

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

Litle:
Provider Name:
☑Completed ApplicationOpen to all Optometrists?☑Yes☑NoMaintain Record Agreement?☑Yes☑No
☑ Correct Application Fee
☑ Detailed Course Summary
☑ Detailed Course Outline
☑ PowerPoint and/or other Presentation Materials
□Advertising (optional)
☑ License Verification for Each Course InstructorDisciplinary History? ☐ Yes ☑ No



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CONTINUING EDUCATION COURSE APPROVAL **APPLICATION**

\$50 Mandatory Fee

Please type or print clearly.

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.

Course Title	Course Presentation Date	
Aggressive Refinopathy of prematerity when + manyement & practical Considerations	Contact Information	
Provider Name	Sontact Information	
Lisette Rocale	ZS (Mide	dle)
Provider Mailing Address		
Street 4353 Park favore IV City West All IV VI Provider Email Address Pasales & Aught	11/996 State (A zip 9/36)	
Provider Email Address Wasa WS W MWM	149 WSE VISION. Com	
Will the proposed course be open to all California licens	ed optometrists?	YES ONO
Do you agree to maintain and furnish to the Board and/o of course content and attendance as the Board requires from the date of course presentation?		□YES □ NO
Course Instruction Delow and attach the curricular of there are more instructors in the course, please provide the		
Instructor Name		
Khaled Tawar	15/	
(First) (L	asť) (N	Middle)
License Number 7 6762	License Type Physician \$ 50	rgeun G
Phone Number (323) 257-3937	Email Address Linuary @ 9	
I declare under penalty of perjury under the laws of the S		tion submitted on
this form and on any accompanying attachments submit		
<u> </u>	2-18.17	
Signature of Course Provider	Date	Form CE-01, Rev. 5/16
U	1	1 01111 0E-01, 1164, 3/10

Khaled Tawansy, presentation start and end time: 9:00 a.m. -10:00 a.m.= 1 hour

Summary:

Aggressive Retinopathy of prematurity: Current Management and Practical Considerations

The purpose of this talk is to review Retinopathy of prematurity and give background information on this topic. This covers Proliferative retinopathy of premature and low birth-weight infants. This talk also covers treatment options for Ablation, and treatment criteria. It also covers types of ROP laser ablation with photos; variation in laser techniques can impact myopia and field loss in intensity, confluence and location.

Aggressive retinopathy of prematurity: Current Management & Practical Considerations Dougherty laser vision 10/6/2016 Khaled A. Tawansy, M.D. Professor of Ophthalmology & Pediatrics Director, Children's Retina Institute of California ktawansy@gmail.com Cell 323-313-5757 Office 805-497-7976 Retinopathy of Prematurity First recognized by Terry in 1954 as Retrolental Fibroplasia Proliferative retinopathy of premature and low birth-weight infants 66% of babies under 1250 grams at birth have some manifestations Leading cause of blindness in nations that sustain preemies 2500 impaired annually in United States ROP Screening and early detection are key

Zone and severity of Plus most important prognostic features

	Stag	e 3 - Extra-retinal neovascularization with Plus
	ROP	Treatment
	Anti	-VEGF Therapy Alter Biochemistry Vascular Burden
	Abla	Alter Topography Vascular Burden Non-Perfusion
	Trea	tment Criteria for Ablation in Neonatal ROP
	Cryc	5-ROP defined Threshold for Ablation 5 contiguous or 8 cumulative clock hrs of stage 3 in zones I and II Outcomes not as favorable in zone I
	ET-F	ROP defined Pre-Threshold types 1 and 2
=	Туре	Zone I any stage 3 Zone I stage 1 & 2 with plus Zone II stage 2 and 3 with plus
	Type	Any ROP below type 1 otment Criteria for Anti-VEGF in Neonatal ROP
	BEA	T-ROP

ш	Stage 3 plus in Zone I and Posterior Zone II
	Within 3 x disc to fovea radius
	Most posterior meridian counts
	Number of clock hours not criteria
	Virgin (non-ablated) eyes
	Disease allowed to advance beyond ET-ROP criteria for ablation
	Randomization of Avastin vs. Ablation
•	ential) Advantages of Anti-VEGF ecurrence rate?
	In BEAT-ROP at 54 weeks, recurrence in
	32 of 146 laser eyes (22%)
	6 of 139 avastin eyes (4%)
	Problem
	Recurrence after laser unacceptably high (Under 1 % in Children's Retina Inst. series)
	 Recurrence after avastin occurs beyond 54 weeks (Has occurred years after avastin)
•	ential) Advantages of Anti-VEGF vation of field
	Ablation posterior to the equator will compromise
3) Preven	tion of myopia
	Especially when mono-therapy done early
4) Immed	liate reversal of plus and ischemia
	24 hours versus 2 weeks
5) Less tr	aumatic procedure
	Better tolerated by fragile preemies
6) Does i	not require clear media or attached retina

■ Befo	re & 24 hours post Avastin
Tuni	ca Vasculosa Lentis pre and post bevacizumab injection
•	ential) Disadvantages of Anti-VEGF nic toxicity
	Hard to disprove
	Not seen with 0.625 mg dose in unablated eyes
2) Catara	ct
	Surgical disaster, high rate of reproliferation
	Technique is important, needle directed peripherally
	Safer to perforate unvascularized retina than to hit lens
3) Crunch	(fibrovascular contraction)
	Not seen if treatment done on time
	Will accelerate existing traction
	Anticipate vitrectomy
Avas	stin Crunch
•	ential) Disadvantages of Anti-VEGF f Intrinsic Vascular Development
	Hell freezes over
	Not selective to neovascularization
	Persistent peripheral non-perfusion
	"Smoldering ROP" or "FEVR-Like"

		Can develop late recurrence, traction, macular dragging, late detachment
		Can occur any time, need to be followed until mature
		Marriage to patient and the parents
		Potential disasters if they fail to follow up
		May need to laser later anyhow
	ROF	P – Regression post Anti-VEGF
ł	24 W	veeks gestation, avastin at 35 weeks, retinal detachment at 65 weeks
	(Pot	ential) Advantages of Laser Ablation
	Th	irty years of follow up
		Good visual function
		Absence of systemic complications
0		
	Th	ne BEST procedure in medicine
		Based on cost / benefit analysis using QUALYs
		Reliable and effective
	Pι	ot the disease to bed
		Not as concerned if follow up missed
	Ea	sier to titrate the extent of treatment or perform focal treatment
	Po	otential long-term benefits of ablation
		? Lower rate of late retinal detachment
		. — :

	ROP – Ablative Treatment
	Aggressive ROP, what are the options? Observation
	Systemic Medical Management
	Laser Ablation
	Anti-VEGF
	Laser Ablation and Anti-VEGF
•	Type 1 ROP, why observe? ET-ROP showed lower rate of late complications at the expense of many additional laser procedures (5 unnecessary treatments for every necessary treatment)
	ET-ROP gives guidelines but not absolute indications for treatment
	Anti-VEGF was not available during ET-ROP, gives opportunity to reverse accelerating cases
	Need judgment, assess vascular burden
	May choose to closely follow patients with stage 2/3 plus or stage 3 without plus
	Type 1 ROP, Systemic Management?

Remember STOP-ROP
Lower progression to threshold in stage III plus
Experience at Stanford (M. Gannon)
O2 supplementation to keep saturation > 98%
Transfusion to keep hematocrit at 40%
Avoid Erythropoietin
Type 1 ROP, Laser Ablation
Typical ROP and Smoldering ROP
Anterior to equator
Tractional component > Vascular component
Delayed vascular maturation
Parents unreliable for follow up
At Children's Retina Institute, 70% of primary therapy since BEAT-ROP is ablation
Low vascularity, evolving traction
Type 1 ROP, Laser Ablation

Vari	ation in laser techniques can impact myopia and field loss
	Intensity
	Confluence
	Location
Тур	e 1 ROP, Anti-VEGF Rx
Ava	stin is agent of choice
	Cost
	Lowest penetrance of blood-retinal barrier
	Experience
Dos	e has not been adequately defined
	o.625 mg in BEAT-ROP
	Lower doses may suppress vascular activity without inhibiting intrinsic vascular development
Тур	e 1 ROP, Anti-VEGF Rx
Higl	n vascular activity and posterior disease
Тоо	fragile to tolerate laser procedure
Med	dia opacity: vitreous heme, cataract, tunica vasculosa lentis
Reti	ina detached, anticipating vitrectomy
Lon	g term commitment to follow up

	Laser not available
	Type 1 ROP, Anti-VEGF Rx: Follow up Protocol p Injection
	Office every 2 weeks examining leading edge of vascular development
	70 % will reach the ora serrata
	30% will remain non-perfused peripherally
-	Fluorescein helps to define regression pattern Blind ending vessels Horse hair supernumerous vessels with dilation Smoldering ridge with leakage Traction with macular dragging, retinal detachment
	Silent Brush Border
-	Avastin: 830 grams; 26 wk gestation, injection at 2 month and still non-perfused at 20 mo
	550 gm; 22 wk gestation
	(Avastin Failure)
	Recurrence post Avastin
	Type 1 ROP, Anti-VEGF Rx:

	Eyes that do not fully vascularize by 70 weeks post conception are not likely to ever fully vascularize
•	Examination under anesthesia with fluorescein angiogram performed at the preemie's first birthday
	Residual avascular retina is ablated
	Judging Vascular Disease Burden
	No substitute for clinical experience
	Vascular Activity Score Grading system using parameters that we typically use to judge degree of activity
•	Correlates linearly with anatomic failure during PPV for ROP retinal detachment
•	Guides Avastin therapy
-	Vascular Activity Score: 5 categories
•	Fetal Vessels
•	Plus
•	Shunt Width
•	Neovascularization
-	Hemorrhage or exudate points for each category ossible points

- 26 weeks gestation, 34 weeks PCA
 Wide ridge and 360 degrees NV & significant plus & exudate
- Relationship between vascular activity score and anatomic outcome with vitrectomy
- Combined Anti-VEGF & Laser Ablation
- Rarely done in severe cases
 - Missed screening
 - □ ROP plus
 - FEVR / Norrin / I.P. mutation
 - Systemic hemangioma
 - Bone marrow diseases
 - Vasculitis
- Cannot wait for VEFG levels to drop w ablation
- Only opportunity to treat
- Prefer give Anti-VEGF first, ablation after 1-2 days
- Comment: Anti-VEGF vs Laser Ablation in Type 1 ROP
- Metabolic versus Anatomic Manipulation
- Laser Ablation remains the mainstay of ROP management
- Anti-VEGF is an important adjunctive tool that has allowed excellent outcomes in eyes with previously limited prognosis, posterior and vascularly aggressive
- Proposed guidelines can not replace clinical experience and judgment, Vascular Activity Score can help
- Follow up and Fluorescein Angiography are Crucial after Anti-VEGF

AGGRESSIVE RETINOPATHY OF PREMATURITY: CURRENT MANAGEMENT & PRACTICAL CONSIDERATIONS

DOUGHERTY LASER VISION 10/6/2016

Khaled A. Tawansy, M.D.
Professor of Ophthalmology & Pediatrics
Director, Children's Retina Institute of California
Thousand Oaks, Pasadena, Bakersfield, Long Beach
ktawansy@gmail.com
Cell 323-313-5757

ROP Treatment

- Anti-VEGFTherapy
 - Alter Biochemistry
 - Vascular Burden
- Ablation
 - AlterTopography
 - Vascular Burden
 - Non-Perfusion

Treatment Criteria for Ablation in Neonatal ROP

- Cryo-ROP defined Threshold for Ablation
 - 5 contiguous or 8 cumulative clock hrs of stage 3 in
 - Outcomes not as favorable in zone I
- ET-ROP defined Pre-Threshold types 1 and 2
- Type 1 (ablation recommended)
 - Zone lany stage 3
 - Zone I stage 1 & 2 with plus
- Zone II stage 2 and 3 with plus
- Type 2
- Any ROP below type 1

Treatment Criteria for Anti-VEGF in Neonatal ROP

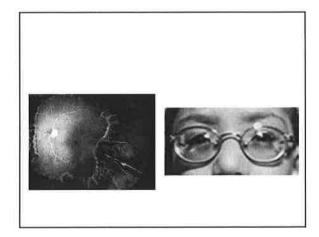
- BEAT-ROP
 - $\,^{\circ}\,$ Stage 3 plus in Zone I and Posterior Zone II
 - Within 3 x disc to fovea radius
 - · Most posterior meridian counts
 - Number of clock hours not criteria
 - Virgin (non-ablated) eyes
 - Disease allowed to advance beyond ET-ROP criteria for ablation
 - Randomization of Avastin vs. Ablation

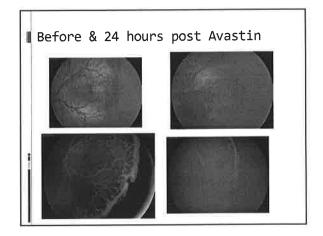
(Potential) **Advantages** of Anti-VEGF

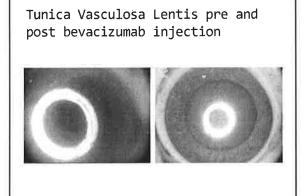
- 1) Lower recurrence rate?
 - In BEAT-ROP at 54 weeks, recurrence in
 - 32 of 146 laser eyes (22%)
 - 6 of 139 avastin eyes (4%)
 - Problem
 - Recurrence after laser unacceptably high (Under 1 % in Children's Retina Inst. series)
 - Recurrence after avastin occurs beyond 54 weeks (Has occurred years after avastin)

(Potential) **Advantages** of Anti-VEGF

- Preservation of field
- Ablation posterior to the equator will compromise
- 3) Prevention of myopia
- Especially when mono-therapy done early
- 4) Immediate reversal of plus and ischemia
 - 24 hours versus 2 weeks
- 5) Less traumatic procedure
- Better tolerated by fragile preemies
- 6) Does not require clear media or attached retina







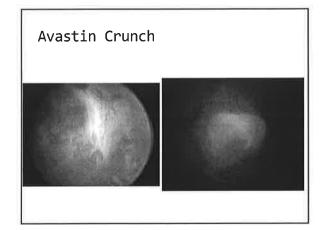
(Potential) Disadvantages of Anti-VEGF 1) Systemic toxicity Hard to disprove Not seen with 0.625 mg dose in unablated eyes 2) Cataract Surgical disaster, high rate of reproliferation Technique is important, needle directed peripherally Safer to perforate unvascularized retina than to hit lens

3) Crunch (fibrovascular contraction)

Not seen if treatment done on time

Will accelerate existing traction

Anticipate vitrectomy



(Potential) Disadvantages of
Anti-VEGF

4) Arrest of Intrinsic Vascular Development

Hell freezes over

Not selective to neovascularization

Persistent peripheral non-perfusion

"Smoldering ROP" or "FEVR-Like"

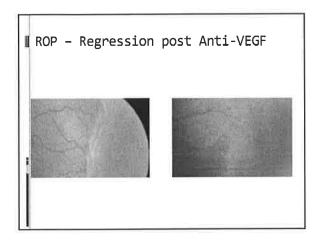
Can develop late recurrence, traction, macular dragging, late detachment

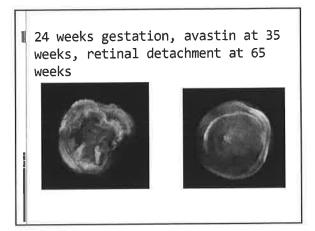
Can occur any time, need to be followed until mature

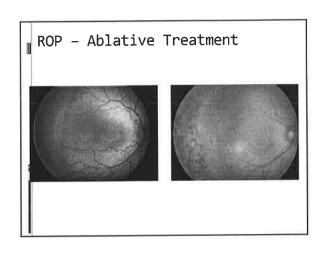
Marriage to patient and the parents

Potential disasters if they fail to follow up

May need to laser later anyhow





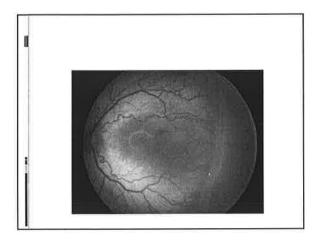


Type 1 ROP, what are the options?

- Observation
- Systemic Medical Management
- Laser Ablation
- Anti-VEGF
- Laser Ablation and Anti-VEGF

Type 1 ROP, why observe?

- ET-ROP showed lower rate of late complications at the expense of many additional laser procedures (5 unnecessary treatments for every necessary treatment)
- ET-ROP gives guidelines but not absolute indications for treatment
- Anti-VEGF was not available during ET-ROP, gives opportunity to reverse accelerating cases
- · Need judgment, assess vascular burden
- May choose to closely follow patients with stage 2/3 plus or stage 3 without plus



Type 1 ROP, Systemic Management?

- Remember STOP-ROP
 - Lower progression to threshold in stage III plus
- Experience at Stanford (M. Gannon)
- O2 supplementation to keep saturation > 98%
- Transfusion to keep hematocrit at 40%
- Avoid Erythropoietin

Type 1 ROP, Laser Ablation

- Typical ROP and Smoldering ROP
- Anterior to equator
- Tractional component > Vascular component
- Delayed vascular maturation
- Parents unreliable for follow up
- At Children's Retina Institute, 70% of primary therapy since BEAT-ROP is ablation

Low vascularity, evolving traction





Type 1 ROP, Laser Ablation

- Variation in laser techniques can impact myopia and field loss
 - Intensity
 - Confluence
 - Location

Type 1 ROP, Anti-VEGF Rx

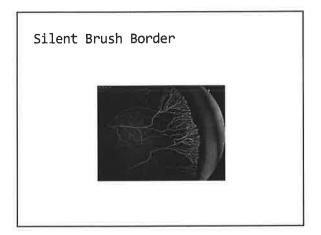
- Avastin is agent of choice
 - Cost
 - Lowest penetrance of blood-retinal barrier
 - Experience
- Dose has not been adequately defined
 - o.625 mg in BEAT-ROP
 - Lower doses may suppress vascular activity without inhibiting intrinsic vascular development

Type 1 ROP, Anti-VEGF Rx

- High vascular activity and posterior disease
- Too fragile to tolerate laser procedure
- Media opacity: vitreous heme, cataract, tunica vasculosa lentis
- · Retina detached, anticipating vitrectomy
- Long term commitment to follow up
- Laser not available

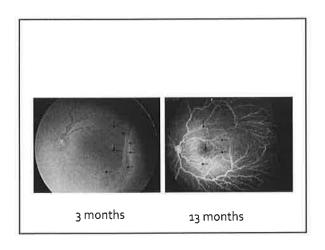
Type 1 ROP, Anti-VEGF Rx: Follow up Protocol p Injection

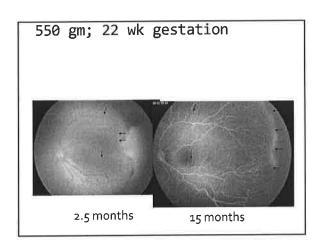
- Office every 2 weeks examining leading edge of vascular development
- 70 % will reach the ora serrata
- 30% will remain non-perfused peripherally
- Fluorescein helps to define regression pattern
 - Blind ending vessels
 - Horse hair supernumerous vessels with dilation
 - Smoldering ridge with leakage
 - Traction with macular dragging, retinal detachment

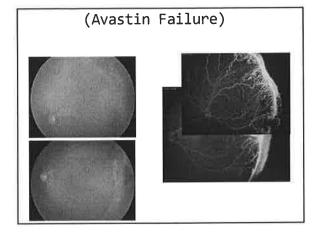


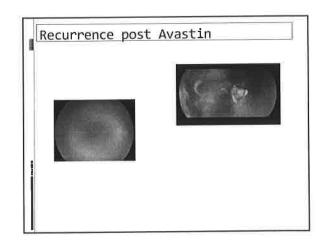
Avastin: 830 grams; 26 wk gestation, injection at 2 month and still non-perfused at 20 mo

2 months
20 months









Type 1 ROP, Anti-VEGF Rx: Follow up Protocol p Injection

- Eyes that do not fully vascularize by 70 weeks post conception are not likely to ever fully vascularize
- Examination under anesthesia with fluorescein angiogram performed at the preemie's first birthday
- Residual avascular retina is ablated

Judging Vascular Disease Burden

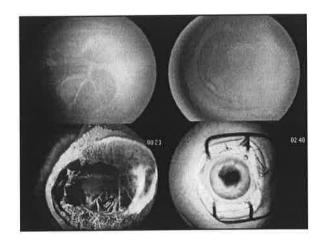
- No substitute for clinical experience
- Vascular Activity Score
 - Grading system using parameters that we typically use to judge degree of activity
- Correlates linearly with anatomic failure during PPV for ROP retinal detachment
- Guides Avastin therapy

Vascular Activity Score:

- 5 categories
- 1. Fetal Vessels
- 2. Plus
- 3. Shunt Width
- 4. Neovascularization
- 5. Hemorrhage or exudate
- o-2 points for each category
- 10 possible points



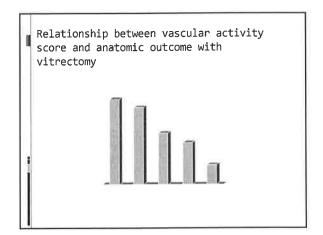




26 weeks gestation, 34 weeks PCA Wide ridge and 360 degrees NV & significant plus & exudate







Combined Anti-VEGF & Laser Ablation

- Rarely done in severe cases
 - Missed screening
 - ROP plus
 - FEVR / Norrin / I.P. mutation
 - Systemic hemangioma
 - Bone marrow diseases
 - Vasculitis
- Cannot wait for VEFG levels to drop w ablation
- Only opportunity to treat
- Prefer give Anti-VEGF first, ablation after 1-2 days

Comment: Anti-VEGF vs Laser Ablation in Type 1 ROP

- Metabolic versus Anatomic Manipulation
- Laser Ablation remains the mainstay of ROP management
- Anti-VEGF is an important adjunctive tool that has allowed excellent outcomes in eyes with previously limited prognosis, posterior and vascularly aggressive
- Proposed guidelines can not replace clinical experience and judgment, Vascular Activity Score can help
- Follow up and Fluorescein Angiography are Crucial after Anti-VEGF

CURRICULUM VITAE

A. Personal Information

Name in full

Khaledcsd Aly Tawansy, M.D.

Cellular

(323) 313-5757

e-mail

ktawansy@childrensretina.com; ktawansy@gmail.com

Home Address:

126 Patrician Way Pasadena, CA 91105

Fax

(323)257-3200

Place of Birth Citizenship

Cairo, Egypt

U.S.A.

Languages

English Arabic French

Medical Spanish

Office Address 1

Children's Retina Institute of California

7447 North Figueroa Street Los Angeles, CA 90041 Phone (323)257-3300 Fax (323)257-3200

Office Address 2

Raymond Renaissance Eye Surgery Center

The Raymond Theater 125 North Raymond Avenue Pasadena CA 91103 Phone (626) 529-3937

Fax (626) 529-3844

Office Address 3

Golden State Eye Center

1001 Tower Way Bakersfield, CA 93309 Phone (661)327-4499 Fax (661)327-4381

Office Address 4

Beach Eye Surgery Institute 3200 North Long Beach Blvd. Long Beach, CA 90807

B. Clinical Focus:

Retinopathy of Prematurity

Paediatric and Adult Vitreo-Retinal Surgery

Combined Anterior and Posterior Segment Surgery

Acute and Chronic Retinal Detachment

Ocular Trauma and Ultrasound

Surgical Complications

Retinal Degenerations

Proliferative Retinal Vascular Diseases

Congenital Retinal Detachment, Hereditary Vitreo-Retinopathies

Ocular Inflammatory Syndromes
Canine Retinal Detachment

C. Research Focus:

Forensic Evaluation of Child Abuse Based on Retinal Findings Pharmacologic Management of Retinopathy or Prematurity

Minimally Invasive Protocols for Laser of Retinopathy of Prematurity

Surgical Management of Malignant Juvenile Retinoschisis

Minimally Invasive Techniques for Combined Anterior & Posterior Seg. Surgery

Canine Retinal Detachments

World Education and Surgical Care for Complex Eye Diseases

D. Education

High School

Detroit Country Day School

High School Diploma, Science Concentration,

Magna Cum Laude, 1983

University

Johns Hopkins University

Bachelor Degree with Honors in Biomedical Engineering, 1987

Medical School

University of Michigan Medical School

Doctorate of Medicine, 1991

Residencies

Residency in Internal Medicine

University of California, Irvine Medical Center

Marc Ofstein, M.D., Director July 1, 1991 – June 30, 1994

Residency in Ophthalmology

Henry Ford Hospital and Health Sciences Center

J. David Carey, M.D., Director July 1, 1994 – June 30, 1997

Clinical Fellowships

Fellowship in Vitreo-Retinal Diseases and Surgery

University of British Columbia

William Ross, M.D., F.R.C.S.C., Director

July 1, 1997 - June 30, 1998

Fellowship in Medical Retina and Macular Diseases

Vanderbilt University Medical Center

J. Donald M. Gass, M.D., Preceptor (Deceased)

July 1, 1998 - June 30, 1999

Fellowship in Pediatric Vitreo-Retinal Diseases and Uveitis

Massachusetts Eve and Ear Infirmary and Schepens Retina Foundation

Harvard Medical School Tatsuo Hirose, M.D. Director

Research Fellowships and Extra-Mural Training

Extramural Fellowship in Pediatric Vitreo-Retinal Surgery William Beaumont Hospital Michael Trese, M.D., Preceptor November 1, 1994 – June 30, 2001

Research Fellowship in Ocular Trauma and Ultrasound Schepens Eye Research Institute Harvard Medical School Charles Schepens, M.D., Preceptor (Deceased) July 1, 1999 – June 30, 2000

Ocular Pathology Clerkship Wilmer Ophthalmologic Institute Johns Hopkins University W. Richard Green, M.D., Preceptor (Deceased) 1987-1991

Basic Science Course in Ophthalmology Stanford University Michael Marmour, M.D., Director July 1, 1993 – August 27, 1993

Neuro-Ophthalmology Clerkship Doheny Eye institute, University of Southern California Alfredo Sadun, M.D., Ph.D. and Steven Feldon, M.D., Preceptors December 1993 – February 1994

Honors and Awards

Tau Beta Pi, National Engineering Honors Society, 1985 Young Investigator's Award, Dept. of Biomed. Eng., Johns Hopkins, 1987 Top Student Achievement, Ophthalmology and Genetics, U of Michigan, 1991 Resident of the Year, Henry Ford Hospital, 1996 – 1997 Barsky Award for Resident Research in Ophthalmology, 1997 Faculty Clinical Teacher of the Year, Vanderbilt Ophthalmology, 1998 – 1999 Faculty Surgical Instructor of the Year, Vanderbilt Ophthalmology, 2001-2002 America's Top Ophthalmologists Distinction, Consumer Reports, 2002 National Register's Who's Who Distinction, 2004 Honor Award, American Society of Retinal Specialists, 2004 Vail Vitrectomy Society 2004 Senior Honor Award, American Society of Retina Specialists, 2005 Ronald McDonald House Charities Shine Honoree, 2008 Compassionate Doctor Recognition, 2010-2013 Patient's Choice Award, (California's Favorite Doctors) 2010-2014 Patient's Choice 5th Anniversary Award, 2014 Achieving Life's Opportunities Cultural Foundation Award, 2012 Distinguished Lecturer, Vydehi Institute of Medical Sciences, 2013 Top Ten Doctors, City of Los Angeles, 2014

Licensure

California: G76762 (Active) Michigan: 4301064042 (Expired) British Columbia: T(E)29455 (Expired)

Tennessee: 30549 (Expired) Massachusetts: 159724 (Expired)

DEA: BT7175525 (Active)

Board Certification

National Board of Medical Examiners, Part I, II, and III

American Board of Ophthalmology

E. Professional Background

Academic Appointments

Director of Pediatric Posterior Segment Fellowship Training Program Children's Retina Institute of California, 2003

Assistant Professor of Ophthalmology Loma Linda University, 2006

Visiting Assistant Professor of Pediatric Ophthalmology and Vitreo-Retinal Surgery, University of Southern California, Keck School of Medicine; and Doheny Eye Institute 2002

Director of Clinical Research, van Wyck-Dalany Childrens Retina Center, Doheny Retina Institute and Children's Hospital Los Angeles, 2002

Director of Ophthalmology Residency Training Program, Hollywood Presbyterian Medical Center, 2003

Assistant Professor of Ophthalmology and Pediatrics, Vanderbilt University, 1998

Clinical Instructor in Ophthalmology, Harvard Medical School, 1999

Fellow Scientist, Schepens Eye Research Institute, 1999

Professor of Ophthalmology, Vydehi Institute of Medical Sciences, Bangalore India 2015

Adjunct Professor of Ophthalmology, Touro University, California College of Osteopathic Medicine, 2016

Active Hospital Privileges

Hollywood Presbyterian Medical Center, Hollywood, CA

San Gabriel Valley Medical Center, San Gabriel, CA

Garfield Medical Center, Monterey Park, CA

Miller Children's Hospital, Long Beach CA

Long Beach Memorial Medical Center, Long Beach CA

Bakersfield Memorial Medical Center, Bakersfield, CA

Mercy Southwest Medical Center, Bakersfield, CA

Mercy Hospital Truxton Medical Center, Bakersfield CA

San Joaquin Medical Center, Bakersfield, CA

Fountain Valley Medical Center, Fountain Valley CA

Henry Mayo Medical Center, Valencia CA

Centinela Medical Center, Inglewood CA

Valley Presbyterian Medical Center, Van Nuys CA

San Antonio Community Medical Center, Upland CA

Saint Francis Medical Center, Lynwood CA

Community Regional Medical Center, Fresno CA

F. Work Experience: (Dates are Approximate)

Vitreo-Rerinal Surgeon, Vanderbilt University, 1998-2001

Director, Pediatric Vitreo-Retinal and Uveitis Service, Children's Hospital Los Angeles, 2002-2005

Director of Pediatric Retina and ROP Screening Program Huntington Memorial Hospital, 2006-2015

Ophthalmology Clinic, Ocular Trauma, and ROP Services Kern Medical Center, 2005 - 2014

Pediatric Ophthalmology and ROP Screening Program Hollywood Presbyterian Medical Center, 2004 – 2012

Director ROP Screening Program, St. Francis, Hospital, 2006-Present

Director ROP Screening Program, San Gabriel Valley Medical Center and Garfield Medical Center, 2005-Present

Ophthalmology Call Panel, Huntington Memorial Hospital, 2008 - Present

Ophthalmology Call Panel, Long Beach Memorial Hospital, 2015-Present

Director of ROP Screening, Valley Presbyterian Medical Medical Center, 2006-Present

Pediatric Retina Consultant, Kaiser Permanente Sunset, Fontana, Bellflower, Downey, Panorama City, Woodland Hills 2002-Present

National Consultant for Forensic Pediatric Retina, 2001-Present

Visiting Vitreo-Retinal Surgeon, Vydehi Institute of Medical Sciences, 2006-Present

Director of Vitreo-Retinal Surgery, Lugene Eye Center Glendale, 2005-7

ROP Surgery Program, Children's Hospital Central California, 2008-2015

Director of Vitreo-Retinal Surgery, Bakersfield Family Medical Center, 2006-Presemt

Director of ROP Screening, Bakersfield Memorial Medical Center, 2005-Present

Director of ROP Screening, Mercy Southwest Medical Center, 2005 - Present

Director of ROP Screening, San Joaquin Medical Center, 2009-Present

Director of ROP Tele-Screening, Community Medical Center Fresno, 2012-16

Medical and Surgical Director, Children's Retina Institute, 2005 - Present

President and Director of Surgery, Raymond Renaissance Surgery Center, 2013 –Present

Director of Vitreo-Retinal Surgery, M/S Surgery Center, 2006 - Present

Director of Vitreo-Retinal Surgery, Orange County Eye Institute, 2013 – Present

Director of ROP Surgery, Centinela Hospital, 2014 – Present

Director of Canine Vitreo-Retinal Surgery, One Retina, 2006 - Present

ROP and Pediatric Retina Consultant and Surgeon, Fountain Valley Medical Center, 2007 – Present

Ophthalmology Trauma Call, Kern County, 2005 - Present

Pediatric Ophthalmologist and Vitreo-Retinal Surgeon, Independence Medical Group, 2005 – Present

Pediatric Ophthalmologist and Vitreo-Retinal Surgeon, Kern Family Medical Group, 2005 - Present

G. Society Memberships

American College of Physicians, 1992
Association for Research in Vision and Ophthalmology, 1994
American Academy of Ophthalmology, 1994
Christian Eye Ministry, 1996
Canadian Ophthalmologic Society, 1997
Umbo Society, 1999
Vitreous Society, 2000
Club Vit, 2001
Los Angeles Eye Society, 2001
Pan American Academy of Ophthalmology, 2001
American Society of Retina Specialists, 2002
Vail Vitrectomy Society, 2004
Project Orbis, 2004
American Medical Association, 2005
European Retina Society, 2006

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A. Hayden, **K.A. Tawansy**, J.A. Gonzales, P. Patel, and M. Chung Peripheral Retinal Non-Perfusion in the Shaken Baby Syndrome Invest. Ophthalmol. Vis Sci. 2004 45: E-A 271

R. Agrawal. K. Tawansy, and H. Lee

Surgical Management of Co-Existing Persitent Fetal Vasculature and Chorio-Retinal Coloboma Invest. Ophthalmol. Vis. Sci. 2004 45: E-A 272

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S. J. Young and K.A. Tawansy

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Rhegmatogenous Retinal Detachment in Neonatal Retinopathy of Prematurity Invest. Ophthalmol. Vis. Sci. 2005 46: E-A 4104

A.A. Fawzi, M.K. Russell, K.J. Lee, K.J.B. Kelly, C. Curry, S.D. Schwartz, and **K.A. Tawansy**

Proliferative Retinopathy in Full-Term Infants with Thrombo-embolic Risk Factors

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K.A. Tawansy, R.R. Lakhanpal, and E. de Juan, Jr.

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I. Submitted Manuscripts

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Tawasny KA. Lashkari K.

Autologous serum and peeling of the internal limiting membrane in macular hole surgery.

Tawansy KA, Hartnett ME.

Early closed vitrectomy versus late open-sky vitrectomy for advanced retinopathy of prematurity.

Tawansy KA, Donahue S, Sinatra R.

Accelerated retinopathy of prematurity and elevated systemic VEGF in premature children with large capillary hemangiomas.

Tawansy KA, Chang TS.

Submacular surgery in age-related macular degeneration for patients with type II choroidal neovascularization.

J. Presentations

Tawansy KA and Trick GL

Optical coherence tomography of the optic disc in pseudotumor cerebri

Henry Ford Hospital Alumni Meeting, June 1995

Tawansy KA and Desai UR

Granuloma of the choroids in systemic sarcoidosis Henry Ford Hospital Alumni Meeting, June 1996

Tawansy KA and Lesser B

Hemodynamic relationships between intraocular pressure and central venous pressure

Henry Ford Hospital Alumni Meeting, June 1997

Tawansy KA, Chang TS, Maberley A, and Ma P Sumacular surgery for type II choroidal neovascularization University of British Columbia Alumni Meeting, 1998

Tawansy KA

Macular translocation for age-related macular degeneration University of British Columbia Retina Meeting, February 1999

Tawansy KA

Options in the management of choroidal neovascularization Ophthalmology Pearls Meeting, Vanderbilt University, June 1999

Tawansy KA

Choroidal neovascularization in ocular inflammatory diseases: diagnosis and management.

Combined Meeting of the American Academy of Ophthalmology and the Pan American Academy of Ophthalmology, October 1999

Tawansy KA, Nguyen QD and Hirose T

Familial exudative vitreo-retinopathy

Massachusetts Eye and Ear Infirmary Meeting on Pediatrics, May 2000

Tawansy KA

Inherited, acquired, and secondary retinoschisis Ophthalmology Pearls Meeting, Vanderbilt University, June 2001

Tawansy KA

Surgical management of retinal detachment in children Pan American Academy of Ophthalmology Meeting, July 2001

Tawansy KA

Juvenile retinoschisis – practical and theoretic considerations Los Angeles Research Study Club Meeting, February 2002

Tawansy KA

Surgical options after failure of primary lens-sparing vitrectomy in retinopathy of prematurity stages IV and V Doheny Eye Institute Alumni Meeting, June 2002

Tawansy KA, de Juan E, Lankhanpal R, Samuel MA Small gauge instrumentation for neonatal ROP retinal detachment American Society of Retinal Specialists Meeting, October 2002

Tawansy KA, and de Juan E

25- gauge instrumentation for the management of neonatal retinal detachment caused by acute retinopathy of prematurity
Combined Meeting of the Vitreous and Retina Societies, October 2002

Tawansy KA

Angiostatic Steroids in the Management of Severe ROP Doheny Eye Institute Alumni Meeting, June 2003

Tawansy KA, Lankhanpal R, and de Juan E Intravitreal Steroids in the Management of Severe ROP American Society of Retinal Specialists Meeting, New York, August 2003

Samuel MA, **Tawansy KA**, and Murphree AL Vitreo-retinal Complications of Retinoblastoma Therapy American Society of Retina Specialists Meeting, New York, August 2003

Tawansy KA and Hakim M

Glucose Anesthesia for Laser of Threshold ROP American Society of Retina Specialists Meeting, New York, August 2003

Moshfeghi D, **Tawansy KA**, and Sears J
Macular Hole in the Shaken Baby Syndrome
American Society of Retina Specialists Meeting, New York, August 2003

Tawansy KA

25-gauge Vitrectomy for Neonatal ROP Detachment 4th Annual Doheny Vision Research Seminar, January 2004.

Tawansy KA

Atypical Retinal Vascular Diseases of Infants
The Research Study Club of Los Angeles, 72nd Mid-winter Clinical Conference,
January 2004.

Tawansy KA

Atypical Retinal Vascular Diseases of Infants. Western Retina Study Club 20th Annual Meeting, Vancouver, British Columbia February 2004

Tawansy KA

Retinopathy of Prematurity: Update on Pathogenesis and Management. Pediatrics Grand Rounds, Long Beach Memorial Hospital, March 2004

Tawansv KA

Surgical Pearls and Pitfalls in the Management of Advanced Retinopathy of Prematurity. Anesthesia Grand Rounds, Children's Hospital Los Angeles, March 2004.

Tawansy KA, Lee H, and de Juan E Smoldering Retinopathy of Prematurity Vail Vitrectomy Meeting March 2004

Tawansy KA

Principles of Pediatric Vitreo-Retinal Surgery Coarse Project Orbis Mission Kuwait City and Coimbatore, India April 2004

Tawansy KA

Retinopathy of Prematurity: Evolution in Presentation and Management Loma Linda University Department of Ophthalmology Residents Research Day Meeting, June 2004

Tawansy KA

Retinal Vascular Manifestations of Retinoblastoma USC Department of Ophthalmology Doheny Days Meeting, June 2004

Stuart J, Samuel MA, and **Tawansy KA**The Modern Role of Open Sky Vitrectomy in Pediatric Retinal Diseases
USC Department of Ophthalmology
Doheny Days Meeting, June 2004

Tawansy KA, de Juan E, and Lakhanpal R Intra-Vitreal Triamcinolone for Severe ROP Refractory to Laser Ablation: One Year Follow Up American Society of Retina Specialists Meeting San Diego, August 2004

Tawansy KA

Management of ROP: Breakfast with the Masters American Society of Retina Specialists Meeting San Diego, August 2004

Shammas MC, Samuel MA, Jubran R, **Tawansy KA**, and Murphree AL Late Recurrence of Intraocular Retinoblastoma American Society of Retina Specialists Meeting San Diego, August 2004

Gonzales JA, **Tawansy KA**, Hayden A, Patel P, Chung M Peripheral Retinal Non-Perfusion and Tractional Retinal Detachment in the Shaken Baby Syndrome American Society of Retina Specialists Meeting San Diego, August 2004

Lam HH, **Tawansy KA**, Lee H, Samuel MA, Novack RL, and Bryan JS Smoldering ROP: Late Onset Neonatal Retinal Detachment American Society of Retina Specialists Meeting San Diego, August 2004

Samuel MA and Tawansy KA

The Modern Role of Scleral Buckle in ROP Retinal Detachment American Society of Retinal Specialists Meeting San Diego, August 2004

Lee H, **Tawansy KA**, Chung M, and Stout JT Predictors of Anatomic Failure in ROP Retinal Detachment American Society of Retina Specialists Meeting San Diego, August 2004

Russell M, **Tawansy KA** lanchelev S Delayed Lensectomy with IOL Implantation in Neonates with ROP American Society of Retina Specialists Meeting San Diego, August 2004 Rahul NK, Charonis A, Samuel MA, Gupta A, and **Tawansy KA**Intravenous Foscarnet in the Management of Acyclovir Resistant Herpes
Simples Virus Type 2 in Acute Retinal Necrosis in Children
American Society of Retinal Specialists Meeting
San Diego, August 2004

Pons M, Samuel MA, **Tawansy KA**, Murphree AL Reression Patterns in Retinoblastoma after Chemotherapy and Local Consolidation American Society of Retina Specialists Meeting San Diego, August 2004

Agrawal RN, **Tawansy KA**, and Lee H

Clinical Features and Surgical Management of Co-Existing Persistent Fetal Vasculature and Chorio-Retinal Coloboma American Society of Retina Specialists Meeting San Diego, August 2004

Margolis R, Murphree AL, Evans M, **Tawansy KA**, and Rao N Diagnosis of Iris Neovascularization in Retinoblastoma by Fluorescein Angiogram American Society of Retina Specialsists Meeting San Diego, August 2004

Tawansy KA and Takeshita B

A Team Approach of Early Intervention for Children with Vision Impairment Southern California Network Conference Santa Ana, October 2004

Tawansy KA

Retinal Disorders of Children Foundation for the Junior Blind Annual Meeting Los Angeles, October 2004

Tawansy KA

Techniques in ROP Retinal Detachment Surgery JJ Bausch Symposia Series American Academy of Ophthalmology Annual Meeting New Orleans, October 2004

Lee TC, Chaum E, **Tawansy KA**, Mukai S, Wilson M, Ober M, Hayashi N, Murphree AL, Haik B, Abramson D
Factors and Management of Vitreous Hemorrhage in Patients with Retinoblastoma
American Academy of Ophthalmology Annual Meeting
New Orleans, October 2004

Tawansy KA

Retinopathy of Prematurity: Practical Pearls White Memorial Hospital Grand Rounds Los Angeles, November 2004

Tawansy KA, Samuel MA, Murphree AL, Rao N, See R Retinal Vascular Manifestations of Retinoblastoma Association of Pediatric Retina Specialists Meeting Duck Key, January 2005

Tawansy KA

Pediatric Retina Symposium Mexico City Institute of Ophthalmology Annual Meeting Mexico City, February 2005

Tawansy KA, Samuel MA, Murphree AL, Rao N, See R Retinal Vascular Manifestations of Ischemic Retinoblastoma Pan-American Association of Ophthalmology Annual Meeting Santiago, March 2005

Tawansy KA, Pons M, Lee H, Shah P, Narendran V Comparison of Threshold ROP in Southern California and Southern India Pan-American Association of Ophthalmology Annual Meeting Santiago, March 2005

Tawansy KA, Gonzales J, Hayden A, Evans M Retinal Non-Perfusion in the Shaken Baby Syndrome Pan-American Association of Ophthalmology Annual Meeting Santiago, March 2005

Tawansy KA

Surgical Management of Malignant Infantile Retinoschisis Loma Linda University Alumni Day Meeting, April 2006

Tawansy KA

Bullous Infantile Retinoschisis: Practical Considerations Club Vit Annual Meeting Whislter, Canada July 2006

Tawansy KA

Delayed Retinal Vascular Maturation in Preemies with CNS Disease American Academy of Ophthalmology Meeting Chicago, 2007

Tawansy KA

Bevacizumab in the Management of Advanced ROP University of Ottawa Grand Rounds Ottawa, Canada 2009

Tawansy KA and Minz-Hittner HA BEAT-ROP Study Protocol and Preliminary Outcomes World Symposium on ROP New Delhi, India, 2009

Tawansy KA

BEAT-ROP Study Update Indian Vitreo-Retinal Society Meeting Napal, 2009

Tawansy KA and Hoffman AR Retinopathy of Prematurity in Kittens Western Retina Society Meeting San Diego, 2009

Tawansy KA

Anti-VEGF Therapy for Posterior ROP

Taiwanese Vitreo-Retinal Society Meeting Taiwan, 2009

Tawansy KA

Smoldering Retinopathy of Prematurity American Society of Retina Specialists Meeting Palm Springs, 2009

Tawansy KA and Merkur A

Exudative Juvenile Retinoschisis: A new Phenotype American Society of Retinal Specialists Meeting Palm Springs, 2009

Tawansy KA and Matti N

High dose bevacizumab for the management of advanced pediatric proliferative retinopathies

American Society of Retina Specialists Meeting

Vancouver, CA 2010

Tawansy KA and Mintz-Hittner HA

Beat-ROP Study Results American Society of Retina Specialists Annual Meeting Vancouver, CA 2010

Tawansy KA and Albiani D

The role of scleral buckle in the management of chorio-retinal coloboma detachments

American Society of Retina Specialists Annual Meeting

Vancouver, 2010

Tawansy KA and Kherani A

Vascular Regression Patterns after Bevacizumab Therapy for Posterior ROP American Society of Retina Specialists Annual Meeting Vancouver, CA 2010

Tawansy KA

Type 1 ROP: Current Management and Practical Considerations Euretina 13th Annual Congress Hamburg, Germany September, 2013

Tawansy KA

Management of Advanced Pediatric Retinal Diseases Skill Matrix International Conference Bridging the Gap between Medicine and Education Bangalor, India November, 2013

Tawansy KA

Retinopathy of Prematurity: Update on Diagnosis and Management Centinela Hospital Rounds March, 2014

Tawansy KA

Center for the Partially Sighted Symposium Bill Takeshita Achievement Award

Skirball Center September, 2014

Tawansy KA

Avastin versus Laser in the Management of Type 1 ROP Euretina 14th Annual Congress London September, 2014

Tawansy KA

Evaluation of Child Abuse based on Retinal Findings National Child Abuse Resource Center Conference Los Vegas October, 2014

K. Fellows Trained

Juan Astruc, M.D., 2000-2001 Richmond Eye and Ear Institute Richmond, Virginia

Adrian M. Lavina, M.D., 2001-2002 Private Practice Palm Beach Gardens, Florida

Hatem Kobtan, M.D., F.R.C.S., 2003-2003 University of Cairo Faculty of Ophthalmology Cairo, Egypt

Michael A. Samuel, M.D., 2003-2004 Retina Institute of California Pasadena, CA

Matt Russell, M.D., F.R.C.S.C., 2004-5 University of New Zealand Division of Vitreo-Retinal Surgery

Mauricio Pons, M.D., 2004-5 University of Virginia

Parag Shah, MBBS, 2006 Faculty, Division of Vitreo-Retinal Surgery Arrivand Eye Hospital Coimbatore, India

Jennifer Hung, M.D., 2005-6 University of Southern California School of Medicine Los Angeles, CA

Mohamed Alomran, M.D., M.S., 2005-6 Division of Vitreo-Retinal Surgery University of Bahrain

Natalia Matti, M.D, 2007-8 Pediatric Vitreo-Retinal Surgeon Tijuana and Northern Mexico David Albiani, M.D., 2009
Faculty of Medicine
Department of Ophthalmology
University of British Columbia
Directory, Vitreo-Retinal Fellowship
Vancouver, CA

Andrew Murker, M.D., 2009 Department of Ophthalmology University of British Columbia Vancouver, BC

Enrique Ariza, M,D, 2009-2010 Pediatric and Adult Vitreo-Retinal Surgeon Mexico City, Mexico

Eugene Ing, M.D. Pediatric and Adult Vitreo-Retinal Surgeon Honolulu,Hawaii

L. Extracurricular Interests

Lacrosse, Bicycling, Swimming, Hiking, Skiing Creative Writing Jazz and Rock Music Missionary Medical Projects.

M. References

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