



Complete Summary

GUIDELINE TITLE

Nontraumatic knee pain.

BIBLIOGRAPHIC SOURCE(S)

Pavlov H, Dalinka MK, Alazraki NP, Daffner RH, DeSmet AA, El-Khoury GY, KNeeland JB, Manaster BJ, Rubin DA, Steinbach LS, Weissman BN, Haralson RH III, Expert Panel on Musculoskeletal Imaging. Nontraumatic knee pain. [online publication]. Reston (VA): American College of Radiology (ACR); 2005. 9 p. [44 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Pavlov H, Dalinka MK, Alazraki N, Berquist TH, Daffner RH, DeSmet AA, el-Khoury GY, Goergen TG, Keats TE, Manaster BJ, Newberg A, Haralson RH, McCabe JB, Sartoris D. Nontraumatic knee pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 2000 Jun;215(Suppl):311-20.

The appropriateness criteria are reviewed annually and updated by the panels as needed, depending on introduction of new and highly significant scientific evidence.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Nontraumatic knee pain

GUIDELINE CATEGORY

Diagnosis
Evaluation

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Nuclear Medicine
Orthopedic Surgery
Pediatrics
Radiology

INTENDED USERS

Health Care Providers
Health Plans
Hospitals
Physicians
Utilization Management

GUIDELINE OBJECTIVE(S)

To evaluate the appropriateness of initial radiologic examinations for patients with nontraumatic knee pain

TARGET POPULATION

Patients with nontraumatic knee pain

INTERVENTIONS AND PRACTICES CONSIDERED

1. X-ray
 - Anteroposterior (AP) (standing or supine)
 - Lateral (routine or cross-table)
 - Notch or tunnel view (standing or supine)
 - Axial view
 - Ipsolateral hip films (AP/frog leg lateral)
2. Nuclear medicine - 3 phase bone scan
3. Ultrasound (US)
4. Computed tomography (CT)
5. Magnetic resonance imaging (MRI)
6. Aspiration/arthrogram
7. CT postarthrogram

MAJOR OUTCOMES CONSIDERED

Utility of radiologic examinations in differential diagnosis

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer performed literature searches of peer-reviewed medical journals, and the major applicable articles were identified and collected.

NUMBER OF SOURCE DOCUMENTS

The total number of source documents identified as the result of the literature search is not known.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Not Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

One or two topic leaders within a panel assume the responsibility of developing an evidence table for each clinical condition, based on analysis of the current literature. These tables serve as a basis for developing a narrative specific to each clinical condition.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Since data available from existing scientific studies are usually insufficient for meta-analysis, broad-based consensus techniques are needed for reaching agreement in the formulation of the appropriateness criteria. The American College of Radiology (ACR) Appropriateness Criteria panels use a modified Delphi technique to arrive at consensus. Serial surveys are conducted by distributing questionnaires to consolidate expert opinions within each panel. These questionnaires are distributed to the participants along with the evidence table

and narrative as developed by the topic leader(s). Questionnaires are completed by the participants in their own professional setting without influence of the other members. Voting is conducted using a scoring system from 1 to 9, indicating the least to the most appropriate imaging examination or therapeutic procedure. The survey results are collected, tabulated in anonymous fashion, and redistributed after each round. A maximum of three rounds is conducted and opinions are unified to the highest degree possible. Eighty (80) percent agreement is considered a consensus. This modified Delphi technique enables individual, unbiased expression, is economical, easy to understand, and relatively simple to conduct.

If consensus cannot be reached by this Delphi technique, the panel is convened and group consensus techniques are utilized. The strengths and weaknesses of each test or procedure are discussed and consensus reached whenever possible. If "No consensus" appears in the rating column, reasons for this decision are added to the comment sections.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Criteria developed by the Expert Panels are reviewed by the American College of Radiology (ACR) Committee on Appropriateness Criteria.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

ACR Appropriateness Criteria®

Clinical Condition: Nontraumatic Knee Pain

Variant 1: Child or adolescent - nonpatellofemoral symptoms. Mandatory minimal initial exam.

Radiologic Exam Procedure	Appropriateness Rating	Comments
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Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, knee, AP (standing or supine)	9	
X-ray, knee, Lateral (routine or cross-table)	9	
X-ray, knee, Notch or tunnel view (standing or supine)	1	
X-ray, knee, Axial view	1	
X-ray, knee, Ipsilateral hip films (AP/frog leg lateral)	1	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
MRI, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 2: Child or adult: patellofemoral (anterior) symptoms. Mandatory minimal initial exam.

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, knee, AP (standing or supine)	9	
X-ray, knee, Lateral	9	

Radiologic Exam Procedure	Appropriateness Rating	Comments
(routine or cross-table)		
X-ray, knee, Axial view	9	
X-ray, knee, Notch or tunnel view (standing or supine)	1	
X-ray, knee, Ipsolateral hip films (AP/frog leg lateral)	1	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
MRI, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 3: Adult: nontrauma, nontumor, nonlocalized pain. Mandatory minimal initial exam.

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, knee, AP (standing or supine)	9	
X-ray, knee, Lateral (routine or cross-table)	9	
X-ray, knee, Notch or	1	

Radiologic Exam Procedure	Appropriateness Rating	Comments
tunnel view (standing or supine)		
X-ray, knee, Axial (Merchant) view	No Consensus	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
MRI, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variante 4: Child or adolescent: nonpatellofemoral symptoms. Initial AP and lateral radiographs nondiagnostic (demonstrate normal findings or a joint effusion).

Radiologic Exam Procedure	Appropriateness Rating	Comments
MRI, knee	9	If additional study is needed.
X-ray, additional views	1	If hip exam is normal.
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	

Radiologic Exam Procedure	Appropriateness Rating	Comments
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 5: Child or adult. Patellofemoral (anterior) symptoms. Initial AP, lateral, and axial radiographs nondiagnostic (demonstrate normal findings or a joint effusion).

Radiologic Exam Procedure	Appropriateness Rating	Comments
MRI, knee	9	If additional imaging is necessary, and if internal derangement is suspected.
X-ray, additional views	1	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 6: Adult. Nontrauma, nontumor, nonlocalized pain. Initial AP and lateral radiographs nondiagnostic (demonstrate normal findings or a joint effusion).

Radiologic Exam Procedure	Appropriateness Rating	Comments
MRI, knee	9	If additional studies are indicated, and if internal derangement is suspected.

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, additional views	1	
NUC, 3-phase bone scan	1	Unless metastatic disease is a possibility.
US, knee	1	
CT, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
Appropriateness Criteria Scale 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 7: Child or adolescent. Nonpatellofemoral symptoms. Initial AP and lateral radiographs demonstrate osteochondral injuries (fracture/osteochondritis dessicans or a loose body).

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, additional views	1	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	Indicated only if further studies are necessary and MRI is contraindicated or cannot be performed.
MRI, knee	No Consensus	Panel agreed that MRI is important to look for additional injury, status of articular surface, or suspected internal derangement and that treatment is dependent on additional information.

Radiologic Exam Procedure	Appropriateness Rating	Comments
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 8: Child or adult. Patellofemoral (anterior) symptoms. Initial AP, lateral, and axial radiographs demonstrate degenerative joint disease and/or chondrocalcinosis.

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, additional views	1	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
MRI, knee	1	Unless treatment and/or surgery is dependent on findings.
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 9: Adult. Nontrauma, nontumor, nonlocalized pain. Initial AP and lateral radiographs demonstrate degenerative joint disease (uni- to tri-compartmental sclerosis, hypertrophic spurs, joint space narrowing, and/or subchondral cysts).

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, additional views	1	Standing if evaluation for TKA. Standing

Radiologic Exam Procedure	Appropriateness Rating	Comments
		views in extension and flexion.
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
MRI, knee	1	Consider for preoperative assessment.
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variante 10: Adult. Nontrauma, nontumor, nonlocalized pain. Initial AP and lateral demonstrates inflammatory arthritis (diffuse tricompartmental joint space narrowing and large joint effusion).

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, additional views	1	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
MRI, knee	1	Unless preoperative assessment necessary.
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	No Consensus	Aspiration for crystals may be indicated but can be done without arthrogram.
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9		

Radiologic Exam Procedure	Appropriateness Rating	Comments
1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 11: Adult, nontrauma, nontumor, nonlocalized pain. Initial AP and lateral radiographs demonstrate avascular necrosis.

Radiologic Exam Procedure	Appropriateness Rating	Comments
X-ray, additional views	1	
NUC, 3-phase bone scan	1	
US, knee	1	
CT, knee	1	
MRI, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Variant 12: Adult, nontrauma, nontumor, nonlocalized pain. Initial AP and lateral radiographs demonstrate evidence of internal derangement (e.g., Peligrini Stieda disease, joint compartment widening).

Radiologic Exam Procedure	Appropriateness Rating	Comments
MRI, knee	9	
X-ray, additional views	1	
NUC, 3-phase bone scan	1	

Radiologic Exam Procedure	Appropriateness Rating	Comments
US, knee	1	
CT, knee	1	
Aspiration/arthrogram, knee	1	
CT, knee, postarthrogram	1	
<i>Appropriateness Criteria Scale</i> 1 2 3 4 5 6 7 8 9 1 = Least appropriate 9 = Most appropriate		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

Nontraumatic knee pain in children, adolescents, and adults includes localized complaints such as anterior (patellofemoral) pain and diffuse nonlocalized symptoms. The consensus of the committee is that the initial imaging study for nontraumatic knee pain is AP and lateral radiograph. The AP view can be performed with the patient either standing or supine. The lateral view may be performed with the patient non-weight bearing on his or her side with a vertical beam and the knee flexed 30 degrees. If symptoms are localized to the anterior (patellofemoral joint) aspect of the knee, a Merchant or axial (skyline) view of the patellofemoral joint is a mandatory part of the initial evaluation. For patients with diffuse non-localized symptoms, there was no consensus regarding the usefulness of a Merchant or axial view as part of the initial examination.

In elderly patients, the most common source of nontraumatic knee pain is degenerative osteoarthritis. Conventional radiographic diagnosis of degenerative joint disease includes joint space narrowing, osteophytes, subchondral cysts, and sclerosis bordering the joint. Articular cartilage is evaluated indirectly on conventional radiographs by joint space narrowing and changes in the subchondral bone. Routine radiographs are insensitive for assessing articular cartilage in the early stages of osteoarthritis, while in advanced disease, joint space narrowing on radiographs is usually an accurate assessment of cartilage loss. Standing radiographs have been reported to more accurately reflect medial and lateral joint compartment cartilage loss than supine radiographs; however, in the presence of a severe varus or valgus deformity, significant cartilage loss in the compartment that appears wide (due to the alignment deformity) may not be evident. A weight-bearing posterior anterior (PA) radiograph, obtained with knee flexion, has been reported to reflect the cartilage width of the posterior medial and lateral joint compartments more accurately than that a standing view obtained with the knee extended. This view may be indicated in elderly patients with degenerative osteoarthritis when surgical intervention is being planned. Additional imaging studies are not indicated in patients for whom the conventional radiographs are diagnostic of degenerative joint disease unless treatment, or surgery, or both are dependent on additional findings such as internal knee

derangement or when symptoms are not explained by the radiographic findings (e.g., stress fractures).

Other nontraumatic causes of knee pain in adolescent and adult patients include internal knee derangement (meniscal and ligament tears), osteochondritis dissecans, transient osteoporosis, spontaneous osteonecrosis, chronic regional pain syndrome, stress fracture, and inflammatory arthritis. Chronic anterior lateral knee pain may also result from patella tendon--lateral femoral condyle friction syndrome or iliotibial band syndrome (friction syndrome) which can be confirmed/excluded by MRI. In children with nontraumatic knee pain, referred pain from the hip must be entertained.

When initial conventional radiographs are nondiagnostic (normal findings or a joint effusion) and knee symptoms require further imaging, the next indicated study is an MRI exam. MRI is more sensitive than conventional radiographs and provides more specific information compared with radionuclide bone scan. MRI of nontraumatic knee pain may document a joint effusion, communicating synovial cysts, proliferative changes of the synovial membrane, osteophytes, subchondral cysts, articular cartilage loss, meniscal and/or ligamentous tears and/or degeneration, bone marrow edema, fractures, and osteonecrosis. MRI is useful to identify a subchondral insufficiency fracture as the initial injury from which localized osteonecrosis may result and which was otherwise identified as spontaneous osteonecrosis. MRI can also detect osteonecrosis of the medial femoral condyle or of the medial tibial plateau associated with tibial stress fracture. A suprapatellar joint effusion is readily detected on a routine lateral roentgenogram of the knee; however, the extent of a joint effusion, the presence of a communicating synovial (popliteal) cyst, or synovial proliferation is readily identified on MRI. Subchondral cysts are easily detected on MRI because of the tomographic quality, multiplanar imaging capability, and the superb sensitivity to fluid- and fat-containing tissues. Cartilage pathology, both articular and meniscal, can be evaluated directly on MRI, and demonstration depends on the location of the abnormality and the pulse sequences used. Magnetic resonance arthrography (MRA) performed with an intraarticular injection or with an intravenous injection of dilute gadolinium solution to enhance cartilage evaluation has been investigated, but noninvasive MRI has been reported accurate for cartilage abnormalities. Patellofemoral cartilage loss has been reported to be closely associated with chronic knee pain symptoms.

MRI is very sensitive for detection of internal derangement, specifically meniscus and anterior cruciate ligament pathology, and a high prevalence of meniscal degeneration is associated with osteoarthritis. Anterior cruciate ligament (ACL) tears and insufficiency are known to cause osteoarthritic changes in the knee.

Transient osteoporosis is characterized by self-limited pain and demonstrable osteopenia on radiographs within eight weeks after the onset of pain. Spontaneous osteonecrosis of the medial femoral condyle, most often found in middle-aged and elderly females, may have normal radiographs for months, followed by subchondral collapse, fragmentation of the articular cartilage, and progressive osteoarthritis. Bone marrow edema seen on MRI occurs in association with, or independent of, transient osteoporosis, osteonecrosis, and also in association with stress fractures; MRI is highly sensitive for detecting these abnormalities. In patients with conventional radiograph diagnosis of an

osteochondral injury such as osteochondritis dissecans or osteonecrosis, an MRI examination may be indicated if clinically additional injury is suspected or when it is necessary to determine the status of the articular cartilage over the area of abnormality. MRI is not indicated to confirm a stress fracture that is evident on the plain roentgenogram.

In patients with conventional radiograph evidence of inflammatory arthritis, the consensus of the panel is that an MRI is usually not indicated for the preoperative differentiation of pannus from effusion or for evaluation of erosion. An aspiration for crystals may be indicated, but arthrographic confirmation is usually not necessary.

When intra-articular pathology is suspected in a patient with claustrophobia, with a large body habitus, or who cannot, for some reason, tolerate an MRI examination; or when there is contraindication to an MRI study such as postsurgical clamps, metal, a pacemaker, or electric implants, a double-contrast arthrogram, possibly followed with CT, may be indicated.

A nuclear medicine bone scan is more sensitive than conventional radiographs for detecting bone changes and degenerative osteoarthritis; however, it is less specific than MRI. A total body nuclear medicine bone scan may be indicated for evaluation of nontraumatic knee pain when there is the clinical suspicion or the possibility of multiple sites of involvement such as in suspected metastatic disease, infarcts, etc.

In summary, the mandatory initial examination for nontraumatic knee pain is an AP and lateral radiograph. In patients with anterior patellofemoral knee pain, an axial view should be included in the initial radiographic study. An MRI examination for nontraumatic knee pain is indicated when the pain is persistent and conventional radiographs are nondiagnostic or for which additional information is necessary before instituting treatment or surgical intervention. An MRI is not indicated before a physical examination or before routine conventional radiographs or when there is diagnostic conventional radiograph evidence of severe degenerative joint diseases, inflammatory arthritis, stress fracture, osteonecrosis, or reflex sympathetic dystrophy, for which additional imaging is not going to alter the treatment plan. A nuclear medicine bone scan may be indicated if there is a clinical need to confirm or exclude other sites of involvement (e.g., suspicion of metastatic disease).

Abbreviations

- AP, anteroposterior
- CT, computed tomography
- MRI, magnetic resonance imaging
- NUC, nuclear medicine
- US, ultrasound

CLINICAL ALGORITHM(S)

Algorithms were not developed from criteria guidelines.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The recommendations are based on analysis of the current literature and expert panel consensus.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate selection of radiologic exam procedures to evaluate patients with nontraumatic knee pain

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

An American College of Radiology (ACR) Committee on Appropriateness Criteria and its expert panels have developed criteria for determining appropriate imaging examinations for diagnosis and treatment of specified medical condition(s). These criteria are intended to guide radiologists, radiation oncologists, and referring physicians in making decisions regarding radiologic imaging and treatment. Generally, the complexity and severity of a patient's clinical condition should dictate the selection of appropriate imaging procedures or treatments. Only those exams generally used for evaluation of the patient's condition are ranked. Other imaging studies necessary to evaluate other co-existent diseases or other medical consequences of this condition are not considered in this document. The availability of equipment or personnel may influence the selection of appropriate imaging procedures or treatments. Imaging techniques classified as investigational by the U.S. Food and Drug Administration (FDA) have not been considered in developing these criteria; however, study of new equipment and applications should be encouraged. The ultimate decision regarding the appropriateness of any specific radiologic examination or treatment must be made by the referring physician and radiologist in light of all the circumstances presented in an individual examination.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Personal Digital Assistant (PDA) Downloads

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Pavlov H, Dalinka MK, Alazraki NP, Daffner RH, DeSmet AA, El-Khoury GY, KNeeland JB, Manaster BJ, Rubin DA, Steinbach LS, Weissman BN, Haralson RH III, Expert Panel on Musculoskeletal Imaging. Nontraumatic knee pain. [online publication]. Reston (VA): American College of Radiology (ACR); 2005. 9 p. [44 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1995 (revised 2005)

GUIDELINE DEVELOPER(S)

American College of Radiology - Medical Specialty Society

SOURCE(S) OF FUNDING

American College of Radiology (ACR) provided the funding and the resources for these ACR Appropriateness Criteria®.

GUIDELINE COMMITTEE

Committee on Appropriateness Criteria; Expert Panel on Musculoskeletal Imaging

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Pavlov H, Dalinka MK, Alazraki N, Berquist TH, Daffner RH, DeSmet AA, el-Khoury GY, Goergen TG, Keats TE, Manaster BJ, Newberg A, Haralson RH, McCabe JB, Sartoris D. Nontraumatic knee pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 2000 Jun;215(Suppl):311-20.

The appropriateness criteria are reviewed annually and updated by the panels as needed, depending on introduction of new and highly significant scientific evidence.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [American College of Radiology \(ACR\) Web site](#).

ACR Appropriateness Criteria® *Anytime, Anywhere*™ (PDA application). Available from the [ACR Web site](#).

Print copies: Available from the American College of Radiology, 1891 Preston White Drive, Reston, VA 20191. Telephone: (703) 648-8900.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- ACR Appropriateness Criteria®. Background and development. Reston (VA): American College of Radiology; 2 p. Electronic copies: Available in Portable Document Format (PDF) from the [American College of Radiology \(ACR\) Web site](#).

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on May 6, 2001. The information was verified by the guideline developer as of June 29, 2001. This NGC summary was updated by ECRI on January 30, 2006.

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