

## American Healthcare Professionals and Friends for Medicine in Israel

2001 Beacon Street, Suite 210, Boston, MA 02135

**K**ids, cancer and bone marrow transplantation are Dr. Asaf Yanir's passion.

The 40-year-old Haifa native, a 2015-2016 APF Clinical Fellow in Pediatric Bone Marrow Transplantation (BMT) at Baylor College of Medicine/Texas Children's Hospital (TXCH), often works "25 hours a day," seven days a week to pursue his medical heart's delight.

"I love working with kids, both emotionally and medically," says Yanir. "Emotionally, you get to interact in a different way than you do with adults. And I like providing support for parents, who are letting me take care of the most important thing in their lives.

"Medically, I like the great impact of curing a child, giving him or her the hope of a whole long life ahead. I also like the great potential for recovery that children's bodies have, being able to recover completely from critical situations that the adult body will not tolerate."

Four times a year Yanir works a month of "inpatient" duty. It's when he can rack up about 100+ hours of work a week, practically living at the hospital days, nights and weekends. When he's not there, he's "on-call."

"I often have to get up in the middle of the night and go to the hospital after taking a telephone call. There are a lot of critical decisions to be made all the time."

The rest of the year he works intensively with these patients in their outpatient pre- and post-transplant stages.

These are the two most common types of bone marrow transplants:

- AUTOLOGOUS TRANSPLANT stem cells are removed from the patient before the patient receives high-dose chemotherapy or radiation treatment. Stem cells are then frozen. After treatment, stem cells are returned to the body with the hope of making normal blood cells.
- ALLOGENEIC TRANSPLANT The source of the stem cells is from a different person. It can be either from a matched sibling or from a matched unrelated donor. More complex transplantations involve the use of a parent's blood or another person's umbilical cord blood as the stem cell source.

The Kibbutz Netiv HaLamed-Heh (Jerusalem area) resident wasn't sure he wanted to become a doctor, even when he was already in medical school. "I was not one of those people 'born with a stethoscope in their ears,'" he said. "When it came to my decision to go to medical school, I felt I had to pick something and so I chose medical school, it was just that. While there, I was still thinking, 'Was this the right choice for me?'

"I only became really passionate when I started working as a true doctor, as a resident. I then thought, 'Yes, this is a very nice thing to be doing. It was definitely the right decision.'"

After his IDF service Yanir taught Hebrew and Israeli studies in Melbourne, Australia. He then completed medical school, his internship, residency and fellowship at The Hebrew University Hadassah Medical School and Hadassah Medical Center in Jerusalem.

After two years at TXCH in Houston, he will return to Hadassah as a senior physician specialist in pediatric bone marrow transplantation and leukemia. He will also teach in the medical school and residency program.

Yanir came to the US with his wife Gali, 41, a pediatric psychologist; sons Itamar, 9 and Yishay, 4 and daughter Nitzan, 7.

How did he come to this specialization?

"Early in medical school I knew I wanted to work with children rather than adults," Yanir said. "I always felt I was in a happier world with children; I had a greater capacity for bonding there.

"At first I was thinking about going into pediatric psychiatry. But then when I started pediatric medicine I said, 'I see it.' And I became passionate about medical pediatrics. During my residency I figured out which branches of pediatrics I didn't want – like general pediatrics.

"I just feel, in general pediatrics, most of the kids would be healthy with or without you. And I wanted to have a greater impact."

Yanir said that toward the end of his first residency year he knew he wanted to be a hospital-based physician.

He also knew he wanted to be the "primary" physician on a case, starting a process with a patient and family and seeing them through to the end.

His rotations in hematology and oncology were very inspiring as were the physicians in that department. Hadassah's head of pediatric hematology/oncology, Dr. Michael Weintraub, is his mentor.

"In hematology and oncology you have that level of impact and during transplantation you are 'escorting' them quite a while through the entire process. I had become very interested in the whole hematology system and I thought hematology and oncology would meet a lot of my expectations for my profession.

"With BMT you follow a patient and family until a cure or, unfortunately, death. But most of the time it's a cure. You may follow a patient and family, literally, for years."

What else brought Yanir to this specific arena of hematology/oncology/BMT?

"I am very interested in basic immunology and bone marrow physiology," he said.

"It is fascinating that you can actually replace the whole blood system of a patient and restart the entire genetic background of that blood system.

"This procedure carries great potential for cures for many diseases and many people.

"And because it's a very high-tech, cutting-edge process, progress is being made all the time. You have to keep on top of everything all the time and this is great for me intellectually."

Yanir does more work with allogeneic rather than autologous transplants. "Autologous is not actually a 'transplant,' because it's not changing the person's immunology and genetic system. It's more like a lot of chemotherapy to destroy a person's cells and then rescuing that person with his/her own blood system. Autologous transplantation is used less and less in cancer therapy overall."

Why did Yanir choose TXCH for his Fellowship?

When he researched programs in pediatric bone marrow transplantation (BMT) found at institutions also featuring fellowships in pediatric leukemia, Yanir found only a handful of programs in the US and, indeed, world-wide. "And in the US only two accepted foreigners."

(By the way, since leukemia is so often treated with BMT, Yanir is spending his second TXCH year doing a pediatric leukemia clinical fellowship.)

When he wrote to TXCH he had a remarkable experience. "The head of the world's largest pediatric cancer center, Dr. David Poplack, immediately contacted me personally, asking me to come there!

"And I accepted."

Another reason for his choice is the size and diversity of patients offered at TXCH. So, it comes as

no surprise to learn that TXCH's BMT program, with more than 130 transplantations a year, is at least five times that of Israel's. "I am exposed to a greater volume and diversity of patients.

"Also, the future of BMT is here. You are exposed to the medicine of tomorrow. The funding is here, the world-famous people and state-of-the-art facilities are here.

"You just can't beat the resources they have here for the planning and execution of the future. It's eye-opening to see such an institution in action and to be a part of it."

Lastly, TXCH has a world-renowned institute for cellular therapy which is part of the BMT program. In this institute scientists treat different kinds of cancers and infectious diseases through genetic modification of the immune system's cells. After modification, the cells become very potent weapons. No such program exists in Israel, Yanir said.

He hopes that learning these treatment methodologies and becoming familiar with

laboratory techniques will help him to, one day, get this treatment available in Israel.

As for his own research, Yanir published four papers prior to coming to Texas and presented research abroad. He's now working on two large papers summarizing transplant experiences that he plans to publish.

Yanir loves his work at TXCH but misses his yearslong associations with patients and families. "During a relatively brief fellowship abroad you just can't build up those kinds of relationships."

Dad, Mom and the kids have also enjoyed two big travel experiences. One was a brief driving trip to the Florida Pan Handle, through Louisiana. The other was a long trip to California during which they visited Yosemite, San Francisco, Los Angeles and Disneyland and drove on California State Rt. 1.

Their house in Houston, at 160 square meters, is significantly larger than their kibbutz residence, a camper of 70 meters. "After all, everything is bigger in Texas," said Yanir laughing.