CYNTHIA A. TOTH, MD

HOW DID YOUR OPHTHALMOLOGY CAREER START?

Most people do not know that I attended medical school on a military scholarship. After residency, I spent 2 years as a general ophthalmologist on active duty in the US Air Force. I enjoyed the beauty of cataract surgery but decided to pursue subspecialty training in retina. After retina fellowship I returned to the Air Force as the chief of the retina service at Wilford Hall Medical Center in San Antonio, Texas. I did not fly jets, but I thoroughly enjoyed my colleagues, the wonderful patients, and the leadership and research opportunities in the military.

TELL US ABOUT YOUR WORK ON OPTICAL COHERENCE TOMOGRAPHY (OCT) IN THE TOTH-DARSI LAB. WHAT INSPIRED YOU TO INVESTIGATE THIS TECHNOLOGY?

In the early 1990s, while in Texas, I had the opportunity to work with an Air Force physicist, Pat Roach, PhD, and with Jim Fujimoto, PhD, from Massachusetts Institute of Technology, on some of the earliest OCT research in retinal laser injury. I was amazed by our ability to view microscopic changes in cross-sections of tissue over time with Dr. Fujimoto's system. This was in the living eye! When I came to Duke, I directed the Biophysics Laboratory that Robert Machemer, MD, had started to develop surgical tools and technology. I believed that there was great promise in OCT imaging and image-guided surgery, so I morphed the laboratory into the Duke Advanced Research in SD/SSOCT Imaging (DARSI) Laboratory. I have been lucky to work with creative colleagues in ophthalmology and with Joseph A. Izatt, PhD, a Duke professor of biomedical engineering, in this research. Turning new ideas into technologies that can improve care and learning from our students is simply great fun.

Dr. Toth (right) and her friend Lorenza at a cooking course in Italy.

WHAT ASPECT OF PRACTICING RETINA INTERESTS YOU THE MOST?

Probably the surgery. I am fascinated by how we work and the limits placed on maneuvering to remove unwanted tissue and to reattach the retina. I am always awed by the beautiful view of the retina—through the ophthalmoscope and especially in surgery.

YOU SEE BOTH PEDIATRIC AND ADULT PATIENTS. WHAT ARE SOME OF THE MOST FULFILLING ASPECTS OF WORKING WITH EACH POPULATION?

I am most interested in the challenge of helping patients with diseases that may not have simple solutions. With both patient groups, I enjoy understanding their lives and how their eye health fits into their overall perspective and goals. With older adults, this is fairly well communicated. In infants, family perspective is provided by parents. What is amazing in young children is their particular interests and concerns that we must consider as we care for their eyes.

DO YOU HAVE ANY TALENTS OR HOBBIES THAT WOULD SURPRISE YOUR COLLEAGUES?

Many friends know that my husband and I love to cook and that I enjoy gardening, but most people probably do not know that I have recently taken up glassblowing. Controlling the movement, flow, and colors of molten glass is great fun! ■

CYNTHIA A. TOTH, MD

- Vitreoretinal Surgeon, Duke Eye Center; Joseph A.C. Wadsworth Professor of Ophthalmology, Duke University School of Medicine; and Professor of Biomedical Engineering, Pratt School of Engineering, Duke University, Durham, North Carolina
- cynthia.toth@duke.edu
- Financial disclosure: None