

Carl C. Awh, MD

Dr. Awh practices at Tennessee Retina in Nashville.



1. What do you enjoy most about being a retina specialist?

I enjoy all aspects of my practice, but I most enjoy vitreoretinal surgery. It was the reason I went into retina and remains the most fulfilling part of my increasingly busy weeks. I may “save”

more vision during a day of injections in the office, but I derive much more personal satisfaction from a challenging day of surgery.

2. With 6 US patents for surgical devices, what advice can you offer colleagues looking to become physician-inventors?

We are taught specific ways to overcome surgical obstacles. With experience, we become more proficient at what we were taught. Successful innovators take a fresh look at accepted obstacles and find a better way. The best example of this during my career has been Dr. Eugene de Juan's development of 25-gauge transconjunctival sutureless vitrectomy. Surgeons had been contentedly incising and suturing the conjunctiva and sclera for years. Gene thought of a better way. Of course, we should recognize that Robert Machemer, MD, developed the 19-gauge cannula system that Gene was trained to use on every case. To use smaller cannulas with a transconjunctival approach was a brilliant evolution of an existing technique.

I was fortunate to have both Robert and Gene as teachers, and I learned much from Gene about innovation in general and instrument development in particular. My advice to prospective inventors is to be patient and persistent and to be satisfied if you are able to address a vexing problem in a new and better way. My OR is full of devices that never achieved commercial success but that are a pleasure for me to use. Commercial success is difficult to predict and virtually impossible for the physician to control. Issues of nondisclosure agreements and intellectual property rights are important, but there are plenty of lawyers who can give better advice in this area than I.

3. Given your reputation as a surgical innovator, what has compelled your interest in genetic testing for age-related macular degeneration (AMD)?

About 5 years ago, I heard about a test that used genetic risk markers (along with nongenetic information) to provide information about an individual's relative

risk of AMD progression. Although this was not an area of expertise for me, I was intrigued. The more I learned about the genetics of AMD, the more I was convinced that genetic testing would become essential to the complete clinical assessment of patients with AMD. Indeed, each year has brought further evidence of the value of genetic testing, and the degree of interest from clinicians has dramatically increased.

I'm proud to have contributed to a recent publication in *Ophthalmology*¹ that describes the interaction of genetic risk alleles and response to components of the AREDS formulation. Our paper has generated a bit of controversy, which I know from my surgical instrument experience is normal for things that challenge the status quo. I think our findings can have significant public health impact, and I hope our paper won't end up like some of the instruments in my OR—interesting to me, but not to others!

4. Please tell us about your decision to develop Best of Retina 2013 and what attendees can expect from this meeting.

My friends and I started the Retina Fellows' Forum, a meeting designed to address issues of interest to younger vitreoretinal surgeons. We were the first to create a dedicated meeting for fellows, and the continued success of that meeting (14 consecutive years) is proof that we have identified and addressed a significant need.

With Best of Retina, we have designed a meeting to appeal to the practicing retina specialist. Attendees will hear the named lectures from multiple major retina meetings (American Society of Retina Specialists, American Academy of Ophthalmology, Retina Society). The editors of 4 major peer-reviewed journals will review the “best of retina” from their publications. A panel of accomplished retina specialists will discuss the presentations and, more important, will discuss questions and topics posed by meeting attendees. As with the Retina Fellows' Forum, we think we've identified an unmet need. We'll soon know if we were correct.

5. What is your favorite way to spend a day off?

We just sent our youngest off to college, so I cherish every opportunity to spend time with my children. My wife and I love to travel, but these days my favorite destination is our home. I am a mediocre but enthusiastic golfer and triathlete. ■

1. Awh CC, Lane AM, Hawken S, Zanke B, Kim IK. CFH and ARMS2 genetic polymorphisms predict response to antioxidants and zinc in patients with age-related macular degeneration. *Ophthalmology*. 2013;120(11):2317-2323.