



# Milestones 2018



Dear Friends,

Today, on many fronts, we are closer to cures for cancer than ever before. As you will see in the highlights that follow, Dana-Farber has achieved many milestones over the past year in a variety of areas. We continued to push the envelope in precision medicine and immunotherapy, and we also led the way in the emerging field of epigenetics—the processes in a cell that govern gene expression, which we now know can trigger cancer. We have made significant strides toward the early detection and prevention of some cancers, and discovered targets to reduce risk of recurrence in others. And we continued to expand access to our high-quality, compassionate care to more patients.

Our leadership across the spectrum of cancer science and medicine presents us with a historic opportunity to dramatically accelerate our progress. Quite simply, we want to take a giant leap forward, and to do this we launched a new Strategic Plan in 2018. Our plan is bold and has an ambitious goal: Transform the field of cancer care through discovery and innovation. The plan's three areas of focus—transforming the science of cancer, expanding the breadth of exceptional care for more patients, and securing and supporting the best talent to expedite our progress—are illustrated on the following pages, and will continue to guide us over the next five to seven years.

Embedded in all aspects of the Strategic Plan is our unique 50:50 balance of research and patient care, which is exemplified by the story of Chloe Hall. Chloe's doctors had the utmost compassion for her concerns about how her treatment plan would affect her life. They found a clinical trial of an experimental drug that would enable her to pursue her dreams while saving her life.

Your generosity underlies our ability to maintain this equal focus on research and care, and to pursue our bold and innovative goals. We have much work to do, but together, I am confident we can dramatically improve outcomes for patients and achieve our vision of a world without cancer.

Sincerely,

Laurie H. Glimcher, MD  
President and CEO





## Research **SAVING LIVES THROUGH DISCOVERY**

### Predicting Effectiveness of Immunotherapy

Immunotherapy, which harnesses a patient's immune system to fight cancer, is only effective for a small proportion of patients. In multiple studies at Dana-Farber, researchers have identified biomarkers that can help predict which patients will benefit from immunotherapy, to make these treatments more effective.

### Hope for Neuroblastoma

Using CRISPR technology, Dana-Farber researchers muted one gene at a time to reveal a protein target in neuroblastoma—the most common cancer in infants—which appears to be vulnerable to newly developed drugs, setting the stage for clinical trials.

### Identifying Epigenetic Drivers

Mutant genes can cause cancer, but so can normal genes when they are activated at the wrong time. Studying epigenetic factors that control gene regulation, Dana-Farber researchers have uncovered how gene regulators known as BAF complexes are “hijacked” to cause prostate cancer, among others.

### Improving Survival in Colon Cancer

In a large study of non-metastatic colon cancer patients, Dana-Farber researchers confirmed that those who followed a diet low in carbohydrates and other foods that raise insulin levels can sharply reduce their risk of recurrence, offering patients a powerful tool to improve prospects of survival.

### Treatment for GVHD

Dana-Farber researchers, who pioneered the use of the immune signaling protein interleukin-2 (IL-2) in post-transplant patients, showed in multiple studies that daily low doses of IL-2 can safely benefit patients, including children, who develop chronic graft-versus-host disease following stem cell transplants.

### Overcoming Resistance in Breast Cancer

A majority of breast cancers are fueled by the hormone estrogen, and treatment resistance in estrogen receptor-positive breast cancer is an ongoing challenge. Now Dana-Farber researchers have identified a cause of resistance and metastasis in such cancers and experimental agents with the potential to overcome them.



*Boston* magazine named 101 Dana-Farber doctors to its annual Top Doctors Guide.



## Care **PREVENTION, DETECTION, AND TREATMENT**

### Genetic Screening for Pancreatic Cancer

A large Dana-Farber study of pancreatic cancer patients revealed that almost 10 percent harbored inherited genetic variations that may have increased their susceptibility to the disease, prompting our physicians to recommend genetic testing for all pancreatic cancer patients at the time of diagnosis, regardless of their age or family history of cancer.

### Expanded Lab Fuels Precision Patient Care

The Connell and O'Reilly Families Cell Manipulation Core Facility at Dana-Farber, which supports more than 600 stem cell transplants, 40 clinical trials, and personalized treatments such as CAR T-cell therapy, tripled in size this year, becoming one of the largest in an academic center in the world.

### Precision Medicine for Thyroid Cancer

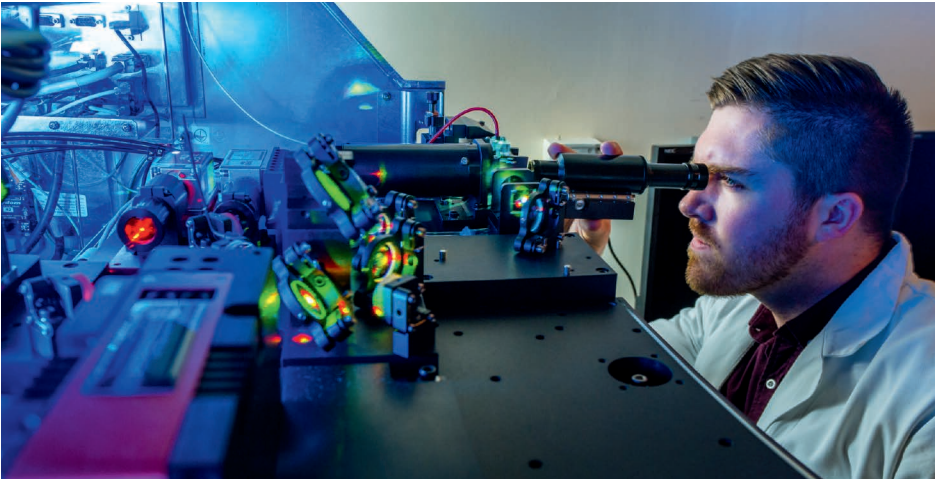
Dana-Farber launched Thyroid Cancer 360, a precision medicine program specializing in targeted treatments for patients with advanced and aggressive thyroid cancers. Research from patient profiles will help to advance diagnostic and treatment strategies.

### Enhancing Access to Care

To help make high-quality cancer care available to more patients, Dana-Farber launched a Chinese-language website, helped to open the Boao Evergrande International Hospital in China's Hainan province, and opened a cancer clinic in Haiti with Partners in Health.

### Highest Quality Care

In *Boston* magazine's Top Doctors Guide, 101 physicians and surgeons affiliated with Dana-Farber Cancer Institute were recognized for their compassionate, expert care.



Flow Cytometry Technologist Alex Heubeck calibrates a cell analyzer, which measures the presence of tumor markers on cells and plays a vital role in detection, classification, and treatment of many cancers.

 **Honors** RECOGNITION AND RANKINGS

**Tops in New England,  
Top 4 Nationwide**

In 2018, Dana-Farber Cancer Institute was the top ranked cancer hospital in New England by U.S. News and World Report for the 18th consecutive year, and was once again the only cancer center in the country ranked in the top 4 for both adult and pediatric cancer programs.

**Welcoming to All**

In recognition of our efforts to provide a welcoming, inclusive, and affirming environment for all patients, as well as for faculty and staff, Dana-Farber was named



Chief Clinical Research Officer Bruce Johnson, MD, was one of two Dana-Farber faculty named a Giant of Cancer Care by OnLive in 2018.

an LGBTQ Healthcare Equality Leader by the Human Rights Campaign Foundation for the 10th time since 2008.

**Highest Research Impact**

The impact of scientific publications from Dana-Farber Cancer Institute is the highest of the 12 leading cancer centers in the United States, with publications by Dana-Farber faculty cited 2.5 times as often, according to a report by *The Lancet Oncology*.

**Giants of Cancer Care**

Judy Garber, MD, MPH, director of the Center for Cancer Genetics and Prevention and the Susan F. Smith Chair at Dana-Farber, and Bruce Johnson, MD, chief clinical research officer, have been named Giants of Cancer Care® by OnLive for their contributions to cancer research and clinical practice.

**A Leader in Prevention**

Tobacco Free Mass, a coalition that has advocated for funding and policies supporting tobacco prevention and cessation for 25 years, recognized Dana-Farber for “continued leadership in the fight against tobacco and its harms.”

The Impact of Your Giving

**10 YEARS CANCER FREE**



Chloe Hall was diagnosed with Hodgkin lymphoma in May 2008, the same week she graduated high school and turned 18. At the time, the standard treatment for Hodgkin lymphoma was a 6- to 8-month protocol. She was supposed to start college in the fall, which would have been impossible. At the time, she says, “It felt like, if I didn’t go to school, I was letting cancer take one more thing away.”

Chloe’s care team at Dana-Farber listened, and took to heart what was important to her. They offered her the option of enrolling in a clinical trial on a shorter, 3-month timeline. Thanks to that trial, Chloe started college on time, and is now 10 years cancer free.

Chloe still visits Dana-Farber once a month to volunteer for the Pediatric Patient and Family Advisory Council, helping other patients and families dealing with cancer. “I feel so fortunate that my family and I received the care and support that we did,” she says. “It’s my way of giving back.”



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ELECTRONIC SERVICE REQUESTED



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**Ann Partridge, MD, MPH**, received the Carol Friedman Award from the Centers for Disease Control for her strong commitment to young women with breast cancer and to all cancer survivors.



**Caron Jacobson, MD, MMS**, received a Cancer Clinical Investigator Team Leadership Award from the National Cancer Institute for her work leading to the approval of a CAR T-cell drug for non-Hodgkin lymphoma.



**Pasi Jänne, MD, PhD**, received an Outstanding Investigator Award from the National Cancer Institute and the Waun Ki Hong Award for Outstanding Achievement in Translational and Clinical Cancer Research from the American Association for Cancer Research.

