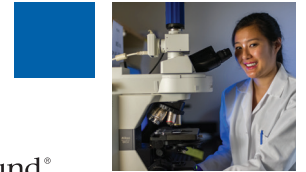
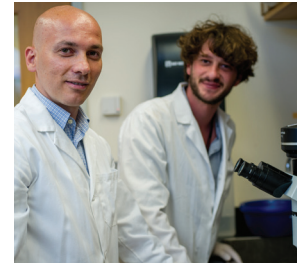


# Center for Prevention of Progression of Blood Cancers

Stopping Cancer Before it Starts



**“We intend to lead a paradigm shift that will ultimately change the way blood cancers are diagnosed and treated. By focusing on early precursor conditions, we will have the ability to develop better targeted therapeutic agents to prevent progression or even eliminate the disease before it leads to symptoms.”**

— Irene Ghobrial, MD  
Co-Principal Investigator, Center for  
Prevention of Progression of Blood Cancers  
Director, Michele & Stephen Kirsch Laboratory

The Center for Prevention of Progression of Blood Cancers at Dana-Farber Cancer Institute, under the direction of Irene Ghobrial, MD, is the first in the nation—leading research and clinical efforts to halt the progression of pre-cancerous conditions before they develop into blood cancers. Although thousands of patients are diagnosed annually with conditions that could potentially become leukemias, lymphomas, or myelomas, there are no effective treatments available to prevent disease progression. This means most patients do not receive treatment until they develop cancer. The Center’s collaborative team of hematologic malignancy specialists works to develop better targeted therapies to stop cancer before it starts by:

## **CROWD-SOURCING PATIENT SAMPLES**

Before a study can begin, researchers must amass patient health information and tumor samples, which they then mine for information. Ghobrial and her team are leading an initiative—PCROWD—to recruit 10,000 patients with precursor conditions nationwide to contribute tissue samples and clinical data for study. As part of routine care appointments, providers will collect an extra blood and bone marrow sample for the precursor crowd trial. By tracking the progression of each patient’s disease over time, researchers will be able to establish timelines of molecular changes that occur as specific precursor hematologic malignancies develop into their respective cancers.

## **INVESTIGATING PROGRESSION**

From this database of samples, researchers will develop *in vitro* and *in vivo* disease models to investigate why some patients’ diseases progress, while others do not. Ghobrial and her colleagues will use these models to study changes in the biology of the tumor cells and surrounding tumor

microenvironments, as well as alterations in tumor genes and gene expression. Combined with the availability of sample data tracked over time, researchers can use these biological insights to pinpoint when and where disease biology changes in the progression from precursor condition to cancer.

## **DEVELOPING NOVEL CLINICAL TRIALS**

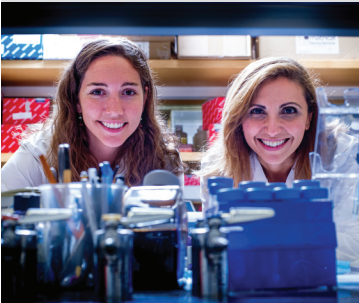
By understanding the molecular changes that occur as a disease advances, physician-scientists will be able to identify the biological markers that signal progression—which will not only aid in early screening measures, but also will help researchers identify potential targets for treatment. Building on this work, Ghobrial and her team will test existing and experimental drug compounds in disease models to determine which therapies are most effective in preventing pre-cancerous conditions from evolving into malignant disease. The ultimate goal of the center is to translate these discoveries into clinical trials in hopes of establishing a new standard of care for patients with precursor conditions—screening and treating patients before they develop cancer.



# Center for Prevention of Progression of Blood Cancers

## Give our Researchers the Edge

Breakthroughs in the prevention and treatment of blood cancers rely on the support of our generous donors. Your investment in the Center for Prevention of Progression of Blood Cancers will make an immediate and lasting impact in the lives of patients and families, worldwide.



## With your help, our investigators can:

- Identify molecular markers of progression for patients with precursor conditions
- Develop tools for early detection screening of high-risk individuals
- Develop therapies to prevent or delay progression in patients with these conditions

## Leading the Way

The Center for Prevention of Progression of Blood Cancers is distinguished by its:

### UNIQUE APPROACH

Dana-Farber's 50/50 balance of research and patient care is the cornerstone of our lifesaving mission. The Center for Prevention of Progression of Blood Cancers works within Dana-Farber's Division of Hematologic Malignancies to seamlessly integrate science and clinical care, with the goal of moving discoveries rapidly from the laboratory bench to the patient's bedside.

### PROMISING CLINICAL TRIALS

The Institute's impactful clinical trials offer eligible patients the opportunity to take advantage of the latest advances in medicine and help develop experimental therapies into viable treatment options.

### COMPASSIONATE, TOTAL PATIENT CARE MODEL

Dana-Farber patients have access to a multidisciplinary team of oncologists, specialists, and caregivers who collaborate to ensure patients receive the best combination of treatments for their cancers—all under one roof.

### EXPANSIVE COLLABORATION

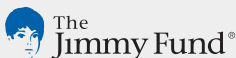
Dana-Farber's "team science" model encourages lab researchers to work in tandem with clinicians, while faculty and staff also collaborate across the Harvard Medical School system and other national and research institutions around the world, bringing together their combined expertise for the benefit of all patients.

## Competitive LLS SCOR Grant

Recently, Ghobrial successfully competed for one of only four Leukemia and Lymphoma Society Specialized Center of Research (SCOR) grants. In 2014, under Ghobrial's direction, the SCOR grant—which recognizes synergy in multidisciplinary research programs—helped formally establish the collaborative, integrative Center for Prevention of Progression of Blood Cancers at Dana-Farber Cancer Institute.



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.



You don't have to be a doctor to cure cancer.®

10% of all designated gifts supports our Faculty Research Fund to advance Dana-Farber's Research Mission.

To learn more, please contact:

Kate Hall

617-632-3739

katherine\_hall@dfci.harvard.edu