



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:

Provider Name:

- 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



OPTOMETRY

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CONTINUING EDUCATION COURSE APPROVAL APPLICATION

PAID

\$50 Mandatory Fee

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, a detailed course outline and presentation materials (e.g., PowerPoint presentation). Applications must be submitted 45 days prior to the course presentation date.

Please type or print clearly.

Course Title: YAG LASER VITREOLYSIS
Course Presentation Date: 10am - 3pm (5hrs)
02/26/2017

Course Provider Contact Information

Provider Name: JESSICA MORALES
Provider Mailing Address: 450N ROXBURY DR #300 BEVERLY HILLS CA 90210
Provider Email Address: jmorales@assileye.com
Will the proposed course be open to all California licensed optometrists? YES
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

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: DR KERRY ASSIL
License Number: 62647
License Type: Physician & Surgeon
Phone Number: (310) 651 2300
Email Address: kerry@assileye.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

Date: FEB 13 2017

Assil Eye Institute
Submission for Continuing Education Credits

LOCATION:

Assil Eye Institute
450 N. Roxbury Drive
Beverly Hills, CA 90210

DATE/TIME:

February 26, 2017 from 10:00am-3:00pm (5 hours)

SUMMARY of Directly Related Topics:

Assil Eye Institute will review the latest technologies which offer new opportunities for improved quality of life and safety. We will review the pre and post operative management with each treatment. By way of example, the micro-invasive glaucoma procedures and YAG Vitreolysis each significantly reduce the level of morbidity associated with the prior standard surgeries of Trabeculectomy and Vitrectomy. Similarly, both procedures share in common with Extended Depth of Focus IOLs, certain quality of life improvements. We will review these features and also focus upon the role of Co-Management with each of these procedures.

Course Title: **“Newest Advances in Ocular Surgery”**

Subtitle: “Extended depth of focus IOL's vs. Spherical Abberation Optimized Multifocal IOLs”

Speaker: Dr. Kerry Assil

License #G62647 Exp. 4/20/2018

License Type: Physician and Surgeon

Summary: The recent FDA approval of the Tecnis Symphony IOL has enabled a new category Premium IOL to be offered for patients seeking a reduction in spectacle dependency, following cataract surgery. These extended depth of focus lenses offer a lower add power than do the traditional multifocal IOLs. We will assess the contrasting physical and optical qualities of these alternative IOL types and map out a rationale for their selection. We will thus review patient selection, surgical protocol, ancillary testing and post operative care.

Presentation Material: “OD CE Event” Multifocal IOLs

Slides Attached, 89 pages

Course Title: “Newest Advances in Ocular Surgery”

Subtitle: “YAG Vitreolysis”

Speaker: Dr. Kerry Assil

License #G62647 Exp. 4/20/2018

License Type: Physician and Surgeon

Summary: Vitreous detachments, accompanied by floaters, have presented a dilemma over the years, as patients are informed they are benign, so long as there is no concomitant retinal tear. Yet, the vitreous condensation (floater) itself can serve as a source of visual handicap. Vitrectomy

used to serve as the most reliable means for removing a floater and the associated surgical risks were typically considered to outweigh the benefits. Recent advances in YAG Laser technology enable ab interno vaporization of the vitreous condensation, with a much great safety profile than with vitrectomy. We will review the procedure including treatment criteria and post operative monitoring.

Presentation Materials: "Laser Vitreolysis"

Slides Attached, 13 pages

Course Title: "**Newest Advances in Ocular Surgery**"

Subtitle: "Micro Invasive Glaucoma Surgery"

Speaker: Dr. Mona Bagga

License #A104390

License Type: Physician and Surgeon

Summary: See Attached 4 pages "Summary of Talk of Management of CoExisting Cataract & Glaucoma

Presentation Materials: "Cataract Surgery In Glaucoma Patients"

Slides Attached, 34 pages

Course Title: "**Newest Advances in Ocular Surgery**"

Subtitle: "Understanding Vitreoretinal Interface: Diagnosis and Management and the Relationship to Anterior Segment Procedures."

Speaker: Dr. Svetlana Pilyugina

License #A89078 Exp. 6/30/2018

License Type: Physician and Surgeon

Summary: This lecture will discuss the anatomy of vitreous and vitreoretinal interface and their role in the pathophysiology of various retinal conditions, such as vitreomacular traction, macular hole, epiretinal membrane, diabetic retinopathies, and vascular occlusions. The use of imaging modalities, such as OCT, in the understanding and therapy selection will be reviewed. Impact of vitreomacular interface abnormalities on visual acuity and their role in preoperative evaluation of patients undergoing cataract surgery and refractive procedures will be discussed. Advances in treatment modalities including pharmacologic vitreolysis and developments in microinvasive vitrectomy procedures will be reviewed.

Presentation Materials: "Diseases and Surgery of Retina, Macula & Vitreous"

Slides Attached, 51 pages

LECTURER'S CVs:

See Attached

CONTACT: Jessica Morales
310.409.9333/jmorales@assileye.com

Course Outlines for Newest Advances in Ocular Surgery:

Extended depth of focus IOLs vs Spherical Abberation Optimized Multifocal IOLs

- FDA approval of Tecnis Symfony IOL
- Extended depth of focus lenses
- Physical and optical qualities of alternative IOL types
- Rationale for novel IOL selection
- Latest in surgical protocol and post operative care

YAG Vitreolysis

- The nature of vitreous detachments
- Vitreous condensation and visual handicap
- Removal of vitreous floaters and associated risks
- Advances in YAG laser technology
- Vitreolysis treatment criteria and post operative monitoring

Microinvasive Glaucoma Surgery

- Latest technologies for glaucoma surgery
- Pre operative factors affecting surgical outcomes
- Patient selection for glaucoma surgery
- Intraoperative factors for successful microsurgery
- Post operative care and management

Understanding Vitreoretinal Interface: Diagnosis and Management and The Relationship to Anterior Segment Procedures

- Anatomy of the vitreoretinal interface
- Pathophysiology of various retinal conditions
- Vitreomacular interface abnormalities
- Imaging modalities of the vitreoretinal interface
- Advances in treatment modalities including pharmacologic and microinvasive surgical therapies



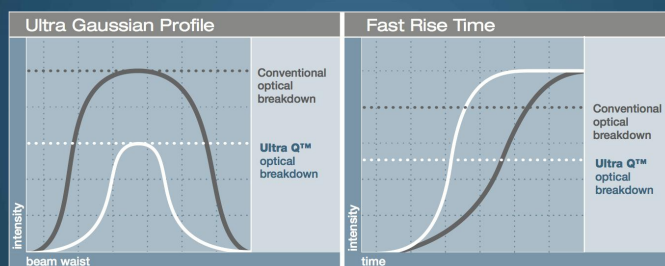
Ultra Q Reflex: Clinical Applications

Ultra Q Reflex™ is optimized for both anterior and posterior Nd:YAG laser treatments:

1. Vitreous: Vitreolysis for membranotomy
 - Vaporize vitreous strands and opacities
2. Cataract: Posterior Capsulotomy
 - Rupturing the posterior capsule behind a posterior chamber IOL (Secondary Cataract)
3. Glaucoma: Peripheral Iridotomy
 - Opening a hole in the iris to relieve or prevent rise in intraocular pressure (ACG, plateau iris, ICL...)

Efficient Energy Delivery

- Ultra Gaussian beam profile and fast Rise Time
- Cut tissue more efficiently, using fewer shots and less cumulative energy – and with a reduced risk of side effects
- Ultra Q Reflex™ achieves optical breakdown in air at 1.8 mJ – this compares to other YAG lasers which typically achieve optical breakdown (in air) of 3 to 4mJ in optimal conditions.



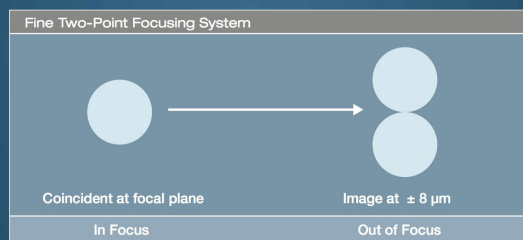
Pinpoint Precision

Two-point focusing system; tolerance range of $\pm 8 \mu\text{m}$

- Anterior offset (0 to +500 μm , continuously variable)
- Posterior offset (0 to -500 μm , continuously variable)

Coaxial illumination

- Reflex Technology™ – optimized for viewing both anterior and posterior segment



Technical Considerations

Conventional YAG lasers are designed for posterior capsulotomy and iridotomy treatments:

- Limited view of the vitreous, which can make it difficult to identify the floaters and membranes to target
- Risk of damage to surrounding ocular tissue in inexperienced hands
- Ellex has designed the first new-generation YAG laser specifically suited to perform vitreolysis as well as more standard procedures: Ultra Q Reflex™

Origin of Floaters

- Collagen fibers in the vitreous may form bundles which can pass across the visual axis as floaters
- In patients usually over 45 yo, the hyaloid may separate from the retina and float across the visual pathway (vitreous membrane)
- Both of the above become more visible after a cataract operation has provided increased clarity of vision

Floater – Quality of Life Issues

Vitreous floaters may negatively affect health-related quality of life

(Am J Ophthalmol. 2011;152(1):60-65.)

- Young symptomatic patients were more likely to risk blindness to rid themselves of floaters; patients aged 55 years or younger showed lower standard gamble (blindness) values when compared with patients older than 55 years ($P = .007$).

In many patients, they may significantly interfere with activities of daily living such as reading, driving, or watching TV.

These patients may benefit from intervention.

Which Treatment Options?

1. Do nothing: try to live with it...
2. FOV : Total surgical removal of vitreous gel = radical surgical solution with secondary complications (early cataract, retinal detachment, glaucoma)
3. Laser Vitreolysis



Vitreotomy

High success rate but carries significant risk of complications:

- infection
- retinal detachment
- macular edema
- anterior vitreous detachment
- glaucoma
- cataract

Sendrowski DP, Bronstein MA. Current treatment for vitreous floaters. Optometry. 2010 Mar;81(3):157-61

Vitreotomy and Cataract

High incidence of patients develop cataract following vitrectomy

2005 study by Holekamp et al, Washington University School of Medicine, measured the oxygen levels adjacent to the lens and near the center of the eye in the vitreous gel of 69 eyes:

- Before retinal surgery, oxygen concentrations were very low in both places
- After surgery, oxygen levels in both locations were about eight times higher than normal

Holekamp NM Shui YB, Beebe DC. Vitrectomy surgery increases oxygen exposure to the lens: a possible mechanism for nuclear cataract formation. American Journal of Ophthalmology, vol. 139, pp. 302-310, Feb. 2005.

Vitrectomy and POAG

2006 retrospective study by Chang et al, Columbia University, New York, which followed 65 patients (68 eyes) who had undergone vitrectomy:

- Glaucoma suspects: the mean IOP was significantly higher in the eye that had undergone vitrectomy than in the fellow eye
- New-onset glaucoma: 23 of 34 eyes (67.6%) developed glaucoma only in the eye that had undergone vitrectomy
- Pre-existing glaucoma: required more anti-glaucoma medications to control IOP in the eye treated with vitrectomy than in the eye that did not undergo surgery

Chang S. *Am J Ophthalmol.* 2006;141(6): 1033-1043.

Vitrectomy and POAG

2011 case-control study by Koreen et al estimated the incidence of, and risk factors for, the development of late-onset open-angle glaucoma following vitrectomy in analysis of 285 eyes (274 patients):

- 11.6% of patients developed glaucoma after vitrectomy
- 1.4% in phakic eyes compared with 15% in non-phakic eyes
- Lens extraction is an important risk factor for the development of late-onset open-angle glaucoma after vitrectomy.

Koreen L et al. *Retina.* 2011 July 14.

Vitrectomy and POAG

Long-term exposure to increased molecular oxygen damages the trabecular meshwork, leading to increased outflow resistance and glaucoma.

- Eyes that underwent vitrectomy had significantly increased pO₂ in the posterior chamber
- Prior cataract surgery was also associated with significantly elevated pO₂ in the posterior chamber and in front of the intraocular lens
- Eyes that had undergone both vitrectomy and cataract surgery showed increased pO₂ in the posterior chamber and anterior to the IOL, as expected, and pO₂ doubled in the anterior chamber

Siegfried CJ et al. Invest Ophthalmol Vis Sci. 2010;51(11):5731-5738.

What is Vitreolysis?

- Vitreolysis is a simple, outpatient-based procedure, which involves the use of a nano-pulsed ophthalmic YAG laser to vaporize vitreous strands and opacities.
- Highly effective, it has a low complication rate and offers a high degree of patient satisfaction.
- It can also delay or obviate the need for surgery.

Vitreolysis: the Benefits

Low complication rate = 0.1 % (rising IOP, choroidal micro hemorrhage, cataract...)

- No significant retinal damage reported in more than 15,000 cases worldwide (Karickhoff)

Effective for 70-95% of floater types

- Best results on hyaline floaters/opacities and membranotomies

High success rates with reduction of symptoms:

- 85% success rate on 112 eyes treated (Geller, S: Nd YAG laser treatment effective for floaters. OSN, Dec. 1, pg. 37, 2001)
- 92% success rate on 200 eyes treated (Karickhoff J., Formal Floater Study under the supervision of the INOVA Fairfax Hospital Institutional Review Board)

Pre-Treatment: Vitreolysis

1. Full dilated eye examination with attention to retina and periphery. Aggressive dilation with both tropicamide and phenylephrine is recommended. Every millimeter of dilation will be beneficial.
2. Personal discussion with the patient establishing appropriate expectations and discussion of the risks of the procedure.
3. Allow sufficient time for the procedure – from 20 minutes to 1 hour
4. Topical anesthetic with 2-3 instillations a few minutes apart.

Treatment: Vitreolysis

1. Place the contact lens on the patient's cornea.
2. Explain to the patient that they will hear the sound of a shutter opening at each shot of the laser and that this is normal.
3. Always start with a single pulse and just enough energy to create the optical breakdown in the vitreous (typically 2.5 mJ).
4. Some users prefer to increase to 2 shots or 3 shots per pulse before increasing the energy per pulse.
5. Stay 2-3mm away from the lens, and 3-4mm away from the retina. When starting out, consider observing a wider margin of safety.
6. When firing directly at a mobile floater or strand, always wait for it to settle into its new position before firing again

Technique 1: Aiming at the strands in presence of suspended floaters



Courtesy of Marie-José Tassignon, M.D., PhD, Belgium

Courtesy of Marie-José Tassignon, MD, PhD, Belgium

Technique 2: Vaporizing the floater



Courtesy of Feike Gerbrandy, MD, Netherlands

Choosing the Right Lens



Volk Singh Mid-
Vitreous Lens

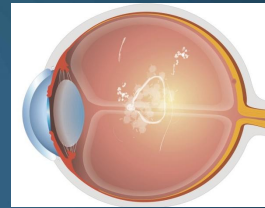
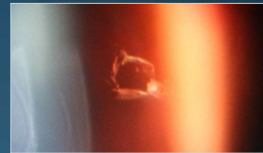
Volk Idrees
Vitreous Lens

Ocular Karickhoff
25mm Off-Axis
Vitreous Lens

What floaters can be treated?

Two main types of treatable floaters:

- The ones that have been pulled off the limiting internal membrane of the retina by PVD; located on the posterior vitreous face, soft, and can usually be completely vaporized by the laser (Weiss ring)
- Floaters located within the vitreous as a result of vitreous degeneration; these syneresis floaters are dense, fibrous and more difficult to vaporize completely. The goal is to move them out of the visual axis and thin them out



Clinical Exam Consultation Considerations

- Size – may require more energy and treatments
- Density – may require more energy and multiple treatments
- Location – Aphakic and Phakic patient (posterior lens surface considerations for natural lens – leave these patients for future treatments after significant procedure experience. If floater is too close to lens surface, don't treat)
- Number – may need multiple treatments
- Visualization – can I see them to even do the laser

The Challenges

Difficulties for Physicians New to the Technique:

- Hard to evaluate position of floater relative to retina/natural lens
- Difficult to judge what floater/membrane will respond
- Expertise/confidence to use the level of energy needed – much more energy is needed to vaporize floaters than for standard YAG procedures

www.floater-vitreolysis.com

Vitreolysis for Vitreous Strands and Opacities | Floaters

<http://www.floater-vitreolysis.com/>

Redefining convention - YAG laser vitreolysis.

Vitreolysis provides an effective outpatient-based treatment for the removal of vitreous strands and opacities, and overcomes many of the risks associated with invasive vitrectomy.

[Learn more](#)

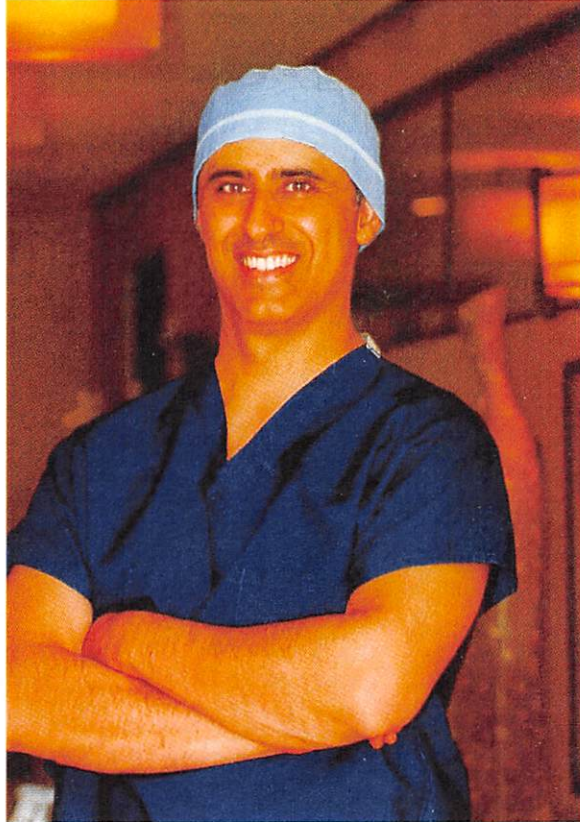
Clear Skies Ahead Redefine Convention Ultra Q Reflex

About Vitreolysis

Also known as floater laser treatment, vitreolysis is a non-invasive, pain-free procedure that can eliminate the visual disturbance caused by floaters. It is performed in your ophthalmologist's office and typically takes 20-60 minutes per treatment session. On average, patients will require two treatment sessions to achieve a satisfactory result. Watch this video interview with vitreolysis expert Dr. Con Moshegov, Australia, to learn more.

Perfect Vision
What is a floater?
Con Moshegov, MD

Questions?



CURRICULUM VITAE

Kerry K. Assil, M.D.

Personal Information

Office Address 450 N. Roxbury Drive, 3rd Floor
Beverly Hills, California 90210
(310) 453-8911

Date of Birth April 22, 1960

Citizenship USA

Pre-Medical Education

1977 -1981 University of California at Los Angeles
Los Angeles, CA
BA 1981
High honors, Phi Beta Kappa

Medical Education

1981 -1986 University of California at San Diego
School of Medicine
La Jolla, CA 92093
M.D. – 1986

1984 -1986 Research in Ophthalmology
(Wound healing and pharmacology)

Post-Graduate Training

July 1986 - June 1987 Internship in Internal Medicine
St. Mary Medical Center - UCLA
Long Beach, CA 90801

July 1987 - June 1990 Residency in Ophthalmology
Department of Ophthalmology
University of California at San Diego
La Jolla, CA 92103
Program Director: Stuart I. Brown, MD

July 1990 - June 1991 Fellowship in Cornea, External Disease and
Keratorefractive Surgery
Saint Louis University
Anheuser-Busch Eye Institute
1755 South Grand Avenue
St. Louis, MO 63110
Program Director: David J. Schanzlin, MD

Licensure California G62647 Issued 04/18/1988 Expires: 04/30/12
DEA BA1436016 Issued 05/17/2000

Board Certification National Board of Medical Examiners, 1986
American Board of Ophthalmology, 1991

Academic Appointments

July 1991 - Jan 1992 Clinical Instructor
Saint Louis University School of Medicine
Department of Ophthalmology
Anheuser-Busch Eye Institute
St. Louis, Missouri

January 1992 - April 1995 Assistant Professor of Ophthalmology
Saint Louis University School of Medicine
Department of Ophthalmology
Anheuser-Busch Eye Institute
St. Louis, Missouri

April 1995 - Sept. 1995 Associate Professor of Ophthalmology
Saint Louis University School of Medicine
Department of Ophthalmology
Anheuser-Busch Eye Institute
St. Louis, Missouri

Sept. 1995 -Present Medical Director and C.E.O.
The Assil-Sinskey Eye Institute
2232 Santa Monica Boulevard
Santa Monica, California 90404
(310) 453-8911

Medical Director and C.E.O.
The Assil-Sinskey Refractive Center
2222 Santa Monica Blvd., Suite 107
Santa Monica, California 90404
(310) 828-2082

**Clinical Staff
Appointments**

Saint Louis University Hospital
St. Louis, Missouri

Cardinal Glennon Children's Hospital
St. Louis, Missouri

Saint Mary's Health Center
Clayton, Missouri

St. John's Hospital and Health Center
Santa Monica, California

Societal Memberships

American Academy of Ophthalmology
American Medical Association
American Society of Cataract and Refractive Surgery
Association for Research in Vision and Ophthalmology
Contact Lens Association of Ophthalmologists
International Society of Refractive Keratoplasty
Lion's Club of Southern California
Missouri Ophthalmological Society

Ophthalmological Associate in Research to Prevent Blindness
Paton Society, Eye Bank Association of America
St. Louis Metropolitan Medical Society
St. Louis Ophthalmological Society

**Honorary Societies,
Awards & Achievements**

Phi Beta Kappa, 1981

Outstanding Senior Medical Student Thesis Award Finalist
University of California at San Diego; 1986.

KCBS, Channel 2, "What's Right with Southern California?"
Award recipient for remarkable charitable contributions in
ophthalmology; March 15, 1998

Lifetime Member, The National Registry of Who's Who

Lifetime Member, Strathmores Who's Who

Television, Radio and Internet Interviews

1. Assil, K.K.: Voice of Israel Radio - Refractive Surgery; June, 1993.
2. Assil, K.K.: Syndicated cable television, "Ophthalmology," House Calls; April, 1994.
3. KCBS: "What's Right with Southern California?" Award recipient for remarkable charitable contributions in eye surgery; March 15, 1998.
4. KCBS News: Broadcast of first hyperopic LASIK under FDA supervised trial; March, 1999.
5. EyeNet Audio, American Academy of Ophthalmology; April, 1999
6. Broadcast.com: First surgeon in the world to perform live web cast of new FDA-approved KeraVision Intacs™ procedure; performed on two ophthalmologists; April, 1999.
7. KABC News: Broadcast of first implantation of Artisan® Phakic Intraocular Lens in Phase III of the FDA trials; May 14, 1999.
8. CNN.com : Refractive Surgery Alternatives; August, 1999
9. Fox News: Interview; February, 2000.
10. WebMD: Yahoo On-Line Chat; May 31, 2000.

11. Univision: Interview (Spanish TV); June, 2001.
12. KNBC: Interview; July, 2001.
13. PBS: LASIK Special; August, 2001.
14. CNN: Refractive Surgery Documentary; October, 2001.
15. KNBC News: Artisan Phakic IOL Implant in a small child; November, 2001.
16. KNBC: Advances in Night Vision Correction; January, 2002.
17. KLCS In Focus: LASIK Candidates and selection; April, 2002.
18. KNBC News: Nystagmus Breakthrough with Dr. Robert Sinskey; August, 2002.
19. KABC News: Importance of Eye Exams in Children; October, 2002.
20. The Other Half: LASIK Feature; October, 2002.
21. KABC News: Assil-Sinskey Eye Institute Foundation for Ophthalmology; January, 2003.

Inventions and Innovations

1. Pioneered advancement of multivesicular liposomes for treatment of ocular diseases and cancer; 1983-1993.
2. Inventor and worlds first surgeon to perform the Combined Technique of RK – subsequently the most popular RK technique performed; April, 1991.
3. On United States team which performed the first KeraVision Intacs™ procedures; May, 1991.
4. Co-inventor and first surgeon in the United States to perform two-incision RK for correction of myopic astigmatism; January, 1992.
5. First surgeon in the world to propose coupling of topographic data to guide laser corneal ablation, presented at EyeSys corneal topography course; 1992
6. First surgeon in the world to teach Combined Technique RK; May, 1992.
7. First surgeon to teach national course on computerized corneal topography to refractive surgeons; 1992.

8. Inventor and first surgeon in the world to perform peripheral corneal-sclerotomy for correction of hyperopia or presbyopia; January, 1993.
9. Inventor and first surgeon in the world to perform the undercut technique of RK; January, 1993.
10. Inventor and first surgeon in the world to perform computer guided RK; July, 1993
11. First surgeon in the world to document the pattern of post-LASIK regression (co-investigator, Arturo Chayet, M.D.); 1994.
12. First in the United States to implant KeraVision IntraStromal Corneal Rings® (ICR®) (Intacs™) in Phase III FDA trials; December 10, 1996.
13. First North American surgeon to perform Phakic IOL using the Ophtec Artisan™ Lens; 1997.
14. Director of first multicentered hyperopic LASIK clinical trial; 1997.
15. First surgeon in California to implant Artisan™ Phakic Intraocular Lens in Phase III of the FDA trials; May, 1998.
16. Inventor of Temporal Hinge (stable hinge) LASIK; 1998.
17. First surgeon in the world to perform post FDA approval Intacs™ surgery. (webcast live on the Internet, performed on two eye surgeons); April, 1999.
18. First surgeon in the world to successfully implant the Verisyse Lens in the eye of a 3 year old child; 2001.
19. Inventor of Pupillometry guided LASIK for Presbyopia; 2004.
20. Inventor of Custom Tailored all Laser LASIK; 2006.