



Laurie H. Glimcher

A Transformative Time for Cancer Research

An Interview with Dr. Laurie H. Glimcher,
President and Chief Executive Officer, Dana-Farber Cancer Institute

Over the past five years, Dana-Farber has had its fingerprints on half of the new cancer drugs.

When you look at the advances taking place at Dana-Farber, should there be more optimism that we're going to achieve the results needed to cure cancer?

It's an incredible and transformative time for cancer research. The history of innovation at Dana-Farber is well-known. Sidney Farber was the first person to use chemotherapy to cure acute leukemia, so we have a long history of innovation.

The checkpoint inhibitor drugs currently being marketed are based on research done in part by one of our faculty members who discovered the PD-L1 gene.

There are two major revolutions that have taken place in the past decade. One of them is precision medicine and the realization that every patient's tumor is unique in that it has different genetic alterations and that one can develop specific drugs that can target those mutations in the tumor. We are the only cancer institute that offers every patient that comes across our threshold the opportunity to have their tumor sequenced and their genetic alterations identified.

The information we have garnered from sequencing patient tumors has influenced the kind of therapy we put patients on about 70 percent of the time. This has been a major thrust of research at Dana-Farber and elsewhere. It's exemplified by some of the targeted drugs that are currently available today that have been very effective in treating diseases like chronic myelogenous leukemia.

The second revolution is immunotherapy. Dana-Farber has been a leader in that starting from discovery of costimulatory receptors and inhibitory receptors.

Checkpoint blockers, for example, were first utilized in melanoma patients. There are a substantial number of melanoma patients who were at death's door but are alive today, 10 years later after treatment, with checkpoint inhibitors.

This is just the tip of the iceberg – there are six or seven different tumor types that are immunoresponsive but, still, only a minority of individuals who have those tumors respond to checkpoint inhibitors.

While the progress has been amazing on those tumors, we still have much left to do to

figure out how we can make 100 percent of patients who have those particular tumors respond to immunotherapy. There are also many tumors that don't respond to immunotherapy, so we have to figure out how to harness the immune system in those patients so that, someday, 100 percent of all patients will respond to immunotherapy.

It will take basic and translational research at many different institutions, both in academia and in the private sector, to figure things out. I'm optimistic about success and eventually making cancer a chronic disease. I hesitate to use the word "cure" but, when we think of HIV/AIDS, that disease was lethal and it's now essentially a chronic disease because of combination therapies.

A 20-year-old diagnosed with HIV today has virtually a normal lifespan. If we could say the same for even some tumors, that would be a big success. I believe we will get there, and it's going to require that we take advantage of precision medicine and targeted therapies and immunotherapy.

At Dana-Farber, the patient-first mentality is embedded in the culture. How critical is that, and how is it driven throughout the institution?

People often ask me what has impressed me the most since I started at Dana-Farber, and I tell them that it's the amazing quality of the patient care I see delivered here. It's uniformly delivered at a level that I have never seen anywhere else.

Every week, I get e-mails and letters from patients or their families who are so grateful for the quality of patient care. They tell us that, from the parking attendant to the janitor to the physical therapist to the nurses and doctors, everyone formed a team around them and made them feel they were part of a family.

I had a woman confide in me that her doctor told her that her breast cancer was essentially cured and she didn't need to come back for more visits. She said that she had made so many friends at Dana-Farber that she wanted to come back every six months to see everyone again.

I hear that over and over again. I don't think I've had a single complaint from a patient in the 10 months I've been here.

Dana-Farber is known for the incredible care it delivers and it is a reputation that is well-justified.

EDITORS' NOTE Immediately prior to assuming her current post, Dr. Laurie Glimcher served as the Stephen and Suzanne Weiss Dean and Professor of Medicine at Weill Cornell Medical College in New York City, and Provost for Medical Affairs at Cornell University. From 1991-2011, Glimcher was the Irene Heinz Given Professor of Immunology at the Harvard School of Public Health, where she was director of the Division of Biological Sciences, and Professor of Medicine at Harvard Medical School. Dr. Glimcher received a bachelor's degree, magna cum laude, from Radcliffe College and a medical degree, cum laude, from Harvard Medical School.

ORGANIZATION BRIEF Since its founding in 1947, Dana-Farber Cancer Institute (dana-farber.org) in Boston, Massachusetts, has been committed to providing adults and children with cancer with the best treatment available today while developing tomorrow's cures through cutting-edge research.

What have been the keys to the strength and leadership of the Dana-Farber Cancer Institute?

Dana-Farber is a unique cancer institute because there is an equal balance between research and clinical care that other cancer research centers don't have.

Ninety percent of our clinicians also have research interests, and this allows us to implement a very seamless interaction between the bench and the bedside.

Our clinicians and researchers are interested in working together to go from very basic research in cancer at the cellular and molecular level to very translational research, where we have a very successful pipeline that stretches from an initial discovery in a laboratory to creating a small or large molecule compound that can be tested for proof of principle in preclinical animal models.

In many instances, it is this model that is attractive for partnering with the private sector.

When it comes to the talent you're hiring, is cultural fit just as important as experience?

It is absolutely vital. One bad apple can spoil the whole bin, and everyone from our volunteers to our clinicians are an amazing group of committed and dedicated people. It's true that people here live and breathe the mission of Dana-Farber, which is to offer the very best quality clinical care we can for our patients and, at the same time, do the transformative research that can lead to new treatments for cancer.

How critical is it that the diversity in your patient base is mirrored throughout your workforce?

That is really knitted into the fabric of Dana-Farber. I have spent my career making sure that we take advantage of the brains of the 50 percent of

our population who are women. I've been devoted to supporting and promoting talented women within the organization and promoting those underrepresented in medicine and science.

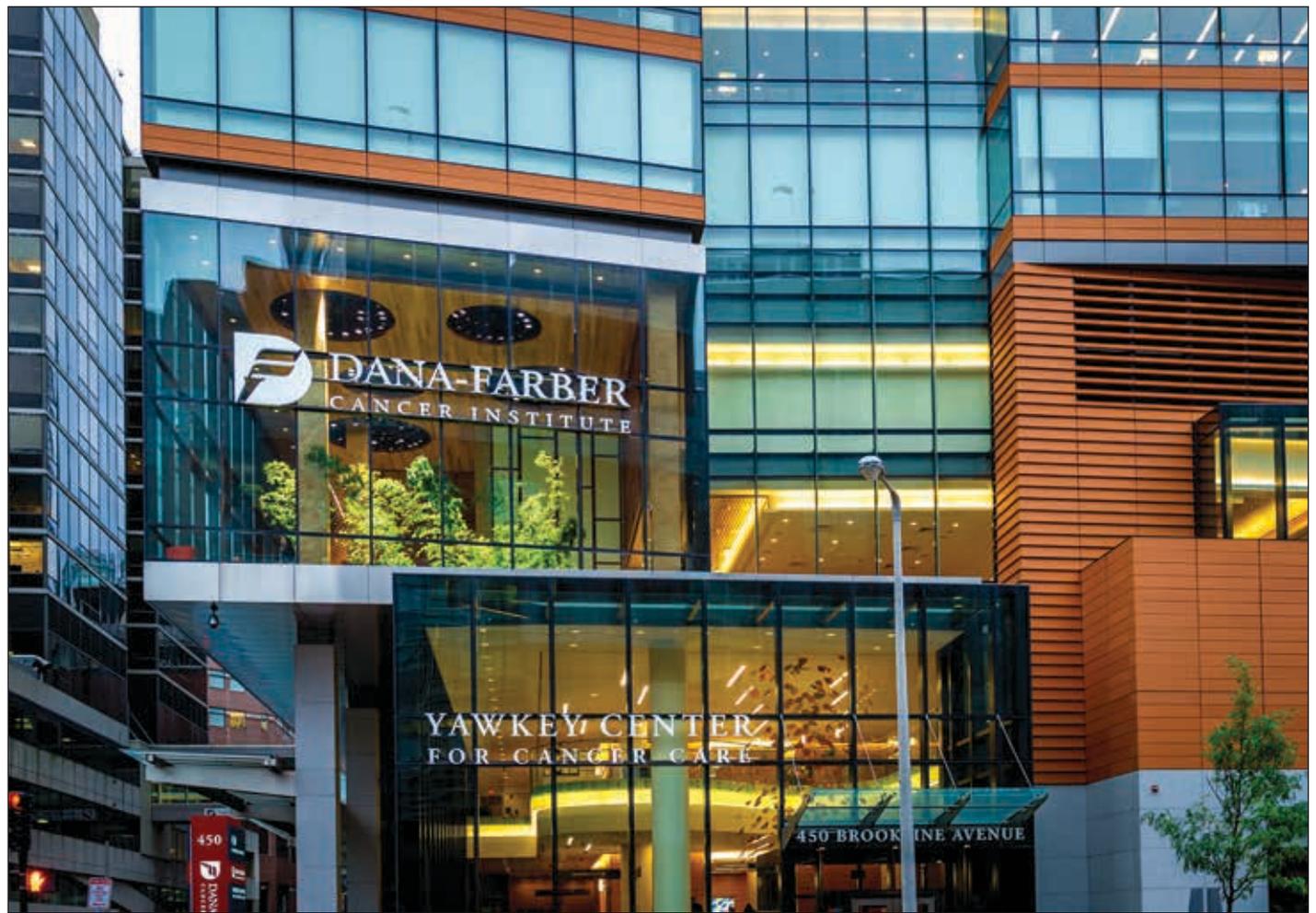
We are committed to serving every patient who comes through our door. We reach out to the community with our clinics, and we treat every person who comes to us for help with no exclusions.

Dana-Farber also plays a strong leadership role within the community. Will you discuss this effort?

Ninety percent of oncology care is delivered locally, and most people want to stay and be treated within their communities. Complex cases need to come to our main campus, but we have four satellites and we're working on a fifth, spread across Massachusetts and New England. This is very important to us in that we can help them stay in their local communities and receive their care there. We are also spreading our training, education, and knowledge to local communities.

One example of that is access to clinical trials. About 20 percent of patients at cancer centers are put on a clinical trial, but in the community, that number is 2 to 3 percent. It's our belief that every patient for whom there isn't an adequate standard-of-care treatment should have access to a clinical trial if they are eligible for it. We're working hard to put in the infrastructure that will allow clinical trials to be done in communities.

In addition to our satellites, we are also establishing partnerships with community



The Yawkey Center for Cancer Care at the Dana-Farber Cancer Institute in Boston, Massachusetts

hospitals and primary care clinics to provide training and education to treat patients with many different kinds of cancers.

We're well-known not only throughout New England, but nationally, because we have established a lot of these partnerships throughout the country.

There is so much discussion today about the changes occurring in healthcare. Do you worry that the next generation of leaders is not going to enter the industry because of the high cost of medical school and the challenges in the industry?

It's a legitimate concern, but when we look at the young people who are coming in, they are amazing. They're coming into medicine and oncology for the same reason that previous generations of students have chosen to do so. I spend a fair amount of time with medical students. My eldest son is now a cardiothoracic surgery fellow, and I remember asking him when he came home from college what he was going to do next. He had considered becoming a lawyer, but then he told me that he wanted to go to medical school. When I asked him why, he said it was because he would never have to wonder in the morning why he was going into work.

We have the best hematology/oncology fellowship program in the country and the quality of our fellows is unbelievable. I wish we could keep all of them, but we don't have room for everyone. These are extraordinary young people and they inspire me and give me much hope about the next generation of medical professionals.

When you ask if I'm worried about the future of the pipeline outside of what I'm seeing at Dana-Farber, there are perhaps institutions that aren't as prominent as ours that might have some issues, but we have a remarkable pipeline.

Sometimes when I contemplate the downward pressure on healthcare reimbursements, the financial constraints of government funding for research and how we're going to support our healthcare system, the job can seem frustrating. That's when I ask my secretary to schedule a meeting for me with one of our junior faculty. Once I have met with them for 20 minutes or so, my optimism returns, and I become very excited about where we are both in treating cancer and in discovering new cancer treatments.

As an institution, every day there are challenging events that occur, but there are also many wins. Are you able to take moments to appreciate the wins?

It's critical to have those moments. Being a doctor and a scientist in a challenging healthcare environment makes this very important in avoiding physician burnout, so we do celebrate our wins all the time because we have such a committed and passionate faculty and staff. We celebrate whenever one of our faculty members wins an award or when we come up with a new small molecule that looks promising in treatment in animal models or when we do a clinical trial and it turns out to have a very positive outcome. We get together and we celebrate because there are amazing things going on today in the fight against cancer. ●