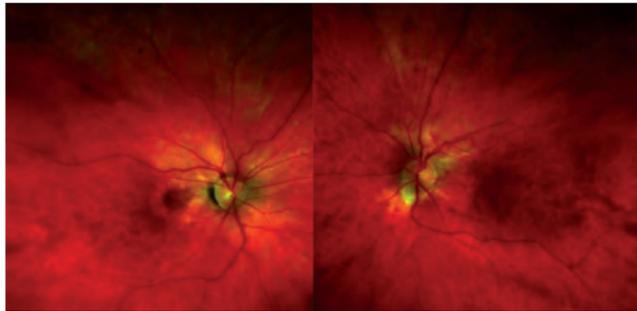




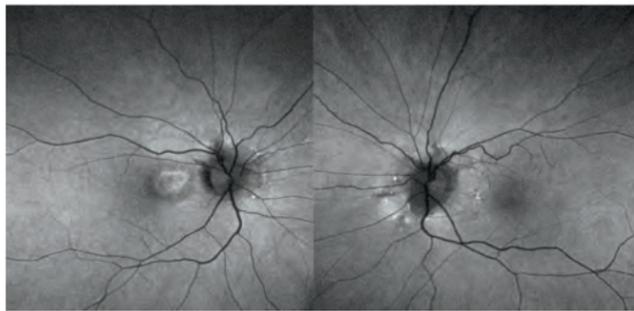
# THE RETINA TIMES

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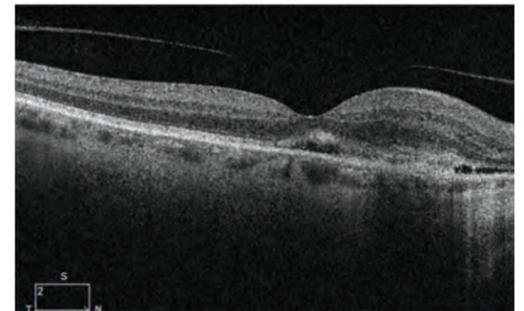
## CLINICAL CASE



**Figure 1.** The right eye shows linear hypopigmented lines emanating from the optic nerve in radial fashion. Notice the grayish choroidal neovascular membrane in the superonasal macula surrounded by a halo of RPE atrophy. The left eye also shows hypopigmented branching striae deep to the retina, arising radially from the optic nerve.



**Figure 2.** The fundus autofluorescence highlights the branching hypo-autofluorescent striae with surrounding relative hyper-autofluorescence.



**Figure 3.** The OCT showed a fibrovascular PED, peripapillary RPE atrophy, and subretinal fluid.

The patient is a 61 yro female who reports metamorphopsia and a relative central scotoma in her right eye for 6 months. Patient denies any pain, redness, photophobia, flashes or floaters. Her past medical history was notable for gastric bypass, hypertension, depression and history of cardiac ablation. Her past ocular history was notable for LASIK surgery in both eyes in 2002.

Her visual acuity was with correction 20/20 in both eyes. Her intraocular pressure was 18 OD and 15 OS. Her anterior segment showed 1+ NS cataracts otherwise normal. Her dilated fundus examination showed the following.

### Differential Diagnosis

The differential diagnosis here is limited due to the classic appearance of the fundus but may include angioid streaks, lacquer cracks (from pathologic myopia), choroidal rupture, AMD, or histoplasmosis (POHS).

The diagnosis in this case was angioid streaks. The linear breaks in Bruch's membrane radial to the optic nerve distinguish it from the crescent shaped breaks concentric to the optic nerve that occur in choroidal ruptures. Lacquer cracks from pathologic myopia happen typically in the central macula and are often accompanied by other telltale signs of pathologic myopia such as tilted

nerves, posterior staphyloma and myopic macular atrophy. Her fundus lacks the typical drusen and RPE mottling of macular degeneration. Also, she is missing the classic punched out chorioretinal scars in the peripheral retina that occur in POHS.

### Discussion and Management

Angioid streaks arise from the calcification and subsequent breaks in Bruch's membrane. This allows for choroidal fibrovascular ingrowth and hemorrhage. Angioid streaks can be idiopathic or have systemic associations such as Pseudoxanthoma elasticum (PXE), Ehler-Danlos, Paget's

disease, Sickle cell disease or other hemoglobinopathies. Systemic workup may include a skin biopsy, serum levels of alkaline phosphatase, calcium and phosphatase, and hemoglobin electrophoresis. Due to the high incidence of cardiovascular disease in PXE, an echocardiogram may be indicated. PXE patients also have a higher incidence of gastrointestinal bleeding. Choroidal neovascularization from angioid streaks responds well to the available anti-VEGF therapies.

Tip. If you suspect a patient has a choroidal neovascular membrane, from a non-inflammatory cause, the time to referral to a retina specialist should be between 1-2 weeks.

*Submitted by Sheila Garcia Santana, MD*

## PHYSICIAN SPOTLIGHT – THOMAS W. STONE, MD

**TRAINING:** Undergraduate BS: Dartmouth College, Magna Cum Laude; Medical School MD: University of Buffalo, Summa Cum Laude

**RESIDENCY:** Duke University Eye Center, Chief Resident

**FELLOWSHIP:** Emory University Eye Center, Vitreoretinal Disease

**HONORS:** "Best Doctors in America" and "America's Top Ophthalmologists"

### Why did you expand Retina Associates of Kentucky to Louisville?

For many years, we at Retina Associates of Kentucky wanted to open an office in Louisville. We realized, though, that to really take care of patients in this area, we needed a doctor who lived in Louisville. I had the opportunity to move to Louisville from Lexington with my family in 2012, and thought it would be a perfect opportunity to start taking care of patients here. We opened our office in October 2013, and after just one year the patient volume made it clear we were destined to evolve. That's when Dr. Todd Purkiss joined the practice, and between the two of us, we have offered full time medical and

surgical care of retina patients. This past summer we had to expand again, and doubled our office space, adding 4 exam lanes, the latest in widefield angiographic cameras, and spacious waiting rooms for our patients. In our Louisville office Dr. Purkiss, my other partners, and I are able to diagnose and treat all retina disorders, including retinal detachments, histoplasmosis, floaters, macular degeneration, diabetes-related conditions and posterior uveitis. We are excited to have two excellent doctors who live and work in Louisville and we are grateful that we've been welcomed by the medical community.

**What are your interests?** I have a fairly broad range of professional interests that include macular degeneration and diabetes, the two most common conditions we treat. While we have ways of treating both of these diseases, the best way to treat each patient is becoming more complicated as we have more than one treatment. Each patient is unique, and to decide which treatment will help them see and function better is a

constant challenge that I pursue daily.

At the same time we are striving to improve the patient experience with surgical cases such as macular hole, epiretinal membrane and vitreous hemorrhage. The surgery time, recovery time, and patient discomfort associated with these conditions have been greatly reduced over the past several years, and I am interested in furthering this improvement in patient care.

I also enjoy collaborating with other physicians besides the retina specialist on a few less common conditions such as uveitis which can be challenging for the patient and the doctor.

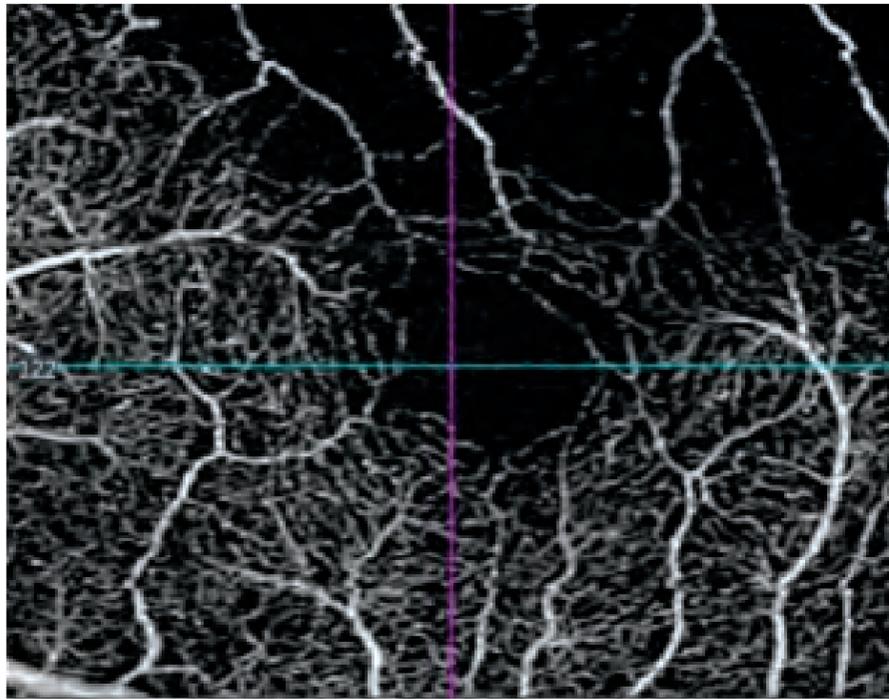
Over the last few years, we have also been refining our ability to improve the quality of life and vision in patients with disabling floaters. These patients have often been suffering from this condition for years, and can be frustrated with the prior lack of effective treatment. Our surgical techniques are not making this a treatable condition in some select patients where the benefit outweighs the risk.



### What research are you working on?

I am currently working on several projects. For over ten years, we've been working with the National Eye Institute in Washington, DC to determine the best way to treat all types of diabetic retinopathy. We've had over 100 patients enrolled in a variety of clinical trials over that time, and have learned a lot about how to care for these patients. Over the past few years we have also been investigating the best way to treat patients with ocular histoplasmosis and have published some of the most comprehensive studies on this condition, as it is found primarily in this part of the country. We also have an ongoing interest in macular degeneration, both wet and dry forms, as it is a common condition that affects many of our patients.





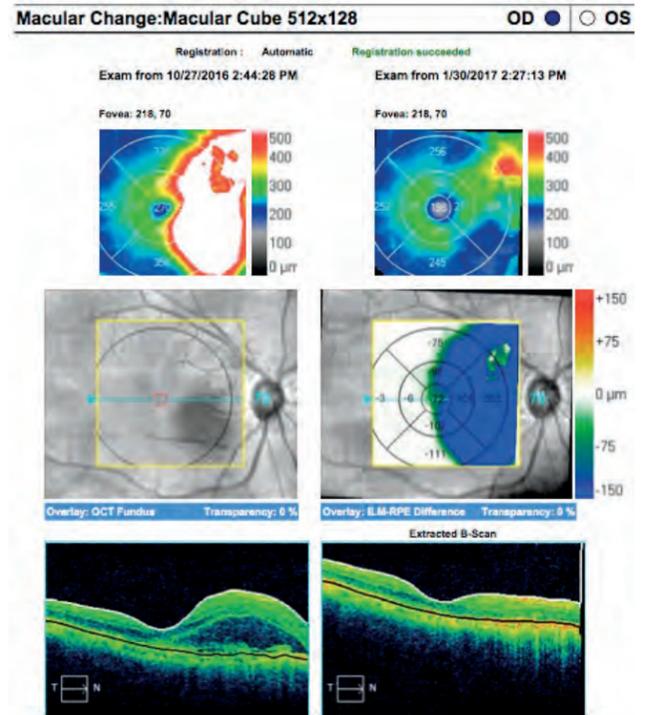
# OCT ANGIOGRAPHY

OCT Angiography of a patient with an artery occlusion in their left eye—this is a “stroke” of the eye. Notice there is a fine web of normal vessels toward the bottom of the picture, where there are a lot of missing or blocked vessels toward the top.

Retina Associates is the first in the area to pioneer this exciting new technology which images blood vessels in the eye without a dye injection. We’re bringing the latest techniques for diagnosing and preserving vision to our patients in Kentucky every day.

# AMD AWARENESS

This is an OCT picture of new wet macular degeneration on the left - notice the large fluid blister. After three treatments, the macula is almost back to normal, and the patient’s vision is better.



Retina Associates of Kentucky’s Macular Degeneration Institute encourages you to join us, in raising awareness for Age-Related Macular Degeneration (AMD) as the leading cause in blindness for people over 50. With early detection new treatments offer much hope for preservation of vision. Our Macular Degeneration Institute physicians are dedicated to being a part of evolving treatments by engaging in meaningful, cutting edge research.

We invite you to visit our website, [www.RetinaKY.com](http://www.RetinaKY.com) for more information about risks and symptoms of AMD.

# JOIN US

The surgeons at Retina Associates of Kentucky are the first in Kentucky to have 3D Digital Assisted Vitreoretinal surgery, powered by TruVision. We are committed to education and showing our colleagues in eye care how we take care of patients. If you are an eye doctor, we welcome you to join us in surgery or clinic for observing. The surgeons at Retina Associates of Kentucky continue to bring the latest technological advances to our patients. Now is a great time for observing in surgery as we are actively using the 3D Vitreoretinal Surgical Imaging System: <https://www.myalcon.com/...surgical/vitreoretinal/index.shtml> If you have interest please feel free to contact Kristin Willard at (502) 649-3681 or by email: [kwillard@retinaky.com](mailto:kwillard@retinaky.com).



# DANCING WITH OUR STARS



Dr. Garcia with her husband Dr. Anshu Jain

Retina Associates of Kentucky was a proud sponsor of the 4th annual Dancing with our Stars event for the Highlands Museum & Discovery Center in Ashland, Kentucky. Our very own Dr. Sheila Garcia Santana (and her partner Abel D. Reyes) won the 2017 Mirror Ball Award with their 1st place performance!



# WHAT'S HAPPENING

**APR 21 2017** Dinner following KAEPS Conference at Nick Ryan’s

**APR 28 2017** Dinner following KOA Conference Distilled at Gratz Park Inn

# RESEARCH

If you are interested in information regarding past clinical trials or participation criteria in our current clinical trials, please contact our research department: **Diana Holcomb - Clinical Research Manager PH (859) 264-2905 | [dholcomb@retinaky.com](mailto:dholcomb@retinaky.com)**

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