Comparable to a monofocal from a night vision and contrast sensitivity perspective

23 **Patient D.S.**

- D.S. 59 y.o. male
- BCVA 20/200 OD, 20/40 OS
- 2-3+ NS, 2-3+ PSC OD, 2+ NS, 2+ PSC OS

24 **Patient D.S.**

- Patient opted for Symfony OU
- Uneventful surgery OU

25 **Patient D.S.**

- Post operative experience: "I can see rings around lights" (this patient did not see starbursts)
- Very good vision at all ranges, despite first eye being slightly myopic (lens much more forgiving than traditional multifocal)

26 **Patient D.S.**

- Right Eye: Uncorrected Va 20/20 Distance, Intermediate 20/20, Near J2,

MR -0.25-0.25 X 55

- Left Eye: Uncorrected Va 20/20, Intermediate 20/20, Near J2, MR plano-0.50 X 45

27 **Patient S.B.**

- 61 y.o. female
- BCVA 20/40- OU, intolerable glare
- 2+ NS, 2+ Cortical OU

28 **Patient S.B.**
Post-op

- Va sc 20/25 OU (early PCO OU)
- Intermediate 20/20 OD, 20/16 OS
- Near 20/32 OU
- M.R. OD plano-0.50 X 100 (S.E. -0.25)
- M.R. OS +0.25-0.50 X 087 (S.E. plano)

29 **Patient S.B.**

- Can read in most lighting conditions
- No complaints of haloes or starbursts

30 **Lenses in the Pipeline**

- Calhoun Vision Light-Adjustable Lens
- PowerVision FluidVision Lens
- Akkolens Lumina
- Vision Solutions Liquilens

31 **Calhoun Light Adjustable Lens**

- Power is adjustable by the surgeon, with input from the patient, after the lens is in place
- Adjustment is made by irradiating the lens's special silicone material with UV light, which changes its shape and thus its power
- UV light is then used to "lock" the shape change when the refraction is optimal

32 **PowerVision FluidVision Lens**

- An acrylic IOL with anterior and posterior optics with a central cavity between them
- Compressable haptics contain a silicone-oil-based fluid
- The two large haptics are connected to the central fluid cavity

33 **PowerVision FluidVision Lens**

- When the eye's normal physiological accommodation occurs and the zonules release tension on the capsule, it compresses the two large haptics
- This pushes the silicone oil fluid between the two optics and creates an accommodative effect
- This large lens requires a 4mm incision

34 **Akkolens Lumina**

- Similar to the FluidVision Lens, the Lumina is a dual-optic lens that relies on the action of the ciliary body for its effect
- Placed in the sulcus
- Once in the sulcus, action of the ciliary body causes one of the optics to slide over the other optic, creating a continuous change in the total lens power

35 **Akkolens Lumina**

- In initial pilot study, distance vision is similar to the monofocal, with 2-3 diopters of accommodation
- Details needing follow up are expectations it may cause some degree of pigment dispersion or may increase IOP by interacting with the ciliary body
- Since lens is in the sulcus, possibly higher incidence of PCO

36 **Vision Solutions Liquilens**

- Also taking the liquid route to accommodation is the Liquilens
- Instead of using the body's anatomical forces, however, the lens uses gravity
- It uses "the fluidics of two immiscible optically clear biocompatible fluids and their interplay to introduce an additional index of refraction into the line of sight that provides additional power when the patient looks down at a 60 to 70 degree angle"
- When the patient looks forward, the fluid is out of the way and the lens provides distance vision
- This lens is more like a bofocal, however, with not much intermediate vision

37 **References**

- Bethke, Walter. IOL Alternatives to Multifocality. Review of Ophthalmology. 8 January 2015
- Tecnis Symfony and Tecnis Symfony Toric IOLs. Abbott Medical Optics Presentation 2016.

38 **Questions?**

- Thank you!

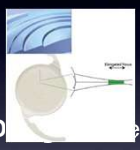
Symf ymfony Toric: Extended Range of Technology

Lisa D. Garbutt, M.D.
Coastal Vision Medical Group

Symfony and Symfony Toric

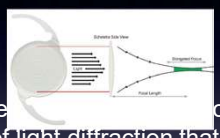
- The first Extended Depth of Focus (EDOF) Presbyopia Correcting IOL for patients with and without Astigmatism

Proprietary Technology



- **Echelette D** nds the depth of focus
- **Achromatic Technology** Corrects chromatic aberration for enhanced image contrast

Extended Depth of Focus



- The eche ces a pattern of light diffraction that elongates the focus of the eye
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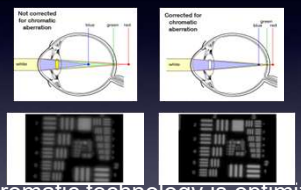
Elongated focus

- Glare and halo comparable to a monofocal

Correction of Chromatic Aberration



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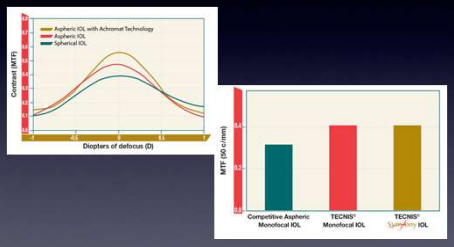
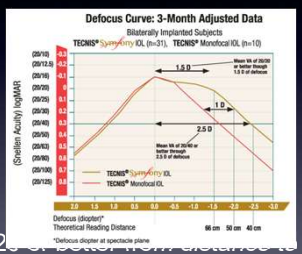
Achromatic Technology Results in Improved Contrast Sensitivity



Continuous Vision



- 20/2[illegible] 1.5D of defocus
- 20/40 or better from distance to 2.5D of

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Symfony Toric

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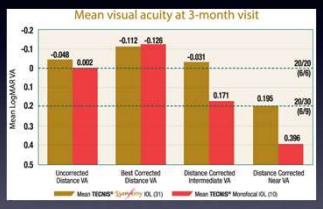
Great Vision At All Distances



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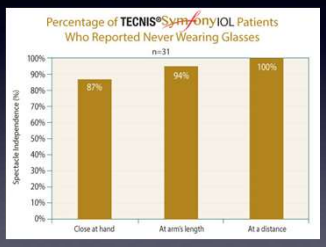
Vision at all distances



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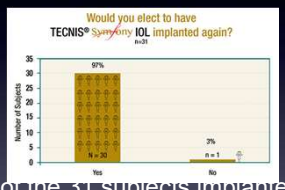
Patient Satisfaction



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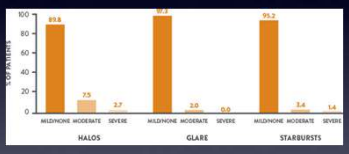
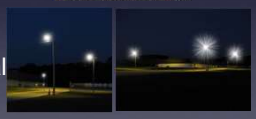
Night Symptoms 6 months post op



- 6 months post op data

Haloes vs. Starbursts

- Starbursts vs. hal



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- Intermediate 20/20 OD, 20/16 OS
- Near 20/32 OU
- M.R. OD plano 0.50 X 100 (S.E. 0.25)
- M.R. OS +0.25 0.50 X 087 (S.E. plano)

Patient S.B.

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Lenses in the Pipeline

- Calhoun Vision Light Adjustable Lens
- PowerVision FluidVision Lens
- Akkolens Lumina
- Vision Solutions Liquilens

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- Tecnis Symfony and Tecnis Symfony Toric IOLs. Abbott Medical Optics Presentation 2016.

Questions?

- Thank you!

Lisa D. Garbutt, MD

lisagarbutt@coastal-vision.com

Experience

COASTAL VISION MEDICAL GROUP, ORANGE, NEWPORT BEACH, AND LONG BEACH, CA MARCH 2014 TO PRESENT BOARD CERTIFIED OPHTHALMOLOGIST/CORNEAL SUBSPECIALIST General ophthalmology, specializing in the treatment of cataracts, ocular surface disease, corneal disease and surgery, and eyelid surgery.

INLAND EYE SPECIALISTS, MURRIETA AND FALLBROOK, CA AUGUST 2008 TO MARCH 2014 BOARD CERTIFIED OPHTHALMOLOGIST/CORNEAL SUBSPECIALIST General ophthalmology, specializing in the treatment of ocular surface disease, cataract surgery, DSAEK, and LASIK.

UCSD DEPARTMENT OF OPHTHALMOLOGY/SHILEY EYE CENTER JULY 2007 TO JULY 2008 CORNEA FELLOW, CLINICAL INSTRUCTOR Fellowship in Cornea, Cataract and Refractive Surgery, Clinical Instructor for Residency Program

Education

BOSTON UNIVERSITY SCHOOL OF MEDICINE. Doctor of Medicine (Cum Laude), May 2003. Boston, Massachusetts

BOSTON UNIVERSITY SCHOOL OF MEDICINE. Master of Arts, Medical Science, January 1999. Boston, Massachusetts

UNIVERSITY OF CALIFORNIA, LOS ANGELES. Bachelor of Science, Psychobiology, December 1994. Los Angeles, California

Postgraduate Training

UNIVERSITY OF CALIFORNIA, SAN DIEGO. Shiley Eye Center. Fellowship in Cornea, Cataract and Refractive Surgery. Fellowship Director: David J. Schanzlin, M.D.

UNIVERSITY OF CALIFORNIA, SAN DIEGO. Shiley Eye Center. Ophthalmology Residency, 2004-2007.

UNIVERSITY OF CALIFORNIA, SAN DIEGO. Department of General Surgery. General Surgery Internship, 2003-2004.

Honors and Awards

Cum Laude. Doctor of Medicine. Boston University School of Medicine. May 2003

Medical School Honors/Advanced Standing: Gross Anatomy, Histology, Neurosciences, Biochemistry, Endocrinology, Immunology, Physiology, Microbiology, Pathology, Pharmacology, Psychiatry, Obstetrics & Gynecology, Medicine, Gastrointestinal Surgery, Ophthalmology, Plastic & Reconstructive Surgery, Ophthalmic Pathology

Dean's List - Boston University School of Medicine. Fall 2000

Association of Pathology Chairs Honor Society. Boston University School of Medicine. 2000

UCSD Department of Ophthalmology Director's Award. June 2007

Physician of the Quarter. Fallbrook Hospital. First Quarter of 2011. Fallbrook, California.

Memberships

American Academy of Ophthalmology

American Society of Cataract and Refractive Surgery

Licensure

Medical Board of California. 4/15/2005, License No. A90909

Board Certification

American Board of Ophthalmology. October 2008.

Other Certification

MORIA Microkeratome Certification Training Course. August 2006.

VISX Physician Certification Training Course, Advanced CostumVue Training, Monovision Training. August 2007, 2012.

Intralase Global Training Course. October 2007. Re-certification 2012.

Research

Sub-Investigator. Alcon. Completion of Principal Investigator and Sub-Investigator Training Course. Alcon. Fort Worth, Texas. July 2011.

Sub-Investigator. Alcon. C-09-045: A Phase 3 Multicenter, Randomized, Controlled, Double-Masked Study of Safety and Efficacy of Sodium Hyluronate Ophthalmic Solution, 0.18% in Dry Eye Syndrome. Semptember 2011-June 2013.

Sub-Investigator. Icon Bioscience, Inc. Investigational Product IBI-10090 (dexamethasone intraocular injection). A Multicenter, Randomized, Double-masked, Doseranging, Phase 2 Study to Evaluate the

Efficacy and Safety of IBI-10090 for the Treatement of Inflammation Associated with Ocular Surgery. September 2012 - December 2012.

Garbutt LD. Purcell T. Nalgirkar A. Schanzlin DS. Corneal Applications of a New Collagen Gel Cross-Linked In Situ. Presented at UCSD Shiley Eye Center Research Alumni Day. May 2007.

Garbutt LD. Nabavi C. Korn BK. Kikkawa DO. Eyelid Levels Following Orbital Decompression. Presented at UCSD Shiley Eye Center Research Alumni Day. May 20, 2006.

Garbutt LD. Korn BK. Kikkawa DO. Periorbital Basal Cell Carcinoma: MOHS Micrographic Surgery vs. Surgical Excision with Frozen-Section Control. Presented at UCSD Shiley Eye Center Research Alumni Day. June 4, 2005.

Black PH. Garbutt LD. Stress, Inflammation, and Cardiovascular Disease. Journal of Psychosomatic Research. 52(Jan. 2002) 1-23.

Contributed to article: Black, PH. Stress and the Inflammatory Response: a Review of Neurogenic Inflammation. Brain, Behavior, and Immunity. 16(6) 2002 Dec. 622-653.

Master's Thesis 1998. Boston University School of Medicine. Stress, the Inflammatory Response, and the Initiation and Progression of Atherosclerosis. Accepted December 1998.

Leadership

Ophthalmology Staff Physician Representative. Ambulatory Surgery Center Medical Advisory Committee. Inland Eye Specialists. June 2010 - 2014.

Chairman. Systems Review Committee. Fallbrook Hospital. January 2011-January 2013.

Physician Member. Systems Review Committee. Fallbrook Hospital. January 2009January 2011.

Physician Member. Medical Staff Executive Committee. Fallbrook Hospital. January 2011-January 2013.

UCSD Department of Ophthalmology Resident Physician Committee Representative. Graduate Medical Education. 2004-2006.

Resident Physician Council. UCSD Medical Center. 2005-2006.

American Medical Student Association Member. 1999-2003.

Other Employment

Scrub Technician. Michael J. Groth, M.D., Ophthalmic Plastic and Reconstructive Surgery. Beverly Hills, California. October 1994-August 1997.

Scrub Technician. Robert W. Hutcherson, M.D., Head and Neck Plastic & Reconstructive Surgery. Beverly Hills, California. October 1994-August 1997.

Office Manager/Surgery Scheduling. Michael J. Groth, M.D., Ophthalmic Plastic and Reconstructive Surgery. Beverly Hills, California. October 1993-October 1994.

References

Douglas Clements, M.D. Inland Eye Specialists. Fallbrook, CA. 760-728-5728.

Leah Levi, M.D. Previous Residency Director. UCSD Department of Ophthalmology, Shiley Eye Center. La Jolla, California 858-534-629