

THE UNIVERSITY OF ARIZONA OPHTHALMOLOGY RESIDENCY PROGRAM FACT SHEET

OUR PROGRAM AT A GLANCE

- Rotations with affiliate private practices in the subspecialties of cornea, refractive surgery, retina and oculo-plastics. This provides a valuable private practice perspective on how ophthalmology is approached outside of academics.
- Our group has a long-standing history of a collaborative culture and comradery among residents.
- Salaries for 2020-2021: PGY-1 \$58,246; PGY-2 \$60,721; PGY-3 \$63,888; PGY-4 \$66,461

CURRICULUM

- **Organized Wet Labs**
 - Internal - yearly cataract and refractive surgery wet labs held at the administrative building or in one of the local private practices.
 - External - a variety of industry and non-industry sponsored wet labs to further the development of phacoemulsification skills.
- Dedicated Friday morning didactic sessions from 7:00 AM to 11:30 AM in which the residents have no scheduled duties.
- Grand Rounds or QIPs held every Wednesday morning from 7:00 AM to 8:30 AM.
- Numerous study aids are available, including a yearly program-paid subscription to OphthoQuestions, a program subscription to online BCSC books, and online access to over 50 ophthalmology textbooks.
- **Review Courses**
 - Senior (PGY-4) residents attend an instructional review course at the San Antonio Ophthalmology Course in spring, shortly before the Ophthalmic Knowledge Assessment Program (OKAP) exam.
 - Second year (PGY-3) residents attend the UCLA Stein/Doheny Comprehensive Ophthalmology Review Course in spring.
 - The senior (PGY-4) residents organize an in-house OKAP review course yearly. Faculty are invited to present. The residents have dedicated time during working hours to attend these sessions.
- The residents may earn funds for travel to AAO or interview days by completing their paperwork in a timely fashion and >90% attendance at lectures.
- Multiple institutionally funded Well-Being events are held every year. Here Banner provides \$50 per employed physician that attends the function. The events may include one alcoholic beverage per resident and may involve non-Banner Employees such as faculty, family and friends.

Travel funds are available for presentations at national meetings if the resident is the primary author and a faculty member sponsors the project.

Call Requirements: One in 8 days averaged for primary call during the first and second years and 1 in 4 days averaged for second (back-up) call during the senior year. A meal card for Banner hospitals is available for call.

Residency Curriculum by Year

- PGY-1 Integrated Year: We are excited to begin the integrated PGY-1 year starting in 2021. While it is not completely formalized, we can share some of the details. It will occur predominantly at the Southern Arizona Veterans Affairs Health Care System, which is one of our most popular sites and the highest impact for learning. We have constructed a curriculum that will provide the resident with a non-ophthalmic perspective of diseases commonly managed by ophthalmologists. Each resident will rotate for 3 months in ophthalmology, 2 months in emergency medicine, 2 months in internal medicine, 2 months in general surgery, 1 month in neuroradiology, 1 month in rheumatology and 1 month in neurology.

Typical 1st Year (PGY-2): The first starts with buddy call shadowing the more senior residents for the first 1-2 months. Also, during the first few weeks, dedicated time is devoted towards learning the basics via a 21-hour video series from the Doheny/Jules Stein Eye Institute Comprehensive Ophthalmology Review Course. Most of the clinical time is at the main Alvernon site assisting with patients in the faculty clinic and running the resident clinics with faculty oversight. General ophthalmology, cornea, glaucoma, neuro-ophthalmology, pediatrics, and retina clinics are attended. Two months are served on the consults service, which is staffed by Dr. Tredici, the ophthalmic hospitalist. Greater than 90% of the consults service is at Banner University Medical Center -Tucson Campus. An average of 1 night in 8 is required for first call. Each resident averages 3 grand rounds presentations per year, with more occurring the first year and progressively fewer in the last 2 years. Dedicated didactic sessions are held every Friday morning from 7:00 AM to 11:30 AM at the Alvernon administrative building. Continuity clinics at the SAVAHCS occur all three years. Additionally, oculoplastics and retina rotations at the SAVAHCS are part of the first year program. Finally, the residents spend time with a private cataract and refractive practice where they gain exposure to keratorefractive surgery and world-renowned cataract surgeons. The first year residents have the option of spending 1-2 weeks in Nogales, Mexico with Dr. Ramirez at her ophthalmology practice (suspended during the COVID-19 pandemic).

Typical 2nd Year (PGY-3): In the second year, residents spend time in cornea, oculoplastics, and retina private practices. These are close to the main Alvernon clinic and highly regarded by the residents. The second year residents attend an ophthalmology review course prior to the OKAP test. They often choose to attend a number of internal and external cataract courses during this year, as well (suspended during the COVID-19 pandemic).

Typical 3rd Year (PGY-4): Nine months of the senior year occurs at the SAVAHCS where they run general, cornea, glaucoma and retina clinics with faculty oversight. During the remaining three months, they serve as the Chief resident where they have administrative time, as well as participating in general, glaucoma, and resident clinics at the Alvernon outpatient clinic. The Chief works closely with the program coordinator to manage the duties of their co-residents. We find this an invaluable tool in learning leadership and management of human capital. The majority of the cataract surgery is obtained at SAVAHCS during this year. The SAVAHCS provides toric and multifocal lenses to appropriate patients free of charge. This allows residents a robust exposure

to managing these premium IOLs. The same is true for iStents, and this allows residents to become certified for this procedure during residency. The seniors are encouraged to attend the annual AAO meeting, and funds are available to assist with this important learning opportunity.

- **Surgical Numbers for Graduating Seniors from 2017-2019**

	ACGME Minimums	Average	
		2017-2018	2018-2019
Cataract - Total (S)	86	202	204
Laser Surgery			
YAG Capsulotomy (S)	5	31	24
Laser Trabeculoplasty (S)	5	33	35
Laser Iridotomy (S)	4	26	32
Panretinal Laser Photocoagulation (S)	10	18	12
Corneal Surgery			
Keratoplasty (S+A)	5	15	19
Pterygium/Conjunctival and Other (S)	3	11	7
Keratorefractive Surgery - Total (S+A)	6	13	11
Strabismus - Total (S)	10	16	13
Glaucoma - Filtering/Shunting Procedures (S)	5	15	18
Retina Vitreous - Total (S+A)	10	34	44
Oculoplastic and Orbit			
Eyelid Laceration (S)	3	16	13
Chalazion Excision (S)	3	6	3
Ptosis/Blepharoplasty (S)	3	21	19
Oculoplastic and Orbit - Total (S)	28	83	62
Globe Trauma - Total (S)	4	7	5
Grand Totals	190	575	527

S = Surgeon Procedures Only

S+A = Surgeon and Assistant Procedures

- **International Opportunities in Mexico** (suspended during the COVID-19 pandemic)
 - PGY-2 residents may participate in two 1-week rotations with one of the program’s associated assistant professors, Dr. Maria Ramirez, who has an ophthalmology practice in Nogales, Sonora, Mexico. This is an hour’s drive from Tucson and provides a medical immersion experience into the Spanish-speaking culture of our Mexican neighbors.
 - PGY-3 residents may be involved in the planning, organization and execution of a four-day medical mission to Kino Bay, Mexico. This is a small fishing village on the Gulf of California. This involves exams, dispensing eyedrops and glasses, and referring surgical cases to regional sources. It provides valuable insight into medical mission work for those who plan to include this in their future.

FACILITIES

- The Southern Arizona Veterans Administration Health Care System (SAVAHCS) is the jewel in our crown. It is a 295-bed hospital that is two miles from BUMC-South and 13 miles from BUMC-Tucson.

That translates into a 20- to 30-minute commute from BUMC-Tucson and a 5-minute drive from BUMC-South. It serves ~170,000 veterans and is unlike any other Veterans facility. It provides specialists in cornea, glaucoma, neuro-ophthalmology, oculoplastics, and retina. SAVAHCS ophthalmology boasts state-of-the-art equipment in both the clinic and operating rooms.

- Average of over 200 cataract surgeries per resident as primary surgeon. Torics and multifocal IOLs at no additional cost to the patient.
- Glaucoma exposure to trabeculectomies, tube shunts and MIGS procedures.
- Cornucopia of oculoplastics experience under the supervision of a seasoned ASOPRS-trained surgeon.
- Intravitreal injections, PRP and retinal experience well beyond the minimum requirements.

- **Banner University Medical Centers**

- In 2017, BUMC-Tucson added a new 9-story tower with an additional 200 beds and 19 operating rooms. Currently, there are a total of 479 beds. The majority of call occurs at this hospital. It has the only level 1 trauma center in the region.
 - Banner UMC-South is a 220-bed hospital with a level 2 trauma center and is located 2 miles from the SAVAHCS and 13 miles from BUMC-Tucson.
 - There are dedicated resident lounges at the Banner University Medical Center (BUMC) -Tucson and South Campus locations. The South Campus lounge is furnished with food, drink and a workout room.
- The Alvernon outpatient facility (707 N Alvernon) is the clinical heart of the practice with over 20 exam rooms. It was completely renovated in 2019 and occupies the entire 3rd floor of the building.
 - A 2-suite ambulatory surgical center will be opening in 2021. It is immediately across the street from the Alvernon outpatient facility. It will be predominantly used for outpatient ophthalmology procedures.
 - The 655 N Alvernon administrative offices are conveniently located next to the Alvernon outpatient facility.
 - There is a dedicated resident area with a ping pong table, computers, printer, projector, study areas, study carrels, lockers, and mailboxes. A lactation/resting room, meeting rooms, and kitchen with refrigerator and microwave are available adjacent to the resident area.
 - In the administrative office is a well-equipped wet lab and includes a Centurion phaco machine, a Wild operating microscope, 3 cataract surgery simulation systems and 24/7 access. The residents have the ability to practice anterior vitrectomy, sutured IOLs, small pupil surgery, pupilloplasty, iris dialysis repair, capsular tension ring insertion, i-stents, Kahook Dual Blade goniotomy and other MIGS procedures. There are also clinical tools for simulation of Yag capsulotomy, SLT and LPI. We recently added simulations for lateral canthotomy/cantholysis, basic skin suturing and lid margin laceration repair.
 - There is a dedicated lecture area in the administrative office, and two shared conference rooms in the building.
 - There is free parking at all facilities.

TUCSON AND SURROUNDING AREA

- The Tucson cost of living is 8% below the national average. Food, gas, electric and natural gas prices are relatively low.
- Low level of traffic relative to major metropolitan regions.
- **Housing:** Median home price \$186,000 in 2020. Average rental price of 1 bedroom apartment \$720/month and 2 bedroom apartment in Tucson \$965/month.
- The 2020 population of Tucson and the immediate surrounding area was 982,000 people.
- **Trails**
 - **Bike Trails:** The Loop Trail is a recently completed circuit of 131 miles of connected, paved, multipurpose trails traversing the city and running along the scenic desert and dry river beds.
 - **Road bike lanes** are prolific in Tucson, which is one of the most bike friendly towns in the US.
 - **Mountain biking and horseback riding trails** are plentiful in Tucson and the surrounding region.
 - **Hiking Trails:** There are 114 moderate trails in Tucson ranging from 0.7 to 59.4 miles and from 2,214 to 9,107 feet above sea level. Additionally, there are many easy and difficult trails.
- **Climate**
 - Temperature
 - Summer average - daily high/low - mid 70s to 100
 - Winter average - daily high/low - low 40s to low 70s
 - Relatively **low winds** throughout the year
 - Humidity - mid teens to high 30% with average yearly of 29.2%
 - **Sunny** - average of 220 days with <20% cloud cover per day
- **Downtown:** There is a growing nightlife, well-positioned light rail service and a city commitment to continued revitalization of the historic downtown region.
- **Food:** In 2015, Tucson was named the first City of Gastronomy by the United Nations Educational, Scientific and Cultural Organization for the variety and quality of culinary options.
- **Local/Nearby Attractions**
 - The **Arizona-Sonora Desert Museum** is a world-renowned zoo, natural history museum and botanical garden, all in one place. The museum is located on the west side of Tucson, near Saguaro National Park West and Tucson Mountain Park.
 - The **Titan Missile Museum** is one of the few remaining cold war missile silos in the US. It is open for touring and a historic look back into the cold war.
 - **Pima Air and Space Museum** features over 350 historical aircraft, from a Wright Flyer to a 787 Dreamliner. It sits on 80 acres and is affiliated with the Davis-Monthan Air force base.
 - **Mount Lemmon** is a 30-minute drive from the base to the top of the 9,157' mountaintop where the temperature is ~30 degrees cooler. Mount Lemmon boasts a ski slope, many hiking trails, camping and fishing.

- Fifty-six miles southwest of Tucson, one may tour the Kitt Peak National Observatory which houses over 20 optical and 2 radio telescopes. It is one of the largest gatherings of astronomical instruments in the northern hemisphere.
- **Regional Attractions**
 - 5 hours from the Grand Canyon National Park
 - 4 hours from popular ski resorts (Sunrise, Arizona Snowbowl, Mount Lemmon)
 - 8 hours from San Diego
 - 10 national parks and 4 state parks in Arizona
- **Tucson International Airport**
 - Parking - offsite \$3/day, onsite \$9/day
 - Minimal lines
 - Southwest Airlines direct flights to many destination cities
 - Phoenix International Airport may be a cheaper alternative
- **Educational Resources**
 - Home of the University of Arizona
 - Two high schools repeatedly rated as top 20 in the nation
 - Elementary schools and junior high magnet schools rated among the Nation's top as well
- **University of Arizona**
 - 46,000 students, which includes undergraduates, graduates, medical students
 - Numerous museums, cultural events
 - University of Arizona Centennial Hall hosts eight Broadway productions per year. There are also several local theater groups across Tucson.
- **Sports:** Wildcats PAC-12 sports include basketball, football, swimming, gymnastics, volleyball, softball, baseball and others. Additionally, the Tucson Roadrunners are a new member of the American Hockey League. Also, Phoenix is home to the Arizona Diamondbacks baseball and the Arizona Cardinals football teams.

FACULTY

Core Faculty

Jonathan M. Holmes, MD
 Professor and Chairman
 Adult Strabismus

Todd W. Altenbernd, MD
 Associate Professor, Program Director
 Glaucoma

Salwa Aziz, MD
Clinical Assistant Professor
Glaucoma

Rita Bhakta, OD
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Pediatric Optometry

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Cornea

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Southern Arizona Veterans Health Care System Faculty

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Martin Worrall, MD

Clinical Assistant Professor
Retina and Vitreous

Affiliates/Associates

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Banner University Medical Center-Tucson

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