

# Morgan Stanley Children's Hospital of NewYork-Presbyterian

## Focus on Pediatrics

Affiliated with Columbia University College of Physicians and Surgeons

*Pediatric Oncology Issue*



A Comprehensive Cancer  
Center Designated by the  
National Cancer Institute

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## The Herbert Irving Child & Adolescent Oncology Center

Morgan Stanley Children's Hospital of NewYork-Presbyterian claims home to one of the best children's oncology programs in the United States: The Herbert Irving Child & Adolescent Oncology Center.

Here, hope and comfort is offered to young people, while state-of-the-art therapies and supportive, compassionate care offers the best possible chance for a cure. Recognized by the National Cancer Institute as a center of excellence, the Center performs clinical and basic science research as an integral part of its existence.

The Center is located at Morgan Stanley Children's Hospital of NewYork-Presbyterian, which ranked as the #1 children's hospital in New York by *U.S. News and World Report*. It has one of the largest and most distinguished pediatric oncology programs that provides unparalleled patient care for more than 150 children and adolescents diagnosed with cancer and serious blood disorders each year. The Herbert Irving Child & Adolescent Oncology Center serves as the academic division of Columbia University Medical Center — a top 10 ranked academic medical center.

### Patient Profile Brianna C.



Brianna was 9 years old when her life began to change. She developed a low grade fever and lethargy; she began to miss school, cheerleading practice, and her friends in Washington Township, New Jersey, a suburb of New York City. Her parents took Brianna to her local pediatrician who in turn referred her to an infectious disease specialist at a local hospital in Bergen County. An evaluation including multiple tests did not reveal the answer, but her symptoms persisted and she developed back pain. She was subsequently referred to a pediatric oncologist, and a rheumatologist. Multiple CT scans, PET scans, a bone marrow biopsy, and a lymph node biopsy were all inconclusive. Brianna was treated empirically for juvenile rheumatoid arthritis with an anti-inflammatory agent, but her symptoms returned.

The family sought a second opinion from Michael Weiner, MD, Director of the Herbert Irving Child & Adolescent Oncology Center at the Morgan Stanley Children's Hospital and Columbia University Medical Center. Dr. Weiner and his team reassessed Brianna and suggested repeat biopsies of a lymph node and bone marrow, both of which now revealed stage IV Hodgkin's disease. Therapy was initiated with a novel regimen for children and adolescents with advanced stage disease developed by Dr. Weiner and his colleague Kara Kelly, MD, who was the protocol principal investigator for the Children's Oncology Group. Brianna received 8 cycles of high dose intensive chemotherapy. She attained a complete remission and remains disease free. Brianna entered the third grade in September, has joined the cheerleading team and soon will fulfill her life-long dream of having a pony.

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# Clinical Expertise

The Herbert Irving Child & Adolescent Oncology Center (HICAOC) has three programs or pillars of care for children with cancer:

- Leukemia/Lymphoma
- Solid Tumors
- Neuro-Oncology (Brain Tumors)

Each program consists of a basic science research component and a clinical team that includes physicians, nurse practitioners, social workers, clinical oncology nurse specialists, research nurses, clinical research associates and coordinators. This overall structure of laboratory investigation linked with a clinical enterprise promotes the translation of the laboratory findings into improved treatments for children with cancer.

The HICAOC has four over-arching, clinic-wide programs that provide expertise and care to all patients and their families:

## **Integrative Therapies Program for Children with Cancer:**

The first of its kind to mainstream complementary medicine with conventional surgery, radiation and chemotherapy. It is the largest such program in the country. Services such as nutrition and herbal counseling, aromatherapy, acupressure, acupuncture, Reiki, yoga and movement, massage, and guided imagery are provided “without walls” as practitioners care for patients both on the inpatient and outpatient units.

## **Valerie Fund Psychosocial Program:**

Dedicated child psychologist provides individual and group counseling as well as neuro-psych testing. The child-life therapists use activities to help children gain coping skills. The social workers assist patients and their families to help navigate the health care system and assist them with all psycho-social matters.

## **Pediatric Cancer Foundation Developmental Therapeutics Program:**

The HICAOC is one of only 20 pediatric oncology programs in the country, and the only one in New York selected by the Children’s Oncology Group and the National Cancer Institute to conduct phase I clinical trials that investigate novel treatment strategies for patients with relapsed or refractory disease. In addition, we are the only program in New York to participate in TACL (Therapeutic



*Bryan Clay (center) 2008 Olympic gold medalist in the Decathlon, pictured with staff.*

Advances in Childhood Leukemia) and NANT (New Approaches to Neuroblastoma Therapy), two limited, exclusive consortia dedicated to testing new drugs for children.

## **Center for Survivor Wellness:**

The center staff provides patients and their families a comprehensive medical and psychosocial assessment and introduces interventions to mitigate the long-term complications of treatment for childhood cancer. Particular attention is paid to the needs of adolescent and young adult survivors, including issues of education, job training, fertility, and a healthy lifestyle. The Center offers several innovative initiatives such as “Cancer Dancers,” an exercise dance troupe, a summer internship program in conjunction with WCBS Radio, and “Survivewell.org”, a site that embraces 21st century technology.

## **Philanthropy**

The Hope & Heroes Children’s Cancer Fund (HHCCF) is an independent 501c3 charity that supports the HICAOC. The mission of the Fund is to provide the financial resources required to fulfill the goals of patient care, teaching, innovative programs and research. Founded in 1996 by Michael Weiner, MD, the HHCCF has a volunteer Board of Directors and employs two full-time development officers: Heather Maloney, Executive Director, and Jeremy Shatan, Special Events Director. The charity raises monies through events and gifts from a donor base consisting of grateful families, friends, philanthropically-minded individuals, foundations, community organizations and corporate entities. Since its inception, the HHCCF has raised approximately \$20,000,000. To learn more, please visit our website at [www.hopeandheroes.org](http://www.hopeandheroes.org).

# Four Major Initiatives Committed to Research

- WOLF Foundation Leukemia/Lymphoma Laboratory
- Taybandz/ Matthews Family Foundation Solid Tumor Laboratory
- Brain and Nervous System Tumor Laboratory
- Molecular Epidemiology Laboratory

## Laboratory and Translational Research

### **WOLF Foundation Leukemia/Lymphoma Laboratory:**

The research component of the Leukemia/Lymphoma program is the laboratory of Dr. Adolfo Ferrando in conjunction with Drs. Maria Luisa Sulis and Theresa Palomero. Their team is analyzing the functions of specific oncogenes such as NOTCH1 and the tumor suppressor gene PTEN to define their role in the origin of childhood leukemia and lymphoma using a combination of genomic technologies, biochemical and genetic analysis. They are also studying the role of deletions in the short arm of chromosome 11 in the pathogenesis of pediatric leukemia.

### **Taybandz/ Matthews Family Foundation Solid Tumor Laboratory:**

The Pediatric Tumor Biology Lab is a joint research effort of Dr. Darrell Yamashiro of Pediatric Oncology and Dr. Jessica Kandel of Pediatric Surgery. They investigated tumor blood vessel growth, or angiogenesis, as a lens to illuminate the fundamental steps of tumor progression, metastasis, and resistance. They demonstrated that pediatric tumors make an essential protein, vascular endothelial growth factor (VEGF), and that treatment with the anti-VEGF antibody Bevacizumab (Avastin™, Genentech) or the novel VEGF blocking agent VEGF-Trap (Regeneron Pharmaceuticals) can dramatically inhibit growth of experimental models of neuroblastoma, Wilms' tumor, and hepatoblastoma. As a direct result of this research, Dr. Julia Glade Bender led the first Children's Oncology Group study with Bevacizumab for children with relapsed solid tumors.

### **Brain and Nervous System Tumor Laboratory:**

The laboratory of Drs. Lasorella and Lavorone, a husband and wife team, is dedicated to research in brain tumors and other tumors

of the nervous system. Their work focuses on the deregulation of the cell cycle and the differentiation in tumors derived from the brain and nervous system. They determined that the loss of retinoblastoma (Rb) tumor suppressor protein results in deregulated Id2 activity with inhibition of differentiation and induction of cell proliferation. A specific goal of the laboratory is to establish the role of Id proteins in progression of human cancer of the nervous system and attempt to identify anti-Id molecules to be used as targeted therapeutic tools for these diseases.

### **Molecular Epidemiology Laboratory:**

The molecular epidemiology laboratory of Dr. Manuela Orjuela is involved in three inter-related projects that investigate the root cause of childhood cancer secondary to genetic and environmental interactions. First, she is investigating the role of folate deficiency and the development of sporadic unilateral retinoblastoma in children. Second, she is exploring the role of prenatal exposures to procarcinogenic polyaromatic hydrocarbons (PAH) during pregnancy on the development of chromosomal deletions and translocations. Third, in collaboration with investigators at the Dana Farber Cancer Institute, she will assess the relationship between dietary folate, red cell folate levels, and polymorphisms in folate metabolizing enzymes with toxicity and the survival of patients with ALL.

# Herbert Irving Child & Adolescent Oncology Center: Faculty Roster

## Michael Weiner, MD

Chief Herbert Irving Division of  
Child & Adolescent Oncology:  
Leukemia, Hodgkin's disease

## Linda Granowetter, MD

Director of Clinical Service,  
Children's Oncology Group Principal Investigator:  
Sarcomas, solid tumors

## Julia Glade-Bender, MD

Director Pediatric Cancer Foundation  
Experimental Therapeutics Program:  
Phase I clinical trials, Wilms' tumor,  
neuroblastoma

## Darrell Yamashiro, MD, PhD

Director Solid Tumor Biology Laboratory:  
Neuroblastoma, hepatic tumors

## Kara Kelly, MD

Director Integrative Therapies Program:  
Leukemia, lymphoma, Hodgkin's disease

## James Garvin, Jr., MD, PhD

Director of Alfano Family  
Neuro-oncology Program:  
Brain tumors

## Alice Lee, MD

Co-director of Fellowship Program:  
Phase I clinical trials, solid tumors,  
neuroblastoma

## Jennifer Levine, MD

Director of Survivor Wellness Program:  
Survivorship, late effects, leukemia

## Stephen Sands, PsyD

Director Valerie Fund Psychosocial Program:  
Neuro-psychology

## Adolfo Ferrando, MD, PhD

Director WOLF Foundation  
Leukemia/Lymphoma Laboratory

## Heather Grossman, MD

Leukemia, lymphoma

## Dennis Kuo, MD

Leukemia, lymphoma

## Anna Lasorella, MD

Brain tumor research

## Manuela Orjuela, MD, ScM

Molecular epidemiology research,  
brain tumors, lymphoproliferative disorders

## Maria Luisa Sulis, MD

Leukemia research, leukemia

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Visit our website at [childrensnyp.org/mschony](http://childrensnyp.org/mschony)

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