

# SUB-SUBSPECIALIZATION IN OPHTHALMOLOGY

Are we in the midst of a new subspecialty?

BY TAL RAVIV, MD



This month, my colleague Robert Weinstock, MD, will be sponsoring what may be the first ophthalmology fellowship focusing exclusively on refractive cataract surgery. With the explosion of devices such as femtosecond lasers, intraoperative aberrometers, digital guidance systems, and a pending onslaught of IOL approvals—not

to mention an increasing number of postkeratorefractive surgery patients—a sub-subspecialization in refractive cataract surgery makes a lot of sense. As Dr. Weinstock told me, “The landscape of cataract surgery is evolving and becoming more complex with the use of myriad newer refractive pre- and intraoperative technologies. I’m seeing a gap in resident education in the arena, and this was the impetus behind starting a fellowship specifically in refractive cataract surgery.”

I agree with Dr. Weinstock. I, too, am starting to see a divide in cataract surgeons between refractive-oriented ones who promise their patients a specific lifestyle visual outcome and traditional cataract surgeons who strive to deliver a safe procedure but without a singular focus on refractive perfection. Refractive cataract surgery further splits from traditional cataract surgery in its economic reliance on a private patient-pay model.

As with any rapidly evolving medical field, there is a time lag in resident education; thankfully, our ophthalmic societies are actively addressing this. In March 2014, the American Society of Cataract and Refractive Surgery (ASCRS) sponsored a refractive-focused cataract course for residents named ReACT, which was a resounding success. I directed the first annual New York Eye and Ear Infirmary Refractive Cataract Surgery course in November 2014, geared toward practicing clinicians as well as residents.

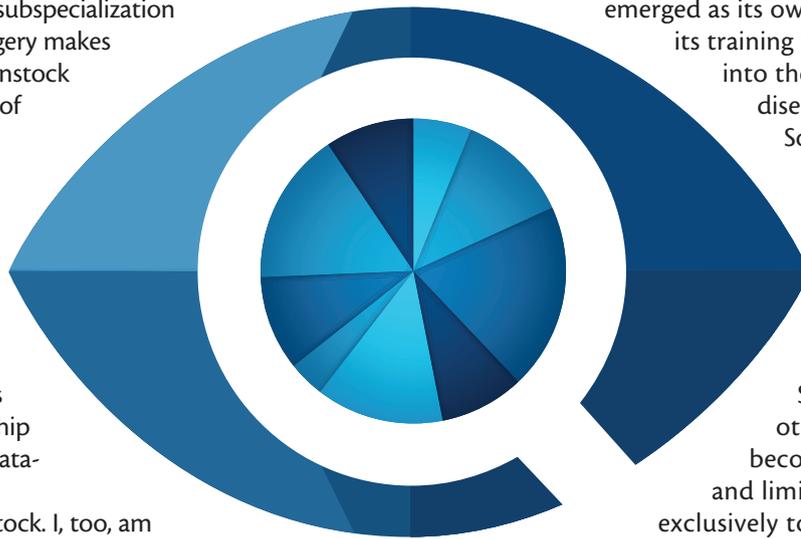
Whether or not refractive lens-based surgery will remain a separate subspecialty or overtake/merge with standard cataract surgery only time will tell, but is such ultraspecialization warranted or beneficial to our specialty or our patients?

We have done this before in ophthalmology. One of our most recently added subspecialties was keratorefractive surgery. With the advent of the excimer laser in the late 1990s and early 2000s, corneal refractive surgery emerged as its own subspecialty. Initially, its training was typically bundled into the cornea and external disease fellowship tract.

Soon, however, the private practice corneal refractive fellowship was born with pioneers such as Daniel Durrie, MD; Stephen Slade, MD; and Richard Lindstrom, MD. Some of their and other fellows went on to become super specialized and limited their entire practice exclusively to LASIK (and its excimer laser variants).

I believe the same is happening to lens-based refractive surgery. There are already surgeons in the United States whose practice is limited entirely to cataract surgery. Is there a subset of surgeons who will limit themselves exclusively to refractive cataract surgery? This is already starting to happen. Just as there are pure LASIK practices, we are starting to see the same with refractive lens-based practices.

There are ongoing debates about the harms and benefits of specialization in medicine. On the one hand, further specialization allows us to become proficient and advance biomedical science. On the other hand, specialization can impinge on generalists’ practice and dramatically increase the fragmentation of care, to which patients with multiple chronic diseases can attest.



## HISTORY OF OPHTHALMOLOGY SPECIALIZATION

**How did we get here? Here's a quick look back at the historical path of ophthalmology specialization.**

Informal specialization in medicine first became common a century ago, as population densities in cities increased, county hospitals were established, and transportation (automobile) improved.

Formal and organized specialization in medicine has an even shorter history in the United States, but ophthalmology was at the forefront. In 1915, in response to the varying and questionable qualifications of most practicing eye specialists of the time, the American Board for Ophthalmic Examinations (now the American Board of Ophthalmology [ABO]) was created as a standardization and certifying body. Ophthalmology was the first specialty board in the United States and was one of the four specialties that established the American Board of Medical Specialties (ABMS) in 1933, which today includes 24 member boards.

Similarly, the American Academy of Ophthalmology and Otolaryngology (AAOO) was established in 1896 primarily to provide continuing medical education to practitioners. Amazingly, only as recently as 1979 was the AAOO divided into its separate societies.

In the intervening 36 years, ophthalmology has seen the proliferation of ophthalmology fellowship programs in multiple subspecialties. The traditional subspecialties have

been cornea and external disease, retina, glaucoma, neuro-ophthalmology, pediatrics, oculoplastics, uveitis, and pathology. To date, these ophthalmic subspecialties are not officially certified by the ABO/ABMS, as, for example, are 20 subspecialties (such as hematology, gastroenterology, cardiology, etc.) under the American Board of Internal Medicine (ABIM). The one exception has been the American Society of Ophthalmic Plastic and Reconstructive Surgery (ASOPRS), which has certified oculoplastic surgeons since 1969.

There have been many debates on the merits of officially creating further ophthalmology subspecialty boards, but most feel this would too narrowly restrict the many existing private or nonacademically affiliated fellowships, which have historically pushed the field of ophthalmology forward.

To maintain high-quality fellowship training, a nonprofit organization, the Association of University Professors of Ophthalmology (AUPO), was created in 2005 to establish uniform training standards for the most common fellowship programs. Fellowship programs that voluntarily meet AUPO may be listed as in compliance on the Ophthalmology Fellowship match. For now, I agree with standardization over strict certification for most ophthalmic subspecialties, but this may change.

Nevertheless, the proliferation of subspecialization continues unabated in all other specialties as well. For example, the American Board of Internal Medicine (ABIM) certified two new subspecialties just in the past 5 years: (1) adult congenital heart disease and (2) advanced heart failure and transplant cardiology. We physicians have to solve the fragmentation of health care problem (electronic health records have not really helped as hoped yet), but there is no denying that all of us would want our family members to have access to these subspecialists for their care if it were geographically and economically feasible.

Ophthalmology specialization, like other disciplines, will continue to evolve. In the not-so-distant future, the real question, I believe, is not what happens to the specialists and surgeons; it is what happens to the generalists, the primary care doctors, and diagnosticians.

As a health care consumer, I believe we all benefit from strong primary care or generalist guidance, but economic forces, technology, and the “retailization” of primary care—

such as in-pharmacy clinics—threaten the generalists. As computer artificial intelligence such as IBM's Watson and digital medical apps improve on one end and midlevel practitioners push forward on the other, the generalists will have to better define their role. I believe that is important to a vibrant health system. Eventually, even refractive cataract surgeons may be replaced by automated femto robots, but I think we have some time, ... and we will have other subspecialties by then as well. ■

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