



# American Healthcare Professionals and Friends for Medicine in Israel

2001 Beacon Street, Suite 210, Boston, MA 02135

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“Get knowledge of the spine,” Hippocrates is said to have preached.

And that’s just what Dr. Ran Lador has done.

First he trained in Israel, the United States and Italy in spinal surgery, oncology and research to become a senior spine surgeon at Tel Aviv Sourasky Medical Center.

Now he’s back in the U.S. for two years of advanced training and research in surgical management of spine cancer.

He is an APF 2018-2019 Fellow in the Department of Neurosurgical Oncology’s Spine Program at The University of Texas MD Anderson Cancer Center in Houston.

“In the past, cancer involving the spine would be tantamount to ‘the end of the road’ for patients. Now with advancements in surgery and oncology treatments, it is very controllable and treatable. It’s even curable if caught at the right time and under the right circumstances. And there’s nothing more satisfying than curing someone.

“We can no longer say, ‘the end of the road.’ ”

The 43-year-old Jerusalem native describes the ever-stimulating duality of the field. “On the one hand you need to deal with the intense technical challenges of extremely complicated surgical situations.

“And on the other you form special, complex, long-term relationships with patients by virtue of the nature of the disease and the treatment.”

Lador says spinal cancer patients are unlike, for example, trauma patients or patients with herniated disks. “The latter don’t need you

anymore after a while,” he says. Spine cancer patients are different in how they react to the disease and how they grow and change with it and how they grow with the surgeon treating them. It’s a marathon, not a sprint.

“Sometimes it’s good news and sometimes not. You have to be prepared to deliver it and to cope with the reaction. Sometimes it’s multiple surgeries. And it’s always multiple check-ins.

“Sometimes it’s a single tumor that comes out in one piece with clear margins. Sometimes it’s another cancer that has spread to the spine.

“And sometimes nearby structures, such as blood vessels, organs and nerves, are disrupted and deficits remain after surgery.

“It’s kind of like a marriage for life with the patient, the family and the entire support group. And I want to be that partner.

“It should be a productive interaction and patients are appreciative of the great effort the surgeon is putting out to treat them, both interpersonally and surgically. I’m not equipped to be a psychologist, but patients react to my efforts and appreciate them.”

For example, he always gives his patients his personal cell phone number.

The Ladors arrived in July. They are: Dad; Mom, 40-year-old Dr. Adi Lador, a cardiac electrophysiologist who also has an APF Fellowship in Houston; 12-year-old son Itay and 6-year-old daughter Noa.

Dad decided to become a doctor while in the military.

He completed the officer’s course at IDF’s naval academy after high school. Lador then served as a

Patrol Ship Commander and squadron leader and later as an Executive Officer in a Special Forces unit. "It was very challenging."

The Tel Aviv resident remains in the IDF Medical Reserve Corps.

"Back then I had some sailors in my unit who needed medical attention urgently and as I saw what was going on, it hooked me.

"Also there was the television show 'ER,' I adored that show! When they asked me in the interview before medical school, 'Why do you want to become a doctor?' I told them about 'ER.' I loved the trauma work."

Lador entered Hebrew University Hadassah Medical School and very early on knew he wanted to do something "interventional and surgical.

"In the second year we did cadaver lab. I found I loved the anatomy and the logic around the muscles and joints and the mechanics and physics surrounding all that. So I thought surgery would be my field."

He spent vacations in the surgery department and also in the operating room with the orthopedics department. "I thought I'd like to be an orthopedist. The constructive stuff interested me, also spinal surgery. It's not just 'taking something out and it's OK.' You aim at gaining function. You want to return them to their normal lives."

An internship at Chaim Sheba Medical Center followed. "Obviously my electives were in orthopedic surgery. But whenever I had a chance, on call in the ER, I kind of made my way onto the ortho. service to help out. It was a comfortable place for me to be."

Lador chose Sourasky for his orthopedic surgery residency. "I wanted to stay in Tel Aviv and I just loved the department there." But before he started, he took a one-year general spinal research fellowship at Baylor College of Medicine in Houston, not knowing the spine would one day be his future

or that he'd return to Houston for another more advanced fellowship.

"When I started I kind of liked the spine and the fellowship seemed interesting." But by the time he returned from Baylor he knew his profession would be spinal surgery.

Lador completed his residency with a focus on the spine. "My chairman, Dr. Moshe Salai, gave me his blessing to spend all this extra time on the spine service.

"I had the good fortune to work with Dr. Ory Keynan, an amazing orthopedic spine surgeon and an amazing guy, who kind of taught me everything I could know by the time I finished my residency.

"I came out with way more than the average resident in general ortho."

After residency Lador did a fellowship in the Oncologic and Degenerative Spine Surgery Department of the Instituto Ortopedico Rizzoli in Bologna. "I trained with Dr. Stefano Boriani, a world leader in this field."

When he returned he took a position in the spine surgery unit of the neurosurgery department at Sourasky, where he worked closely with its director Dr. Zvi Lidar. "As a mentor he was the best I could wish for. He is a unique clinician and a surgeon that I could only hope to follow. He gave me opportunities to do more and more complex surgeries with the backing and the teaching. He also allowed me to work with new technologies such as 3D printing."

In fact, Lador literally introduced the world to 3D printing technology with spine surgery. His work paved the way for a recent first-in-the-world surgery using 3D printing to create a novel replacement lumbar vertebra implanted after tumor resection. Lador was one of the spine surgeons on his mentor's team.

Including the publishing of the 3D printing work, Lador has been part of producing 27 papers and a

book chapter while at Sourasky – all with no dedicated research time.

“We are investing a lot in research but still you just have to fit it in between your academic and clinical duties. For me, it was about 10 to 15 percent of my time vs. the other two.” He has also presented research abroad and his work is now being cited in both orthopedic and neurosurgery spine literature.

At MD Anderson Lador has many research projects in the works, spending about 20 percent of his time on them. “But we haven’t published yet. It’s not been long enough.”

### **WAS IT NECESSARY TO LEAVE ISRAEL TO GET THIS KIND OF EDUCATIONAL EXPERIENCE?**

“Absolutely. There’s nothing like this in Israel. In fact, there isn’t any dedicated training program anywhere in the world for neurosurgical spine oncology. It’s usually part of a bigger program, like general spine surgery or general neurosurgery.

“Working in the spine service at MD Anderson for two years is a long time doing these dedicated complex spine oncology surgeries. This is indeed unique in and of itself.

“For anyone who is attempting to treat these pathologies, this is the best experience possible as far as I know.”

### **WHY MD ANDERSON?**

“This is one of the leading places in the world for spinal cancer. The facilities, the people, the teaching, the clinical work, the research – all cutting edge, all just excellent. Dr. Laurence Rhines, director of the Spine Tumor Program in the Department of Neurosurgery, and his team were definitely a major part of my decision.

“Then there’s the volume, diversity and complexity of cases. At Sourasky we see a lot of spine cases, but not as many spine cancer cases as here. And there you might have very complex cases once in a while, but not every week or more like here. Here you see the most complex and unique cases and

novel treatment approaches. I may not be doing more in actual number of cases a week, but it’s certainly more in number of cancer cases. And these aren’t just any spinal cancer cases, these are referral cases, one that others have started and then referred out. You see THE most complex cases anywhere.

“In the end there’s nothing like experience. The more you do it the better you become at it.

“The place is world famous for a reason, not to put any other place down. For example, created at MD Anderson and unique in its use is a special hybrid “cage” of living bone and non-organic material to attach to remaining vertebrae after it was necessary to remove three original vertebrae during a significant spinal tumor resection. It’s the part of the surgery that is about getting the patient back to normal life.

“Another example of what’s unique is Dr. Claudio Tatsui, who pioneered laser surgery for spinal cancer. I’m fortunate to be working with him as well.

“And there are two hallmark MD Anderson care features that are wonderful to witness almost every day. One is ‘prehabilitation,’ that is preparing for postsurgical deficits before the operation. For example, when a neurological deficit is expected, maybe a nerve that has something to do with motor function, patients work with clinicians on how to cope afterward *beforehand*.

“Then there is this amazing multi-disciplinary team approach. Everyone including: radiation oncologists, plastic surgeons, vascular surgeons, medical oncologists, rehab. specialists and nurses all work together as one unit deciding (with the patient) on treatment. And they do it seemingly without ego. It’s remarkable to me.”

### **HOW ABOUT MENTORS IN ISRAEL AND IN THE U.S.?**

“In this country it’s Dr. Rhines. He’s a great teacher and has vast experience with these complex pathologies. His knowledge is huge and I love that.

But what I appreciate even more is his approach to both the patient and the procedure.

“When treating these pathologies you put a lot of effort into planning everything that’s possible to plan and seeing anything that might go wrong. Dr. Rhines prepares more than anyone I’ve ever known.

“His patient skills are remarkable too. His approach is that the more knowledge the patient has the better the outcome. And it actually works.

“The patients and their families are explained everything in advance – what’s going to happen, why and when.

“As far as Israel goes -- Definitely Drs. Lidar and Keynan have both had significant roles in my professional development, for which I will always be in debt.

“All in all, here and in Israel, I’ve been fortunate to have had mentors who’ve had amazing bedside manners and those who were examples of leaders and of technical skills. And that combination was great for me. And of course some were examples of just everything one would want in a mentor.”

#### **NOW YOU YOURSELF ARE A MENTOR.**

“I teach medical students, residents and fellows – particularly about the spine and particularly young orthopedic and neurosurgeons interested in spinal surgery.

“I’ve also created cadaver labs for more surgical exposure, manikin workshops on minimally invasive procedures and additional courses to upgrade young surgeons’ skills and techniques in spine surgery.

“I really do enjoy it. And I hope students and younger surgeons see a good role model in me.”

#### **WHAT ARE DAYS LIKE?**

“Surgery is always intense, delicate, creative and not exactly relaxing – but totally satisfying.

“Some surgeries are short, maybe an hour or an hour and a half and others can take much longer. Recently we did one that took about 33 ½ hours, staged over two days – 20 ½ the first day and 13 the next. Typically I do one surgery a day. I’m not on call. And I usually don’t work weekends.

“My hours are flexible. When I don’t have surgery I usually start at 7:30 a.m. and stay until 6:30 p.m. doing clinic, patient rounds and research.

#### **DOES YOUR NAVAL EXPERIENCE HELP OUT?**

“Absolutely. You’re experienced at functioning under stress and in new environments, developing good interpersonal communication skills, working around the clock and in the importance of good teamwork and decision-making – the last being perhaps the most important skill a surgeon has to have.

“Also, when you are the full commander of a boat you are the only one who makes the decisions, no one knows better what to do. There’s no one else to guide you. And that’s very similar to the experience of a surgeon. In the OR you have to collect all the data, but when you look over your shoulder you don’t see your peers there to help you. You can call someone, but as a general rule you’re the one making the determinations, no one else is. Getting used to making these decisions as a commander is surprisingly similar.”

#### **HOW ABOUT WORK/LIFE BALANCE?**

“It’s a constant struggle. Since I’ve become a practicing surgeon I haven’t had one good night’s sleep. You’re always troubled -- worried about the cases you’ve done or those you’re about to do. You’re preoccupied with your patients, technically or emotionally.”

Lador says he hasn’t completely disengaged from his Israel patients while in Houston. “I gave them a way to contact me. I wouldn’t be able to cut off completely from my practice back home. I’m just not made that way.

"The reason I always give my patients my cell number is because if a patient has a situation I want to be on top of it, not dragged into it later. I get messages all the time from patients. Surprisingly, unless it's very urgent they don't call and I appreciate that.

"On the other hand, my family gets the same treatment. They know if they need me I'm always available. They also know not to abuse it, this is absolute. But this is not a 9-5 job, in order to keep the family OK with it you have to always be available."

Lador tells a story about availability in a wry tone of voice -- "Once, my son was hospitalized and he was doing OK so I took him on rounds with me. I thought it would be nice for him to see where I work and what I do. Then I overheard him say, 'If I want to see my father I have to be sick.' It was a blow.

"But we try regularly to have 'boys' night out.' Also, my son is on a swim team and I attend meets and we go skiing in Europe and scuba dive as well.

"My daughter is still a little too young for that sort of thing."

#### **WHAT DO YOU/HAVE YOU DONE FOR FUN?**

"This is our second trip to the U.S. so we're concentrating pretty much on Texas and Southwestern stuff. We've really fallen in love with Texas. We've been on a lot of Texas trips including: San Antonio, Austin and Dallas.

"And we recently saw a Monster Truck Jam! We go to air shows and do mostly the stuff that isn't

happening in Europe or Israel. Of course we have my son's swim team activities here too.

"And we did a big trip to California."

#### **HOW HAS THE APF AWARD AFFECTED YOUR LIFE?**

"There are a lot of financial considerations and I'm not very young anymore. I've halted my practice, moved my entire family to the U.S. and put two kids in Jewish school. That's not an insignificant challenge; we're using some of our personal resources to make it happen, it's that important. But the fact is we need to make these two years happen without the income we were used to in Israel.

"The APF award is very helpful. It helps us maintain our regular lives with our traditions, including Jewish school, which we knew we wanted, but is a cost."

#### **WHAT KIND OF AN IMPACT WILL YOUR MD ANDERSON EXPERIENCE HAVE ON YOUR PROFESSIONAL LIFE WHEN YOU RETURN?**

"When I return I will be the only one in Israel with this kind of training. The plan is that I will establish a dedicated spine oncology service at Sourasky. It is planned to serve all of Israel and abroad.

"Also some things I saw at MD Anderson that I'd like to take back to Israel besides technical skills include: the idea of prehabilitation, the use of laser surgery for spinal cancer and further development of the multi-disciplinary team approach that we already have at Sourasky."

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

P: 617-232-5382 • F: 617-739-2616 • [info@apfmed.org](mailto:info@apfmed.org) • [www.apfmed.org](http://www.apfmed.org)