THE MOST IMPORTANT CONCERTO OF HIS LIFE

With music as his muse, Dr. Javier Torres-Roca is rewriting the rules for radiation therapy.

“In music, you learn how to play other people’s songs, then you learn to improvise around them. Or write your own. Ultimately, you learn how to play something in a way that no one has ever played it. That’s what I’ve tried to do my whole life.”
By his own admission, Javier Torres-Roca, M.D., a radiation oncologist at Moffitt, is a bit of a willful individualist. Always has been. Even as a child growing up in Puerto Rico.

“I didn’t want to follow any rules,” he recalls wistfully. “I just did not want to do what I was told.”

Of course, it’s one thing to ignore your mother’s pleas to make your bed, but another to turn a deaf ear to your father who’s begging you, now a full-fledged adult, not to drop out of medical school to follow the siren song of music and pursue a career as a classical pianist.

“But that was a pivotal moment. I decided to open up the creative juices by going back to music school. Looking back I was essentially saying that creativity is something that I have to feed in some kind of way— in whatever I do.”

And feed it he has. In his own characteristically willful and individualistic manner.

After completing two years of intense musical training, he returned to medicine and has spent his career since then taking, one might say, the neural path less traveled, developing a molecular diagnostic test to predict whether a cancer patient will respond to radiation therapy.

This, when most clinicians were focusing on the more traditional approach of administering radiation therapy without knowing or investigating ways to predict tumor response to radiation.

That may not sound radical, but hear him out:

“Depending on the cancer, radiation therapy can be curative. In some cases, it’s considered equal to or better than surgery because generally it has better functional outcomes. For example, before a treatment plan is devised, a patient might be told he has an equal chance of doing well with surgery or radiation. But that’s just based on the average. Not the individual. What our test does is help to identify the patients most likely to be cured with radiation.”

For oncologists, that’s big. If you give them genomic information on the specific tumor that they’re treating, they can better tailor a patient’s treatment.

After medical school, Dr. Torres-Roca spent five years as a researcher completing postdoctoral training in molecular biology and immunology at the Institut Pasteur, Unité d’Oncologie Virale in Paris, France, and Stanford University in California. He completed his clinical training in radiation oncology at the University of California, Irvine. Most notable was his time in the laboratory of Professor Luc Montagnier, co-discoverer of the AIDS virus and winner of the 2008 Nobel Prize in Medicine. “Incredibly eye-opening,” he says of his time there. Among other things, he was introduced to the idea of entrepreneurship. And this has led to his cofounding of a company called CvergenX to market the molecular diagnostic test. A physician-scientist for Moffitt since 2002, where he ran both an active laboratory and a clinic, he now directs his efforts toward this commercial endeavor with Moffitt’s blessing and support. Moffitt co-owns the technology that enables the test, and CvergenX has an exclusive license for its commercial use.

“I came to Moffitt,” Dr. Torres-Roca remembers, “because they showed a great interest in being novel going into the genomic space and thinking outside the box. I knew if I came here nobody was going to tell me I was crazy.”

People telling him he’s crazy, then the good doctor proving them wrong, seems to be a recurring theme here.

Dr. Torres-Roca continues, “Radiation oncology departments are usually very conservative by nature, and I knew that what I wanted to do would not fit well in the majority of radiation oncology departments in the United States.”

Not surprisingly, he gives at least partial credit to whatever success he’s had to music. In a way, his career has played out like variations on a Beethoven theme: “I returned to medical school because I realized that you can be an artist in all walks of life.”

He keeps this metaphor close. Always handy. It explains him so well.

“In music, you learn how to play other people’s songs, then you learn to improvise around them. Or write your own. Ultimately, you learn how to play something in a way that no one has ever played it. That’s what I’ve tried to do my whole life.”

So then, let’s hear it for improvisation. And, of course, willful individualism.

CvergenX is one of Moffitt’s newest and most exciting startups. It was co-founded by Javier F. Torres-Roca, M.D., and Steven A. Eschrich, Ph.D., to market a game-changing molecular diagnostics test the two are developing. Using a proprietary algorithm to generate a radiosensitivity index derived from the expression of 10 specific genes, the test will enable oncologists to predict patient response to radiation therapy. In other words, says Dr. Torres-Roca, we will soon be able “to identify the patients most likely to be cured with radiation.”

Dr. Torres-Roca is a board-certified radiation oncologist at Moffitt and serves as chief scientific officer of CvergenX. Dr. Eschrich is an associate member of Moffitt’s Department of Biostatistics and Bioinformatics.