

## ACR Appropriateness Criteria® Chronic Wrist Pain

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## **Abstract**

Radiographs are indicated as the first imaging test in all patients with chronic wrist pain, regardless of the suspected diagnosis. When radiographs are normal or equivocal, advanced imaging with MRI (without or without intravenous contrast or following arthrography), CT (usually without contrast), and ultrasound each has a role in establishing a diagnosis. Furthermore, these examinations may contribute to staging disease, treatment planning, and prognostication, even when radiographs are diagnostic of a specific condition. Which examination or examinations are best depends on the specific location of pain and the clinically suspected conditions.

The American College of Radiology Appropriateness Criteria are evidence-based guidelines for specific clinical conditions that are reviewed annually by a multidisciplinary expert panel. The guideline development and revision include an extensive analysis of current medical literature from peer reviewed journals and the application of well-established methodologies (RAND/UCLA Appropriateness Method and Grading of Recommendations Assessment, Development, and Evaluation or GRADE) to rate the appropriateness of imaging and treatment procedures for specific clinical scenarios. In those instances where evidence is lacking or equivocal, expert opinion may supplement the available evidence to recommend imaging or treatment.

Key Words: Appropriateness Criteria, Appropriate Use Criteria, AUC, Carpal tunnel syndrome, Chronic pain, Ganglion cyst, Ligament, Wrist, Wrist joint

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The American College of Radiology seeks and encourages collaboration with other organizations on the development of the ACR Appropriateness Criteria through society representation on expert panels. Participation by representatives from collaborating societies on the expert panel does not necessarily imply individual or society endorsement of the final document. Reprint requests to: publications@acr.org.

Conflicts of Interest: Dr. Cassidy reports personal fees from Johnson and Johnson outside the submitted work.

Disclaimer: The 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 examinations 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 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.

Variant 1. Chronic wrist pain. With or without prior injury. Best initial study.

Procedure	Appropriateness Category	Relative Radiation Level
X-ray wrist	Usually Appropriate	�
MRI wrist without IV contrast	Usually Not Appropriate	0
MRI wrist without and with IV contrast	Usually Not Appropriate	0
MR arthrography wrist	Usually Not Appropriate	0
US wrist	Usually Not Appropriate	0
CT wrist without IV contrast	Usually Not Appropriate	<b>⊕</b>
CT wrist with IV contrast	Usually Not Appropriate	<b>⊕</b>
CT wrist without and with IV contrast	Usually Not Appropriate	�
CT arthrography wrist	Usually Not Appropriate	�
X-ray arthrography wrist	Usually Not Appropriate	<b>⊕</b>
Tc-99m bone scan wrist	Usually Not Appropriate	<b>⊕</b> ⊕⊕

IV = intravenous; US = ultrasound.

Variant 2. Chronic wrist pain. Routine radiographs normal or nonspecific. Persistent symptoms. Next study.

Procedure	Appropriateness Category	Relative Radiation Level
MRI wrist without IV contrast	Usually Appropriate	0
MR arthrography wrist	May Be Appropriate	0
MRI wrist without and with IV contrast	Usually Not Appropriate	0
US wrist	Usually Not Appropriate	0
CT wrist without IV contrast	Usually Not Appropriate	<b>⊕</b>
CT wrist with IV contrast	Usually Not Appropriate	<b>⊕</b>
CT wrist without and with IV contrast	Usually Not Appropriate	<b>⊕</b>
CT arthrography wrist	Usually Not Appropriate	<b>⊕</b>
X-ray arthrography wrist	Usually Not Appropriate	<b>⊕</b>
Tc-99m bone scan wrist	Usually Not Appropriate	<b>₩₩</b>

IV = intravenous; US = ultrasound.

Variant 3. Chronic wrist pain. Routine radiographs normal or nonspecific. Suspect inflammatory arthritis. Next study.

Procedure	Appropriateness Category	Relative Radiation Level
MRI wrist without and with IV contrast	Usually Appropriate	0
MRI wrist without IV contrast	Usually Appropriate	0
US wrist	May Be Appropriate	0
MR arthrography wrist	Usually Not Appropriate	0
CT wrist without IV contrast	Usually Not Appropriate	<b>⊕</b>
CT wrist with IV contrast	Usually Not Appropriate	<b>⊕</b>
CT wrist without and with IV contrast	Usually Not Appropriate	<b>⊕</b>
		(continued)

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