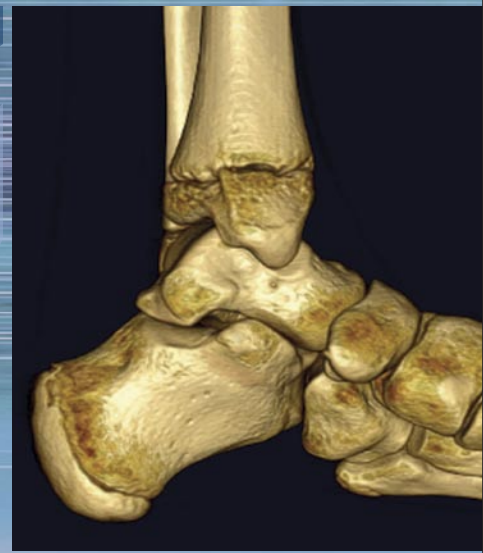


MUSCULOSKELETAL IMAGING



 **Valley Radiologists**  
Complete Diagnostic Imaging  
an affiliate of Southwest Diagnostic Imaging Ltd.

While musculoskeletal imaging isn't new, today's powerful, versatile technologies have provided a new level of sophistication and accuracy in the diagnosis of problems related to muscles, bones, joints and supporting soft tissue. Yet, this sophistication and the complexities involved make subspecialty expertise a vital part of an accurate and complete diagnosis. At Valley

Radiologists, we combine comprehensive capabilities and modalities with fellowship-trained subspecialty expertise in musculoskeletal imaging. As a result, we offer the complete range of musculoskeletal radiology exams, use the most advanced techniques and have the training and focused experience to deliver the consistently reliable diagnoses on which you depend.



## COMPREHENSIVE CAPABILITIES IN SPORTS & MUSCULOSKELETAL RADIOLOGY.

**MRI** – In sports and musculoskeletal applications, magnetic resonance imaging is most often used to evaluate trauma- and sports-related injuries and inflammatory and degenerative conditions. In addition to its usefulness for imaging the knee, shoulder and spine, MRI is beneficial for evaluating the hips and small joints (i.e., the hand, wrist, elbow and ankle). Other uses include the assessment of ligament and tendon injuries, stress fractures, avulsion injuries, tumors and systemic diseases. Using an intra-articular contrast agent,

MR arthrography helps us evaluate unexplained joint pain and postoperative knee and shoulder problems... and to follow other imaging studies that show abnormality. MR arthrography also aids in the evaluation of the ligaments of the wrist and is especially helpful for evaluating labral injuries of the hip and shoulder joints.

**CT** – Multidetector CT (MDCT) is especially effective for examining the skeletal system. This is because it provides extremely detailed high-resolution cross-sectional images of most internal structures. MDCT enables us to examine fractures in bones that are otherwise hidden from view using simple radiography and to evaluate some soft-tissue abnormalities related

to musculoskeletal complaints. Subtle fractures, particularly in small joints like the wrist, are better seen with MDCT and 3-D rendering. This permits extremely high-resolution three-dimensional visualization of the bone surface and internal trabecular structure. Volume-rendered images provide 3-D visualization of complex fractures, including the complex spatial relationships between bone fragments. The resulting images can be cropped and rotated to show anatomic exposure, which is sometimes not even possible during surgical intervention. MDCT also benefits postoperative imaging in patients who have orthopedic hardware, as it makes it possible to see the 3-D relationships between internal hardware, joint surfaces, bones and bone fragments. To evaluate internal joint structure, CT arthrography is ideal for patients who are unable to undergo MRI.

**Musculoskeletal ultrasound** – Today, ultrasound has become an important part of the diagnostic toolkit for musculoskeletal disorders. Because it provides results in “real time,” ultrasound allows our musculoskeletal specialists to evaluate muscles, tendons, ligaments and other soft tissues dynamically. This means we can assess the structures as a system while they are under load and/or while the body is moving. With ultrasound, we can evaluate infection, inflammatory processes, soft-tissue masses and tendon tears, particularly in the ankles, fingers, knees and elbows. Ultrasound is also excellent for examining the soft tissue and fluids that surround the joints.

**DXA** – Dual-energy X-ray absorptiometry quickly, painlessly and accurately measures the strength, density and mineral content of bone. DXA is the standard method for identifying patients with or at risk for osteoporosis and osteoporotic fractures. Patients who are identified as being at risk for osteoporosis because of age, medication or previous fractures should obtain a

DXA scan to determine the need for treatment to prevent further bone loss. DXA is also the method of choice for monitoring treatment and disease progression.

**PET/CT** – With the help of radioisotopes, nuclear imaging with positron emission tomography (PET/CT) helps us identify certain medical problems early, when treatment can be most effective. PET/CT scanning can identify fractures, tumors and diseases of the skeletal system. Its greatest strengths include providing early physiologic information about injury sites and evaluating large areas — or the entire body — in a single exam. This is particularly well-suited for patients at risk for metastasis to the bone or to monitor therapy for bone metastasis.

**Musculoskeletal intervention** – As the area's most complete, full-service interventional radiology provider, we perform the full range of imaging-guided musculoskeletal interventions. These include biopsy, joint aspiration, discography, arthrography, facet injections, nerve-root injections and other procedures.

### **CONTINUING OUR TRADITION OF EXCELLENCE WITH SUBSPECIALIZED MUSCULOSKELETAL DIAGNOSES.**

Musculoskeletal radiology and sports medicine imaging are two of the areas in which we continue our 40-plus-year tradition of clinical excellence and patient-focused care. In addition to having all the modern modalities, our board-certified radiologists combine subspecialty training and experience with a heartfelt dedication to providing the highest standard of care.

For more information on musculoskeletal imaging at Valley Radiologists or our other subspecialized imaging programs, or if you wish to refer a patient, please call 623-847-2000.



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Complete Diagnostic Imaging  
an affiliate of Southwest Diagnostic Imaging Ltd.

**DEER VALLEY OFFICE**

Deer Valley Medical Center  
2525 West Greenway Road, Suite 250  
Phoenix, AZ 85023  
*SERVICES: Bone Densitometry, Diagnostic Radiography,  
Screening Mammography, Ultrasound*

**ESTRELLA OFFICE**

Estrella Medical Plaza I  
9305 West Thomas Road, Suite 100  
Phoenix, AZ 85037  
*SERVICES: Bone Densitometry, Breast MRI, CT,  
Digital Radiography, Digital Screening & Diagnostic  
Mammography, Interventional Breast Services, MRI, Ultrasound*

**PALM VALLEY OFFICE**

Palm Valley Medical Plaza  
13555 West McDowell Road, Suite 106  
Goodyear, AZ 85338  
*SERVICES: Bone Densitometry, CT, Digital Radiography,  
Digital Screening & Diagnostic Mammography, MRI, Ultrasound*

**PARADISE VALLEY OFFICE**

16641 North 40th Street, Suite 1  
Phoenix, AZ 85032  
*SERVICES: Breast MRI, CT, MRI, Ultrasound,  
Vascular Ultrasound*

**PARKVALE OFFICE**

Parkvale Medical Building  
4616 North 51st Avenue, Suite 104  
Phoenix, AZ 85031  
*SERVICES: Bone Densitometry, CT, Digital Radiography,  
Screening Mammography, Ultrasound*

**PASEO I OFFICE**

Paseo Medical Plaza I  
5601 West Eugie Avenue, Suite 102  
Glendale, AZ 85304  
*SERVICES: Digital Radiography,  
Digital Fluoroscopy, Ultrasound*

**PASEO II OFFICE**

Paseo Medical Plaza II  
5605 West Eugie Avenue, Suite 110  
Glendale, AZ 85304  
*SERVICES: Breast MRI, CT, CTA, Digital Screening  
Mammography, MRI, PET/CT, Ultrasound, Vein Lab*

**SUNWEST OFFICE**

Sunwest Medical Center  
5757 West Thunderbird Road, Suite W101  
Glendale, AZ 85306  
*SERVICES: Bone Densitometry, Digital Radiography*

**SUNWEST BREAST CENTER**

Sunwest Medical Center  
5757 West Thunderbird Road, Suite W100  
Glendale, AZ 85306  
*SERVICES: Breast Ultrasound, Interventional Breast Services,  
Digital Screening & Diagnostic Mammography*

**THUNDERBIRD OFFICE**

Thunderbird Medical Plaza II  
5310 West Thunderbird Road, Suite 100  
Glendale, AZ 85306  
*SERVICES: Digital Radiography, Ultrasound*

**BUSINESS OFFICE**

2323 West Rose Garden Lane  
Phoenix, AZ 85027

**CENTRAL SCHEDULING: 623-847-2000**

**CENTRAL FAX SCHEDULING: 623-847-2001**

**[WWW.VALLEYRADIOLOGISTS.COM](http://WWW.VALLEYRADIOLOGISTS.COM)**