

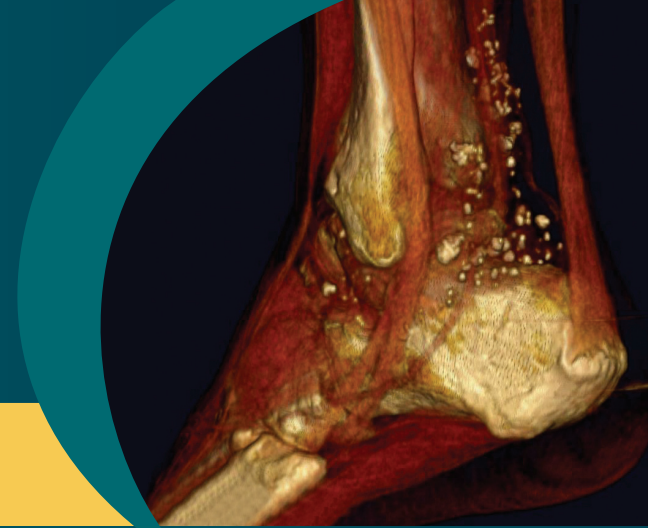


CEDARS-SINAI®

S. MARK TAPER FOUNDATION IMAGING CENTER

EYE ON IMAGING

FALL 2010



Osteoarthritis Treatment: Viscosupplementation

Thomas J. Learch, MD and Michael Witkosky, MD

Although viscosupplementation is becoming a common form of minimally invasive treatment for osteoarthritis (OA), it must be done correctly to achieve its full effectiveness. The fellowship-trained musculoskeletal radiologists at the S. Mark Taper Foundation Imaging Center have extensive training and experience with viscosupplementation for the treatment of OA.

Current treatments for OA, such as analgesics, anti-inflammatories and corticosteroids, often lead to complications. NSAID may cause GI symptoms, Cox 2 inhibitors may lead to myocardial infarction, and acetaminophen may lead to acetaminophen-related liver toxicity.

Promising Treatment

The injection of hyaluronic acid into the knee joint mimics healthy, young synovial fluid in terms of molecular weight, elasticity and viscosity. The injection helps lubricate the joint. Viscosupplementation works well across a spectrum of OA, reduces pain, is well tol-

erated, has a low complication rate, long-term effectiveness, and has no significant systemic adverse events. Candidates for viscosupplementation include elderly patients across the OA spectrum, younger patients with mild to moderate OA, and patients with late-stage OA before total knee replacement (TKR). Patients who are too young for TKR, cannot take NSAIDs, or who have multiple comorbidities may be considered for viscosupplementation.

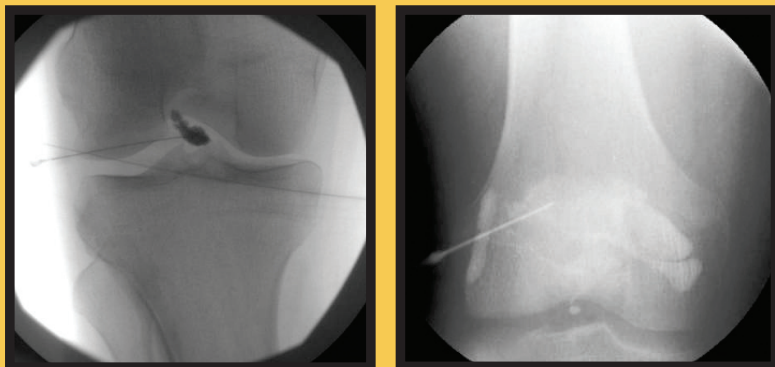
Precise Technique Maximizes Probability of Success

Precise technique is required to maximize the effectiveness of viscosupplementation. Unlike steroids that have a local effect, hyaluronic acid must be intra-articular (IA). If the injection is into the soft tissue, discomfort is increased and effectiveness significantly decreased. Therefore, an experienced musculoskeletal radiologist should be selected to perform the procedure. Board-certified and fellowship-trained radiologists Thomas J. Learch, Joseph C. Giaconi and Joseph Robinson at the S. Mark Taper Foundation Imaging Center, and Dr. Andrew Spitzer of Cedars-Sinai's Department of Orthopaedic Surgery have extensive experience with the procedure. Our musculoskeletal radiologists have extensive experience in IA injections and with imaging guidance can ensure correct IA placement of medications including viscosupplements, steroids, and anesthetics.

Promise for Other Joints: Shoulder, Hip, Wrist

Viscosupplementation also shows great promise for the treatment of OA in the shoulder, hip and wrist. Our

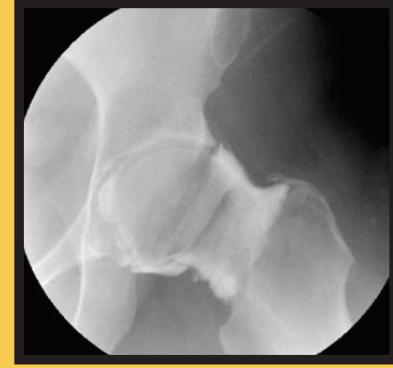
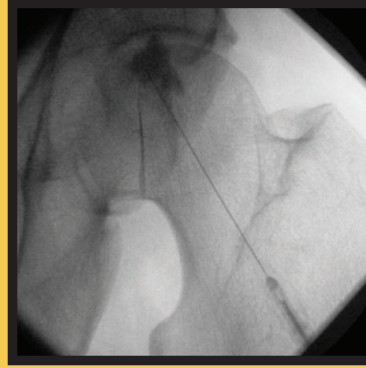
Continued



*Incorrect injection into knee (left).
Correct intraarticular injection into knee (right).*

musculoskeletal radiologists have extensive experience with injections of all joints, including the knee, hip, wrist and shoulder, and plan to continue to study the most effective methods for using it to treat debilitating joint conditions.

Dr. Leach is an attending radiologist and Dr. Witkowsky is a resident at the S. Mark Taper Foundation Imaging Center at Cedars-Sinai Medical Center.



*Incorrect injection into hip (left).
Correct intraarticular injection into hip (right).*

The S. Mark Taper Foundation Imaging Center Offers Outpatient Evening and Weekend Appointments

Evening Appointments Monday - Friday	
CT	Until 8:00 p.m.
MRI	Until 9:00 p.m.
X-Ray (<i>Walk-ins Welcome*</i>)	Until 9:00 p.m.
Saturday Appointments	
CT	9:00 a.m. - 2:30 p.m.
Mammography (<i>Screening</i>)	7:30 a.m. - 4:30 p.m.
MRI	7:45 a.m. - 7:15 p.m.
X-Ray (<i>Walk-ins Welcome*</i>)	8:00 a.m. - 3:15 p.m.
Ultrasound	9:00 a.m. - 2:00 p.m.
Vascular Ultrasound	9:30 a.m. - 4:45 p.m.
Sunday Appointments	
MRI	7:45 a.m. - 7:15 p.m.
X-Ray (<i>Walk-ins only</i>)	8:00 a.m. - 3:15 p.m.

**X-Ray walk-in patients may experience a longer wait time.*

STAT vs. Wet Readings for Imaging Studies

The following plan has been developed with the Quality Improvement Committee in order to clarify requests for STAT and Wet Readings. STATs apply to the performance of the examination and Wet Readings apply to the interpretation. Ordering a study as a STAT will result in it being performed more quickly as indicated below, but will not generate a Wet Reading unless specifically requested.

Exam Performance “STAT”:

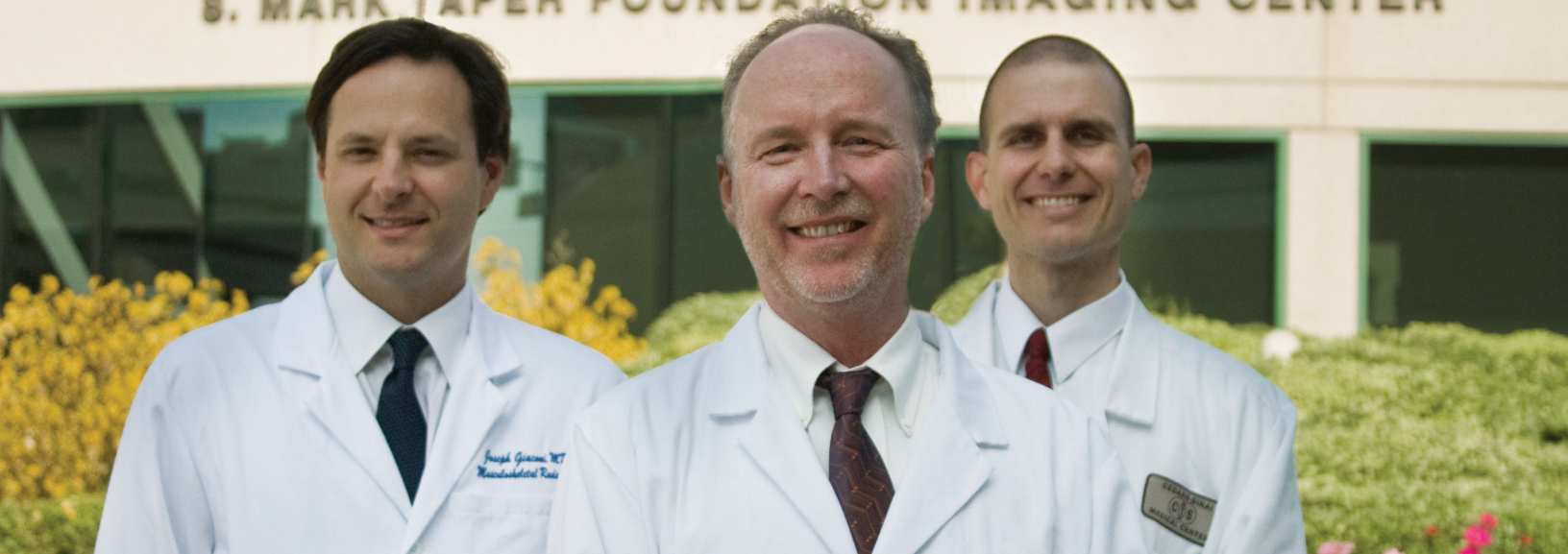
The study will be performed within 4 hours.

Exam Interpretation “Wet Read”:

The interpretation will occur within 2 hours of the performance of the study. The interpretation will be called to whomever is designated on the request form. If no person is designated, the report will be called to the ordering physician.

Exam Performance and Interpretation “STAT Wet Read”:

For both a quick exam and a quick report, order both a STAT and Wet Read.



Pictured left to right: Joseph C. Giaconi, MD, Thomas J. Learch, MD, and Joseph L. Robinson, MD

Radiologists Join Musculoskeletal Imaging Team

Led by Thomas J. Learch, MD, the Musculoskeletal Section at the S. Mark Taper Foundation Imaging Center is pleased to announce that Joseph C. Giaconi, MD and Joseph L. Robinson, MD have recently joined the team.

Dr. Learch is a board-certified attending radiologist and an expert in musculoskeletal imaging. He has received numerous honors including a *cum laude* at the 2006 Radiological Society of North America Annual Meeting. He was an associate professor of diagnostic radiology at USC-University Hospital and LA County/USC Medical Center. He earned his medical degree from Northwestern University and completed an internship and residency at USC. He completed a fellowship in musculoskeletal/osteoradiology at UCSD with Dr. Donald Resnick.

Dr. Robinson is a board-certified musculoskeletal radiologist. He specializes in image-guided aspirations, injections and biopsies. He has expertise in rheumatic disease, orthopedic conditions, and the treatment of tumors using RFA and cryoablation techniques. He earned his medical degree at Saint Louis University Health Sciences Center, before entering a one-year preliminary internal medicine program at St. Mary Medical Center in Long Beach, CA. He completed a residency in diagnostic radiology at the UCI and a fel-

lowship in musculoskeletal radiology at Cedars-Sinai. He was elected to Alpha Omega Alpha.

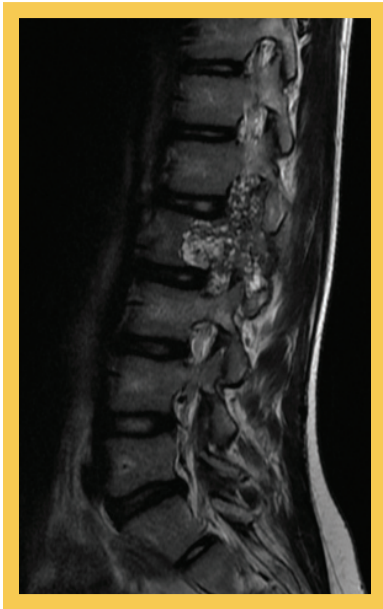
Dr. Giaconi is a board-certified musculoskeletal radiologist. He specializes in RFA, musculoskeletal biopsies, joint aspirations and injections, MRI, MRA, rheumatologic diseases, and evaluation of ACL graft reconstructions. He has published several papers and several cases in the *Musculoskeletal Imaging Case Study*. Before joining Cedars-Sinai, he was an attending musculoskeletal radiologist at the UCSF School of Medicine, where he served as assistant clinical professor in the Department of Radiology and Biomedical Engineering. He is a reviewer for the *Journal of Orthopedic Research*. He earned his bachelor's degree at Yale University, and his medical degree at the Keck School of Medicine at USC. Elected to Alpha Omega Alpha, he completed an internship at the University of Hawaii, a residency in diagnostic radiology at USC, and a fellowship in musculoskeletal radiology at UCSF.

Injections on the Weekend

Our team of musculoskeletal radiologists now offers weekend outpatient joint injections and arthrography (MR and CT). To refer a patient, please call (310) 423-8000 and press 1, then press 3. Our scheduling hours are Monday to Friday, 8 a.m. to 6 p.m.

What's Your Diagnosis?

A 12-year-old girl presented with back pain and lytic lesions found on scoliosis films.
Based on the following MRI images:

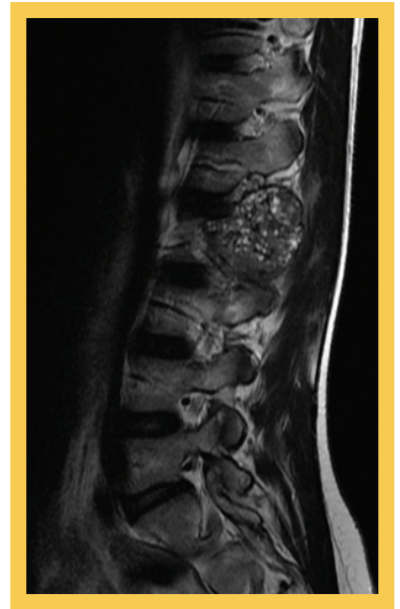


What's your diagnosis?

- Giant Cell Tumor
- Metastatic Disease
- Aneurysmal Bone Cyst
- Osteoblastoma

For the answer, please visit
www.csmc.edu/caseofthemoth

*Submitted by Kamron Izadi, MD, resident
and Marcel Maya, MD
S. Mark Taper Foundation Imaging Center*



To refer a patient, please call (310) 423-8000

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**Imaging Grand Rounds Wednesday, September 22
from 12 pm - 1 pm at the Harvey Morse Auditorium**
*Clinical Features and Imaging Characteristics
of Biphosphonate-associated Femoral Insufficiency Fractures*