

	Clinical Protocol: Knee MRI	
	ORIGINAL EFFECTIVE DATE: 05/22/2021	REVIEWED/REVISED DATE(S): 08/13/2021 09/01/2022 11/15/2023 07/24/2025
PREPARED BY: Ashley Gonzalez, UM Project Coordinator; Konstantin Yengoyan, Supervisor, Clinical Operations		APPROVED BY: Dr. Shenoda Y.A Abd Elmaseh, Assistant Medical Director

PROTOCOL OVERVIEW

This Clinical Protocol advises on indications and guidelines for Knee MRI.

INDICATIONS

Knee MRI may be indicated for **1 or more** of the following:

- a. Bone anatomy or structural defect evaluation needed, as indicated by **1 or more** of the following:
 - i. Acute traumatic cartilage injury, suspected, and need for assessment
 - ii. Bone abnormality on plain x-ray or CT scan
 - iii. Bone scan demonstrating well-localized increased uptake
 - iv. Loose body in joint space, suspected
 - v. Osteochondral injury or osteochondritis dissecans, suspected
 - vi. Osteonecrosis, suspected, as indicated by **1 or more** of the following:
 1. Focal radiolucency seen on plain x-ray
 2. Pain, stiffness, and swelling associated with localized tenderness to pressure
 3. Persistent pain in patient with risk factors for osteonecrosis (eg, sickle cell disease, use of corticosteroids, treatment of acute lymphocytic leukemia)
 - vii. Prosthetic joint complication, suspected (eg, infection, osteolysis, pain)
- b. Cancer or neoplasm evaluation or staging needed, as indicated by **1 or more** of the following:
 - i. Bone neoplasm (benign or malignant), as indicated by **1 or more** of the following:
 1. Abnormal finding on plain x-ray or bone scan
 2. Chondrosarcoma and **1 or more** of the following:
 - a. Initial staging
 - b. Monitoring response after treatment completed
 - c. Post-treatment surveillance for local tumor recurrence; intervals include **1 or more** of the following:
 - i. Low-grade and intracompartmental: every 6 to 12 months for 2 years, then annually as clinically indicated
 - ii. High-grade (ie, grade II or III), clear cell, or extracompartmental: as clinically indicated^[A]
 3. Current diagnosis or history of cancer located elsewhere and **1 or more** of the following:
 - a. Plain x-ray or bone scan findings indeterminate
 - b. Unexplained localized bony signs and symptoms (eg, pain)

4. Ewing sarcoma family of tumors and **1 or more** of the following:
 - a. Initial staging
 - b. Monitoring response after treatment completed
 - c. Post-treatment surveillance for local tumor recurrence; intervals include **1 or more** of the following:
 - i. Every 2 to 3 months for first 2 years, then decreasing frequency through year 5
 - ii. Annually after 5 years
5. Osteosarcoma and **1 or more** of the following:
 - a. Initial staging
 - b. Monitoring response after chemotherapy or radiation therapy
 - c. Post-treatment surveillance for local tumor recurrence; intervals include **1 or more** of the following:
 - i. Every 3 months for 2 years
 - ii. Every 4 months for year 3
 - iii. Every 6 months for years 4 and 5
 - iv. Annually after 5 years
6. Palpable bony abnormality, with normal findings on plain x-ray
- ii. Soft tissue neoplasm (benign or malignant), suspected or known
- c. Joint anatomy or structural defect evaluation needed, as indicated by **1 or more** of the following:
 - i. Cystic lesions, as indicated by **1 or more** of the following:
 1. Baker cyst, suspected (eg, pain, mass in popliteal space)
 2. Bursa lesions
 3. Ganglion
 4. Meniscal cyst
 5. Subchondral cyst
 6. Synovial cysts (eg, Baker cyst in popliteal space)
 - ii. Loose body in joint space, suspected
 - iii. Meniscal pathology, suspected, as indicated by **1 or more** of the following:
 1. Effusion with acute injury or with subsequent episodes of minor injury or vigorous activity
 2. Fractures with high association of meniscal tear (eg, tibial plateau)
 3. Persistent knee pain associated with joint line tenderness to palpation
 4. Positive Apley test
 5. Positive McMurray test
 6. Restricted range of motion, buckling, or locking
 - iv. Synovial pathology, as indicated by **1 or more** of the following:
 1. Chronic synovitis secondary to hemarthrosis of hemophilia
 2. Intra-articular venous malformation
 3. Juvenile idiopathic arthritis with knee involvement, for assessment of joint involvement and treatment
 4. Pigmented villonodular synovitis
 5. Seronegative spondyloarthropathies (eg, ankylosing spondylitis, psoriatic arthritis)
 6. Synovial sarcoma
- d. Ligament, muscle, or tendon injury or tear, known or suspected, as indicated by **1 or more** of the following:
 - i. History of tearing or popping after acute injury

- ii. Inability to bear weight after injury
 - iii. Laxity with valgus or varus stress to knee
 - iv. Positive anterior or posterior drawer sign (ie, laxity with anterior or posterior stress to knee)
 - v. Positive Lachman test
 - vi. Postoperative assessment needed after ligament repair or reconstruction, as indicated by **1 or more** of the following:
 - 1. Decreased knee range of motion (eg, due to impingement, arthrofibrosis, cystic degeneration of graft)
 - 2. Graft tear, suspected
 - 3. Postoperative septic arthritis, suspected
 - vii. Posttraumatic effusion
 - viii. Symptoms of instability (ie, giving way or buckling, particularly with sudden stops or rotational and cutting maneuvers)
 - ix. Tear of extensor mechanism, suspected (eg, quadriceps, patellar tendons)
- e. Infection, known or suspected, as indicated by **1 or more** of the following
 - i. Osteomyelitis, suspected, as indicated by **1 or more** of the following:
 - 1. Abscess of residual limb, suspected, following lower extremity amputation for osteomyelitis
 - 2. Bone pain (localized) associated with chills or fever
 - 3. Bone pain (persistent) in patient with diabetes or severe peripheral vascular disease
 - 4. that responds poorly to antibiotics
 - 5. Focal lesion seen on bone scan
 - 6. Sinus tract infection from ulcer, suspected
 - 7. Ulcer of lower extremity, persistent or worsening, in patient with diabetes or severe peripheral vascular disease
 - ii. Septic arthritis, known or suspected
- f. Pain localized to knee, as indicated by **ALL** of the following:
 - i. Knee pain of 6 or more weeks' duration
 - ii. Pain unexplained by history and physical examination, with normal findings on plain x-ray
 - iii. Pain unresponsive to appropriate conservative measures (eg, NSAIDs, physical therapy, restorative)
- g. Patella dislocation or chronic patellofemoral instability, as indicated by **1 or more** of the following:
 - i. Following reduction of acute traumatic dislocation
 - ii. Preoperative evaluation of patient with recurrent dislocation
- h. Peripheral neuropathy, and imaging is required to assist in diagnosis or treatment
- i. Trauma or fracture, known or suspected, as indicated by **1 or more** of the following:
 - i. Arcuate fracture of fibular head
 - ii. Occult Salter-Harris fracture (ie, fracture through growth plate), as indicated by **ALL** of the following:
 - 1. Patient skeletally immature (eg, has not reached full growth)
 - 2. Plain x-ray negative or equivocal for physeal fracture of distal femur or proximal tibia
 - iii. Second fracture (ie, avulsion fracture)
 - iv. Tibial eminence fracture in pediatric or adolescent patient
 - v. Tibial plateau fracture

- j. Repeat evaluation of specific area or structure with same imaging modality, as indicated by **1 or more** of the following:
- i. Change in clinical status (eg, worsening symptoms or new associated symptoms)
 - ii. Need for interval reassessment that may impact treatment plan
 - iii. Need for re-imaging either prior to or after performance of invasive procedure

RECOMMENDED RECORDS

Please submit history and physical or progress notes that show the symptoms, exam findings, and any pertinent diagnostic tests that may have been done. (i.e. X-ray, ultrasound).

CITATION

MCG Care Guidelines 29th Edition, 3/04/2025 [MCG Releases 29th Edition of Guidelines with New Support for the 2025 Medicare Advantage Final Rule - MCG Health](#)

REVISION HISTORY

Revised By:	Ashley Gonzalez, UM Project Coordinator; Konstantin Yengoyan, Supervisor, Clinical Operations	Date: 07/24/25	
Approved By:	Dr. Shenoda Y.A Abd Elmaseh, Assistant Medical Director	Date: 01/29/2026	Signature Shenoda Abd Elmaseh,
Revised By:		Date:	
Approved By:		Date:	Signature
Revised By:		Date:	
Approved By:		Date:	Signature
Revised By:		Date:	
Approved By:		Date:	Signature
Revised By:		Date:	
Approved By:		Date:	Signature
Revised By:		Date:	
Approved By:		Date:	Signature