DANA-FARBER CANCER INSTITUTE | The Jimmy Fund®

PRESIDENT'S CIRCLE
DISCOVERY • COMPASSION • IMPACT

PRESIDENTIAL UPDATE

June 2014

The Brock Wilkerson Mem. Cancer Research Fund
PO Box 2003
Lenox, MA 01240-5003

Dear Friends,

Since my last update in early 2014, there has been much excitement and great progress within the clinics, laboratories, and patient programs at Dana-Farber Cancer Institute. Thanks to your support as a President's Circle member, we have been able to make strides toward realizing Dr. Sidney Farber's vision to conquer cancer. I am delighted to share examples of these advances with you and hope you feel a shared sense of pride in the lifesaving work that you help Dana-Farber undertake on behalf of our patients and their families.

We continue to seek novel ways to tailor personalized therapies. While the cancer-related genes within a tumor serve as a directory of potential targets for drug therapy, tumor tissue poses troubling limitations. Samples can be difficult to obtain and often require multiple invasive procedures to remove tissue for research. In order to remedy this, the Belfer Institute for Applied Cancer Science at Dana-Farber, under the direction of Pasi Jänne, MD, PhD, and Kwok-Kin Wong, MD, has devised a novel technique that utilizes the castoff DNA from tumor cells obtained via a simple blood test. This less-invasive analysis provides a wonderfully accurate picture of a tumor's genomic composition and illustrates the most promising course of treatment for the specificities of a patient's disease.

To gauge the efficacy of this technique, investigators at the Belfer Institute tested the procedure in patients with lung cancer. I am pleased to report that in a set of experiments involving patients with certain genetic mutations, the technique accurately identified the presence of the correct mutation 70 to 80 percent of the time. This promising work is already garnering a great deal of interest and was recently published in the journal *Clinical Cancer Research.*

Mirroring the Belfer Institute's efforts to realize our goal of providing precision medicine for all of our patients, Dana-Farber's Early Drug Development Center (EDDC), headed by Geoffrey Shapiro, MD, PhD, ensures that experimental drugs will be designed to inhibit the growth of cancer cells across all disease areas. One barrier to the success of such drugs is the alteration of proteins known as "checkpoint proteins" that regulate the division of cells. When cells are cancerous, they ignore the checkpoints that control cell division, which causes tumors to form. To target these mutations more accurately, the EDDC has designed a new generation of compounds aimed at mutated checkpoint proteins.

A shining example of the success of the EDDC's work is evident with the discovery of palbociclib, a compound that has dramatically slowed the progression of metastatic breast cancer in women with estrogen-receptor-positive disease. This exciting finding grabbed headlines at an April meeting of the American Association for Cancer Research, and additional tests are being conducted within the EDDC to explore in greater detail the power of these compounds.

I hope that these glimpses into the cutting-edge research being conducted at Dana-Farber illustrate how important your President's Circle support is to our success. You are our valued partner in the fight against cancer and the entire Dana-Farber community is appreciative of your wonderful, thoughtful generosity.

Sincerely,

Edward J. Benz, Jr., MD
President and CEO, Dana-Farber Cancer Institute