The Uveal Melanoma Program

Healing + Discovery. Made Possible By You.

UNTIL EVERY CANCER IS CURED
Jefferson: A National Destination

Jefferson is the national destination of choice for many patients with advanced stages of uveal melanoma. Since 1999, we have seen approximately 100 new patients every year with metastatic uveal melanoma, about two-thirds of whom travel from outside of the tri-state area for treatment.

Home to a multidisciplinary team of the world’s foremost experts in the field, our NCI-designated Sidney Kimmel Cancer Center (SKCC) is a national referral center for uveal melanoma patients, particularly for treatments directed at the liver—the most common site of metastasis for this unique patient population.

SKCC is consistently ranked among the top cancer centers in the nation by US News & World Report

Two-thirds of our uveal melanoma patients come from outside of the tri-state area

Approximately 650 liver-directed treatments for metastatic uveal melanoma are performed at Jefferson every year—more than any other program in the nation

Our world-renowned faculty are frequent recipients of prestigious honors like the Falk Catalyst Research Award and the Melanoma Research Alliance’s Team Science Award

Ranked in top 5% of cancer centers nationwide for clinical trial enrollment
The Challenge: The Need for Research

Uveal melanoma is the most common type of cancer in the adult eye, affecting two thousand Americans per year. It is also one of the most complex types of cancer—one that is largely unaffected by traditional treatments like chemotherapy.

Uveal melanoma does not have a standard of care. The key to combating this disease lies in translational research, a bench-to-bedside research model in which breakthroughs in the lab are rapidly translated into new innovations in the clinic. For over 20 years, the breadth of Jefferson’s research has been unmatched by any other program in the world.

Our comprehensive and personalized approach to research not only furthers our understanding of the disease—it allows uveal melanoma patients to receive leading-edge therapies available nowhere else.

The Vision

At Jefferson’s Sidney Kimmel Cancer Center, our vision is clear—we are working to establish an international standard of care for uveal melanoma.

We have a proven track record for pioneering new therapies and treatments for metastatic uveal melanoma patients. Our multidisciplinary program is one of only a few across the country and, as a nationally ranked referral center, our program is one of the most trusted in the United States.

To make this vision a reality, we are tireless in our pursuit of three strategic priorities: provide the highest quality of care to our patients and their loved ones, pursue bold new research opportunities, and train the future leaders of the discipline. Every step we take today brings us closer to a cure tomorrow.

Philanthropy is the foundation upon which these priorities stand, serving as a vital catalyst for trailblazing work that is leading to more breakthroughs, more therapies, and more hope for uveal melanoma patients. By investing in Jefferson, you place the next level of understanding, prevention, and treatments all within our reach.

This is the future of cancer care, and it’s powered by you. The next breakthrough, the next treatment—you make it possible.
Pictured from left to right: Takami Sato, MD, PhD, and Renee Zalinsky, RN, OCN, pose with Anjum Amjad, PA, Carin Gonsalves, MD, and David Eschelman, MD, of the Interventional Radiology team, who have gotten big results through a thoughtful combination of the standard anti-cancer playbook and new therapies like immunoembolization. When discussing her care under Dr. Gonsalves’ team, Jill, a grateful patient, said, “I trust her intellectual, academic side to make good recommendations and bring forth creative solutions.”
Medical Oncology

Takami Sato, MD, PhD  Mariana Orloff, MD

Jefferson's Medical Oncology team is unparalleled in the field, offering uveal melanoma patients the best, most personalized care from the world's foremost specialists in the discipline.

Fundamental Research

Vitali Alexeev, PhD  Andrew Aplin, PhD  Jeffrey Benovic, PhD  Mizue Terai, PhD  Philip Wedegaertner, PhD

Fundamental research is the foundation of medical innovation—lab studies that unlock the mysteries of disease and fuel breakthroughs in the clinic. Our distinguished researchers stand at the forefront of uveal melanoma research, leading investigations that are translated into first-in-field clinical applications.

Interventional Radiology

Robert Adamo, MD  David Eschelman, MD  Carin F. Gonsalves, MD

The Interventional Radiology team has pioneered liver-directed treatments that have provided significant survival benefits for uveal melanoma patients with hepatic metastasis. They led the largest real-world study demonstrating the improvement of patient outcomes using this innovative treatment method.
A uveal melanoma diagnosis is life changing for patients and their loved ones. We understand how overwhelming a cancer diagnosis can be, which is why we strive to be more than just a medical team. We are an ally, working diligently to coordinate and advocate on our patients’ behalf from diagnosis through treatment and beyond.

**A Hands-on, Holistic Approach**
Every step of uveal melanoma treatment comes with unique needs and challenges that can be overwhelming for patients and their loved ones.

At Jefferson’s Neu Center for Supportive Medicine and Cancer Survivorship, patients and their families have access to myriad services designed to minimize the emotional and logistical stresses associated with cancer care.

**Philanthropy is invaluable to bringing the Neu Center’s services to our uveal melanoma patient population. Your generosity will help to maximize our patients’ quality of life while they are in our care, exposing more patients to such vital services as patient coordination, legal guidance, social work, financial planning, psychotherapeutic services, transportation, and lodging support.**

**Novel, Next-Generation Therapies**
Jefferson is home to a number of innovative treatments for metastatic uveal melanoma, including immunoembolization, percutaneous hepatic perfusion, transarterial chemoembolization (TACE), selective internal radiation therapy (SIRT), and drug-eluting beads.

Few centers in the country match the breadth of our treatment options. In fact, few offer immunoembolization, which was developed at Jefferson and has been shown to markedly increase length of survival with modest toxicities.

**Philanthropy presents a special opportunity to fuel the development of these novel therapies, improving the care and quality of life for current and future patients. It causes a ripple effect of hope and healing that helps to create future survivors.**

“Over time, these patients become part of our family.”
Renee Zalinsky, RN, OCN

Renee Zalinsky, RN, OCN
Uveal melanoma Navigator Renee Zalinsky is the first point of contact for Jefferson’s metastatic uveal melanoma patients and their loved ones, providing hands-on and compassionate support through every stage of their cancer journey. Whether scheduling appointments or keeping patients abreast of the latest clinical trials, Renee works tirelessly to handle the many details associated with our patients’ care, so that they can focus on what matters most—getting healthy.
“The patient is the center of everything we do. We tailor treatments to what’s appropriate for each patient, being mindful of what’s going on in their lives beyond their disease.”

- Takami Sato, MD, PhD
  Director,
  Metastatic Uveal Melanoma Program

Your generosity facilitates the best patient-centered clinical care from a multidisciplinary medical team. By combining world-renowned physicians from an array of disciplines and specialties, we can provide the best treatments, tailor-made for each patient. Your gift has the power to help us continue creating innovative solutions for future generations of uveal melanoma patients.
In the fight against uveal melanoma, science matters. From molecular breakthroughs to innovative therapies and technologies, every discovery made in the lab today brings us closer to a new treatment, a new standard of care, even a cure tomorrow.

That is why Jefferson is home to an unparalleled translational research infrastructure that pairs thought leaders in melanoma research with the world’s foremost clinicians in the discipline. This bench-to-bedside model not only fuels innovation in the lab and clinic, it ensures that our patients have access to next-generation therapies that could one day become a new standard of care for uveal melanoma.

Philanthropy is invaluable to our research efforts. Your generosity empowers our team to launch bold new research endeavors, recruit distinguished faculty and staff, create state-of-the-art facilities, expand the breadth and scope of our current investigations, and so much more. It’s a catalyst that sparks breakthroughs in the lab and innovations at the bedside—a powerful source of hope for current and future generations of uveal melanoma patients.
Personalized Medicine

There is a critical need for new and improved therapeutic strategies in uveal melanoma. At SKCC, Takami Sato, MD, PhD, and his team have developed a first-in-field approach to surgically implant a patient’s uveal melanoma into a mouse model to test the tumor’s drug sensitivity. This practice allows the team to develop a customized treatment plan for metastatic uveal melanoma as each patient’s tumor has unique characteristics that affect its response to treatments. So far, Dr. Sato’s team has an implantation success rate of greater than 80 percent – the highest success rate among those who are attempting this technology. Establishing these models is a major advance for uveal melanoma research.

Related to the ImmTAC clinical trial, Dr. Sato is working on the development of new mouse models to investigate the immunological mechanism of this novel approach. Immunotherapy is a cancer treatment designed to boost the body’s natural defenses and has changed the way we treat the disease. Historically, mice were used to test the effectiveness of cancer treatments like chemotherapy. In order to accurately test the treatment’s response, a mouse would need to have a humanized immune system. Dr. Sato and his team are currently developing a method that would mimic a human immune system in a mouse model to more accurately test the effectiveness of cancer therapies.

Targeting Genetic Alterations

Two gene mutations (GNAQ or GNA11) occur in nearly all uveal melanoma cases. SKCC investigators are developing multiple approaches to discover how mutations in GNAQ/11 drive uveal melanomas and are testing strategies designed to target these mutations. Philip B. Wedegaertner, PhD, is studying how mutations in GNAQ/11 alter their localization and activity within cancer cells. Jeffrey Benovic, PhD, is testing new inhibitors to directly target mutant GNAQ in uveal melanoma models. Vitali Alexeev, PhD, is developing a vaccine to stimulate a patient’s immune system to eliminate cancer cells expressing antigens derived from these mutations. The vaccine is currently being tested in mouse models to target, prevent and reverse metastasis. It is expected that these novel approaches will be tested in uveal melanoma patients in two to three years.
Dissemination & Dormancy

Dr. Mizue Terai uses liquid biopsies to study circulating tumor cells (CTC) in the blood of patients with uveal melanoma. Her team has discovered that arterial blood, rather than venous blood, is a better source of CTC detection of metastatic uveal melanoma. They are also working on tumor-derived DNA in the blood of uveal melanoma patients. This test is expected to provide a more sensitive method of early detection for metastatic uveal melanoma.

Uveal melanoma sometimes develops metastases decades after diagnosis and treatment. The mechanism of this late recurrence after periods of dormancy is a prime area for investigation that has, until now, been largely overlooked. Dr. Andrew Aplin’s laboratory is identifying the underlying cause of dormancy and compiling the information necessary to develop a clinical trial focused on eliminating dormant cells. Dr. Aplin’s group is also studying the effects of BAP1 mutations that are associated with metastasis and poor overall survival in uveal melanoma. Efforts are currently focused on identifying targets that selectively kill mutant BAP1 tumors.

Cluster Analysis

The factors underlying the etiology of uveal melanoma are poorly understood. Dr. Marlana Orloff has identified potential clusters of uveal melanoma patients, many who are young women—some of them graduated from the same high school and others stayed in the same college dormitory. She is disseminating these findings within the relevant communities and researching potential environmental factors that may cause uveal melanoma. To further investigate this issue, more accurate registry of uveal melanoma patients including their residence history is critical. Dr. Orloff is actively working to develop a national registry for uveal melanoma patients. Creating this database will gather and document valuable information that will allow us to keep accurate statistics, observe locations of occurrences, and target trends.
Novel Clinical Trials

All treatments that are now standard of care were once considered cutting-edge, and all were pioneered through clinical research. At SKCC, we are steadfast in our dedication to clinical research, particularly for metastatic uveal melanoma. In fact, we are in the top 5% of cancer centers nationwide for clinical trial enrollment.

In January 2016, the FDA granted ImmTAC (Immune mobilizing mTCR Against Cancer) an Orphan Drug designation for the treatment of uveal melanoma. The drug harnesses T-cell receptor (TCR) technology in patients expressing HLA A2 positive, a tissue type that is found in almost half of all Americans. **This type of approach is potentially a breakthrough treatment for many different types of cancer, and SKCC is one of the leading study sites in the world offering this clinical trial.**

In contrast to skin melanoma, uveal melanomas have low numbers of mutations. This knowledge has spurred “epigenetic” efforts to target common genetic processes that play a key part in the proliferation of cancer cells in uveal melanoma patients. A new class of epigenetic inhibitors, known as BET inhibitors, are being tested in a phase 1b/2 trial run by Dr. Marlana Orloff. She is collaborating with the Aplin laboratory to understand determinants of response and mechanisms of resistance.

The patient data garnered from these studies will be critical to broadening our understanding and treatment of uveal melanoma.

Attacking Metastases

The liver is the most common site of metastasis from primary uveal melanoma and is the life-limiting factor for the majority of metastatic uveal melanoma patients. SKCC is the national center for liver-directed treatments for metastatic uveal melanoma, with approximately 650 such procedures performed every year by Drs. Robert Adamo, David Eschelman, and Carin Gonsalves of Jefferson’s Interventional Radiology team. These innovative treatments, such as immunoembolization, have been shown to dramatically increase the survival of metastatic uveal melanoma patients. Dr. Sato, Dr. Orloff, and the Interventional Radiology team are currently conducting new clinical trials combining liver-directed treatments with systemic immunotherapies to further improve the outcome of patients with liver metastasis.

The liver microenvironment produces various molecules that protect uveal melanoma cells from therapeutic agents that are effective in other forms of melanoma. Dr. Andrew Aplin has identified factors from the liver (HGF and FGF) that bind tumor cell receptors (cMET and FGFR, respectively) that are critical for the ability of uveal melanoma to tolerate targeted therapies. These findings form the basis for clinical trials to test the effectiveness of blocking these factors made by the liver microenvironment to enhance the effects of targeted therapies in uveal melanoma patients.

The liver is also an immuno-suppressive organ. Dr. Mizue Terai has identified that a factor rich in the liver (tryptophan dioxygenase, TDO) is also produced by metastatic uveal melanoma cells. TDO decreases essential amino acid, tryptophan, that is critical for the survival of killer T cells and NK cells in tumor microenvironment. Based on these research results, they are now planning to conduct clinical trials using a TDO inhibitor in combination with other agents in uveal melanoma patients.
Endowment Funding

Endowment funding provides a competitive edge that enables us to continue our ongoing research in perpetuity. It enables us to train, recruit, and retain thought leaders in the field. Your generosity provides training and education for future generations of world-class physicians, health providers, and scientists; and accelerates the path to future discoveries that will unlock new treatments and a new standard of care.

With an endowment, you have the power to make a difference that lasts forever, leaving a legacy of hope and healing that will be felt for generations to come.

How an Endowment Works

1. Benefactor makes a gift to Jefferson and decides to endow it for a specific purpose
2. The gift is invested by “buying shares” in Jefferson’s pooled investment fund
3. The amount of earned income available is based on the current spending policy
4. Earnings are distributed monthly and directed to the purpose of the gift
5. Principal continues to grow in perpetuity, resulting in increased earnings each year

Establishing an Academic Center of Excellence

As one of the country’s premier destinations for uveal melanoma care, Jefferson is uniquely poised to educate the future leaders in the field, as well as the wider healthcare community. As a part of our commitment to setting an international standard of care for this disease, it is our vision to establish an Academic Center of Excellence for Uveal Melanoma. This first-of-its-kind center will provide continuing education for physicians in other disciplines and cancer centers around the world so that they will be better equipped to handle the unique needs of the uveal melanoma patient population.

Philanthropy is critical in this endeavor, empowering us to continue setting the standards of the discipline and ensuring that more uveal melanoma patients receive the specialized care they need and deserve.
Attracting Premier Faculty

Endowed chairs and professorships are the most prestigious faculty appointments at Jefferson. They are invaluable assets that markedly strengthen our ability to recruit and retain the best physicians and scientists in the world. Reserved for leaders in their fields, endowed positions signify Jefferson’s belief in a faculty member’s past contributions and future promise. They recognize the holder who has earned the distinction, the namesake who is being honored, and the benefactor who made the endowment possible.

Fellowship Opportunities

Fellowships are a pillar of modern medicine—a vital stepping stone for aspiring physicians to gain the specialized skills necessary to thrive in a particular discipline. At Jefferson, we have a proud history of training generation after generation of healthcare leaders. As such, we are a highly sought and competitive destination for fellowship training.

Creating advanced fellowship opportunities in our uveal melanoma program is among our top philanthropic priorities. By establishing an endowed fellowship at Jefferson, you give more promising young clinicians and investigators an unparalleled opportunity to train alongside some of the foremost experts in the world. In doing so, you play a key role in creating future generations of healthcare leaders who will continue our tradition of setting the standards for uveal melanoma care, research, and education.

Made Possible By You:

By supporting our educational priorities, you can help us transform the future of uveal melanoma care. Your generosity has the power to attract the best and brightest to our institution, jumpstart the careers of aspiring specialists, and ensure that Jefferson’s unique brand of next-generation, compassionate care continues in perpetuity.
We are steadfast in our mission to make a better world for patients and families affected by uveal melanoma. But without visionary benefactors to drive innovative and forward-thinking luminary programs, they are likely to remain merely big ideas—tantalizingly out of reach for physicians and patients alike.

You are the difference. The next breakthrough, the next treatment—you make it possible. With a gift to Jefferson, you not only support our path-breaking work—you can leave a legacy that will inspire future faculty and patients. You give people hope.

With the brightest minds, boldest ideas, and a reputation for next-generation and compassionate care, we are uniquely poised to make the most of your philanthropic investment, quickly transforming your generosity into tangible, life-saving medical successes.

An investment in this program is an investment in our patients. Thank you for helping them achieve the best possible quality of life.

“Dr. Sato is on the verge of something really big. If he has the funds to continue discovering why the clinical trials are working for us, then he can help more people. Research is really the key to curing uveal melanoma.”

-Terry Willoughby
Grateful Patient
TO LEARN MORE, CONTACT

Emma Laverty
Director of Development
Sidney Kimmel Cancer Center
Office of Institutional Advancement
Thomas Jefferson University and Jefferson Health
215-503-8679
emma.laverty@jefferson.edu

Jinhee Lee
Assistant Director of Development
Sidney Kimmel Cancer Center
Office of Institutional Advancement
Thomas Jefferson University and Jefferson Health
215-505-8797
jinhee.lee@jefferson.edu

Office of Institutional Advancement
125 S. 9th St, Suite 600
Philadelphia, PA 19107
Giving.Jefferson.edu