



PROGRESS UPDATE

The Pan-Mass Challenge

Fall 2015



Dana-Farber Cancer Institute has been the top ranked cancer hospital in New England by U.S. News and World Report for 15 consecutive years, and is the only cancer center in the country ranked in the top 4 for both adult and pediatric cancer programs.

2015 PAN-MASS CHALLENGE: BRINGING CURES CLOSER BY THE MILE

The Pan-Mass Challenge (PMC) and Dana-Farber Cancer Institute are driven by a shared goal: to conquer cancer. As Dana-Farber's largest single contributor, the PMC provides more than 50 percent of the Jimmy Fund's annual revenue and has raised \$500 million for cancer care since its inception in 1980. Founded by Executive Director Billy Starr, who was made an Institute Trustee in 1987, this bike-a-thon represents the biggest athletic fundraising event in the nation.

The PMC leverages the generous investment of committed cyclists, volunteers, corporate sponsors, and individual contributors. Most of this support constitutes flexible funding that is directed when and where it is needed most.

The PMC has earned national recognition for passing through 100 percent of every rider-raised dollar to Dana-Farber's fight against cancer. An average of \$7,400 is raised per person, and rider retention rates stand at 75 percent. In 2015, approximately 6,000 cyclists from 41 states chose to ride one of 12 routes, traveling between 25 and 192 miles. More than 4,000 passionate volunteers powered the success of this event by organizing luggage, unloading cargo from trucks, distributing water, and preparing meals. More than 600 riders and volunteers represent PMC Living Proof®.

Dana-Farber remains grateful for your steadfast commitment and support.

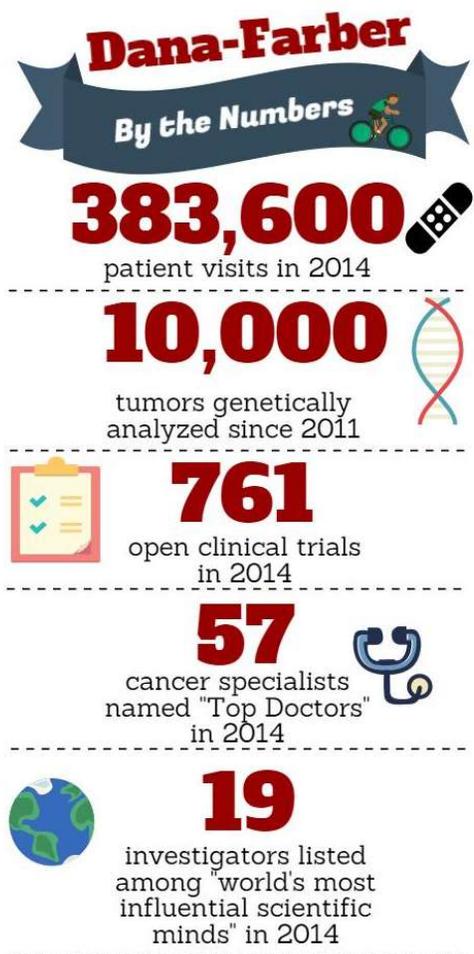


PMC SUPPORT: SOLID GROUND FOR MOVING FORWARD

Unrestricted, flexible funds provided by the PMC are the lifeblood of Dana-Farber, enabling the Institute to direct dollars to the most urgent needs, promising programs, and patient care initiatives. These funds are always focused on where they will have the largest impact and have moved the needle forward on a variety of fronts.

The following pages describe the impact of your generous support, which drives discovery and propels progress in our shared mission. Over the past year, unrestricted flexible funds generated by the PMC have advanced Dana-Farber's leadership in precision cancer medicine, which focuses on a patient's disease at a genetic level and seeks to find targeted treatments for each individual's cancer. These funds strengthen programs that bolster quality of life by addressing the total needs of patients and their families, and augment initiatives that reduce cancer risk. Further, PMC support makes enhancements to our state-of-the-art facilities and fundamental scientific research that is not yet eligible to receive federal funding possible.

As cancer science continues to evolve, the need for steady, flexible funding remains important. The PMC makes every dollar count, dedicating all funds raised to the world-class cancer care at Dana-Farber.



PMC DOLLARS AT WORK: FLEXIBLE FUNDING FOR TOP PRIORITIES

🚲 **Capital Projects** – PMC support funds significant enhancements that enable the Institute to continue to lead the field in innovation and remain at the forefront of cancer medicine, discovery, and delivery. Revitalization across Dana-Farber campuses have expanded the Institute’s research footprint, creating a more dynamic hub of breakthrough science fueled by the latest technology and strategic partnerships.

🚲 **Precision Medicine** – PMC support speeds precision medicine toward its ultimate goal—the right drug, for the right patient, at the right time. Powered by this funding, Dana-Farber leverages strategic partnerships to accelerate the development of targeted therapies that improve patient outcomes.

🚲 **Pediatric Oncology** – PMC support backs breakthrough research analyzing the root causes of childhood cancers and advancing cures. Additionally, PMC funding bolsters comprehensive services for young patients and their families. While many of these programs are not covered by insurance, the PMC ensures that Dana-Farber can continue to deliver expert, compassionate care without compromise.

🚲 **Experimental Therapeutics** – PMC support provides seed funding enabling Institute innovators to take strategic risks and make bold strides in devising and applying novel scientific and clinical strategies for cancer treatment.



PMC DOLLARS AT WORK: SUSTAINING INNOVATIVE RESEARCH

Scientists have gained better insight and have more tools available than ever before to treat cancer, yet securing federal support for research remains a challenge. The PMC helps to fill this funding gap, enabling the Institute to keep pace with the latest scientific developments, refine better ways of working, and invest in promising new initiatives that distinguish Dana-Farber as a world-leading cancer center. Following are examples of groundbreaking research powered by flexible funds from the PMC:

- 🚴 Researchers at the Center for Immuno-Oncology are exploring the capabilities of immunotherapy through the use of pre-clinical research models, clinical-trial frameworks, and guidance from a scientific advisory board. Recent breakthroughs include new trials of PD-1 inhibitors and novel vaccines unleashing the full cancer-fighting potential of the immune system.
- 🚴 Investigators at the Center for Neuro-Oncology are leveraging genomic science to generate targeted therapies for some of the most aggressive cancers. They are testing combinations of genetic drivers to uncover their underlying mechanisms and identify the best drug candidates to test in clinical trials. This approach could impact clinical outcomes for a variety of cancers.
- 🚴 Physician-scientists are spearheading pediatric cancer studies to pinpoint drivers and drug targets for various disease types, identify new cancer vulnerabilities, harness precision medicine for treating childhood cancers, and engineer other advances benefitting young patients and their families.

The passion and philanthropy of the PMC community fuel these and other pioneering scientific studies leading to tomorrow's cures. Thanks to the PMC, Institute innovators can creatively and boldly pursue the most promising opportunities, translating their findings into clinical applications.



PMC support allows the Institute to attract and retain the highest caliber faculty, and recruit promising, innovative scientists and clinicians from around the globe to join our experts in redefining cancer care and research.

PMC DOLLARS AT WORK: ENSURING TOTAL CARE FOR EVERY PATIENT

Dana-Farber’s hallmark “total patient care” philosophy is reflected in the comprehensive services provided to meet the social, emotional, and spiritual needs of patients and their families. PMC support is a lifeline for these vital services, many of which are not covered by insurance.

These services include:

- 🚲 Patient and family resource centers.
- 🚲 Support groups for patients and families.
- 🚲 Art and music therapies.
- 🚲 A School Liaison Program for children transitioning back into their classrooms after undergoing treatment.

There are 14.5 million cancer survivors in the United States today, a number that is projected to grow to almost 19 million by 2024. The effects of treatment, however, can have longer-lasting physical and psychological implications. PMC support extends to the Perini Family Survivors’ Center and Adult Survivorship Program, which have helped to advance clinical programming and research in the rapidly expanding field of survivorship.



Dana-Farber is unique among cancer centers in that its mission and budget are equally divided between scientific inquiry and compassionate care.

PMC support is essential for driving this signature approach, enabling the most progress against cancer in the shortest amount of time.

PMC DOLLARS AT WORK: BUILDING FOR TOMORROW TODAY

Thanks to PMC funds, Dana-Farber has broken new ground in the development of facilities that enable newer and better ways to prevent and treat cancer, to deliver those advances to every patient who needs them, and to live up to its mission. These projects represent a formidable investment in the space and technology needed to advance Dana-Farber's work, and to attract and retain the very best physician-scientists in the world.

The January 2015 opening of the Longwood Center significantly advances the delivery of precision cancer medicine, fostering collaboration and providing access to technologies needed to accelerate drug development. Customized, state-of-the-art laboratories allow the formation of research "neighborhoods" designed to facilitate a sense of community.

Home to investigators from the Robert and Renée Belfer Center for Applied Cancer Science, Blais Proteomics Center, and Linde Family Program in Cancer Chemical Biology, much of Dana-Farber's basic science investigation and a large component of experimental therapeutics research are conducted at the Longwood Center.

Additionally, the Molecular Cancer Imaging Facility (MCIF) opened in June 2015, featuring the only cyclotron in Massachusetts dedicated solely to cancer research. The MCIF equips the Institute with a comprehensive imaging platform for determining drug efficacy within days, versus weeks or months, ultimately speeding the delivery of new drugs to patients.



"Dana-Farber has made the decision to be more aggressive than ever about cancer research because the opportunities are so great. And the only reason we can even dream about being that aggressive and doing even more research is because of the PMC."

- President and CEO Edward J. Benz Jr., MD

PMC DOLLARS AT WORK: ADVANCING PRECISION MEDICINE



PMC funding has helped Dana-Farber become a world leader in precision cancer medicine—an emerging form of care that identifies genetic changes within a patient’s tumor that can be used to determine which drugs will be most effective against it. Even before precision medicine was declared a national initiative in January 2015, precision medicine has helped bring more effective treatment to patients with many types of cancer.

At Dana-Farber, the *Profile* project, launched in 2011, is an example of precision medicine at work. All patients diagnosed with cancer can consent to have samples of their tumors analyzed for the presence of mutations and other cancer-related DNA abnormalities.

Since *Profile*’s inception:

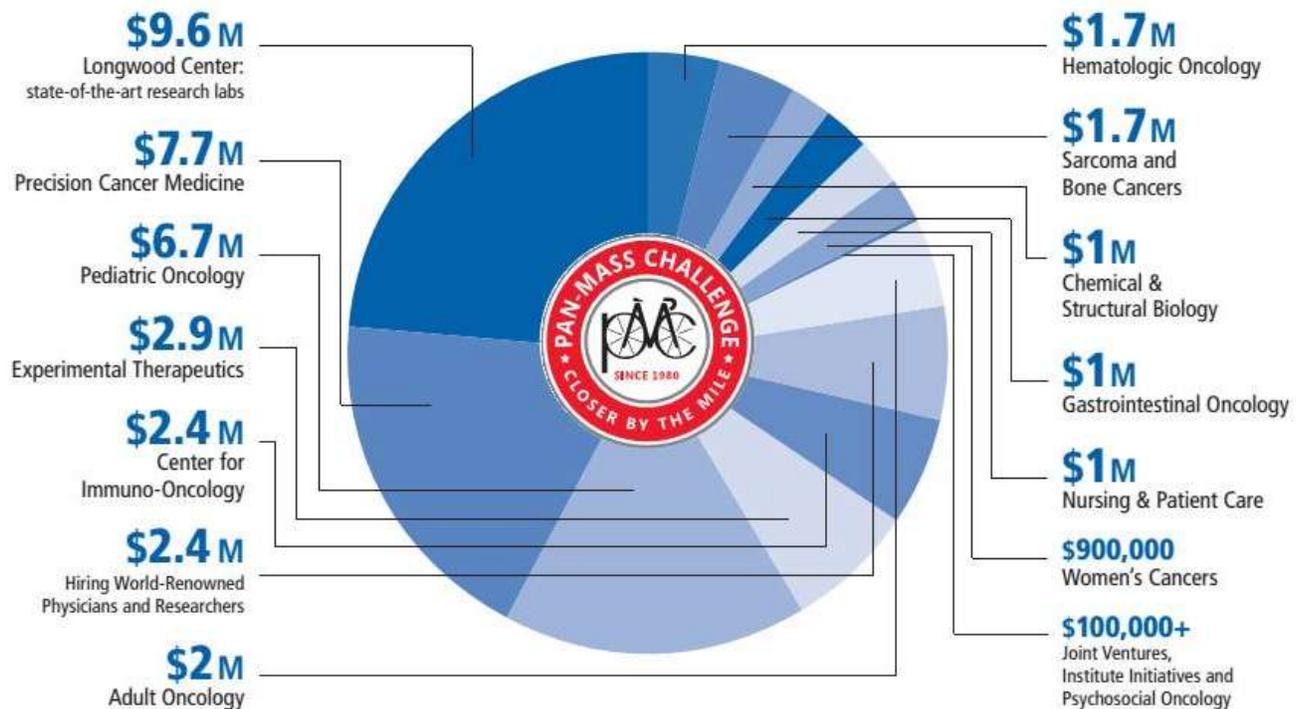
- 🚲 More than 30,000 patients have consented to participate in the project.
- 🚲 Researchers have completed and analyzed genomic tests on more than 10,000 tumor specimens.
- 🚲 A technology platform, called OncoPanel, has evolved so that it can now read out the entire genetic code of 305 cancer-related genes.

Profile has demonstrated that this type of genomic analysis can uncover potentially useful genetic information about an individual patient’s tumor, which ultimately helps doctors optimize each patient’s treatment plan.

In parallel, the Institute’s Joint Center for Cancer Precision Medicine is spearheading efforts to incorporate novel methodologies and genomic tools into the clinic, providing a crucial link between laboratory discovery and therapeutic innovation. The goal of the Joint Center is to identify extensive genetic and molecular information about patients’ tumors over time so that physicians can incorporate the information into selection for clinical trials and treatment decisions. A collaboration among Dana-Farber, Brigham and Women’s Hospital, Boston Children’s Hospital, and the Broad Institute of MIT and Harvard, the Joint Center aims to help patients receive targeted treatments based on their specific cancer.

Pan-Mass Challenge: \$41 Million in 2014

The Pan-Mass Challenge (PMC) raises money for Dana-Farber Cancer Institute and the Jimmy Fund's lifesaving mission to conquer cancer. In 2014, committed riders, donors, sponsors, and volunteers joined together to contribute \$41 million. This chart shows how Dana-Farber uses these funds to bring us closer by the mile.



START!



Billy Starr organizes his friends to bike and raise money to combat cancer, marking the beginning of the PMC.

1980

1983

The PMC becomes The Jimmy Fund's largest fundraising event.

1984

Institute President Baruj Benacerraf, MD, receives the Nobel Prize for work that unveiled the genetic underpinnings of the human immune system.

The Sidney Farber Cancer Institute is renamed the Dana-Farber Cancer Institute.



1993

The PMC becomes the most successful cycling fundraiser in the world.

1990

1988

Dana-Farber introduces its Susan F. Smith Center for Women's Cancers program to reduce the incidence of cancers in women.

Two out of every three children who enter the Jimmy Fund Clinic are cured.

The bridge connecting the Richard A. and Susan F. Smith Research Laboratories to the Dana Building is dedicated as the Pan-Mass Challenge Bridge to Progress.

1997

1998



2005

2006

The national Lung Cancer Alliance presents Billy Starr with a lifetime achievement award.

Gleevec (imatinib) goes on the market. Many patients with chronic myelogenous leukemia experience success with this "smart" drug, which was pioneered at Dana-Farber.

The American Nurses Credentialing Center bestows its first Magnet designation on Dana-Farber, the highest honor in nursing care.

Closer by the mile!

PMC achieves its goal of raising \$500 million since 1980!

2015



Dana-Farber's new Yawkey Center for Cancer Care is dedicated.

2011



The Longwood Center opens, expanding Dana-Farber's research footprint.

Dana-Farber launches "Profile," an ambitious research project screening cancer patients for mutations in known cancer genes, putting the Institute ahead of the national wave in precision medicine.

PMC: PUSHING THE PACE OF PROGRESS SINCE 1980

The PMC has enabled Dana-Farber to make tremendous strides in cancer care during the past 36 years. In the face of unprecedented change in the healthcare sector, PMC supporters have stepped up to raise funds for the Institute's vital work.

As the PMC has increased in size and scope, it has helped the Institute to pursue breakthrough discoveries and improved outcomes more ambitiously and aggressively.



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FOR MORE INFORMATION

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