

2015 Impact | Funding Allocations

Cycle for Survival is determined to beat rare cancers by powering groundbreaking research. Participants and donors fight so all patients have the treatment options they desperately need.

Since 2007, Cycle for Survival has raised more than \$75 million—including \$25 million in 2015. Every dollar launches and accelerates research studies and clinical trials to drive progress.

2015 was our biggest fundraising year yet! 100% of every dollar raised directly funds pioneering research initiatives.

MSK has long been the preeminent center for research devoted exclusively to cancer. MSK's clinicians treat over 400 subtypes of the disease. The discoveries made here benefit patients around the world. MSK has produced more FDA-approved drugs for the treatment of cancer than any other single academic institution.

The 2015 donations will be transformative:



Our 2015 Impact | Funding Allocations

Cycle for Survival Research Awards

Acute Myeloid Leukemia
Advanced Solid Tumors
Bladder Cancer
Blood Cancers (two projects)
Bone Sarcomas
Glioblastoma
Mesothelioma
Ovarian Cancer
Pancreatic Cancer
Pediatric Brain Cancer
Pediatric Glioblastoma and Leukemia
Stomach Cancer
Uveal Melanoma

Directed Support

Adenoid Cystic Carcinoma
Appendix Cancer
Brain Cancer
Bile Duct Cancer
Clear Cell Ovarian Cancer
Kidney Cancer
Leukemia
Leptomeningeal Disease
Lymphoma
Merkel Cell Carcinoma
Multiple Myeloma
Pancreatic
Neuroendocrine Tumors
Philadelphia Chromosome -Positive ALL
Sarcoma*
Testicular Cancer
Thyroid Cancer
Uterine Papillary Serous Carcinoma

*Sarcoma research includes:
Angiosarcoma, GIST, Leiomyosarcoma,
Liposarcoma, Ewing Sarcoma,
Osteosarcoma, Rhabdomyosarcoma

Pediatric

Ewing Sarcoma
Germ Cell Tumors
Osteosarcoma
Retinoblastoma
Rhabdomyosarcoma

Our 2015 Impact | Funded Research

Thanks to dedicated participants and donors, the funds raised in 2015 will develop many critical areas of research. In addition to the allocations for very specific rare cancer research projects, donations also support the advancement of comprehensive research initiatives. We're proud to contribute to these bold efforts that will change the way cancer is diagnosed and treated.



The David M. Rubenstein Center for Pancreatic Cancer Research

Only 7% of people diagnosed with pancreatic cancer survive longer than five years. That statistic is unacceptable. Cycle for Survival supports groundbreaking efforts so that one day, every patient can go on to lead a full, long life.

The mission of the David M. Rubenstein Center for Pancreatic Cancer Research, led by Dr. Steven Leach, is to improve the lives of pancreatic cancer patients through bold, innovative and multidisciplinary research. Using Cycle for Survival funds, the Rubenstein Center is going to: launch a clinical trial testing a state-of-the-art preoperative therapy; recruit additional clinical research staff to increase the number and scope of trials; validate a novel method of optimizing individualized patient therapy; and purchase cutting-edge research equipment. This growing, ambitious effort promises new and better treatment options for patients around the world.

Our 2015 Impact | Funded Research

»»» The Marie-Josée and Henry R. Kravis Center for Molecular Oncology

No one should ever be told, “We don’t have a treatment for your cancer.” Cycle for Survival’s support for this pioneering center will help ensure that every patient—even with the rarest form of the disease—has powerful, effective options.

The Marie-Josée and Henry R. Kravis Center for Molecular Oncology (CMO), led by Dr. David Solit, integrates molecular and clinical information to develop breakthrough therapies individualized to each patient’s cancer. The CMO will use Cycle for Survival funding to advance crucial studies of “driver” mutations, which promote and maintain tumors. Therapies targeting these alterations can have a dramatic and positive effect on patients because they attack cancer’s fundamental vulnerabilities. Dr. Solit and his team are conducting in-depth molecular testing on tumors that have no known mutation—with a focus on rare cancers. This far-reaching initiative will bring new answers and more powerful treatments to patients.

»»» The Center for Epigenetics Research

Epigenetics research—a rapidly growing and innovative field—promises to refine how we understand and treat cancer. Cycle for Survival support will accelerate and leverage epigenetic discoveries.

The Center for Epigenetics Research (CER), led by Dr. Scott Armstrong, studies how information passed down from cell to cell—but not encoded in the DNA—influences cancer cell behavior. Cycle for Survival funding will support three crucial CER programs. The Epigenetics Technology Innovation Lab is developing novel tools to pinpoint how epigenetic processes lead to the development of leukemia, sarcoma and a number of other cancers. The Computational Epigenetics Lab is designing more thorough, accurate ways of assessing epigenetic programs in cancer cells. Finally, the Preclinical Interface Platform is a new strategy for developing cancer models, therapies, and instruments that target tumors at the epigenetic level. These projects inform the development of a revolutionary new generation of drugs and treatment strategies.

»»» Sarcoma Research

“Sarcoma” is a simple word for a difficult challenge: multitudes of diseases—often with numerous, complex drivers—that can be resistant to treatment. Cycle for Survival’s support continues to create an array of powerful therapies that attack and contain every form of sarcoma.

The Sarcoma Medical Oncology Service, led by Dr. William Tap, conducts wide-ranging research examining this group of many different rare malignancies. Cycle for Survival funding will accelerate several critical initiatives. First, Dr. Tap and his team will advance clinical trials testing immunotherapies, which help the immune system to better recognize and attack sarcoma; and targeted therapies, which disable sarcomas’ means of survival and growth. The team will also increase the breadth and depth of basic science and translational research—bridging lab discoveries to patients’ bedsides. Finally, the Jennifer Goodman Linn Laboratory of New Drug Development in Sarcoma and Rare Cancers will expand its ambitious, groundbreaking research agenda. All of these efforts will deliver more targeted, effective treatments to sarcoma patients worldwide.

Our 2015 Impact | Funded Research

»»» The Human Oncology and Pathogenesis Program (HOPP)

It is essential that discoveries made in the laboratory inform better treatments in the clinic. Cycle for Survival's support will cut the time required for breakthrough targeted therapies to reach patients.

The Human Oncology and Pathogenesis Program (HOPP), led by Dr. Charles Sawyers, addresses the challenges presented by cancer research in the era of targeted therapies. This highly-promising new class of treatment often reduces side effects and improves patients' quality of life. HOPP will use Cycle for Survival funding to drive clinical studies of therapies that treat rare cancers more directly and powerfully. The HOPP team conducts research on a wide array of diseases, including glioblastoma, leukemia, and thyroid cancer—and has diverse specializations, such as neurology, endocrinology, and pathology. The team's unifying characteristic is their training as clinician-scientists: these investigators' time is spent in the lab, but they also maintain clinical duties—keeping them closely attuned to patient needs and critical challenges in the clinic.

Select Projects Supported by 2015 Donations

Fourteen Cycle for Survival grant recipients were chosen, based on the merit of their proposals, to pursue unique approaches and ideas that will impact the diagnosis and treatment of rare cancer patients. Each recipient was selected by a committee composed of their peers and MSK's leadership. It's an honor to support their work—all thanks to generous and devoted Cycle for Survival participants and donors.

The funds raised in 2015 were also allocated to specific areas of research to support new and ongoing efforts to defeat rare cancers. These pioneering initiatives offer hope for patients around the world who are battling rare cancers.

Blood Cancers (Research Award Recipient)

Drs. Ross Levine and Andrea Ventura are leading a study to model and characterize certain chromosomal rearrangements found in blood cancers—as a way to evaluate how this impacts treatment for patients with these diseases.

Acute Myeloid Leukemia (Research Award Recipient)

To investigate a treatment for patients with AML, which will soon be entering clinical trials, Dr. Scott Armstrong is leading a study to target a specific enzyme and identify biomarkers that show treatment response; he also will test for new epigenetic mechanisms that either sensitize or cause resistance to this therapy.

Mesothelioma (Research Award Recipient)

By examining the signaling network activated by loss of the tumor suppressor NF2, Dr. Filippo Giancotti seeks to develop better treatment options for patients with mesothelioma.

Blood Cancers (Research Award Recipient)

For patients with hematologic cancers, Dr. Marcel van den Brink is developing an off-the-shelf immunotherapy drug using engineered T cells and created using laboratory models—ultimately moving into a phase I clinical trial.

Select Projects Supported by 2015 Donations

Bladder Cancer (Research Award Recipient)

Dr. Gopakumar Iyer is leading a study to determine how the loss of a certain gene, more common in bladder cancer than any other cancer type, could lead to a new treatment option for patients with urothelial carcinoma.

Pancreatic Cancer (Research Award Recipient)

Dr. Andrea Ventura is exploring the role of a specific genetic mutation found in most pancreatic adenosquamous carcinoma, an aggressive subtype of pancreatic cancer. Determining how its presence contributes to the origin of the disease and its progression will help uncover treatment possibilities.

Ovarian Cancer (Research Award Recipient)

Dr. Dmitry Zamarin is using laboratory models to evaluate response rates and resistance to immunotherapy approaches in ovarian cancer—to eventually develop a combination treatment targeting the body's own immune system.

Uveal Melanoma (Research Award Recipient)

For patients with melanoma of the eye, Dr. Yu Chen is evaluating the relationship between the activation of one genetic mutation and another's de-activation—and how this could translate into an effective treatment to stop the disease.

Pediatric Glioblastoma and Leukemia (Research Award Recipient)

Using models of leukemia and pediatric gliomas created in the lab, Dr. Viviane Tabar is evaluating the therapeutic effect—and possible anti-cancer growth mechanism—of a brand-new inhibitor.

Bone Sarcomas (Research Award Recipient)

For patients needing reconstruction after the surgical removal of a sarcoma, Dr. Daniel Prince is investigating the regenerative ability of bones for two years post-surgery.

Advanced Solid Tumors (Research Award Recipient)

Dr. David Hyman is evaluating how a specific genetic mutation impacts the development and treatment of advanced solid tumors, regardless of where the cancer originates in the body, by performing a co-clinical trial that studies the disease in the lab while simultaneously studying patients enrolled in a trial.

Stomach Cancer (Research Award Recipient)

Using tissue samples from patients with HER2+ stomach cancer, Dr. Yelena Janjigian is determining how changes in the genomic landscape correlate with cancer spread and drug resistance.

Pediatric Brain Cancer (Research Award Recipient)

Through phase I and phase II clinical trials, Dr. Yasmin Khakoo is developing a new targeted therapy for pediatric low-grade gliomas.

Glioblastoma (Research Award Recipient)

To advance the standard of care for patients with gliomas, Dr. Jason Huse is researching the epigenetic mechanisms that drive a newly-discovered molecular alteration found in a large subtype of primary brain tumors.



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Select Projects Supported by 2015 Donations

Osteosarcoma

For children and young adults battling osteosarcoma, Dr. Paul Meyers is leading an initiative to use a patient's own immune system combined with modified cells to attack the cancer. By targeting a tumor's vulnerability, patients will have a potentially powerful new treatment option.

Multiple Myeloma

Through genetic analysis, Dr. Sergio Giralt will be able to identify DNA predictors of response and outcome for myeloma patients. The data will be used to more effectively tailor therapies for high-risk myeloma patients, and to develop new molecularly-targeted treatments.

Liposarcoma

Drs. Mark Dickson, Andrew Koff, Samuel Singer, and William Tap are collaborating to launch a clinical trial studying a drug that inhibits the expression of a gene linked to liposarcoma. The goal is also to identify which patients—with liposarcoma and possibly other cancer types—are a match for the treatment.

Pancreatic Neuroendocrine Tumors

Dr. Diane Reidy-Lagunes is helping to identify and validate "master regulator genes" in neuroendocrine tumors that drive the metastatic form of the disease; studies will focus on evaluating patients' tissue to find the best treatments to defeat the tumor.

Cholangiocarcinoma

Drs. Scott Lowe and Maeve Lowery are developing treatments to more effectively target genetic mutations in bile duct cancer; information about drug sensitivity and resistance learned through models created in the lab will benefit patients currently enrolled in clinical trials for these therapies.

Lymphoma

Dr. Craig Moskowitz is leading an effort to generate the first comprehensive genetic and immunologic profile of Hodgkin lymphoma—the goal being to predict a patient's response to standard and investigational therapies.

Brain Cancer

Dr. Lisa DeAngelis is advancing clinical trials to evaluate new and innovative therapies that treat brain tumors based upon genetic profiling.

Thyroid Cancer

Dr. Alan Ho is conducting several clinical trials investigating new approaches for treating patients with incurable RAI-refractory thyroid cancer.

Uterine Papillary Serous Carcinoma

To advance understanding of this disease, Dr. Douglas Levine and the GYN Research Lab are investigating treatment response to targeted therapies, characterization of these aggressive tumors, and molecular features of their behavior.

Philadelphia Chromosome-Positive ALL

Dr. Ross Levine is investigating a new combination of treatments, a type of therapy called kinase inhibitors, that block cancer growth for patients with Philadelphia chromosome-positive acute lymphoblastic leukemia.



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The December Challenge: A Gift to Beat Rare Cancers

Last holiday season, the Cycle for Survival community propelled innovative research at MSK by funding breakthrough technology. In a few short weeks, \$1 million was raised to acquire a DNA sequencer. Already in the lab, this equipment is transforming the way cancer is studied by allowing doctors to identify genetic mutations and provide targeted treatments. Many of the researchers who received Cycle for Survival funding in 2015 will use this revolutionary sequencer to develop new and better therapies for patients worldwide.

