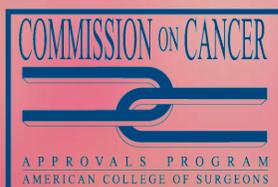




The Cancer Center

at Miami Children's Hospital

Renewing Health  
Restoring Hope





## Dear Friend of the Cancer Center at Miami Children's Hospital:

When a child is diagnosed with a serious illness such as cancer, the world comes to a standstill for the entire family. All the little things in life that seemed so important just days before, suddenly fade into the background. Every ounce of the family's energy becomes focused on the child and his or her care. At the Cancer Center at Miami Children's Hospital, families confronting a child's critical illness are matched with a team of physicians, nurses and caregivers who share in their passion to restore the child's health. Our doctors and other specialists understand the unique needs of critically ill children and the families whose lives revolve around them, and work to create individual care plans to meet each family's needs.

The Cancer Center at Miami Children's has also taken a leadership role in advancing research protocols. We believe our contributions will lead to increasingly advanced treatments to benefit children all over the world.

We dedicate ourselves to providing the most current treatment modalities in settings that are supportive of a child's needs. We're here for the children...when they need us most.

Sincerely,

Enrique Escalon, M.D.  
Medical Director  
The Cancer Center  
Miami Children's Hospital

# The Cancer Center at Miami Children's Hospital

## Florida's Leader in Caring for Children with Cancer and Blood Disorders

The Cancer Center at Miami Children's Hospital is the region's largest and most comprehensive cancer center for children. It provides care for more pediatric cancer patients than any other facility in South Florida.

MCH is one of only 12 children's hospitals nationwide and two in Florida to achieve approved cancer program status from the American College of Surgeons Commission on Cancer. This recognition is given to programs that adhere to the commission's stringent quality-of-care standards.

Services of the Cancer Center include comprehensive diagnostic services and treatments for children with cancer, leukemia and blood disorders. Children with these conditions have special physical, emotional and psychological needs. They require the highest level of medical expertise and highly specialized medical treatment combined with very personalized support from their physicians and care staff. In short...they need Miami Children's Hospital.

Every member of the care team at Miami Children's is trained and experienced in supporting children during treatment for serious illnesses. Their skills and compassion can make all the difference for a child and family during a difficult time... renewing health and restoring hope.



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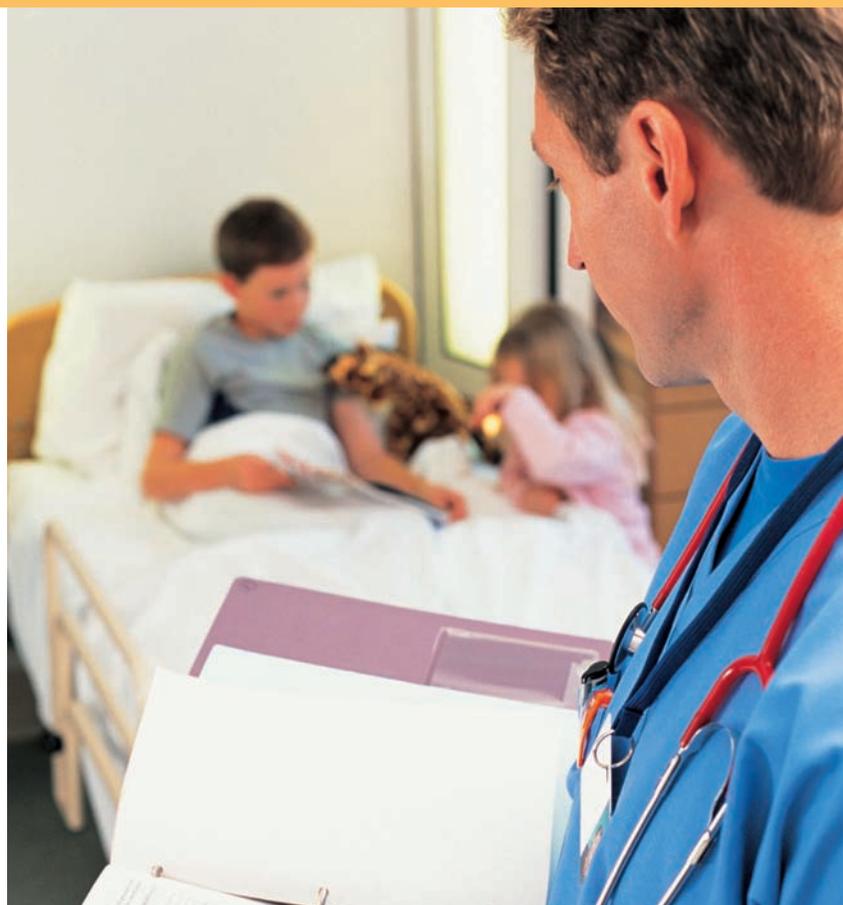
## A Multidisciplinary Team Approach to Caring for the Child and Family

The Cancer Center at Miami Children's is recognized for a multidisciplinary, holistic, family-centered approach to care that places the child and family at the center of a highly coordinated network of specialists. Our staff works together to anticipate and meet the needs of the child and family during treatment and follow-up care. When children enter the Cancer Center, they benefit from knowing that an entire team of pediatric specialists is putting their needs and the needs of their family first.

The team includes:

- pediatric hematologists/oncologists
- pediatric radiologists
- pediatric pathologists
- pediatric neurosurgeons
- pediatric radiotherapists
- pediatric surgeons
- other pediatric sub-specialists
- specially trained oncology nurses
- clinical nurse specialists
- pharmacists
- dietitians
- social workers
- child life specialists
- psychological and spiritual counselors
- rehabilitative therapists.

As part of its commitment to meeting each child's needs, the Cancer Center has developed new specialty programs for children with bone marrow transplantation-related conditions, brain tumors, "late effects" of treatment, sickle cell anemia and clotting disorders.



## The Comfort of Knowing You're with Miami Children's

When you choose the Cancer Center at Miami Children's Hospital, you know your child is receiving care at one of the very best hospitals for children in the country. In 2007, Miami Children's was ranked among the nation's top pediatric hospitals by both *U.S. News & World Report* and *Child* magazines.

Miami Children's combines clinical excellence in virtually every pediatric sub-specialty with a family-focused care environment. When your child receives care at Miami Children's, our entire team of pediatric sub-specialists is available to serve you, including pediatric gastroenterologists, ophthalmologists, orthopaedists, neurologists, reconstructive surgeons, infectious disease specialists, nephrologists, psychiatrists, psychologists, as well as specialists to help with rehabilitation, nutrition and any other care issues that may arise.

# Multidisciplinary Specialty Programs

## Leukemia and Solid Tumor Program

The Leukemia and Solid Tumor Program provides care for children with malignancies. With current methods of treatment, the majority of patients with leukemia and solid tumors reach adulthood. An oncology team today must weigh the long-term impact of treatment methods to ensure the best outcome for each child. The Cancer Center at Miami Children's Hospital provides highly specialized and sophisticated treatment for pediatric cancer patients – always with a focus on the best long-term results.

Leukemia remains the most common childhood malignancy, with approximately 2,500 new cases diagnosed annually in the United States. The Cancer Center at Miami Children's is nationally recognized and has outstanding qualifications to provide the highly sophisticated treatment required by children with solid tumors or leukemia.

## Research Program

Clinical Research: The Cancer Center at Miami Children's is currently engaged in more than 125 clinical research studies, all of which are focused on finding new cures, treatments and diagnostic procedures for pediatric malignancies. No hospital in the region features such a wide array of clinical trials for children's cancer. As such, the Cancer Center offers its patients unparalleled hope as it tests the latest drugs, medical devices, biotechnology and other technological innovations in the fight against children's cancers. The Cancer Center at Miami Children's has been recognized as a full-member of the prestigious Children's Oncology Group (COG), a nationally-funded group of pioneering physicians and institutions. To maintain this standing, full compliance with COG requirements is mandated. Compliance in this group involves not only participation in and adherence to multicenter research protocols, but also submission of accurate and timely data. The center has also been awarded a grant by the National Cancer Institute to advance cancer research. In addition, members





of the team share their knowledge through publication of research findings and presentation to national societies of physician-scientists.

Laboratory Research: Significant progress has been made in the early development of new treatments and diagnostics through oncology research in the laboratories at Miami Children's. Molecular and genetic diagnosis and classification of pediatric brain tumors is being developed by micro-array technology. This leading-edge approach may soon be in use for diagnostic and prognostic evaluation of malignant solid tumors. Also underway is work focused on the roles of cell growth and death in the development of drug resistance in pediatric cancers. In an exciting new effort, MCH has made progress in evaluating alternative medicines that are used to treat cancer in other cultures.

## Bone Marrow Transplant Program

The Bone Marrow Transplant (BMT) Program at Miami Children's Cancer Center is headed by a team of physician specialists in hematology, oncology and clinical immunology. This multidisciplinary team has performed numerous transplants involving children with a variety

of forms of leukemia, and solid tumors, as well as genetic, hematological and other illnesses.

Bone marrow transplants have improved the long-term prognosis of children with disorders previously unresponsive or refractory to standard therapy. Members of the team perform transplants in children with disorders traditionally responsive to bone marrow transplantation such as aplastic anemia, leukemias, lymphoma, neuroblastoma and congenital immunodeficiencies and other systemic diseases. Recently the team has begun successfully performing BMT for other disorders such as sickle cell disease, beta thalassemia major, certain storage diseases and brain tumors.

The Bone Marrow Transplant Program at Miami Children's is part of the National Marrow Donor Program, enabling the hospital to locate unrelated donors for its patients. The bone marrow program is also part of the Children's Oncology Group, International Bone Marrow Transplant Registry and the Pediatric Bone Marrow Transplant Consortium. Membership in these organizations enables the BMT program to participate in a number of clinical research protocols and to have access to the very latest research data.



## Neuro-Oncology Program for the Treatment of Brain Tumors in Children

The prognosis and survival for children with brain tumors has improved in the past decade. It is now possible to “cure” a majority of children with such tumors. The Cancer Center at Miami Children’s Hospital is a multidisciplinary team consisting of the neuro-oncologist, neurosurgeons, neuro-radiologist, radiation oncologist and other specialists who contribute to the diagnosis and treatment of all types of benign or malignant brain tumors.

The Cancer Center works closely with the Miami Children’s Brain Institute to provide the highest quality of care to children with brain tumors. Following appropriate surgical intervention by the neurosurgery team, treatment with chemotherapy or radiation therapy may be required.

The Neuro-Oncology and Bone Marrow Transplant programs at Miami Children’s utilize innovative modalities such as stem cell transplants and are pioneering new protocols such as anti-angiogenesis treatment for brain tumors as well as alternative therapies. MCH is conducting research to reduce the long-term impact of radiation therapy and examine the effects of non-conventional drugs on cell lines derived from brain tumors.

The Brain Tumor Clinic - comprised of a multidisciplinary team - meets regularly to evaluate patients and address psycho-social and cognitive issues, as well as medical needs.

## Late Effects Clinic

As more children with cancer respond favorably to chemotherapy and radiation treatments, an increasing number require treatment for late effects of the disease. About half of childhood cancer survivors are likely to develop some type of late effects or disability stemming from cancer or its treatment. Although children tolerate chemotherapy better than do adults, the growing child may be more vulnerable to the delayed adverse effects of cancer therapy, such as effects on growth, fertility and neuropsychological function.

The Late Effects Clinic at MCH is a rapidly growing program. Patients receive high-quality, multidisciplinary care that focuses on each child or young adult’s special needs. Areas of focus include growth management, disorders of the musculoskeletal and related tissue, neuropsychological and neurological function, gonadal and thyroid function, cardiovascular, pulmonary, gastroenterological, urinary, hematological and immunological function. The development of second malignant neoplasms is of utmost importance.





## Retinoblastoma Program

Retinoblastoma is the most common intraocular tumor of childhood. Treatment requires the care of a multidisciplinary team composed of the pediatric hematologist-oncologist, ophthalmologist, clinical geneticist, radiation oncologist and many other sub-specialists in concert with a full spectrum of care services available at Miami Children's Hospital. The MCH neuroradiology team provides the high-quality imaging and MRI studies essential to the management of retinoblastomas. Chemotherapy protocols are available for advanced disease to help preserve the eye, and, when possible, avoid radiation. Specific care with laser treatment is supported by consultation with the Ocular Oncology Services of Bascom Palmer Eye Institute. When needed, measurements and fittings for an ocular prosthesis can be coordinated at the hospital.

## Sickle Cell Program

Comprehensive care for patients with sickle cell disease is offered through the Cancer Center at Miami Children's Hospital. The Cancer Center has been providing care for children with blood disorders for more than 25 years. More than 300 patients with sickle cell disease and other hemoglobinopathies are cared for on a regular basis.

Under the direction of our team of highly experienced pediatric hematologists, children with sickle cell anemia are monitored closely and receive comprehensive management, including coordination of EKGs, echocardiograms, eye examinations and radiologic studies. Preventive measures offered through the center include immunizations, prophylactic antibiotics and other medicines. Ophthalmologic, endocrinologic and cardiac evaluations are provided on a regular basis.

Special services available include:

- Hypertransfusion management
- Hydroxyurea treatment for recurrent painful crises, acute chest syndrome and other complications
- Transcranial Doppler study for early detection of potential risk for stroke
- Genetic counseling for patients and family
- Bone marrow transplantation.

# Cancer Care Services

## Inpatient Care the Miami Children's Hospital Way

Children who are hospitalized during the course of their therapy receive treatment and support in Miami Children's 30-bed Hematology/Oncology Unit. Patient rooms feature cheerful decor and have been specially designed for patients with weakened immune systems to decrease the risk of infection.

During their stay, children experience the special environment of a dedicated children's hospital, where all care and support personnel are experienced in meeting the needs of sick children. Highlights include visits from the Big Apple Circus® Clown Care<sup>SM</sup>, the pet therapy team and child life specialists, who spend time with each child daily to ensure that his or her emotional and recreational needs are being met. What's more, children meet and mingle with other youngsters with similar health issues, often developing lasting bonds that help sustain them throughout their care and recovery.



## 'The Living Room' Infusion Program

The Living Room, MCH's ambulatory infusion center, is a family-centered service designed to provide infusions and short-stay treatments, including chemotherapies and blood transfusions. The Living Room at MCH is like a living room at home - a pleasant, comfortable space where children can play, relax and even nap while receiving infusions. It also provides a setting where children can interact with young people with similar diagnoses. Parents can meet and gain support from other parents in comparable circumstances. The Living Room has become a place where the child and family learn that they are not alone, while receiving the healthcare services they need safely and efficiently.

## Surgical Services

The Cancer Center team includes Miami Children's Hospital's Department of Pediatric Surgery, which features some of the region's most respected pediatric surgeons. The surgical excision of primary tumors plays a major part in the treatment of solid tumors in the abdomen, chest, head, neck and extremities. The pediatric surgical team performs diagnostic biopsies using advanced techniques including the newest minimally invasive technologies, such as thoracoscopy and laparoscopy (videosurgery). The surgeons also place intravenous access for children requiring long-term chemotherapy. The team's use of smaller IV devices has led to a decrease in the incidence of catheter-related complications.

Members of the pediatric surgical team are board-certified by the American Board of Surgery. They have special expertise in pediatric tumors and regularly participate in national research protocols.

## Neurosurgery Services

MCH's Division of Neurosurgery is involved in the diagnosis and treatment of disorders of the nervous system, including tumors of the brain and spinal cord. The division's pediatric neurosurgeons are nationally recognized leaders in the field and are the only two American Board of Pediatric Neurological Surgery-certified neurosurgeons in South Florida. The division features the latest neurosurgical equipment, including intraoperative neuro-navigational systems that allow the surgeon to integrate preoperative imagery with the operative procedure. Other advances available through the Division of Neurosurgery include an MRI Functional Imagery Center that pinpoints brain function and motor skills, thereby enhancing surgical outcomes.



## Orthopaedic Surgical Services

For tumors involving the musculoskeletal system, MCH's Department of Orthopaedic Surgery offers full evaluation and treatment, including prescribing and interpreting imaging and testing, as well as performing biopsies and definitive surgical treatment, when indicated. The orthopaedic surgical team is one of the region's most experienced in the removal of pediatric tumors and in limb salvage and reconstruction of children's extremities following tumor removal. The department also coordinates rehabilitative care of the patient following surgery.





## Radiation Therapy Services

Radiotherapy is an integral part of a multidisciplinary cancer treatment program. Radiation therapy can be given alone as a cure. It can also be combined with surgery or chemotherapy to enhance treatment.

The MCH Cancer Center offers radiation treatment through the Department of Radiation Oncology at Sylvester Cancer Center - Jackson Memorial Hospital. The department is equipped with five modern linear accelerators, one Gamma Knife, two simulators and a high-dose rate brachytherapy unit. In addition, the department has an active three-dimensional conformal therapy program, intensity-modulated radiation therapy program, stereotactic radiosurgery program and high-dose-rate/low-dose-rate brachytherapy program.

The department is staffed by radiation oncologists, medical physicists, board-certified radiation therapists, medical dosimetrists and other highly trained support staff.

## Pharmacological Services

The Cancer Center team includes a dedicated clinical pharmacist from the MCH Pharmacy Department, who is assigned exclusively to support patients from the Cancer Center. The pharmacist provides patient care recommendations on pharmacotherapy, and assesses drug interactions, drug dosages and drug effects. The pharmacist accompanies the Cancer Center team on daily rounds and provides counseling to families of patients regarding medication use and administration. The pharmacist also helps with the transition to home care, ensuring that each patient has appropriate medications when leaving the hospital. The pharmacist is just a phone call away for patients once they are home, providing ongoing support with medications as needed. The provision of a clinical pharmacist to serve the Cancer Center offers a continuum of care for patients, ensuring that a specialist familiar with each child's unique needs and physiological response is available throughout the course of treatment. Also, the hospital's Outpatient Pharmacy supports the center by stocking the very specialized drugs required for care of cancer patients.



*MCH is a pioneer in offering barcode-assisted technology to prevent medication errors. This technology enables staff to verify the patient and medication electronically and is part of the hospital's commitment to safety.*

# Diagnostic Services

## Pathology and Laboratory Services

The Department of Pathology and Laboratory Services at MCH is a state-of-the-art comprehensive facility that serves as the leading provider of pathological and laboratory services for children in the region. It offers highly sophisticated testing to support the diagnosis and on-going evaluation of children with cancer and blood disorders. Each of the pathologists on staff, including the neuropathologist, has particular expertise in pediatric malignancies.

Cytogenetics and now cytometry are among the advanced laboratory services essential to the study of pediatric cancer that are available at MCH.

Cytogenetics is the study of chromosomes and related diseases that are caused by chromosome abnormalities. The Department of Pathology and Laboratory Services offers a comprehensive list of cytogenetic tests, including routine chromosome analysis (karyotyping) of peripheral blood, bone marrow and other tissue. In addition, the department offers an extensive array of fluorescent in situ hybridization (FISH) testing. FISH tests introduce fluorescently labeled DNA probes to detect or confirm gene or chromosome abnormalities that are beyond the scope of routine cytogenetics.

Flow cytometry involves analysis of specimens in a flow cytometer to evaluate blood malignancies and immunological abnormalities.



## Radiology Diagnostic and Follow-up Services

The Department of Radiology at MCH offers a level of experience that makes it a regional leader in pediatric oncological diagnosis and follow-up evaluation. The department features state-of-the-art equipment, including multidetector computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine SPECT, ultrasound and general diagnostic radiology capability. Our cutting edge CT and MR systems allow complete follow-up imaging in a single sitting, MR spectroscopy and perfusion imaging allows for further tissue characterization. The department is one of only four pediatric centers in the U.S. performing MIBG nuclear medicine scans. The staff of 16 pediatric radiologists has an unparalleled level of experience in radiological evaluation of infants and children.

# Support Services



## Psychiatric and Psychological Services

Child and adolescent psychiatric consultation is part of an integrated, comprehensive evaluation of many hematology/oncology patients. Chronic pediatric illness of almost any kind with recurrent hospitalization is a psychological risk factor for children. The rate of psychiatric illness in children with both chronic medical conditions and disability is three times greater than non-compromised children. Every child with a pediatric illness requiring hospitalization experiences a psychological reaction. The degree of reaction varies with the developmental level and the level of function prior to illness, as well as the state and reaction of the family, and the severity of the illness. The Divisions of Psychiatry and Behavioral Medicine at MCH offer individual therapy for the patient, family therapy and the ability to participate in the patient and family support groups.

## Social Services

Due to the enormous impact a cancer diagnosis has on the life of a patient and his or her family, a team of social workers is an integral part of the Cancer Center at MCH. A social worker is present when the family first meets with the physician to discuss the diagnosis and continues to play a supportive, clinical role throughout the child's treatment. Social workers participate in weekly multidisciplinary meetings to review the care plan of each hospitalized child. Representatives also work individually with patients, parents, siblings and extended family members, assisting them in their adjustment process to illness and hospitalization. When indicated, social workers consult closely with psychiatrists and behavioral medicine specialists for additional clinical interventions. The social work team facilitates diverse parent support groups and refers families for assistance, such as financial, housing, transportation, day-care and other services as needed.

## Volunteer Services

Volunteer organizations are the lifeblood of any institution. Miami Children's Hospital is fortunate to have the support of the United Order True Sisters, Miami #43, since 1958. This entity has a long tradition of providing support to the patients of the MCH Cancer Center, including sponsorship of the annual summer cancer camp. In addition, the Cancer Center's Parent Support Group plays an important role supporting the Cancer Center's "Radio-thon" fundraiser and various recreational activities.

# Support Programs

## Annual Summer Camp and Celebrations

The annual summer camp is a dream come true for children with cancer and their families. Participants enjoy typical summer activities while under the care of their Miami Children's Hospital doctors and nurses, who serve as the camp counselors. The week-long sleep-away camp, which takes place at Miami-Dade County's A.D. Barnes Park, is free and open to all MCH cancer patients. Activities include arts and crafts, sports and a variety of field trips, such as bowling, movies, a bayside cruise, a pool party, a two-day trip to Disney World and the extraordinary experience of swimming with dolphins. The camp, which was established in 1991, is sponsored by the United Order True Sisters, Miami #43.

A Cancer Survivor's Day celebration is held each June, with dozens of patients and their families in attendance. A holiday party in December brings children with cancer together to celebrate the joys of the season with staff, friends and acquaintances from the hospital.



## Support Groups for Parents and Teens

Parents of children with cancer and blood disorders benefit from sharing feelings, coping mechanisms, information and resources with other parents in similar circumstances. MCH hosts bilingual support groups for families of patients with sickle cell disease and cancer. Periodically, physicians attend the support groups to share information. The cancer support group meets twice a month and the sickle cell group meets once a month. Both groups are facilitated by the hospital's social work team. For more information on the support groups, please call (305) 666-6511, ext. 3671 or 3597.



Founded in 1950, Miami Children's Hospital is the only licensed specialty hospital for children in South Florida. The 275-bed freestanding facility is ranked by *Child* magazine among the best children's hospitals in the nation and is the only Florida pediatric hospital to be included in *U.S. News & World Report's* 2007 listing of "America's Best Children's Hospitals." It has also been designated an American Nurses Credentialing Center (ANCC) Magnet facility, the nursing profession's most prestigious institutional honor. Miami Children's has expertise in all aspects of pediatric medicine and serves children from birth to age 21.





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3100 S.W. 62nd Avenue  
Miami, Florida 33155-3009  
305-666-6511  
[www.mch.com](http://www.mch.com)  
Cancer Center  
305-662-8360