

Musculoskeletal Oncology and Stem Cell Laboratory



Address:

PO Box 112727
Gainesville, FL 32611

For Information:

352-273-7432

Location Information

Overview

The University of Florida is dedicated to providing the most effective therapeutic modalities for treating patients with Osteosarcoma while probing for the biological origins and progression of musculoskeletal cancer.

Osteosarcoma research is currently sponsored in part by grants from the National Institutes of Health.

Musculoskeletal Oncology Laboratory

Osteosarcoma is the most common primary malignancy of bone in childhood and adolescence. Despite aggressive and toxic therapy 40% of these children still die of their disease. We are currently studying novel ideas about the genesis and progression of this deadly cancer. The Orthopaedic Oncology Lab at the University of Florida was the first to identify putative cancer stem cells in osteosarcoma. The discovery of these rare cells has formed the basis for our subsequent research to determine the cell of origin in osteosarcoma.

Current research efforts include:

- Application of stem cell biology to the study of osteosarcoma
- Describing the molecular signature of the osteosarcoma cancer stem cell
- Developing more effective and less toxic targeted therapies directed at the cancer stem cell

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Enneking - Anspach Research Center

The University of Florida is the largest referral center for musculoskeletal tumors in the southeastern United States and has established one of the finest collections of data relating to orthopaedic disease in existence. The Enneking - Anspach Research Center is dedicated to the study of musculoskeletal pathology and disease. It contains an extensive, world-renowned collection of bone and soft-tissue orthopaedic pathology samples. Various epidemiological studies utilize this tissue bank.

Surgical and Clinical Outcomes

Children with life or limb-threatening tumors from all over the Southeast United States are referred to UF Orthopaedic Oncology for treatment. Our physicians have extensive experience with some rare and challenging forms of osteosarcoma that require special surgical procedures, including rotationplasty, limb salvage surgery and amputation. Clinical outcome investigations now include motion or gait analysis to determine pre and post surgery what is best for each individual patient.

Education

Residents and physicians come from all over the country each year to attend the [Musculoskeletal Pathology Seminar](#) at the University of Florida. The purpose of this semi-annual seminar is to expose physicians and surgeons to the latest information on diagnosis and treatment of musculoskeletal cancers.



Researchers

[Steve Ghivizzani, Ph.D.](#)

Gene Therapy Laboratory, Research



[C. Parker Gibbs, M.D.](#)

Orthopaedic Oncology



[Padraic P. Levings, Ph.D.](#)

Gene Therapy Laboratory, Research

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