

# TECHNOLOGY IS A ONE-WAY ROAD



In response to this month's cover focus, which provides pointers on smart investing in ophthalmology, I decided to take a moment to reflect on my 26-year involvement in the field. From my early days in residency and fellowship to my current affiliations, technology has always affected the way I practice, from the ways I approach

clinical assessments and reach ophthalmic diagnoses, to the ways I consider medical and surgical interventions. I continually stand in awe of the tremendous developments in ophthalmology that I have witnessed over the years.

We are blessed as eye surgeons to be involved with the visual apparatus, which, for the most part, is translucent. As a result of this quality, the eye is amenable to a multitude of diagnostics. Starting from the eyelids, to the tear film, to the epithelium and deeper into to the cornea. Then into the anterior chamber, through the aqueous humor, to the crystalline lens. Finally, into the posterior chamber, through the vitreous body, to the retina, to the choroid and the retinal vasculature. We can perform diagnostics on and measure the anatomic and physiologic properties of all of these structures.

Over time, an armada of technologies has enhanced our capacity to be great diagnosticians. The same technology has allowed us to intervene earlier and prevent or cure significant ocular diseases, such as keratoconus, glaucoma, choroidal neovascularization, and many tumors. In return for these efforts, we have been able to prevent blindness in many patients who might otherwise have lost their sight.

Having access to imaging within the retina opens a great window through which we can truly see many of the integral components of human vision, including neuronal and vascular tissue, and can even measure electrolyte, glucose, and hormone levels. Using similar diagnostic technologies, it may someday be possible to unlock treatment solutions for a multitude of systemic neurologic and vascular diseases, such as atherosclerotic arterial disease. Perhaps at a future general medical checkup, instead of undergoing a needle stick to test our blood, we will be instructed to visit the local ophthalmologist's office for some advanced eye imaging.

The work of tireless researchers, the heavy investment of industry, and, of course, the ingenuity of early adopters



of technology have paved the road to success with these technologies. The fact that such technologies have been absorbed by the core of practicing ophthalmologists globally is due, in great part, to these driving forces in innovation.

That being said, there are always considerations of cost and whether a certain investment will pay off, especially in our tough economic time. But one cannot ignore the fact that, regardless of whether a specific acquisition has been financially successful for us, technology development is a one-way road, and we can only look forward. ■

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