

Why I Chose to Practice Ophthalmology in Europe

Although the ultimate surgical tool is the surgeon, he or she must be able to innovate.

BY A. JOHN KANELLOPOULOS, MD

My background is quite international. I was born in Chicago, a child of immigrant parents (engineer father and architect mother) from Greece and Italy that re-immigrated back to Europe when I was 6 years old. I went to elementary and high school in Athens, and I was very fortunate to pass my post-high school examinations and secure a position in the prestigious University of Athens 6-year under- and graduate medical school program. Soon after, when I was in my third year, I envisioned continuing my medical studies in the United States, and I transferred to a US medical school in Illinois in 1987.

I became interested in laboratory eye research that used corneal transplants and uveitis work in rats and was awarded a National Eye Institute grant for original research in 1989. I completed my medical training there in 1990 and then moved to New York to attend the State University of New York-Stony Brook. I completed my internship, ophthalmology residency, and stayed in New York for an external disease/corneal fellowship under Drs. Eric Donnenfeld and Hank Perry at Cornell University/North Shore Hospital in New York. I was fascinated by the “heavy” cornea practice and robust clinical research. I continued my academic training with a second fellowship in glaucoma at the Massachusetts Eye and Ear Infirmary/Harvard Medical School in Boston. There, I trained with Claes Dohlman, MD, in keratoprosthetics.

PROFESSIONAL CAREER

I began my professional career as the director of residency training and the corneal and glaucoma

attending surgeon at the State University in New York in Brooklyn (Downstate). Soon I realized that, in the reality of everyday practice, standard operating procedures often conflict with the quality of patients' care and the armamentarium that can be offered to patients in the real world.

I found myself writing a 1-page reports to justify the use of corneal topography in young patients with allergic conjunctivitis to exclude the potential of early keratoconus. As a corneal specialist, I thought the use of topography was imperative, and all of this was for a reimbursement of \$35 to the university system at the time.

RESEARCH

Soon, I developed additional research initiatives. I found myself blocked from performing clinical research by funding and institutional review board and hospital university red tape. An opportunity for me to fulfill my research presented itself in Europe. Within a year and a half into my early personal career, I found myself performing cataract surgeries in Athens with a very innovative device at that time, the Dodick neodymium YAG photolysis system that allowed cataract extraction through 1.2-mm incisions. In 1997, this was a tremendous breakthrough, as the smallest phaco incision at the time was between 2.5 and 3 mm. Within a few months, in cooperation with Acrytec in Germany, my colleagues and I developed a prefolded acrylic lens able to be implanted through a 1.2-mm incision. We broke the 2-mm barrier in cataract surgery IOL implantation in 1988.

EUROPEAN DIFFICULTIES, SPLITTING TIME IN AMERICA

The difficulty in practicing ophthalmology in Europe was the academic environment and the academic code and limited openness with which new research is discussed, debated, and promoted among colleagues. Therefore, I found myself attending more meetings in the United States, and with more need to interact with colleagues and build on my academic initiative to drive future projects. When I received my first professional offer from a previous mentor to form a partnership, I found myself back in New York and Connecticut working in a private LASIK center performing cataract and transplant surgery at the Manhattan Eye, Ear & Throat Hospital, becoming a staff member and teacher at the NYU Medical School and building a private Park Avenue practice in Manhattan.

Interestingly enough, my short encounter in Europe had created a significant nucleus of patients that demanded my expertise and clinical judgment when I would return to Greece. For 3 years between 1998 and 2001, I found myself spending a week in Athens doing purely clinical work, and 3 weeks in the US: running a private practice, being partner in a LASIK center, and pursuing an academic career at NYU Medical School where I was appointed associate clinical professor in early 2001.

TECHNOLOGICAL EXPLOSION

At that time, there was a significant technology explosion in Europe with wavefront-guided treatments becoming available, femtosecond lasers being used in cornea surgery, new diagnostic devices, and IOL designs. I was becoming tired of spending a good part of my monthly free time in a plane crossing the Atlantic, so I built my own small center in Athens where I could pursue most of my goals under one roof.

In 2001, I started LaserVision.gr, an innovative eye center with its own excimer laser. It was the first WaveLight laser in Greece and one of the first few in Europe, and I found the technology and the opportunity fascinating. During the next 10 years, my colleagues and I presented, in paper or poster form, more than 300 articles globally. In a country where keratoconus is rampant, I estimated that about one out of every 50 patients that we see at my practice has some kind of diagnosable topographic keratoconus. Topography-guided excimer treatments and corneal collagen cross-linking (CXL) produced “viral” innovations in clinical practice. I nevertheless remained committed to the academic opportunities available in the United States, so I pursued my teaching and surgery with the residents at NYU, a scenario that has been extremely helpful in achieving my goals

as a surgeon. Interaction with a great group of residents there has contributed to my becoming a better teacher. I have assisted with more than 100 resident research projects for posters and papers, global presentations, and multiple publications and book chapters.

TODAY

Today, 11 years later, our center in Athens has grown to a 25,000-square foot facility, and it is considered one of the leading centers in CXL in the world. We have introduced multiple concepts in CXL, such as higher fluence, using CXL prophylactically in LASIK, and CXL in combination with topography-guided normalization of the cornea, as well as CXL’s use in hyperopic LASIK, and most recently, using very high-fluence CXL in conjunction with femtosecond astigmatic keratotomy and even clear cornea incisions. At our center, we employ the latest in refractive surgery (Alcon Laboratories’ refractive suite and all its diagnostics), most CXL technologies, and perform laser cataract surgery with the LenSx (Alcon Laboratories, Inc.) and Cetus (ARC Laser) lasers. Our center presents anywhere from 10 to 20 articles in each of the major global ophthalmology meetings over the last 10 years.

CONCLUSION

My continuing academic commitment in the United States was rewarded with my appointment to full clinical professor at NYU in 2010, and I remain dedicated to that part of my professional work.

Given the restrictions in terms of FDA approval and barriers that impede the ability to perform solid, honest, clinical research—always with the main purpose to better serve patients—practicing in the US is no longer my first choice. Experience has taught me that the ultimate surgical tool is not a single technology, an instrument, or technique, rather it is the surgeon. For the surgeon to become the ultimate surgical tool, there must be an interaction among research, trial and error, and innovative technology. In my small microcosmos, I have these components in my life, along with a wonderful family in a beautiful country to enjoy life’s other pleasures during my free time. ■

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