
LEGENDS IN UROLOGY

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My journey into the field of urology was one of serendipity, combined with persistence and the good fortune of being blessed with wonderful role models, mentors and colleagues.

My first role model was my father, an Armenian immigrant who survived the Genocide of 1915 and arrived at Ellis Island, in 1922 at the age of 10, ready to start a pursuit of the American dream. He learned a new language and culture, excelled in school and earned a PhD in Chemistry at NYU, eventually becoming a world authority on edible fats and lipids. Dad worked as a research scientist at a local chemical company, perfecting formulas for margarines and fashioning emulsifiers for the chocolate industry. He was highly inquisitive and discovered a medicinal use for a by-product of the margarine manufacturing process, medium chain triglycerides (MCT oil). His innovative research resulted in his being hired as Vice President and Director of Research and Development for Stokely Van Camp in Indianapolis. His task was to diversify the portfolio of the company and develop new products to add to its stable of canned vegetables and pork & beans. Within a year of arriving in Indiana, Dad was able to work with a group of nephrologists at the U. of Florida and take a novel, but horrible tasting, electrolyte solution and turn it into a palatable best-selling sports drink, Gatorade. The rest is history.

I wanted to follow in my father's footsteps, and after graduating high school in 1966, chose to attend Tufts University. I graduated from Tufts with a BS in biology and was accepted into a PhD program in Pathobiology at Columbia University under the direction of Donald West King, MD, the Chair of Pathology. Funding for medical research was severely cut in 1970 and my proposed research project was underfunded. Dr. King suggested that I start taking basic science courses with the first-year medical students at Columbia while he tried to garner more research funding. Dr. King was director of the Given Institute of Pathobiology in Aspen, Colorado which was a hub for basic science researchers from around the country. I was able to spend the summers of 1971 and 1972 in Aspen assisting Dr. King. Courses and seminars were run by a number of Nobel laureates as well as Pathology luminaries such as Hans Popper, Ramzi Cotran and Stanley Robbins. Working in close proximity to these individuals was very enlightening and they all recommended that I put my PhD research on hold, go to medical school and obtain an MD first.

I followed their advice and was accepted to Indiana University School of Medicine in 1972. I was able to skip the first year as I was given credit for the courses I took at Columbia and completed my MD in 3 years. Still intent on a career in laboratory research in my third year, I was assigned to a two-week block on Urology. I was immediately captivated by my next mentor, John Donahue, MD, a rising star in IU Urology who would soon be named Chair of the department. I can still vividly remember his words on my first day of Urology. In the OR, Dr. Donahue placed my hand under a fully skeletonized aorta and cava and said: "Son, this is the pulse of life and you will only see this dissection in Urology. Become a Urologist." I knew what career I wanted. I spent the first block of my 4th year on the Urology service and soon Dr. Donahue approached me offering me a residency position in his program. I respectfully declined telling him that I had a romantic interest in Boston and wished to do my residency there. He told me that Carl Olsson, was a dynamic young chair and I should try to train in his program. He picked up the phone, called Dr. Olsson and arranged an interview and Dr. Olsson offered me

a spot for 1977. I still had to enter the internship match for 2 years of general surgery residency prior to starting Urology. I matched with Yale-New Haven Hospital.

Surgical internships and residencies were still every other night, in-house on call but I embraced the challenge. The Urology service at Yale, run by Bernard Lytton was one of the best surgical specialties. The first year Urology residents were Demetrius Bagley and Rodney Appell, both of whom would become great friends in the future. Serendipity occurred once more when I was a second-year surgery resident rotating on Urology at the West Haven VA. The Chief resident, Erick Albert, left for a two-week honeymoon in Europe. The first year Urology resident was sick and Ed McGuire let me run the service and took me through any Urology case I could find.

When I arrived in Boston in 1977, I was supremely confident and excited to finally start my Urology residency. BU was a small but outstanding Urology program. In addition to Dr. Olsson who was the Chair and Chief of Urology at the University Hospital, the faculty consisted of Robert Krane, the Chief at Boston City Hospital, who was making his mark in NeuroUrology and Erectile Dysfunction; Ralph deVere White who had recently arrived from Duke with an interest in Uro-Oncology and Infertility; and Mike Siroky, a recent BU graduate who specialized in Urodynamics. George Austen, the former Chief at Boston City was now the Chief of Urology at the Boston VA Hospital. Alan Retik was the Chief of Pediatric Urology at Boston Children's Hospital and we spent 6 months on his service along with residents from the other Urology training programs in Boston. My co-residents were Paul Freedberg and Irwin Goldstein.

The highlight of my first year of Urology was being called upon by Dr. Olsson to write an essay for the newly created Walter Kerr Cost Containment essay contest. "The Catch-22s of Cost Containment" won first prize and I was off to my first AUA Annual meeting in Washington, DC where I received a beautiful framed award. It was also the first time I heard the name of Ralph Clayman, a resident at Minnesota, who finished second in the essay contest. We would later formally meet and become close friends.

It was also during my first year in Boston that I finally convinced Sonya Nersessian, the love of my life to marry me. Our wedding was in July of 1978 when I was starting a transplant rotation at the VA. Sonya has been a loving partner and stabilizing influence on my life for the last 44 years as well as being supportive of all my endeavors. Sonya is a tax attorney specializing in wills, trusts and estates. We have two children, Julie and Christopher. Sadly, neither of my kids showed any interest in following my footsteps in medicine. Julie is a communication lawyer and Christopher is an environmentalist.

As I completed my residency, my inclination was to go into a community Urology practice. I had several offers to choose from. Ralph deVere White invited Sonya and me to his home for dinner where he convinced me to take over a project he was planning with a basic scientist at MIT. The project involved the use of a novel focused ultrasound apparatus to obliterate a renal tumor using non-invasive hyperthermia. I applied for an AUA research fellowship and was selected. So began my academic career.

In 1980, Drs. Olsson and deVere White left BU for Columbia and Bob Krane became Chairman. With Bob Krane's encouragement and support, I turned my attention to minimally invasive therapies and was an early convert to Endourology, adapting new instrumentation to perform flexible cystoscopy and ureteroscopy as well as performing percutaneous nephrostolithotomy (PCNL). Membership in the Endourology Society led to many collaborations with colleagues not only in the US but internationally. Lasting friendships were formed with such notable giants in Endourology as Ralph Clayman, Arthur Smith, Joe Segura, Demetrius Bagley, Glenn Preminger and Gopal Badlani just to name a few. I was fortunate to be involved in cutting edge technologies, many of which changed our approach to common urologic conditions.

TURP, the first minimally invasive urologic procedure, was also undergoing major changes in the 1980s and 90s with the advent of better optics, the video camera to provide binocular vision on a screen, continuous flow resectoscopes and eventually bi-polar loops to speed resection with less morbidity and virtually eliminate TUR syndrome. TURP was being challenged by medical therapies and a host of alternative minimally invasive options, many of which led to clinical trials that I participated in. In the 1990s, laparoscopy became an available tool for the urologist. I was very fortunate to have Allen Chiu, from Taiwan, spend a year with me as an endourology

fellow. It was a very productive union which has persisted to this day as Dr. Chiu has become a very prominent urologist in Taiwan and is the Secretary General of the Asian Association of Urology. I was also an early adapter of robotics and performed the first robot assisted radical prostatectomy in Boston.

I was able to climb the academic ladder and become Professor of Urology at BU in 1991, interim Chair of the department in 1999 and finally Chairman in 2000. I discovered that I had administrative skills and was able to recruit and build a first-rate clinical faculty, despite working in a safety net hospital with limited resources. We evolved from the traditional Boston model of the renaissance urologist, who did everything, to a faculty where every member was fellowship trained and had a unique subspecialty. Over the last quarter century, the majority of my residents have gone on to fellowship training in virtually every subspecialty in Urology, a testament to the diversity of the BU faculty. I am forever indebted to my many colleagues and supportive staff with whom I have had the opportunity to work over the last 43 years.

During the 1990s I became involved in the AUA, first at the section level, serving as Section Treasurer and then President of the New England Section, AUA in 2000. I was also a founding member of the Massachusetts Association of Practicing Urologists, the state urological organization. In 2005 I was elected to be the New England Section representative to the AUA Board of Directors. During that time, I served as a Mentor, for multiple classes in the AUA Leadership program, working with young, rising stars in Urology. I received a distinguished service award from the AUA in 2011 and in 2013 the New England Section honored me with the Joseph B. Dowd, Lifetime Achievement Award. I continued to stay involved in section activities and served on numerous AUA committees. In 2015 I was elected by the New England Section to rejoin the AUA BOD to become President of the AUA, in 2016-2017 and hosted the Annual Meeting of the AUA in Boston in May of 2017. This was truly a distinct honor and privilege and one of the highlights of my urologic career. It was both stimulating and gratifying to serve alongside so many fellow urologists who volunteered their services to the AUA. I witnessed as the AUA evolved from a modest operation housed in a quaint row building in downtown Baltimore to an all-encompassing corporate entity in Linthicum, Maryland which is the hub of urologic education, research, advocacy and coordination for Urology. Many great friendships have been formed during my years at the AUA. My years of involvement with the AUA have left a lasting admiration for the dedicated service provided by executive director, Mike Sheppard, and his staff which has allowed the AUA to flourish and meet the demands of a changing world.

My Armenian heritage has always played a significant role in my life. After a devastating earthquake in 1988, my wife and I went on our first medical mission, bringing needed medical supplies to Armenia. I worked with Armenian urologists, teaching the latest operative techniques while my wife documented the needs for future relief efforts for NGO's in the United States. A bond was formed and following the independence of Armenia in 1991, I have returned multiple times, including my presidential year with the AUA when I was made an honorary member of the Armenian Association of Urology. I continue to provide educational resources for Armenian Urology residents and I currently serve on the Board of Directors of the Fund for Armenian Relief (FAR), overseeing medical missions in Armenia and Nagorno-Karabakh (Artsakh).

My career in Urology has been at a time of great change and evolution of our profession. I started out as a maximally invasive surgeon and morphed into a minimally invasive endourologist. My advice to future urologists is first, get involved. It is not enough to be a passive bystander. Second, embrace change. Change is inevitable and one must be on the cutting edge of the process. Urology has been flexible and ever welcoming to innovation, adaptation and change. It has been very gratifying to have been able to contribute to some of these changes in the last 4 decades. I anticipate that further changes will come with more use of molecular and genetic applications to treat urologic disease. I have no doubt that Urology will not only embrace the coming changes but also be on the forefront of making advances in our knowledge base to improve the care we provide to patients, with or without surgery.

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