Franklin & Seidelmann
SUBSPECIALTY RADIOLOGY

Musculoskeletal Interpretations

Access to High Quality Subspecialty MSK Interpretations

Franklin & Seidelmann Subspecialty Radiology (F&S) has built a dedicated subspecialty teleradiology network of the industry's top radiologists in their fields. This access has proven particularly critical, as the demand for subspecialty expertise has been driven by modality advancements and clinician specialization.

Our imaging service provider clients utilize F&S in order to increase referring physician satisfaction by providing decisive, directive, detailed radiology reports with deeper anatomic description, clinically specific pathology and an understanding of current surgical/medical options with fast turnaround time physicians insist upon. F&S radiologists "speak the same language" as orthopedists, and emphasize a collaborative team approach to medicine.

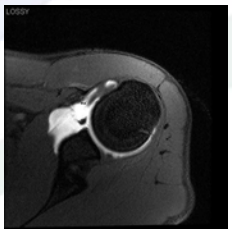
A Dedicated Team of Musculoskeletal Specialists

The F&S radiology team includes several MSK MRI specialists who often collaborate on challenging cases. Many of our radiologists include leading MSK MRI educators such as: Don Resnick, M.D., Professor of Radiology, University of California, San Diego; Javier Beltran, M.D., Chairman of the Department of Radiology, Maimonides Medical Center and Clinical Professor of Radiology, Mount Sinai School of Medicine, New York; Tommy Pope, M.D., Professor of Radiology and Orthopaedics, Medical University of South Carolina, Charleston; and Gabrielle Bergman, M.D., Former Associate Professor of Radiology and Chief of Musculoskeletal Radiology, Stanford University Medical Center.

About F&S Radiologists

The quality of reports and consultations is a direct result of the expertise of the radiologists. F&S can deliver on the promise of high quality reports due to its growing network of more than 100 experienced subspecialty radiologists with the following qualifications:

- Board Certified musculoskeletal (MSK) specialists;
- Musculoskeletal fellowship training and/or extensive experience;
- American Roentgen Ray Society;
- Society for Magnetic Resonance Imaging;
- American, European and International Skeletal Societies;
- Radiological Society of North America;
- American College of Radiology;
- Combined, they are licensed in 50 states;
- Advanced Training in MRI, MDCT and PET/CT;
- All live in the U.S.;
- Many are nationally and internationally recognized experts and educators in their subspecialty area. Collectively, they have produced more than 8,000 papers and lectures;
- F&S maintains a high level of quality and consistency across reports through the utilization of a proprietary lexicon, a rigorous quality control process, and ongoing educational programs;
- Prior to joining F&S radiologists must have significant experience in their dedicated subspecialty area with a minimum of 10,000 cases, and must undergo interpretation testing to ensure expertise meets the standards of the F&S team.



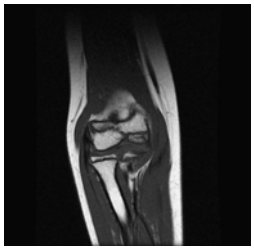
100,000+ Annual Musculoskeletal Interpretations

Traditional radiology departments on average interpret a low volume of annual MSK MRI cases, resulting in radiologists inexperience in the specific anatomy and pathology required to detect subtle findings in the shoulder, elbow, hand, wrist and knees. Therefore, MSK MRI reports are often vague.

Because Franklin & Seidelmann is a dedicated subspecialty teleradiology provider, we aggregate a high volume of annual MSK studies–more than 100,000 annually–across a large national client base. This enables our radiologists to maintain their expertise levels.

23625 Commerce Park, Suite 204, Beachwood, OH 44122 • P: 216.255.5700 • F: 216.255.5701 • www.franklin-seidelmann.com

Franklin & Seidelmann
SUBSPECIALTY RADIOLOGY



What do we See?
Franklin & Seidelmann prides itself on MSK MRI expertise to uncover the subtle findings and commonly missed pathologies. Common and unusual pathology that we see includes:

- Shoulder: GLAD, Bankart, and Kim lesions
- Knee: Complex meniscal and ligamentous injuries (i.e., Jack and Jill lesion)
- Hip: Paralabral cysts and femoro-acetabular impingement syndrome
- Elbow: Complex and unusual elbow injuries (i.e., Hageman's disease)
- Wrist: TFCC injuries, scapho-lunate and lunato-triquetral injuries.

What are the Benefits of Detailed, Decisive and Directive MSK Interpretations?

- Helps physicians with surgical planning and treatment process which can potentially result in improved patient outcomes.
- Ddx conservative versus surgical pathologies.
- Mitigate malpractice exposure.

Second Opinion Radiology Reports
If you question the original interpretation and need a second opinion, you or your patients can simply send the original interpretation and images to your imaging facility or directly to us and we will gladly provide a second opinion report. F&S handles several hundred second opinions cases annually.

About F&S

F&S provides subspecialty interpretations to more than 250 clients operating in imaging centers, physician practices and hospitals nationwide and we serve tends of thousands of physicians, many of which support professional sports teams. F&S offers our clients virtual access to subspecialty expertise whether it is to complement existing staff, or to handle all interpretations.

We make it easy for our clients to access subspecialty radiology expertise through our robust teleradiology platform which distributes images and reports between our clients and radiologists. Our system is managed by a co-located data center that is one of the highest quality solutions available in any market today ensuring 99.99% uptime reliability, scalability and security. F&S supports compliance with HIPAA and ACR/NEMA teleradiology standards.

F&S has 100+ employees dedicated to supporting clients with all aspects of their operation, including RT support, which provides technical positioning training and protocol development.

Visit www.franklin-seidelmann.com for detailed radiologist biographies and sample reports.

Orthopedists Rely on Our Interpretations

*"As an orthopaedic surgeon/sports medicine specialist, practicing in San Diego, California, I handle many professional athletes and serve as the team physician for the **San Diego Chargers**. The services that F&S provides are invaluable in my treatment of these athletes. Even though the radiologists are not physically located in San Diego, the quality of the service we consistently receive and the readings are superior. We have found their responsiveness to be unparalleled. Their readings are always accurate, and the staff is always available to discuss cases in great detail, as well as to perform specialized studies. I have been asked why I use a radiology group that is not located in San Diego and I always respond that it is because Franklin & Seidelmann provides superior service and accurate readings. I consider their team of subspecialists to be a valuable part of my orthopaedic sports medicine practice. "*

David J. Chao, M.D.
Oasis Medical Service Organization, San Diego, CA

23625 Commerce Park, Suite 204, Beachwood, OH 44122 • P: 216.255.5700 • F: 216.255.5701 • www.franklin-seidelmann.com

MRI REPORT — Knee

This is a middle-aged male complaining of chronic knee pain, instability and locking for one month. The patient has a history of remote torn ACL (six years prior) and a prior meniscectomy. The patient is S/P ACL reconstruction.

FINDINGS:

The patient is S/P ACL tendon graft repair. There is a high-grade partial tear of the ACL graft which is thread-like as it enters the tibial tunnel with associated laxity. There is marrow edema indicating an active marrow stress phenomenon surrounding the tibial tunnel. There is osteoarthritic spur formation of the medial wall of the femoral notch. There is no osteophyte of the roof of the femoral notch.

The patient is S/P high-grade medial meniscectomy with a minimal residual perpheral red zone. There is osteoarthritic spur formation producing extrusion of the residual body of the medial meniscus. There is a small recurrent horizontal tear of this small remnant portion of the meniscus in the mid body region. This tear measures approximately 2mm in depth and 6mm in length. There is inflammation of the medial knee capsule with periligamentous inflammation of an otherwise normal MCL.

Normal lateral meniscus.

There is mild chondral thinning of the hyaline cartilage of the medial femorotibial compartment but no intermediate or high-grade area of chondromalacia. Normal hyaline cartilage of the lateral femorotibial compartment.

Normal lateral collateral ligamentous complex.

There is patellofemoral arthrosis with marginal osteophyte formation. There is a normal patellofemoral congruence and no patellar tilt or subluxation.

There is a small suprapatellar pouch effusion but no popliteal cyst.

Normal hyaline cartilage of the patellofemoral articulation.

Normal quadriceps tendon. There is patellar tendinosis and thickening of the patellar tendon with a cortical defect of the anterior cortex of the patella suggesting postsurgical tendinosis of a bone tendon bone graft location.

IMPRESSION:

High-grade partial tear of the ACL which appears thread-like with laxity but without complete discontinuity.

High-grade medial meniscectomy with a recurrent small tear of the body of the medial meniscus.

Osteoarthritic spur formation of the tricompartments of the knee.

Cancellous marrow edema surrounding the tibial tunnel consistent with an active marrow stress phenomenon.

MRI REPORT — Elbow

This is a middle-aged male with elbow pain after a severe pulling injury. There is pain posteriorly with extension. Question avulsion fracture.

FINDINGS:

There is a complete rupture of the triceps tendon from its insertion on the olecranon process of the ulna, and this is associated with a small avulsion fragment that measures 6mm in diameter. The distal end of the tendon is displaced posteriorly, with a "mop-end" appearance of the distal 3cm. There is a gap of 2.5cm from the distal end of the tendon to the olecranon process. There is extensive fluid tracking deep and superficial to the distal triceps tendon, as well as along the posterior subcutis adipose space, extending forward along the forearm. This also extends medially and laterally as well as anteriorly. This is best demonstrated on sagittal T2 images #5-14.

There is focal increased signal within the common flexor tendon insertion on the medial epicondyle of the humerus, consistent with medial epicondylitis, but there is no high-grade tear. This is best demonstrated on axial T2 images #7-10.

There is marked thickening and increased signal within the common extensor tendon insertion on the lateral epicondyle of the humerus, consistent with epicondylitis and partial tearing. There is no complete tear.

There is slight thickening of the distal biceps tendon insertion on the radial tuberosity, with enthesopathic marrow changes in the radial tuberosity, but there is no complete tear or retracted tendon, and there is no peritendinous fluid. These changes appear chronic (axial T2 #17-22).

There is chondromalacia within the olecranon fossa without a focal OCD lesion or fracture. There is no subluxation.
There is normal articular cartilage within the radiocapitellar and ulnotrochlear articulation without an OCD lesion.

There is a joint effusion.
There is a sprain of the ulnar collateral ligament at the insertion on the medial epicondyle of the humerus without a complete tear, and there is an intact ulnar attachment (coronal T1 #16-20).

There is a high-grade tear of the radial collateral ligament without demonstration of the humeral or radial components (coronal T1 #23-28).
The ulnar nerve is well demonstrated within the cubital tunnel, without evidence of entrapment, enlargement or signal changes.

IMPRESSION:

Triceps tendon rupture with small avulsion fragment from the olecranon process as described.

Medial epicondylitis.

Common extensor partial tear.

Ulnar collateral ligament sprain.

Radial collateral ligament tear.

Chronic biceps insertional tendinosis.

Joint effusion and extensive edema within the subcutis adipose space.