Pediatric sarcomas are exceptionally challenging diseases that require a dedicated, multidisciplinary treatment approach to ensure the greatest chances of survival. UCLA’s Pediatric Bone and Soft-Tissue Sarcoma Program includes experts in several subspecialty areas and has one of the three busiest clinics in the United States.

Pediatric soft-tissue sarcomas are a heterogeneous group of malignant tumors that originate from primitive mesenchymal tissue. Sarcomas are diagnosed in about 1,600 children each year in the United States. Five-year survival rate estimates range from 59.2 percent to 68.5 percent, making this illness one of the most life-threatening of all pediatric cancers. Higher survival rates have been associated with treatment at major sarcoma centers.

UCLA’s program specializes in all forms of bone and soft-tissue sarcomas, including:

- Ewing sarcoma
- Osteosarcoma
- Rhabdomyosarcoma
- Synovial sarcoma
- Malignant peripheral nerve sheath tumors
- Liposarcoma
- Fibrosarcoma
- Chondrosarcoma
- Aggressive fibromatosis (desmoid tumors)
- Undifferentiated soft-tissue sarcomas
- Epithelioid sarcoma
- Other rare bone and soft-tissue tumors

UCLA is part of an extensive clinical-trials network that offers children and teens the best opportunity for successful recovery through innovative treatments.

"We'd like every patient who walks through the door to be part of a clinical trial or registry," Dr. Federman says. "It is really important to move the ball forward. Because these cancers are so rare, we have to learn from each patient and provide each of them with personalized care."

Coordinated, multimodal approach

Patients with sarcomas typically require multimodal therapy including aggressive chemotherapy, high-dose radiation and surgery. To coordinate a multi-pronged and individualized treatment approach, each case is reviewed by a multidisciplinary team including physicians from pediatric oncology, medical oncology, orthopaedic oncology, surgical oncology, pediatric surgery, musculoskeletal radiology, radiation oncology and musculoskeletal pathology as well as specialists in nursing, social work, psychology, physical therapy and nutrition.

As a leading referral center, UCLA offers patients access to innovative targeted therapies as well as intensity-modulated radiation therapy (IMRT), which targets the tumor with high-dose radiation while sparing healthy surrounding tissue.

UCLA’s Musculoskeletal Oncology Service has been a pioneer in the development of limb-sparing surgical strategies for both malignant bone and soft-tissue sarcomas. The program is one of the most experienced in the nation in the use of metal implants (endoprostheses) for bone tumors and resections for soft-tissue sarcomas.

Alleviating pain and stress

UCLA physicians strive to lessen the burden of illness, pain and disability in children and adolescents. Extensive psychosocial support is provided to patients and families to assist with multiple phases of treatment over an extended period of time. While sarcomas can present at any time from infancy through adulthood, about three-quarters of pediatric cases are seen in adolescents and young adults. The UCLA Daltrey Townshend Teen Cancer Program — an extension of Teenage Cancer Trust, a charity dedicated to improving the lives of young people with cancer — is designed to meet the special needs of patients ages 13 to 25. Additionally, patients can be referred to UCLA’s oncofertility specialists to review options for fertility preservation.

UCLA’s Children’s Pain and Comfort Care Program is aimed at alleviating pain and other causes of distress for children and adolescents with complex illnesses as well as offering support to family members. Moreover, the Pediatric Long-term Follow-up Clinic at Mattel Children’s Hospital UCLA was created to address the medical and quality-of-life issues of childhood cancer survivors through a comprehensive health evaluation, psychosocial assessment and targeted specialty referrals. The program also helps survivors with educational and vocational challenges.

Clinical trials can offer leading-edge treatments

Clinical trials have improved the outcomes for pediatric sarcoma patients. In recent years, an enhanced understanding of the disease biology has yielded new avenues of treatment including targeted therapies and immunotherapy. The UCLA Pediatric Sarcoma Program is at the forefront of cancer discoveries. The program participates in the Sarcoma Alliance Research through Collaboration (SARC) global network, a non-profit organization dedicated to the development and support of clinical-trial research for the prevention, treatment and cure of sarcomas.

Participating Physicians

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