



# American Healthcare Professionals and Friends for Medicine in Israel

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**D**r. Shay Golan is an artist with a robotic arm.

The 40-year-old Petach-Tikva native is an APF 2016-2017 Fellow in minimally invasive urologic oncology at The University of Chicago. There he uses the Da Vinci robotic surgery system.

"The Da Vinci has now created a totally different surgery," he says. "We are looking at smaller, better-placed incisions and better surgical outcomes – less pain and blood loss and improved preservation of function.

"It feels like an art and a science all in one."

It's Golan's second year of a clinical fellowship at Chicago. He, 35-year-old physician wife Maya-Aharoni-Golan (an internist studying gastroenterology), daughters Shahar, 6 and Noa, 4 came to the US in 2015. Baby daughter Ofri, 10 months, was born here.

At home they live in Petach-Tikva (a few miles east of Tel-Aviv) where Dad is an attending physician in the department of urology at Rabin Medical Center.

Golan attended medical school at Technion – Israel Institute of Technology in Haifa. During his fifth year he spent a month studying urology at The University of Minnesota Medical Center in Minneapolis. Golan also visited the Mayo Clinic where, for the first time, he saw the Da Vinci robot in action.

He did his internship and residency at Rabin Medical Center and took post-graduate coursework in urology at Sackler Faculty of Medicine, Tel Aviv University.

From 2011-2012 he completed a research fellowship in urology at the University of Chicago.

As a young boy, Golan loved biology, was interested in nature and life sciences and planned to become a

veterinarian. "My grandfather, born in Israel, influenced me very much in terms of liking nature and biology and in terms of his indomitable spirit.

"He really wanted to become a veterinarian himself and attended the famous Mikveh Israel agricultural school where he treated animals and studied biology, chemistry and math. And I guess that was part of what made me go in that direction.

"He was a significant part of my life and, for sure, affected my choice of career. We had a very strong bond." Grandfather was also quite a hero, participating in the Nazi era Maccabee games as a volleyball player and having his photo taken with a Nazi officer. (That photo exists today.) Years later he successfully smuggled 18 Haganah officers out of Iraq.

But at the same time Golan had begun to develop an interest in human medicine.

"In the end I decided I wanted the relationship with people and chose them over animals."

Golan's interest in urology started in medical school when, in about the fourth year, he finally learned of the specialty.

"I heard about urology, for the first time, from my roommate, Michael Nagar. (now a urological pathologist in New York) He was a student in the American program at the Technion and very enthusiastic about the subject. In my fifth year I received a scholarship for a rotation in Minneapolis and I decided I would like to see what urology really was. I loved it, especially minimally invasive oncological surgery with the Da Vinci that I saw at Mayo!"

He then chose extra urology rotations in medical school, internship and residency. "It's a very

versatile field including: malignancies, stones and pediatric and female urology.”

Golan says he always loved working with his hands, however, surgery wasn’t always on his radar. But the more surgeries he saw and participated in (particularly the urologic oncology cases) the more enthusiastic he became. The high tech elements also drew him in.

“And, obviously, fighting cancer is an ideal that most of us identify with and it’s a noble goal. You really feel that you have a lasting impact on your patient’s life.”

Golan says minimally invasive urologic oncology is a fascinating and delicate balance of destruction and reconstruction. “We destroy in order to remove the disease while at the same time strive to preserve function. So, say it’s prostate cancer: we do everything to preserve urinary and sexual function. For testicular cancer we try to do a nerve-sparing procedure during lymph node dissection in order to preserve ejaculatory function. If it’s kidney cancer, we want to preserve renal function.

“You want to be aggressive enough to remove the entire tumor and yet gentle enough to protect function. It’s very challenging playing between these two extremes.”

The Rabin urologist says robotics and minimally invasive procedures are revolutionizing surgery, particularly urology, one of the leaders in the field.

“A hundred years back surgeons were very proud of very large incisions, the larger the better, and of removing things. Now it’s just the reverse and that’s a very positive change in the process. We are now looking at totally different surgeries.”

Minimally invasive surgery allows for less blood loss, less pain and faster healing time. “We’re talking about litres vs. CC’s now in terms of blood loss.”

Besides his interest in clinical work, Golan is an avid researcher and has been since medical school.

“Research as a goal has characterized my career and has cemented my commitment to life as a surgeon/scientist.”

One of his medical school science highlights was when he participated in prostate cancer research with the 2004 Nobel Prize winner Aaron Ceichanover.

His intensive Chicago Fellowship is half clinical and half research. Clinical days are divided into operating room and clinic days. The rest of the week is devoted to research.

Research includes: computerized data base work and lab research on bladder cancer treatment as well as leading a multi-center project on renal cancer and robotic surgery.

Research days are more flexible than clinical days, but can last until late at night.

Golan has published more than 20 journal articles and regularly presents research abroad.

From his Chicago experience he has already published several papers and a book chapter. He expects to publish more.

**Why The University of Chicago?**

“Here everything is the “gold standard” – clinicians, staff, equipment, research and procedures. Also, I see a volume and diversity that I can’t get in Israel. At Chicago we have six robotic set-ups at our disposal. In all of Israel there are only six.

“This is a very active training center, it’s very high-volume. In a busy week we have up to eight surgeries a week and each is about three to four hours long. With clinic and research hours added on, it’s a very busy fellowship.

“It is expected I will participate in 200 laparoscopic/robotic procedures and 100 open radical surgeries per year.

“The University of Chicago program is known worldwide for its commitment to truly educating its

fellows, giving them all the hands-on training they need in addition to other learning support.”

What will he take back to Israel with him?

“While there are Israeli physicians with some exposure to the Da Vinci robotic system, very few urologists have had official fellowships devoted to minimally invasive urologic oncology and robotics. I will be one of about four or five with this training. And not all programs are equally high-volume and high-quality educational experiences.

“Also, I have an extensive and formal research background.”

But that’s not all that makes a good surgical urologic oncologist.

Golan says his relationships with patients are what help sustain him through the difficulties of his profession – the intensity of the work and the sacrifices of time and quality of life.

“It’s not just taking out the cancer,” he says. “We support the patients, we follow them and help them recover their entire lives, not just from their cancers.

“Sometimes it takes weeks and maybe months to recover a function, so you need all the patience, will and mental strength to help them get to the place before cancer appeared.

“We are very motivated and we are believers and have a lot of faith in what we can do to help these patients – help them back to their routines, their capabilities -- enjoying their lives, including their sexual lives.

“The technology is exciting, the biology and the research are fascinating and the meaningful interpersonal relationships are inspiring. But this all does take time from our families, our hobbies and our lives.”

## **American Physicians Fellowship for Medicine in Israel**

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