



Complete Summary

GUIDELINE TITLE

ACR Appropriateness Criteria™ for chronic hip pain.

BIBLIOGRAPHIC SOURCE(S)

Berquist TH, Dalinka MK, Alazraki N, Daffner RH, DeSmet AA, el-Khoury GY, Goergen TG, Keats TE, Manaster BJ, Newberg A, Pavlov H, Schweitzer ME, Haralson RH, McCabe JB. Chronic hip pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 2000 Jun; 215(Suppl): 391-6.

COMPLETE SUMMARY CONTENT

SCOPE

METHODOLOGY - including Rating Scheme and Cost Analysis

RECOMMENDATIONS

EVIDENCE SUPPORTING THE RECOMMENDATIONS

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

QUALIFYING STATEMENTS

IMPLEMENTATION OF THE GUIDELINE

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

SCOPE

DISEASE/CONDITION(S)

Chronic hip pain

GUIDELINE CATEGORY

Diagnosis

CLINICAL SPECIALTY

Family Practice
Nuclear Medicine
Orthopedic Surgery
Radiology

INTENDED USERS

Health Plans
Hospitals

Managed Care Organizations
Physicians
Utilization Management

GUIDELINE OBJECTIVE(S)

To evaluate the appropriateness of initial radiologic examinations for patients with chronic hip pain

TARGET POPULATION

Patients with chronic hip pain

INTERVENTIONS AND PRACTICES CONSIDERED

1. Magnetic resonance imaging (with or without contrast)
2. Ultrasound
3. Computed tomography
4. Computed tomography with intra-articular contrast
5. Radionuclide scan
6. Arthrography and aspiration
7. Arthrography with anesthetic or anesthetic and steroid
8. Injection with anesthetic or anesthetic and steroid

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 recent peer-reviewed medical journals, primarily using the National Library of Medicine's MEDLINE database. The developer identified and collected the major applicable articles.

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

Expert Consensus (Delphi Method)
Weighting According to a Rating Scheme (Scheme Not Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

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 to reach agreement in the formulation of the Appropriateness Criteria. 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 1-9, 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. If consensus cannot be reached by this method, 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.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

Quinn et al described the cost effectiveness of T1-weighted magnetic resonance (MR) images compared to computed tomography (CT) for detection of subtle hip fractures. Others have confirmed the superiority of MR imaging compared with bone scan and CT for neoplasms and soft tissue pathology.

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 and the Chair of the ACR Board of Chancellors.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

ACR Appropriateness Criteria™

Clinical Condition: Chronic Hip Pain

Variant 1: X-ray negative, suspect avascular necrosis.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Magnetic Resonance Imaging		
• Without contrast	9	
• With contrast	2	
Ultrasound	2	
Computed tomography	2	
Computed tomography with intra-articular contrast	2	
Radionuclide scan	2	If unable to have magnetic resonance imaging, acceptable solution.
Arthrography and aspiration	2	
Arthrography with anesthetic or anesthetic and steroid	2	

Appropriateness Criteria Scale

1 2 3 4 5 6 7 8 9

1=Least appropriate 9=Most appropriate

Clinical Condition: Chronic Hip Pain

Variant 2: X-ray negative, suspect extra-articular or soft tissue abnormality.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Magnetic Resonance Imaging		
• Without contrast	9	
• With contrast	2	
Ultrasound	2	
Computed tomography	2	
Computed tomography with intra-articular contrast	2	
Radionuclide scan	2	
Arthrography and aspiration	2	
Arthrography with anesthetic or anesthetic and steroid	2	

Appropriateness Criteria Scale

1 2 3 4 5 6 7 8 9

1=Least appropriate 9=Most appropriate

Clinical Condition: Chronic Hip Pain

Variant 3: X-ray negative, suspect osteoid osteoma.

Radiologic Exam	Appropriateness	Comments
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Procedure	Rating	
Computed tomography	9	
Radionuclide scan	4	Only if lesion is difficult to localize.
Magnetic Resonance Imaging		
• Without contrast	2	
• With contrast	2	
Ultrasound	2	
Computed tomography with intra-articular contrast	2	
Arthrography and aspiration	2	
Arthrography with anesthetic or anesthetic and steroid	2	
<u>Appropriateness Criteria Scale</u> 1 2 3 4 5 6 7 8 9 1=Least appropriate 9=Most appropriate		

Clinical Condition: Chronic Hip Pain

Variant 4: X-ray negative.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Magnetic Resonance Imaging		
• Without contrast	9	
• With contrast	2	
Ultrasound	2	
Computed tomography	2	
Computed tomography	2	

with intra-articular contrast		
Radionuclide scan	2	
Arthrography and aspiration	2	
Arthrography with anesthetic or anesthetic and steroid	2	
<u>Appropriateness Criteria Scale</u>		
1 2 3 4 5 6 7 8 9		
1=Least appropriate 9=Most appropriate		

Clinical Condition: Chronic Hip Pain

Variant 5: X-ray negative or mild osteoarthritis, suspect referred pain but wish to exclude hip.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Injection with anesthetic or anesthetic and steroid	4	In excluding hip as a source of pain.
Magnetic Resonance Imaging		
• Without contrast	2	
• With contrast	2	
Ultrasound	2	
Computed tomography	2	
Computed tomography with intra-articular contrast	2	
Radionuclide scan	2	
Arthrography and aspiration	2	
<u>Appropriateness Criteria Scale</u>		

1 2 3 4 5 6 7 8 9

1=Least appropriate 9=Most appropriate

Clinical Condition: Chronic Hip Pain

Variant 6: X-ray positive, arthritis uncertain type.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Magnetic Resonance Imaging		
• Without contrast	2	
• With contrast	2	
Ultrasound	2	
Computed tomography	2	
Computed tomography with intra-articular contrast	2	
Radionuclide scan	2	
Arthrography and aspiration	2	If suspect infectious etiology aspiration and culture is suggested.
Injection with anesthetic or anesthetic and steroid	2	
<u>Appropriateness Criteria Scale</u>		
1 2 3 4 5 6 7 8 9		
1=Least appropriate 9=Most appropriate		

Clinical Condition: Chronic Hip Pain

Variant 7: X-ray positive, suggestive of pigmented villonodular synovitis or osteochondromatosis.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Magnetic Resonance Imaging		

• Without contrast	9	
• With contrast	2	
Ultrasound	2	
Computed tomography	2	
Computed tomography with intra-articular contrast	2	
Radionuclide scan	2	
Arthrography and aspiration	2	
Arthrography with anesthetic or anesthetic and steroid	2	
<u>Appropriateness Criteria Scale</u>		
1 2 3 4 5 6 7 8 9		
1=Least appropriate 9=Most appropriate		

Summary

Imaging of chronic hip pain is a broad subject with numerous causes. Clinical data plays an important role in patients with chronic hip pain. Routine radiographs are essential to plan further imaging studies. Magnetic resonance imaging, radionuclide scans, computed tomography, ultrasound, and diagnostic/therapeutic injections with or without contrast may all be used as a second technique depending on clinical and radiographic findings. The American College of Radiology states that this topic should be further investigated and appropriate use of imaging techniques more thoroughly studied.

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 chronic hip pain

POTENTIAL HARMS

None identified

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.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Berquist TH, Dalinka MK, Alazraki N, Daffner RH, DeSmet AA, el-Khoury GY, Goergen TG, Keats TE, Manaster BJ, Newberg A, Pavlov H, Schweitzer ME, Haralson RH, McCabe JB. Chronic hip pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 2000 Jun; 215(Suppl): 391-6.

ADAPTATION

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

DATE RELEASED

1998

GUIDELINE DEVELOPER(S)

American College of Radiology - Medical Specialty Society

SOURCE(S) OF FUNDING

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

GUIDELINE COMMITTEE

ACR Appropriateness Criteria™ Committee, Expert Panel on Musculoskeletal Imaging.

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Names of Panel Members: Thomas H. Berquist, MD; Murray K. Dalinka, MD; Naomi Alazraki, MD; Richard H. Daffner, MD; Arthur A. DeSmet, MD; George Y. El-Khoury, MD; Thomas G. Goergen, MD; Theodore E. Keats, MD; B.J. Manaster, MD, PhD; Arthur Newberg, MD; Helene Pavlov, MD; Mark E. Schweitzer, MD; Robert H. Haralson, III, MD; John B. McCabe

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

GUIDELINE AVAILABILITY

Electronic copies of the updated guideline: Available from the [American College of Radiology \(ACR\) Web site](#).

Print copies: Available from ACR, 1891 Preston White Drive, Reston, VA 20191.
Telephone: (703) 648-8900.

AVAILABILITY OF COMPANION DOCUMENTS

None available

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.

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