South Atlantic Medical Group	**Clinical Protocol: Orthopedic**	**SUBDEPARTMENT:** N/A
	POLICY NO.	**ORIGINAL EFFECTIVE DATE:** 12/01/2019
		REVIEWED/REVISED DATE(S): 11/15/2023, 03/6/2024
PREPARED BY: Adriana Martinez, Compliance Manager	**APPROVED BY: Dan Kahen, DO- Medical Director**	
TITLE OF POLICY: Non-Traumatic Knee Pain		

PROTOCOL OVERVIEW

The knee has the largest articulating surface of any joint. Depending on the activity, this weight-bearing joint can support two to five times a person's body weight. Chronic knee pain affects 25 percent of adults and has a deleterious effect on daily function and quality of life.

This protocol advises on guidelines, indications, and the referral for non-traumatic knee pain.

INDICATIONS

Clinical indications for referral include Referral for knee pain may be indicated for **1 or more** of the following:

1. Emergent evaluation or management of **1 or more** of the following:
    - Fracture (eg, distal femur fracture, tibial plateau fracture)
    - Knee dislocation
    - Multidirectional instability
    - Neurovascular compromise
    - Septic arthritis
    - Trauma
    - Infectious disease referral for evaluation or management of septic arthritis
    - Interventional radiology referral for evaluation or management of radiosynovectomy (ie, for hemophilic joint bleed)

2. Orthopedic surgery referral for evaluation or management of **1 or more** of the following:
    - Abnormal findings on imaging (eg, torn cruciate ligament)
    - Anterior cruciate ligament tear (eg, positive or equivocal anterior drawer sign, Lachman test, pivot shift test)
    - Arthrocentesis needed and difficult to perform
    - Baker cyst in popliteal fossa
    - Child with persistent knee pain and normal physical examination
    - Child with new-onset limp
    - Failure of nonoperative treatment (eg, NSAIDs, physical therapy)
    - Fracture evident or equivocal on plain x-ray
    - Hemophilic joint bleed or arthropathy
    - Increasing varus or valgus deformity
    - Knee instability
    - Knee locking, buckling, or giving way 2

- Loose body evident on plain x-ray
- Meniscal tear (eg, joint line tenderness on palpation, positive or equivocal Apley, McMurray, or Thessaly test)
- Osteochondritis dissecans
- Osteonecrosis
- Patellar dislocation
- Posterior cruciate ligament tear (eg, positive or equivocal posterior drawer sign, reversed pivot shift test, sag sign)
- Septic arthritis
- Skeletal dysplasia
- Synovectomy needed (eg, pigmented villonodular synovitis, rheumatoid arthritis)
- Tumor

3. Physical therapy referral for evaluation or management of **1 or more** of the following

    - Anterior knee pain (ie, patellofemoral pain syndrome)
    - Gait training with assistive device
    - Instruction on knee taping
    - Meniscal tear
    - Muscle weakness (eg, quadriceps weakness)
    - Rehabilitation after procedure (eg, arthroscopy)

4. Rheumatology referral for evaluation or management of **1 or more** of the following:

    - Atypical presentation or presence of comorbid condition (eg, adult with underlying gout)
    - Joint effusion and 1 or more of the following:
    - Arthrocentesis needed and difficult to perform
    - Bloody effusion on arthrocentesis
    - Synovial or inflammatory disease
    - Unresponsive to conservative care

5. Systemic disease, as indicated by **1 or more** of the following:

    - Eye inflammation (ie, uveitis)
    - Morning stiffness lasting more than 30 minutes
    - Multiple joints involved
    - Recent genital tract infection
    - Recent rash
    - Serum antinuclear antibody positive
    - Serum erythrocyte sedimentation rate or C-reactive protein elevated
    - Serum rheumatoid factor or anti-citrullinated peptide antibody positive

OSTEOMYELITIS

1. Indicated for ANY ONE of the following:
    - Patient with diabetes or severe peripheral vascular disease and ANY ONE of the following:
        - Persistent leg pain, even without ulcers present
        - Persistent or worsening ulcer without obvious bone exposure

- Suspected osteomyelitis due to presence of ANY ONE of the following:
    - Pain associated with chills or fever, particularly after trauma or orthopedic surgery
    - Overlying cellulitis that responds poorly to antibiotics
    - Chronic skin ulcer
- Focal lesion seen on bone scan

SUSPECTED BONE TUMOR

1. Indicated for ANY ONE of the following:
    - Abnormal finding on x-ray or bone scan
    - Palpable bony abnormality with normal x-ray
    - Known diagnosis of cancer elsewhere and ANY ONE of the following:
        - Unexplained pain
        - Abnormal x-ray or bone scan
    - Persistent pain or unclear etiology
    - Follow-up after treatment for either primary or metastatic cancer of the bone.

RECOMMENDED RECORDS

- History and physical with specific focus on the knee and also history of trauma and whether the pain is acute or chronic in nature
- Imaging including plain film and MRI
- Labs including CBC CMP and Vitamin D level
- Disease specific labs including HA1C
- Rheumatology specific labs based on clinical exam

CITATION

1. MCG Care Guidelines 27th Edition, 2/28/2023 https://www.mcg.com/client-resources/newsitem/mcg-27th-edition-care-guidelines/
2. Jinks C, Jordan K, Croft P. Measuring the population impact of knee pain and disability with the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). Pain 2002; 100:55.
3. Nguyen US, Zhang Y, Zhu Y, et al. Increasing prevalence of knee pain and symptomatic knee osteoarthritis: survey and cohort data. Ann Intern Med 2011; 155:725. American College of Radiology (ACR): ACR Appropriateness Criteria acute trauma to the knee (revised 2019