



## **St. Jude Cancer Predisposition Clinic**

For years, oncologists have asked two basic questions: Why do some children get cancer and others don't? What can be done with genetic information to improve cancer treatment or even prevent it from forming? That's what this new medical service—the St. Jude Hereditary Cancer Predisposition Clinic—will find out.

The clinic has been created for children who may have inherited genetic mutations that increase their cancer risk, helping answer that important question for many families.

Led by pediatric oncologist Kim Nichols, M.D., the Hereditary Cancer Predisposition Clinic evaluates children who have hereditary forms of cancer. The staff also sees kids who do not have cancer but have genetic conditions or family histories that put them at increased risk for developing it.

Expansion of the program originated with the St. Jude – Washington University Pediatric Cancer Genome Project, an unprecedented effort to sequence the normal and cancer genomes of more than 800 children with cancer. Now scientists and clinicians at St. Jude are teaming up to apply that information to the clinic.

It's estimated that at least 8.5 percent of children with cancer have the disease because they carry a predisposing gene mutation—and that percentage may be even higher, because some children carry mutations in genes that have not yet been identified.

The Hereditary Cancer Predisposition Clinic focuses on the whole family, working with patients, siblings and parents. Licensed certified genetic counselors encourage families to find out as much as they can about their medical histories, paying particular attention to family members who have had cancer. From studying the family tree and the child's medical information, the counselors determine if any family members, including future children, might have a higher-than-normal likelihood of developing cancer.

The counselors educate the families. If genetic testing is needed, the staff and families discuss the risks, benefits and limitations of those tests. When a genetic diagnosis is made, the clinic staff helps families obtain appropriate medical care as well as mental, emotional, social and spiritual support.

The Hereditary Cancer Predisposition Clinic, like all programs at St. Jude, addresses the child's overall health and well-being. Staff members walk families through the process of genetic counseling and testing, offering access to appropriate psychological or Child Life services, when necessary.

The pioneering expertise and technology built by the Pediatric Cancer Genome Project make St. Jude the perfect place to launch such a program. St. Jude is the only pediatric oncology facility doing this type of

analysis to look at the genetic make-up of tumor and normal cells. This personalized approach to cancer treatment allows clinicians to modify treatment based on the genetic make-up of the tumor.