

CHOOSING CATARACT AND REFRACTIVE SURGERY

Why subspecialty training matters more than ever as surgical complexity increases and the global ophthalmology workforce faces mounting pressure.

BY JORGE L. ALIÓ, MD, PHD, FEBOPHTH, AND H. BURKHARD DICK, MD, PHD, FEBOS-CR



CRST Global: Why does fellowship matter now?

Jorge L. Alió, MD, PhD, FEBOPht: Fellowship has always mattered. To be trained in a subspecialty by a highly trained and expert specialist is essential to our education.

H. Burkhard Dick, MD, PhD, FEBOS-CR: The ophthalmology workforce is under pressure. Recent studies predict a looming shortage—up to 30% of ophthalmologists by 2035—if training capacity is not expanded. In this climate, fellowship training has a nuanced role. On the one hand, additional training delays a surgeon's entry into practice; on the other, it produces highly skilled specialists who can enhance overall care capacity. For example, fellowship-trained retina and cornea surgeons manage complex cases that might otherwise require multiple visits or referrals, indirectly improving system efficiency. Experts have noted that meeting future demand may require roughly doubling current residency slots and that the strategic expansion of a diverse workforce is key to improving access. In practice, selective fellowships help fill critical niche roles (eg, pediatric retina, advanced glaucoma), allowing comprehensive ophthalmologists to

focus on high-volume cataract surgery and routine care.

Fellowships are especially valuable for bridging the gap between standard residency training and today's complex refractive cataract practice. Cataract surgery has become a subspecialty unto itself: modern care involves IOL choices with additional optical technologies, including toric and multifocal designs, femtosecond laser steps, intraoperative diagnostics, microinvasive glaucoma surgery (MIGS) procedures, and detailed refractive planning. Residency programs generally emphasize the mechanical skills of cataract surgery and provide limited exposure to the refractive components and rapidly evolving technologies. In other words, it is not possible to learn everything about modern lens-based surgery during residency.

Fellowship programs help fill these gaps by offering intensive experience with advanced cases and devices. Fellows learn to select and implant simultaneous vision IOLs, manage complex corneal or retinal pathology, and use cutting-edge tools in a supervised setting. Surgeons aiming to provide high-quality refractive cataract surgery, particularly in competitive or academic environments,

often must seek additional training, and a dedicated fellowship is an excellent pathway to gain those competencies.

Training opportunities vary regionally. Even within countries, experiences can differ greatly; for example, a survey of Chinese programs found substantial regional variation in training and graduate skill levels, largely attributed to the absence of uniform standards. Globally, fellowship availability is uneven. Many large US and European centers offer 1- to 2-year subspecialty fellowships (eg, retina, cornea, glaucoma, pediatrics), whereas in some regions, advanced skills are acquired through shorter courses or international observerships.

For young surgeons weighing their options, practical considerations are critical. If your goal is to practice advanced refractive cataract, cornea, or vitreoretinal surgery (particularly in academic or highly competitive markets), pursuing fellowship training is highly advisable. It can accelerate the acquisition of specialized skills and enhance credibility. If you plan a comprehensive community practice or intend to serve an underserved area, entering practice sooner

may be reasonable because general ophthalmologists are urgently needed. That said, key competencies—such as complex keratoplasty techniques, pediatric cataract and strabismus surgery, MIGS,

and advanced vitreoretinal procedures—are rarely attainable without a structured fellowship. Finally, rapid technological change (including AI-driven imaging, new laser platforms, expanded IOL designs, and

novel MIGS devices) further strengthens the case for subspecialty training. Fellows often become early adopters who can safely and effectively integrate these innovations into patient care.

CRST Global: How can fellowship programs bridge the gap between residency and advanced refractive surgery practice?

Dr. Alió: Fellowship programs must have a good theoretical basis, a good observership, and, if possible, some practice. The last is not always

possible due to legal restrictions and medicolegal issues, but practical training without a good level of theoretical education is impossible

because the practice is not a substitute for the knowledge gained by studying the topics of a particular subspecialty.

CRST Global: What practical advice do you have for surgeons weighing fellowship versus immediate practice entry?

Dr. Alió: Do not enter into subspecialized practice unless you have adequate training. Problems and errors will disqualify you

forever, and this is not adequate for your patients, either. Take a fellowship even if it is short (6 months); it will open your eyes

to what has to be done as the first line of treatment (gold standards) and how to avoid problems in your early career.

CRST Global: What competencies can be acquired only through a dedicated fellowship?

Dr. Alió: That depends on the level of complexity. If you are a cornea, glaucoma, or retina surgeon, then you

need high skills of practice, and on top of your theoretical education and the observership, you have to get hands-on

practice. Surgical competencies, especially in medium- and high-difficulty cases, can be accomplished only by direct training.

CRST Global: What trends in surgical complexity and technology are making formal training more important?

Dr. Alió: The more we advance in our knowledge and surgical competencies, the more complex the procedures become. That means advances in ophthalmologic knowledge increase the demand for a higher level of surgical education. Modern simulators can play an important role in fellowship training as well because they have improved a lot recently. ■

JORGE L. ALIÓ, MD, PHD, FEBOPHTH

- Professor and Chairman of Ophthalmology, Visum-Instituto Oftalmológico de Alicante, Spain
- Miguel Hernandez University, Alicante, Spain
- Member, *CRST Global* Editorial Advisory Board
- jlalio@visum.com
- Financial disclosure: None acknowledged

H. BURKHARD DICK, MD, PHD, FEBOS-CR

- Director and Chairman, Ruhr University Eye Hospital, Bochum, Germany
- Member, *CRST Global* Editorial Advisory Board
- burkhard.dick@kk-bochum.de
- Financial disclosure: None acknowledged