THE SNIFF TEST

Attending large national conventions such as those of the American Academy of Ophthalmology and the American Society of Cataract and Refractive Surgery (ASCRS) can be overwhelming. Even so, they have become almost therapeutic for me over the years. Not only do I fulfill my continuing medical education requirements, but I also connect with old friends and make new ones. Because many international surgeons travel to these meetings, I can learn what is happening outside the United States. This opportunity has become extremely valuable, because many of the technologies mired in the FDA approval process are already available internationally. At major meetings, we US surgeons can learn what to expect from products destined for our hands.

Major meetings also provide us with a wide-angle view of our professional landscape and establish a framework for strategic planning in our own practices. The experiences of trusted peers can help to answer the questions we all have like, "What new equipment should I buy?" or "Should I start performing a new procedure?"

This April's ASCRS meeting in San Diego left me pensive. I was shocked that the FDA did not approve corneal collagen cross-linking (CXL) in light of the procedure's overwhelming success internationally and in the current US study by Avedro. To my mind, the published data show that CXL is safe and effective and can dramatically improve the lives of thousands of patients by reducing the progression of or stabilizing keratoectasia. Every surgeon here and abroad who has experience with CXL and with whom I have personally spoken has seen the dramatic benefit of this technology for patients. I found it ironic that the FDA tabled CXL but approved the Kamra (AcuFocus). I have heard of great successes with the corneal inlay but also other stories that give me cause for skepticism and concern.

These decisions by the FDA prompted me to reflect on what is sometimes called the "sniff test." Mine for new technology is pretty straightforward: Would I have it done to myself? How about my parents? What does my gut tell me? Logically and conceptually, does the technology make sense?

Based on the sniff test, I adopt some technologies early but proceed with others more cautiously. This is because I have been burned a few times, especially in the areas of hyperopic and presbyopic correction. Laser thermal keratoplasty, conductive keratoplasty, and the Array lens immediately come to mind. Some cases still haunt me.

As far as presbyopic correction, I continue to wonder why ophthalmology as an industry and medical specialty continues to develop cornea-based solutions for a lenticular disease. A more physiologic, lens-based solution to presbyopia is at the top of my list of unmet needs in refractive surgery, and I believe that such technology will ultimately trump the corneal alterations. I hope that corneal inlays will serve patients well as a stopgap until better modalities become available. My gut tells me, however, that we need to target the source of the disease—age-related changes in the crystalline lens—if we want to deliver the quality of vision enjoyed by a 20-year-old emmetrope.

At this year's ASCRS symposium, I met with many startup, midphase, and late-phase companies that are working on novel IOL designs that function more like a natural young lens. Pharmacologic treatments are another interesting area of research for either the prevention of lenticular changes or the creation of a miotic pinhole optical effect. There is also some early work being done on laser treatments to soften the presbyopic crystalline lens and restore accommodation.

With cautious optimism, I plan to embrace this new wave of solutions. Time has proven that clinical experience sometimes trumps research, studies, and published data. Ultimately, patients determine a technology's fate, not just the FDA. ■

Robert J. Weinstock, MD
Chief Medical Editor