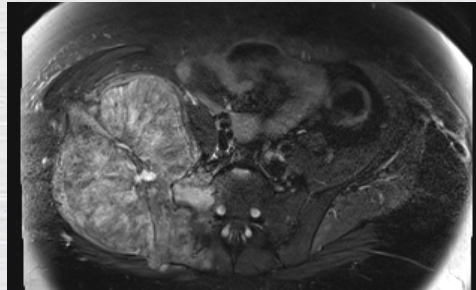
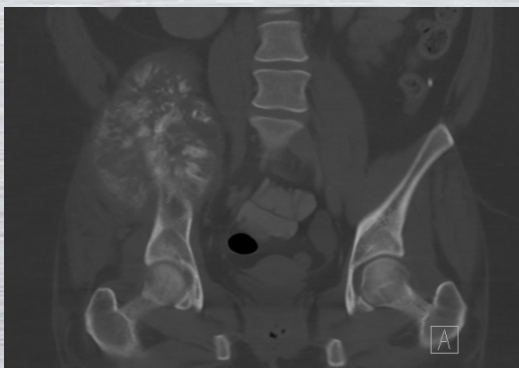
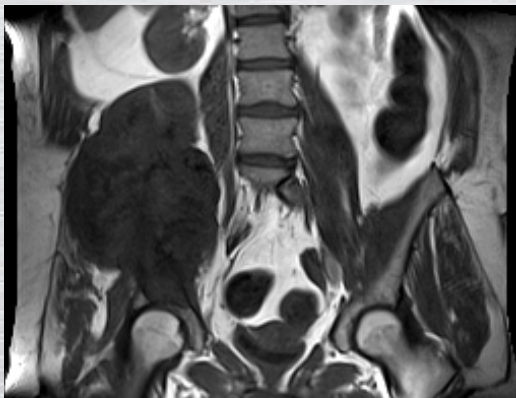


ROTHMAN INSTITUTE ORTHOPAEDIC ONCOLOGY CLINICAL BULLETIN



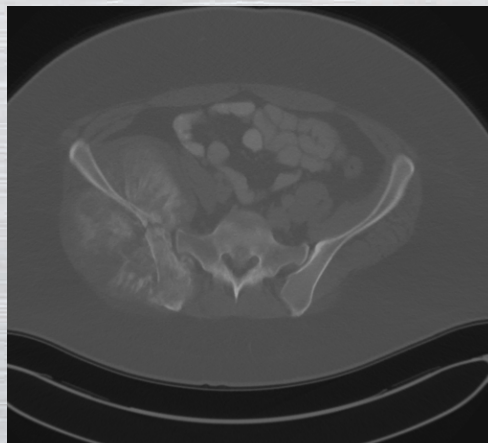
► Clinical History

A 24-year-old female is referred to the Orthopedic Oncology Service at Rothman Institute for evaluation for a pelvis bone lesion seen on imaging. About eight months ago she first developed right-sided low back pain and pain radiating down her right leg. An MRI of the lumbar spine was done. A large bone lesion was seen, involving a significant portion of her right hemipelvis, and a portion of the sacrum and spine. A CT scan of the pelvis was ordered to better evaluate this lesion, which confirmed an aggressive appearing tumor of the pelvis, sacrum and spine. Once this imaging was completed, the patient was referred to Dr. Abraham, chief of the Orthopedic Oncology service at Rothman Institute for further workup and management of this malignant pelvis tumor.



► Workup and Treatment

Based on the appearance of the tumor on the imaging, the suspected diagnosis is pelvic osteosarcoma. A biopsy is performed, which confirms the diagnosis. Staging studies are performed, which confirms that the tumor is localized to the pelvis only, with no sign of metastatic disease. Osteosarcomas of the pelvis are rare, with only about 100 such tumors seen in the entire US per year. Treatment of Pelvic Osteosarcoma requires the expertise of a multidisciplinary team familiar with osteosarcoma treatment, such as the Musculoskeletal Oncology Center at Jefferson. The patient is referred to Dr. Basu-Mallick, a Sarcoma Medical Oncologist, for initiation of the neoadjuvant chemotherapy protocol.



The Osteosarcoma Treatment Team

Orthopedic Surgery

John A. Abraham, MD
Kristin Strogus, PA-C

Medical Oncology

Atrayee Basu-Mallick, MD

Radiation Oncology

Wenyin Shi, MD, PhD
Mark Hurwitz, MD

General Surgery

Adam Berger, MD

Thoracic Surgery

Nate Evans, MD

Plastic Surgery

Patrick Greaney, MD

Musculoskeletal Radiology

William Morrison MD
Diane Deeley MD
Suzanne Long MD
Adam Zoga MD

Bone and Soft Tissue Pathology

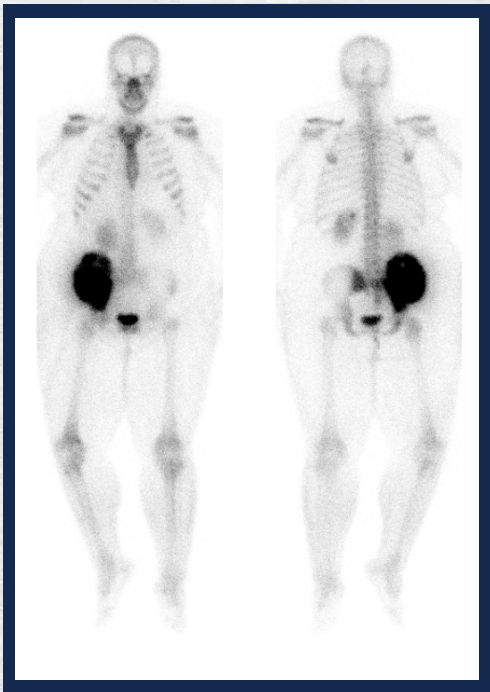
Brian O'Hara MD
Anthony Prestipino MD
Wei Jiang MD PhD

Rehabilitation Medicine

Deborah Franklin MD

Anesthesia and Pain Management

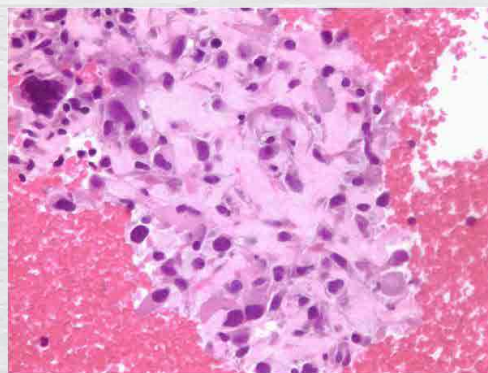
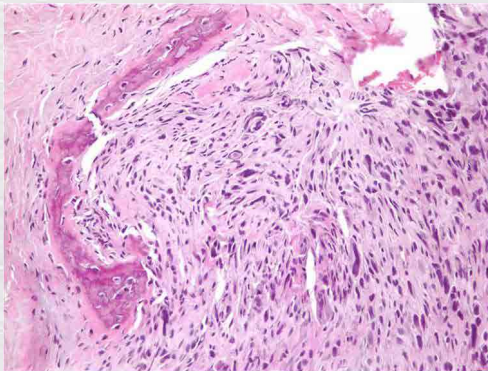
Kishor Gandhi MD



► Surgical Treatment

The surgical treatment of Pelvic Osteosarcoma is extremely challenging. Only a few centers in the country have the expertise necessary to safely and adequately remove these tumors. Dr. John Abraham, chief of the division of Orthopedic Oncology at the Rothman Institute, and Director of Jefferson's Musculoskeletal Oncology Center, has pioneered the use of technology known as surgical navigation to assist in the resection of complex tumors such as this one. Using this system, a highly precise 3 dimensional image of the tumor and surrounding tissues can be seen intra-operatively in real time. This makes the resections not only safer, but also increases the surgeon's ability to achieve a negative margin resection, which is critical to the patient's disease free survival. Preoperative planning was done at the weekly Sarcoma and Musculoskeletal Oncology treatment planning conference, with the input from the Musculoskeletal Radiology and Bone and Soft

Tissue Pathology teams. In this case, an extremely complex 12 hour operation was performed by Dr. Abraham. A navigation assisted resection including the right hemipelvis, right hemi sacrum, and the right half of the L5 vertebral body was performed.



► Final Pathology

The tumor was evaluated by the Bone and Soft Tissue Pathology service. The resection demonstrated a negative margin in all planes of the resection. This is the best surgical result that can be achieved when dealing with these aggressive tumors, and significantly improves the patient's chance for survival.



► Did You Know?

The Orthopedic Oncology service at Rothman Institute is the only center in the region with expertise in the utilization of surgical navigation for resection of bone tumors. As demonstrated by this case, achieving a negative margin is extremely challenging, yet is absolutely critical to the best patient outcome. Dr. Abraham believes this technology has increased his ability to safely and completely remove even the most challenging of skeletal tumors like this one, and is thrilled about the benefits that it can offer his patients with difficult bone tumors.

To Refer A Patient

Contact us at 1-800-321-9999

or

visit us at:

<http://www.rothmaninstitute.com/referring-physicians>

For more information visit the Orthopaedic Oncology page:

<http://www.rothmaninstitute.com/specialties/orthopaedic-oncology>

