AAOS
American Academy of Orthopaedic Surgeons

Management of Carpal Tunnel Syndrome

Appropriate Use Criteria

Adapted by:
The American Academy of Orthopaedic Surgeons Board of Directors
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Disclaimer
Volunteer physicians from multiple medical specialties created and categorized these Appropriate Use Criteria. These Appropriate Use Criteria are not intended to be comprehensive or a fixed protocol, as some patients may require more or less treatment or different means of diagnosis. These Appropriate Use Criteria represent patients and situations that clinicians treating or diagnosing musculoskeletal conditions are most likely to encounter. The clinician's independent medical judgment, given the individual patient's clinical circumstances, should always determine patient care and treatment.

Disclosure Requirement
In accordance with American Academy of Orthopaedic Surgeons policy, all individuals whose names appear as authors or contributors to this document filed a disclosure statement as part of the submission process. All authors provided full disclosure of potential conflicts of interest prior to participation in the development of these Appropriate Use Criteria. Disclosure information for all panel members can be found in Appendix C.

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FDA Clearance
Some drugs or medical devices referenced or described in this document may not have been cleared by the Food and Drug Administration (FDA) or may have been cleared for a specific use only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or device he or she wishes to use in clinical practice.

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www.OrthoGuidelines.org/auc

To view the clinical practice guideline for this topic, please visit www.orthoguidelines.org/ctsguideline

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I. INTRODUCTION

OVERVIEW

The American Academy of Orthopaedic Surgeons (AAOS) has developed this Appropriate Use Criteria (AUC) to determine appropriateness of various health care services for the management of carpal tunnel syndrome. An "appropriate" healthcare service is one for which the expected health benefits exceed the expected negative consequences by a sufficiently wide margin.[2] Evidence-based information, in conjunction with the clinical expertise of physicians from multiple medical specialties, was used to develop the criteria in order to improve patient care and obtain the best outcomes while considering the subtleties and distinctions necessary in making clinical decisions. To provide the evidence foundation for this AUC, the AAOS Evidence-Based Medicine Unit provided the writing panel and voting panel with the 2016 AAOS Clinical Practice Guideline on the Management of Carpal Tunnel Syndrome, which can be accessed via the following link: www.orthoguidelines.org/ctsguideline.

The purpose of this AUC is to help determine the appropriateness of clinical practice guideline recommendations for the heterogeneous patient population routinely seen in practice. The best available scientific evidence is synthesized with collective expert opinion on topics where gold standard randomized clinical trials are not available or are inadequately detailed for identifying distinct patient types. When there is evidence corroborated by consensus that expected benefits substantially outweigh potential risks, exclusive of cost, a procedure is determined to be appropriate. The AAOS uses the RAND/UCLA Appropriateness Method (RAM).[2] The process includes these steps: reviewing the results of the evidence analysis, compiling a list of clinical vignettes, and having an expert panel comprised of representatives from multiple medical specialties to determine the appropriateness of each of the clinical indications for treatment as "Appropriate," "May be Appropriate," or "Rarely Appropriate." To access an intuitive and more user-friendly version of the appropriate use criteria for this topic online, please visit the AUC web-based application at www.orthoguidelines.org/auc or download the OrthoGuidelines app from Google Play or Apple Store.

These criteria should not be construed as including all indications or excluding indications reasonably directed to obtaining the same results. The criteria intends to address the most common clinical scenarios facing all appropriately trained surgeons and all qualified clinicians managing patients under consideration for diagnosis and management of carpal tunnel syndrome. The ultimate judgment regarding any specific criteria should address all circumstances presented by the patient and the needs and resources particular to the locality or institution. It is also important to state that these criteria were developed as guidelines and are not meant to supersede clinician expertise and experience or patient preference.

INTERPRETING THE APPROPRIATENESS RATINGS

To prevent misuse of these criteria, it is extremely important that the user of this document understands how to interpret the appropriateness ratings. The appropriateness rating scale ranges from one to nine and there are three main range categories that determine how the median rating is defined (i.e. 1-3 = "Rarely Appropriate", 4-6 = "May Be Appropriate", and 7-9 = "Appropriate"). Before these appropriate use criteria are consulted, the user should read through and understand all contents of this document.

ASSUMPTIONS OF THE WRITING/VOTING PANEL

Before these appropriate use criteria are consulted, it is assumed that:

1. For this CTS AUC, all patients receive an in-office diagnostic evaluation including a completed CTS-6 or Katz Hand Diagram.
2. This AUC addresses adult patients with suspected primary carpal tunnel syndrome and excludes failed treatment after surgery.
3. If patients are diabetic and a steroid injection is rated appropriate, the clinician and patient should be aware that the steroid medication may cause a transient, but substantial elevation of blood glucose level.
4. If operative treatment by carpal tunnel release is appropriate, endoscopic or open may be performed at the practicing clinician's discretion.
5. In the absence of reliable evidence, it is the opinion of the work group that CTS during pregnancy should be treated at the discretion of patients and their clinicians within the confines of the clinical practice guideline.
6. Duration of symptoms as an indication can be difficult to accurately quantify and therefore is not addressed in this AUC.
7. The EDS are ordered based on clinical judgement and are of sufficient quality to investigate the diagnosis of CTS and/or alternative diagnoses when appropriate.
8. For the indication group "response to previous treatment," non-operative treatment assumes no prior steroid injection.
9. When surgery is the most appropriate treatment but the patient is unwilling or there is a medical contraindication to surgery, clinicians may select non-operative treatment options.

Exclusions:

1. This AUC does not apply to:
    - acute carpal tunnel syndrome
    - untreated inflammatory arthritis
    - untreated diabetes
    - thyroid disease
    - Pernicious Anemia
    - patients with a known space-occupying lesion in the carpal tunnel
    - failed treatment after surgery
    - pediatric and adolescent patients

BURDEN OF DISEASE

CTS is the most common compressive neuropathy affecting the upper extremity and is an important cause of lost workplace productivity. The prevalence of CTS is estimated to be 0.7/10,000 workers. Between 1997 and 2010 CTS was the second most common cause of days

lost from the workplace. Throughout this period the median time lost per case of CTS varied between 21 and 32 days.

ETIOLOGY

CTS is caused by compression of the median nerve under the transverse carpal ligament. Although pressure on the median nerve is clearly the pathophysiologic basis for the symptoms observed clinically, the etiology of elevated pressure within the carpal canal is unknown.

POTENTIAL BENEFITS, HARMS, AND CONTRAINDICATIONS

The main benefit of appropriate use criteria focused on diagnosis is the emphasis on standardized diagnostic criteria which reduce variability in the case definition for CTS. This could have an important impact on the care of CTS, by minimizing the risk of incorrect diagnosis, and also help in the design of studies seeking to identify associations with specific workplace exposures, an area of interest for workers.

The goal of the management of carpal tunnel syndrome appropriate use criteria is to aid in diagnosis and alleviate symptoms in affected patients. Many forms of management are associated with some potential for adverse outcomes, especially if invasive or operative. Contraindications vary widely based on the treatment administered. Reducing risks improves treatment efficacy and is accomplished through collaboration and communication between patient and physician.

II. METHODS

This AUC for the management of carpal tunnel syndrome, hereafter referred to as carpal tunnel syndrome AUC, is based on a review of the available literature and a list of clinical scenarios (i.e. criteria) constructed and voted on by experts in orthopaedic surgery and other relevant medical fields. This section describes the methods adapted from the RAND/UCLA Appropriateness Method (RAM)[2]. This section also includes the activities and compositions of the various panels that developed, defined, reviewed, and voted on the criteria.

Two panels participated in the development of the carpal tunnel syndrome AUC (see list on page i). Members of the writing panel developed a list of 135 patient scenarios, for which six treatments were evaluated for appropriateness. The voting panel participated in three rounds of voting. During the first round of voting, the voting panel was given approximately two months to independently rate the appropriateness of each the provided treatments for each of the relevant patient scenarios as 'Appropriate', 'May Be Appropriate', or 'Rarely Appropriate' via an electronic ballot. After the first round of appropriateness ratings were submitted, AAOS staff calculated the median ratings for each patient scenario and specific treatment. An in-person voting panel meeting was held in Rosemont, IL on Friday, August 12th, 2016. During this meeting, voting panel members addressed the scenarios/treatments which resulted in disagreement (definition of disagreement can be found in Table 3). The voting panel members discussed the list of assumptions, patient indications, and treatments to identify areas that needed to be clarified/edited. After the discussion and subsequent changes, the group was asked to rerate their first round ratings during the voting panel meeting, only if they were persuaded to do so by the discussion and available evidence. After completion of the second round of voting, the voting panel opted to look again at scenarios which still contained disagreement and open the ballot for a third round of voting. The voting panel determined appropriateness by rating treatments for the various patient scenarios (i.e. criteria) as 'Appropriate', 'May Be Appropriate', or 'Rarely Appropriate'. There was no attempt to obtain consensus about appropriateness.

The AAOS Appropriate Use Criteria Section, the AAOS Council on Research and Quality, and the AAOS Board of Directors sequentially approved the Carpal Tunnel Syndrome AUC. AAOS submits this AUC to the National Guidelines Clearinghouse and, in accordance with the National Guidelines Clearinghouse criteria, will update or retire this AUC within five years of the publication date.

DEVELOPING CRITERIA

Panel members of the Carpal Tunnel Syndrome AUC, who are orthopaedic specialists in treating wrist-related injuries/diseases, developed clinical scenarios using the following guiding principles:

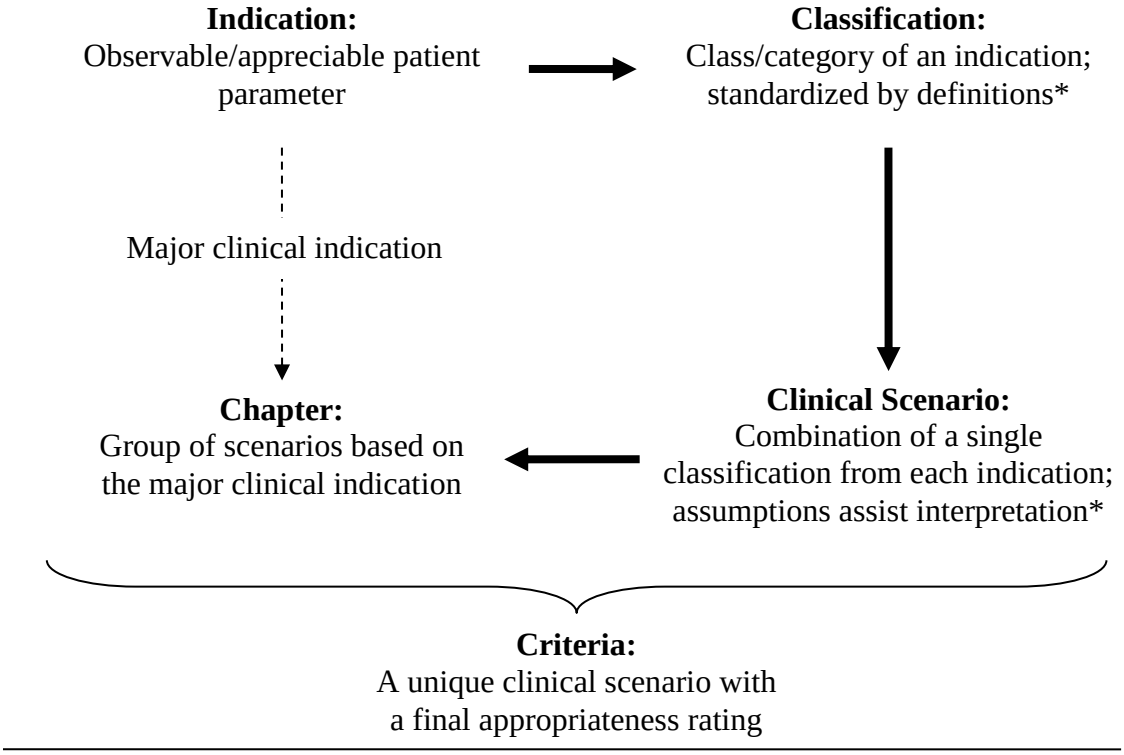
- Patient scenarios must include a broad spectrum of patients that may be eligible for diagnosis or treatment of carpal tunnel syndrome *[comprehensive]*
- Patient indications must classify patients into a unique scenario *[mutually exclusive]*
- Patient indications must consistently classify similar patients into the same scenario *[reliable, valid indicators]*

The writing panel developed the scenarios by categorizing patients in terms of indications evident during the clinical decision making process (Figure 1). These scenarios relied upon definitions and general assumptions, mutually agreed upon by the writing panel during the development of the scenarios. These definitions and assumptions were necessary to provide consistency in the interpretation of the clinical scenarios among experts voting on the scenarios and readers using the final criteria.

FORMULATING INDICATIONS AND SCENARIOS

The AUC writing panel began the development of the scenarios by identifying clinical indications typical of patients with suspected carpal tunnel syndrome in clinical practice. Indications are most often parameters observable by the clinician, including symptoms or results of diagnostic tests. Additionally, "human factor" (e.g. activity level) or demographic variables can be considered.

Figure 1. Developing Criteria



Indications identified in clinical trials (derived from patient selection criteria) included in AAOS Clinical Practice Guidelines (www.orthoguidelines.org/ctsguideline) served as a starting point for the writing panel and ensured that these Appropriate Use Criteria referred to the evidence base for the carpal tunnel syndrome CPG. The writing panel considered this initial list and other indications based on their clinical expertise and selected the most clinically relevant indications (Table 4). They then defined distinct classes for each indication in order to stratify/categorize the indication (Table 4).

The indications are then organized into a matrix of clinical scenarios that addressed all combinations of the classifications. The writing panel was given the opportunity to remove any scenarios that rarely occur in clinical practice, but agreed that all scenarios were clinically relevant. The major clinical decision making indications chosen by the writing panel divided the matrix of clinical scenarios into chapters, as follows: CTS diagnostic likelihood based on clinical examination, electrodiagnostic testing history, clinical severity, response to previous treatment.

CREATING DEFINITIONS AND ASSUMPTIONS

The carpal tunnel syndrome AUC writing panel constructed concise and explicit definitions for the indications and classifications. This standardization helped ensure the way that the writing panel defined the patient indications was consistent among those reading the clinical scenario matrix or the final criteria. Definitions drew explicit boundaries when possible and were based on standard medical practice or existing literature.

Additionally, the writing panel formulated a list of general assumptions in order to provide more consistent interpretations of a scenario (see Assumptions of the Writing Panel). These assumptions differed from definitions in that they identified circumstances that exist outside of the control of the clinical decision making process.

Assumptions also addressed the use of existing published literature regarding the effectiveness of treatment and/or the procedural skill level of physicians. Additionally, assumptions highlighted intrinsic methods described in this document such as the role of cost considerations in rating appropriateness or the validity of the definition of appropriateness. The main goal of assumptions was to focus scenarios so that they apply to the average patient presenting to an average physician at an average facility.[1]

The definitions and assumptions should provide readers with a common starting point in interpreting the clinical scenarios. This list of definitions and assumptions accompanied the matrix of clinical scenarios in all stages of the development of this AUC and appears in the Assumptions of the Writing Panel section of this document.

VOTING PANEL MODIFICATIONS TO WRITING PANEL MATERIALS

At the start of the in-person voting panel meeting, the voting panel was reminded that they have the ability to amend the original writing panel materials if the amendments resulted in more clinically relevant and practical criteria. In order to amend the original materials, the voting panel members were instructed that a member must make a motion to amend and another member must "second" that motion, after which a vote is conducted. If a majority of voting panel members voted "yes" to amend the original materials, the amendments were accepted.

The voting panel opted to make the following amendment/addition to the original AUC materials:

Change	Original	Approved Modification
Assumption Addition	N/A	The EDS are ordered based on clinical judgement and are of sufficient quality to investigate the diagnosis of CTS and/or alternative diagnoses when appropriate.
Assumption Addition	N/A	For the indication group "response to previous treatment," non-operative treatment assumes no prior steroid injection.
Assumption Modification	All patients who present with CTS-like symptoms are given an in-office diagnostic test (CTS-6 or Katz)	For this CTS AUC, all patients receive an in-office diagnostic evaluation including a completed CTS-6 or Katz Hand Diagram.
Assumption Modification	Physicians may seek non-operative treatment options when surgery is the only appropriate treatment but the patient is unwilling or there is a medical contraindication to surgery.	When surgery is the most appropriate treatment but the patient is unwilling or there is a medical contraindication to surgery, clinicians may select non-operative treatment options.
Assumption Modification	This AUC addresses primary carpal tunnel syndrome, not failed treatment after surgery	This AUC addresses adult patients with suspected primary carpal tunnel syndrome and excludes failed treatment after surgery.
Assumption Language	N/A	"Physician" and "practitioner" changed to "clinician" throughout assumptions list
Exclusion Addition	N/A	failed treatment after surgery, pediatric and adolescent patients
Treatment Modification	Investigate further: Electrodiagnostic Study (only applies if EDS has not been performed)	Investigate further: Electrodiagnostic Study

LITERATURE REVIEW

The 2016 Clinical Practice Guideline on the Management of Carpal Tunnel Syndrome was used as the evidence base for this AUC. The full guideline can be accessed via the OrthoGuidelines website (www.orthoguidelines.org/ctsguideline) or mobile app (available via the Apple or Google Play Stores). This guideline helped to inform the decisions of the writing panel and voting panel where available and necessary.

Direct links to the evidence for the treatments discussed in this AUC can be found below:

1. Investigate further: Electrodiagnostic Study
2. Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)
3. Splint (Non-operative treatment)
4. Steroid Injection (Non-operative treatment)
5. Carpal Tunnel Release (Operative Treatment)

DETERMINING APPROPRIATENESS

VOTING PANEL

A multidisciplinary panel of clinicians was assembled to determine the appropriateness of treatments for the carpal tunnel syndrome AUC. A non-voting moderator, who is an orthopaedic surgeon, but is not a specialist in the treatment of carpal tunnel syndrome, moderated the voting panel. The moderator was familiar with the methods and procedures of AAOS Appropriate Use Criteria and led the panel (as a non-voter) in discussions. Additionally, no member of the voting panel was involved in the development (writing panel) of the scenarios.

The voting panel used a modified Delphi procedure to determine appropriateness ratings. The voting panel participated in three rounds of voting while considering evidence-based information provided in the literature review. While cost is often a relevant consideration, panelists focused their appropriateness ratings on the effectiveness of diagnosis and treatment of carpal tunnel syndrome.

RATING APPROPRIATENESS

When rating the appropriateness of a scenario, the voting panel considered the following definition:

> "An appropriate action for suspected carpal tunnel syndrome is one for which the action **is** generally acceptable, **is** a reasonable approach for the indication, and **is** likely to improve the patient's health outcomes or survival."

They then rated each scenario using their best clinical judgment, taking into consideration the available evidence, for an average patient presenting to an average physician at an average facility as follows:

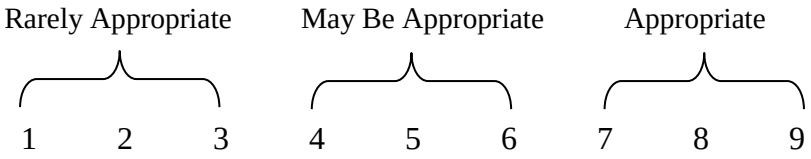
Table 1 Interpreting the 9-Point Appropriateness Scale

Rating	Explanation
7-9	**Appropriate**: Appropriate for the indication provided, meaning treatment **is** generally acceptable and **is** a reasonable approach for the indication and **is** likely to improve the patient's health outcomes or survival.

4-6	**May Be Appropriate**: Uncertain for the indication provided, meaning treatment **may** be acceptable and **may** be a reasonable approach for the indication, but with uncertainty implying that more research and/or patient information is needed to further classify the indication.
1-3	**Rarely Appropriate**: **Rarely** an appropriate option for management of patients in this population due to the lack of a clear benefit/risk advantage; **rarely** an effective option for individual care plans; exceptions should have documentation of the clinical reasons for proceeding with this care option (i.e. procedure is not generally acceptable and is not generally reasonable for the indication).

Each panelist uses the scale below to record their response for each scenario:

Appropriateness of [Topic]



ROUND ONE VOTING

The first round of voting occurred after completion of the independent review of the scenarios by the review panel and approval of the final indications, scenarios, and assumptions by the writing panel. The voting panel rated the scenarios electronically using a personalized ballot created by AAOS staff using the AAOS AUC Electronic Ballot Tool. There was no interaction between panel members while completing the first round of voting. Panelists considered the following materials:

- The instructions for rating appropriateness
- The completed literature review, that is appropriately referenced when evidence is available for a scenario
- The list of indications, definitions, and assumptions, to ensure consistency in the interpretation of the clinical scenarios

ROUND TWO AND THREE VOTING

The second round of voting occurred during the in-person voting panel meeting on August 12th, 2016. Before the in-person meeting started, each panelist received a personalized document that included their first round ratings along with summarized results of the first-round ratings that resulted in disagreement. These results indicated the frequency of ratings for a scenario for all panelists. The document contained no identifying information for other panelists' ratings. The moderator also used a document that summarized the results of the panelists' first round voting. These personalized documents served as the basis for discussions of scenarios which resulted in disagreement.

During the discussion, the voting panel members were allowed to add or edit the assumptions list, patient indications, and/or treatments if clarification was needed. They were also asked to record a new rating for any scenarios/treatments, only if they were persuaded to do so by the discussion and/or the evidence. There was no attempt to obtain consensus among the panel members.

Upon completion of the second round of voting, AAOS staff and moderators used the AAOS AUC Electronic Ballot Tool to again identify any statistical disagreements. After discussing these again, and at the request of the voting panel, the ballots were opened for a third round of voting. No voter was forced to participate in this round of voting and there was no attempt to obtain consensus among the panel members. After the final ratings were submitted, AAOS staff used the AAOS AUC Electronic Ballot Tool to export the median values and level of agreement for all voting items.

FINAL RATINGS

Using the median value of the third round ratings, AAOS staff determined the final levels of appropriateness. Disagreement among raters can affect the final rating. Agreement and disagreement were determined using the BIOMED definitions of Agreement and Disagreement, as reported in the RAND/UCLA Appropriate Method User's Manual [2], for a panel of 8-10 voting members (see Table 2 below). The 8-10 panel member disagreement cutoff was used for this voting panel. For this panel size, disagreement is defined as when ≥ 3 members' appropriateness ratings fell within the appropriate (7-9) and rarely appropriate (1-3) ranges for any scenario (i.e. ≥ 3 members' ratings fell between 1-3 and ≥ 5 members' ratings fell between 7-9 on any given scenario and its treatment). If there is still disagreement in the voting panel ratings after the second round of voting, that voting item is labeled as "5" regardless of median score. Agreement is defined as ≤ 2 panelists rated outside of the 3-point range containing the median.

Table 2 Defining Agreement and Disagreement for Appropriateness Ratings

	Disagreement	**Agreement**
Panel Size	Number of panelists rating in each extreme (1-3 and 7-9)	Number of panelists rating outside the 3-point region containing the median (1-3, 4-6, 7-9)
8,9,10	**≥ 3**	**≤ 2**
11,12,13	≥ 4	≤ 3
14,15,16	≥ 5	≤ 4

Adapted from RAM [1]

The classifications in the table below determined final levels of appropriateness.

Table 3 Interpreting Final Ratings of Criteria

Level of Appropriateness	Description
Appropriate	• Median panel rating between 7-9 and no disagreement
May Be Appropriate	• Median panel rating between 4-6 or • Median panel rating 1-9 with disagreement
Rarely Appropriate	• Median panel rating between 1-3 and no disagreement

REVISION PLANS

These criteria represent a cross-sectional view of current use of management of carpal tunnel syndrome and may become outdated as new evidence becomes available or clinical decision making indicators are improved. In accordance with the standards of the National Guideline Clearinghouse, AAOS will update or withdraw these criteria in five years. AAOS will issue updates in accordance with new evidence, changing practice, rapidly emerging treatment options, and new technology.

DISSEMINATING APPROPRIATE USE CRITERIA

All AAOS AUCs can be accessed via a user-friendly app that is available via the OrthoGuidelines website (www.orthoguidelines.org/auc) or as a native app via the Apple and Google Play stores.

Publication of the Appropriate Use Criteria (AUC) document is on the AAOS website at [http://www.aaos.org/auc]. This document provides interested readers with full documentation about the development of Appropriate Use Criteria and further details of the criteria ratings.

AUCs are first announced by an Academy press release and then published on the AAOS website. AUC summaries are published in the *AAOS Now* and the Journal of the American Academy of Orthopaedic Surgeons (JAAOS). In addition, the Academy's Annual Meeting showcases the AUCs on Academy Row and at Scientific Exhibits.

The dissemination efforts of AUC include web-based mobile applications, webinars, and online modules for the Orthopaedic Knowledge Online website, radio media tours, and media briefings. In addition AUCs are also promoted in relevant Continuing Medical Education (CME) courses and distributed at the AAOS Resource Center.

Other dissemination efforts outside of the AAOS include submitting AUCs to the National Guideline Clearinghouse and to other medical specialty societies' meetings.

III. PATIENT INDICATIONS AND TREATMENTS

INDICATIONS

Indication	Classification(s)
CTS Diagnostic Likelihood based on Clinical Examination	1. **Low Probability of CTS**: CTS-6 Score of < 5 (<25% probability of CTS) and/or Unlikely CTS on Katz Hand Diagram 2. **Moderate Probability of CTS**: CTS-6 Score of 5-11.5 (25-79% probability of CTS) and/or Probable/Possible CTS on Katz Hand Diagram 3. **High Probability of CTS**: CTS-6 Score ≥ 12 (80% probability of CTS) and/or Classic CTS on Katz Hand Diagram
Electrodiagnostic Testing History	1. No Electrodiagnostic testing performed 2. Electrodiagnostic testing not consistent with carpal tunnel syndrome 3. Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist 4. Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist 5. Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist
Clinical Severity	1. Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms) 2. Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination) 3. High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy)
Response to Previous Treatment	1. No previous non-operative treatment for CTS 2. Positive response to non-operative treatment and subsequent recurrence of symptoms 3. Failure to respond to non-operative treatment

TREATMENTS

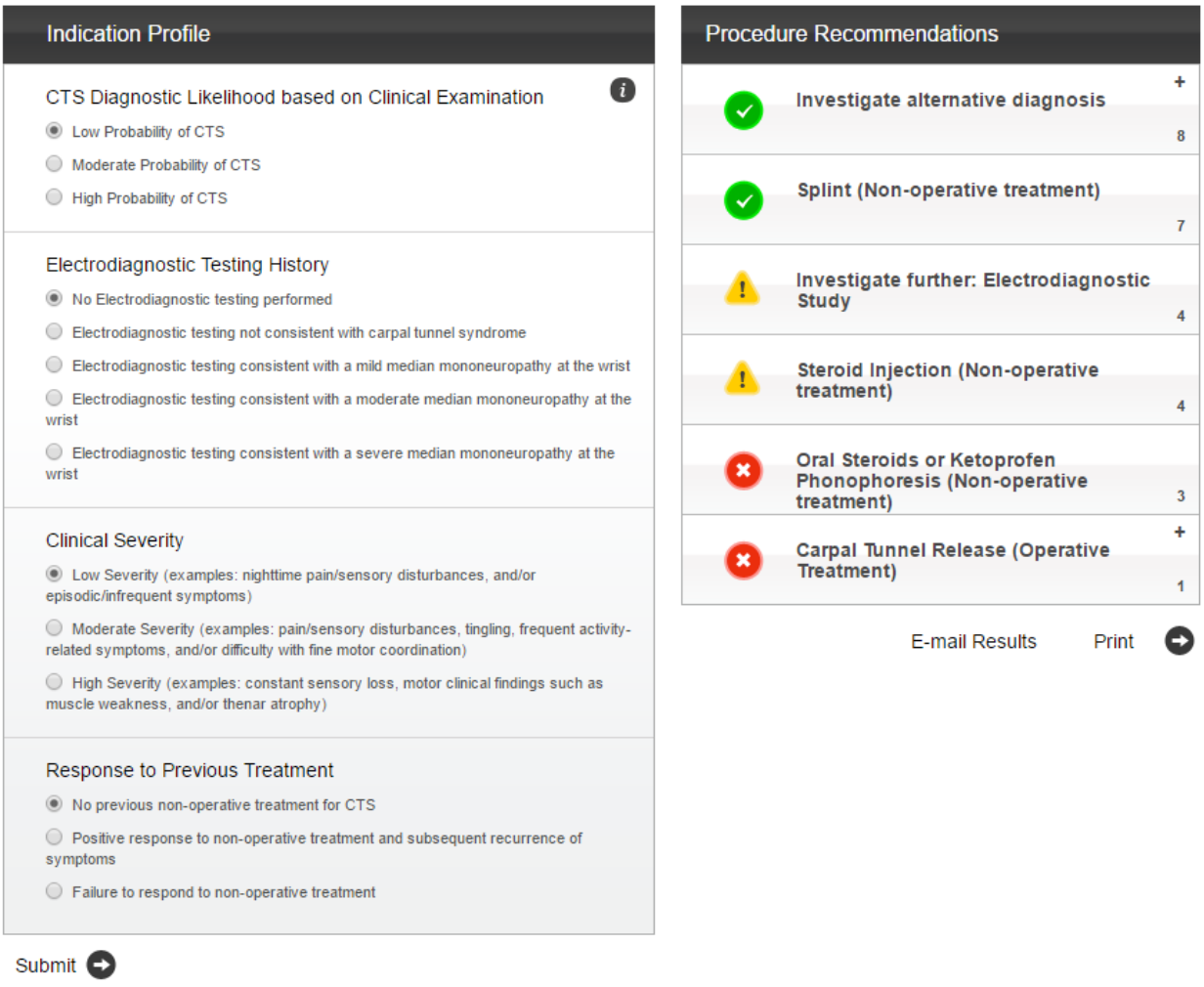
Treatments Addressed Within This AUC

1. Investigate alternative diagnosis
2. Investigate further: Electrodiagnostic Study
3. Non-operative treatment: Oral Steroids or Ketoprofen Phonophoresis
4. Non-operative treatment: Splint
5. Non-operative treatment: Steroid Injection
6. Operative Treatment: Carpal Tunnel Release

IV. RESULTS OF APPROPRIATENESS RATINGS

For a user-friendly version of these appropriate use criteria, please access our AUC web-based application at www.orthoguidelines.org/auc. The OrthoGuidelines native app can also be downloaded via the Apple or Google Play stores.

Web-Based AUC Application Screenshot



Click Here to Access the AUC App!

Results

The following Appropriate Use Criteria tables contain the final appropriateness ratings assigned by the eight members of the voting panel. Patient characteristics are found under the column titled "Scenario". The Appropriate Use Criteria for each patient scenario can be found within each of the treatment rows. These criteria are formatted by appropriateness labels (i.e. "R"=Rarely Appropriate, "M"=May Be Appropriate, and "A"=Appropriate), median rating, and + or - indicating agreement or disagreement amongst the voting panel, respectively.

Out of 810 total voting items (i.e. 135 patient scenarios x 6 treatments), 330 (40.74%) voting items were rated as "Appropriate", 196 (24.2%) voting items were rated as "May Be Appropriate", and 284 (35.06%) voting items were rated as "Rarely Appropriate" (Figure 1). Additionally, the voting panel members were in agreement on 353 (43.58%) voting items and were in disagreement on 17 (0.02%) voting items (Figure 2). For a within treatment breakdown of appropriateness ratings, please refer to Figure 4.

Figure 1. Breakdown of Appropriateness Ratings

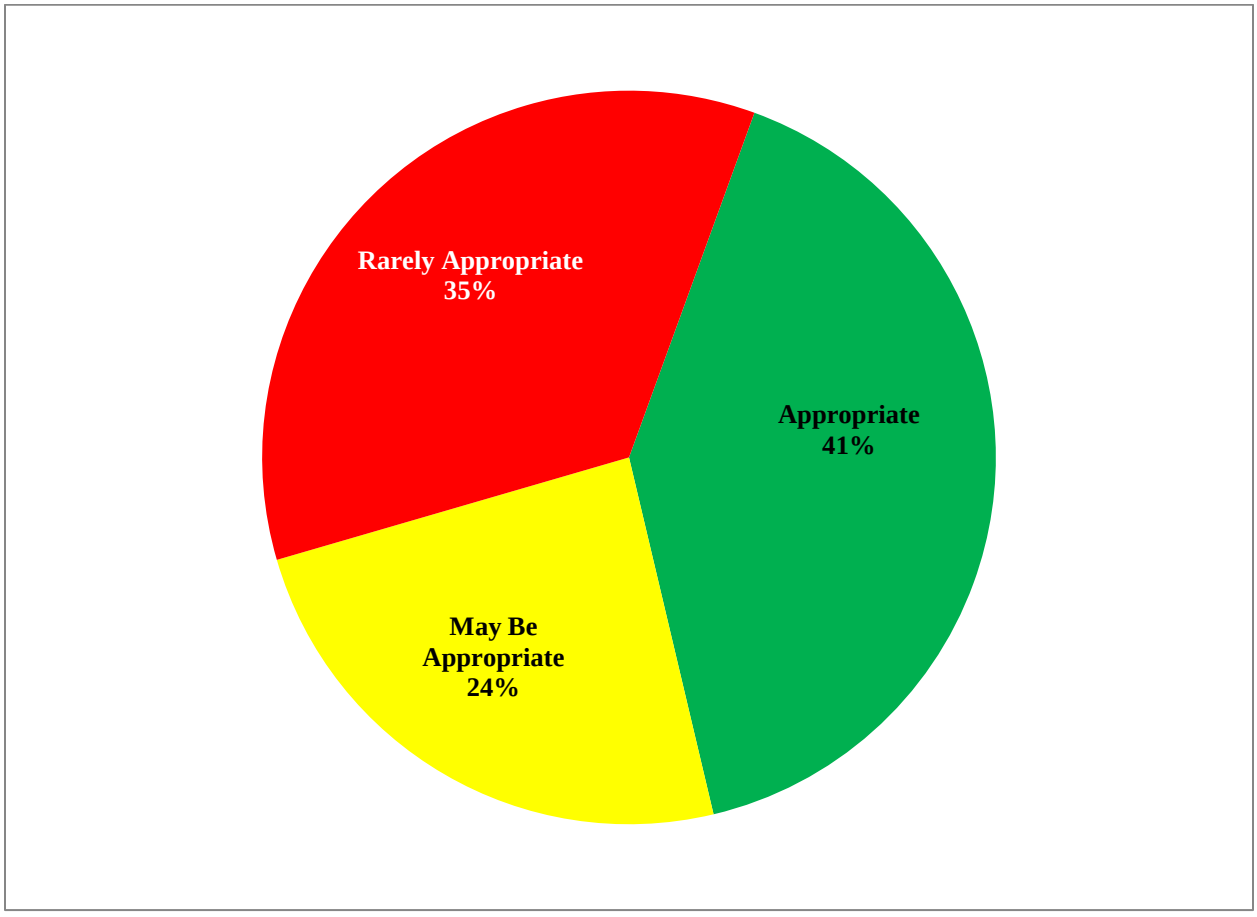


Figure 2. Breakdown of Agreement amongst Voting Panel

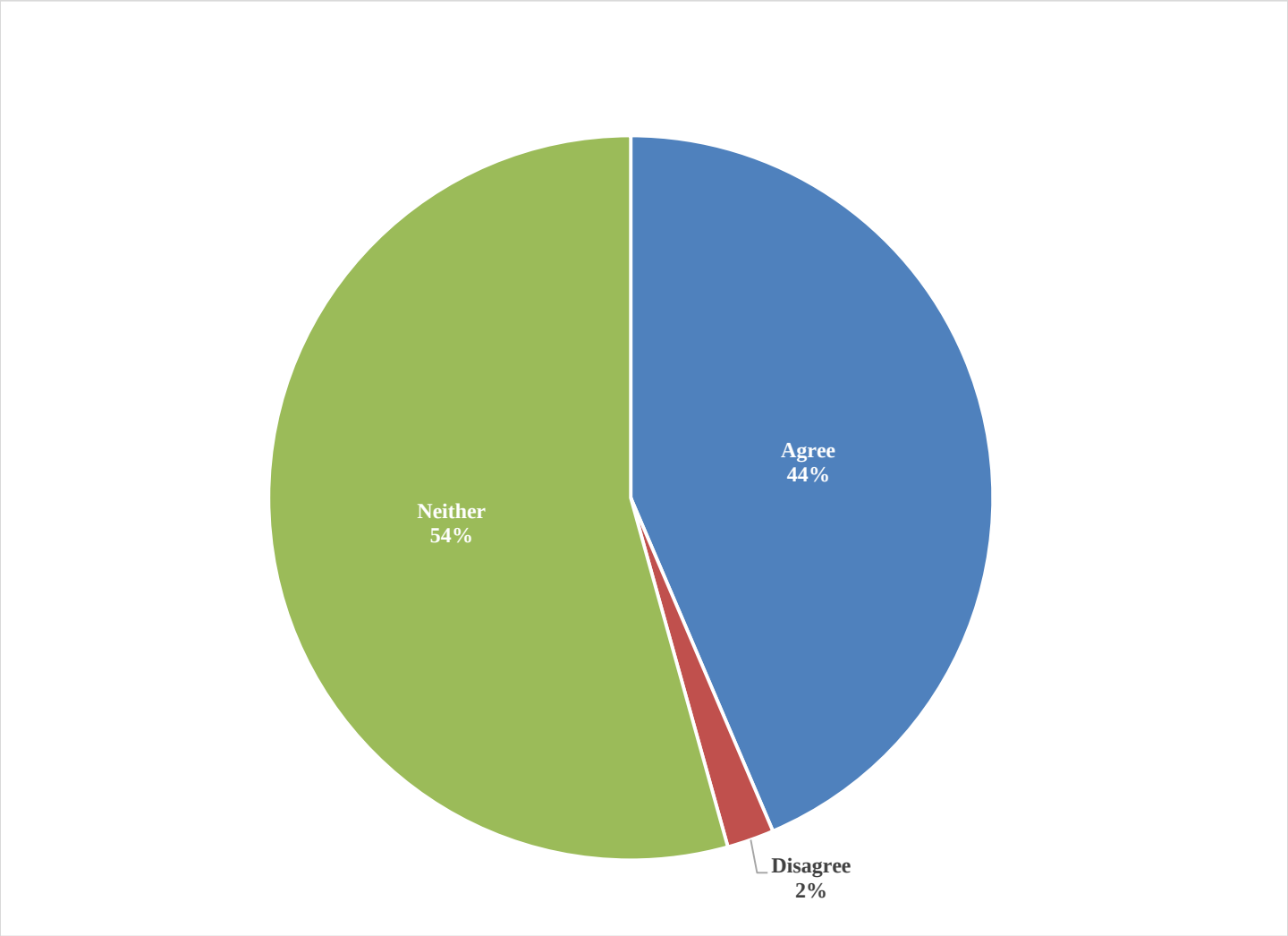


Figure 3. Distribution of Appropriateness Ratings on 9-Point Rating Scale

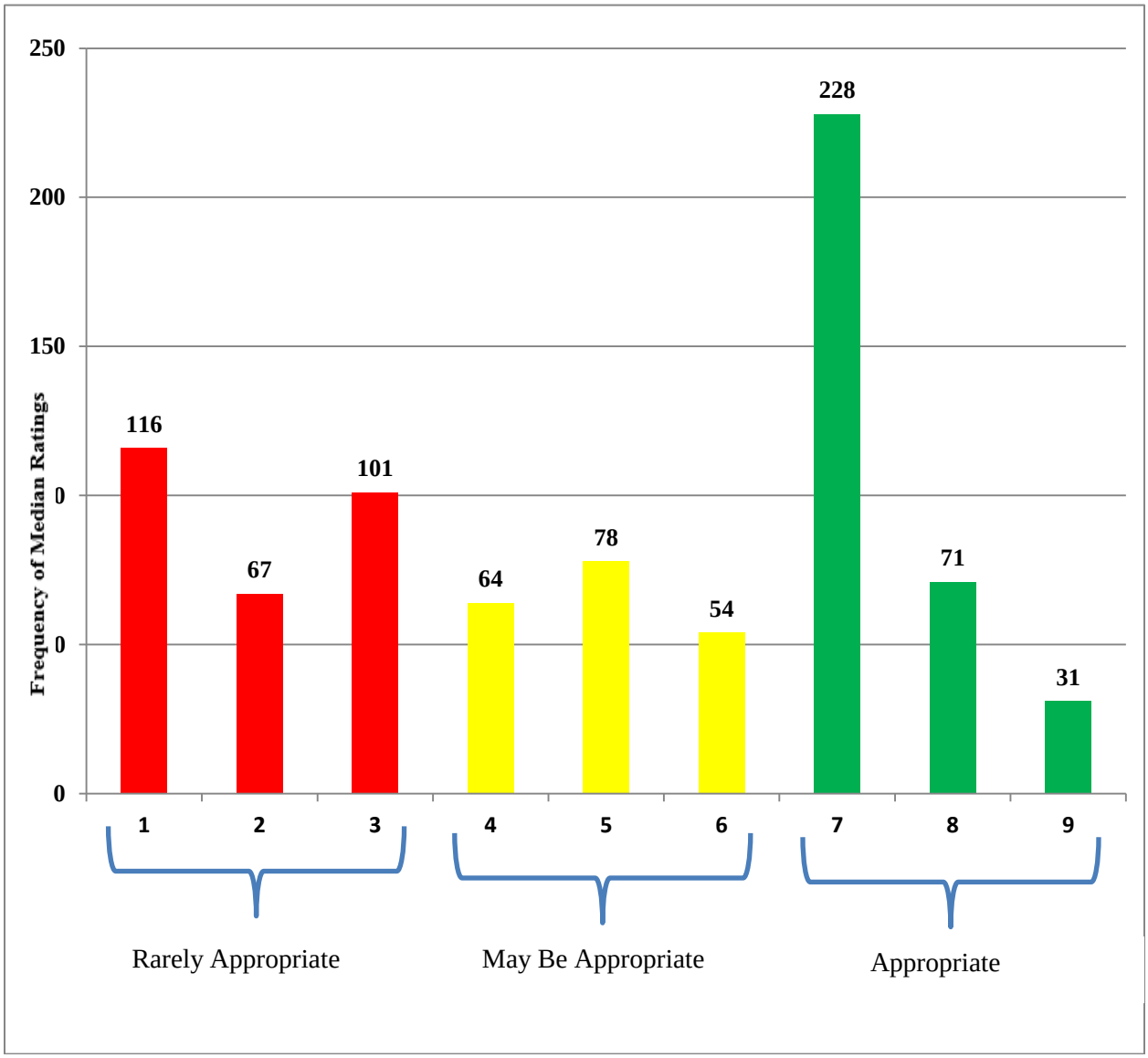
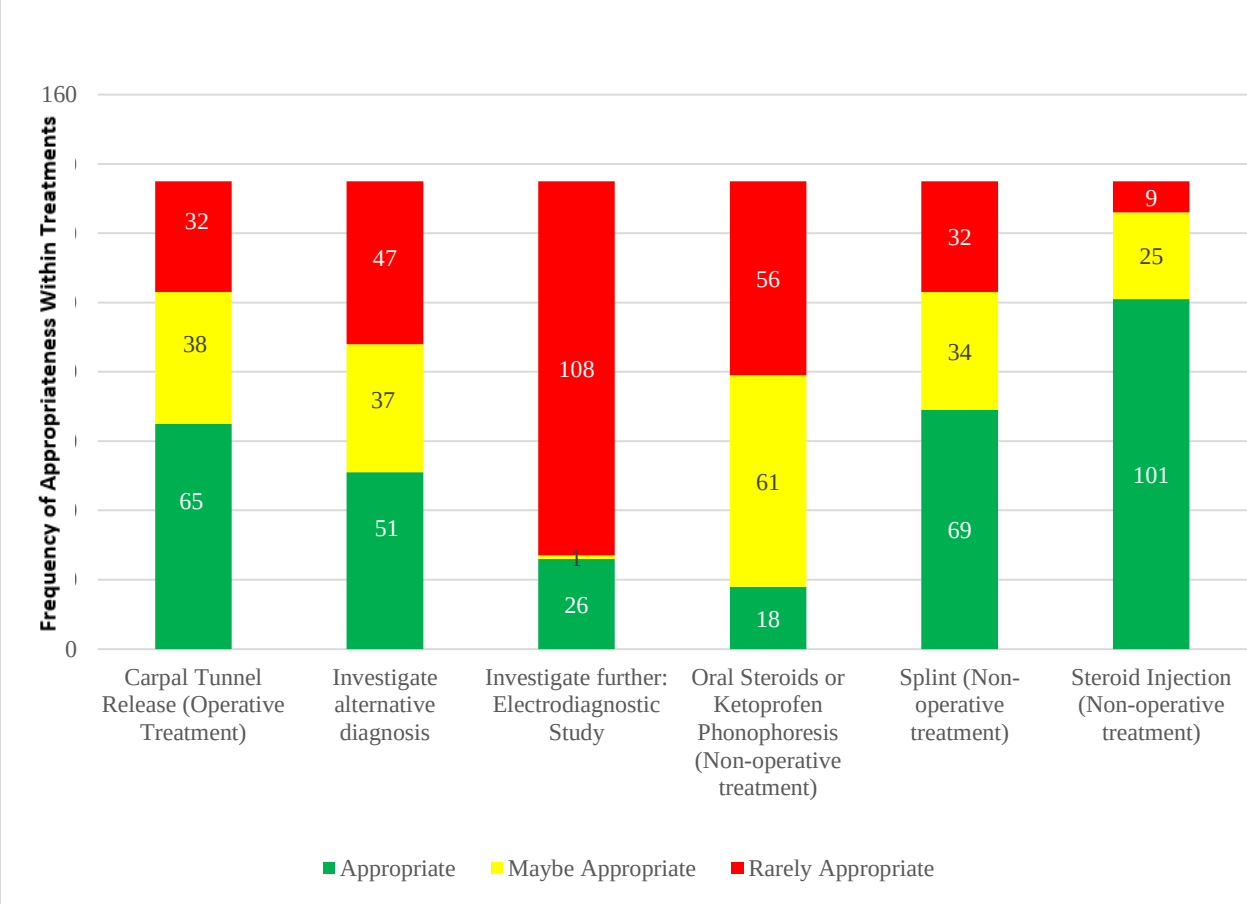


Figure 4. Within Treatment Appropriateness Ratings



APPROPRIATE USE CRITERIA FOR THE MANAGEMENT OF CARPAL TUNNEL SYNDROME

Interpreting the AUC tables:

- R = Rarely Appropriate, M = May Be Appropriate, A = Appropriate
- Numbers under "M" column indicate the median rating of voting panel
- A plus symbol (+) indicates agreement between voting panel members and a minus symbol (-) indicates disagreement between voting panel members

Scenario 1:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	May Be Appropriate	4	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+
Scenario 2:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	+

Scenario 3:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Appropriate	8	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	5	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+
Scenario 4:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Appropriate	7	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+

Scenario 5:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 6:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	4	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	

Scenario 7:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	+
Scenario 8:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	7	+
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	

Scenario 9:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	-
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 10:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+

Scenario 11:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	
Scenario 12:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	2	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+

Scenario 13:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	5	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+
Scenario 14:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	+

Scenario 15:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+
Scenario 16:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	5	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	+

Scenario 17:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	5	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 18:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	1	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	1	+

Scenario 19:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	6	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	+
Scenario 20:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	6	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 21:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	7	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	5	-
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 22:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	

Scenario 23:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	6	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	
Scenario 24:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	4	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	

Scenario 25:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	6	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 26:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 27:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	9	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 28:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	+

Scenario 29:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	8	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 30:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	+
	Splint (Non-operative treatment)	May Be Appropriate	4	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	4	

Scenario 31:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	-
Scenario 32:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 33:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	7	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	
Scenario 34:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	-
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 35:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	
Scenario 36:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	7	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 37:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 38:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 39:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 40:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 41:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	
Scenario 42:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 43:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	+
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 44:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	5	-
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 45:	**Treatment**	Appropriateness	Median Rating	Agreement
Low Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	2	+
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 46:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Appropriate	7	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	

Scenario 47:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 48:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	5	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	4	

Scenario 49:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	+
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 50:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	+
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 51:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	4	
Scenario 52:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	+

Scenario 53:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	
Scenario 54:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 55:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	+
Scenario 56:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	4	

Scenario 57:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 58:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	+

Scenario 59:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 60:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	
	Splint (Non-operative treatment)	Rarely Appropriate	3	-
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	

Scenario 61:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	8	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 62:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	8	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 63:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	2	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 64:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	

Scenario 65:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+
Scenario 66:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	5	-
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	4	-
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 67:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	
Scenario 68:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 69:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	4	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+
Scenario 70:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	6	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 71:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 72:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	5	-
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 73:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	4	
Scenario 74:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 75:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	4	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+
Scenario 76:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 77:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 78:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+

Scenario 79:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 80:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+

Scenario 81:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	4	-
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 82:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 83:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 84:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Rarely Appropriate	2	-
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+

Scenario 85:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 86:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+

Scenario 87:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 88:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	3	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	

Scenario 89:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	1	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	5	-
	Steroid Injection (Non-operative treatment)	May Be Appropriate	5	-
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+
Scenario 90:	**Treatment**	Appropriateness	Median Rating	Agreement
Moderate Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	-
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+

Scenario 91:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Appropriate	7	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	2	
Scenario 92:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	+
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	May Be Appropriate	6	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	

Scenario 93:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Appropriate	9	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	4	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 94:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Appropriate	7	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 95:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	+
	Investigate further: Electrodiagnostic Study	Appropriate	7	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 96:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	5	-
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 97:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	
Scenario 98:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	1	
	Investigate further: Electrodiagnostic Study	Appropriate	8	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+

Scenario 99:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, No Electrodiagnostic testing performed, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Appropriate	8	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 100:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	4	

Scenario 101:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 102:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	5	-
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	4	

Scenario 103:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 104:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 105:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	
Scenario 106:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Appropriate	7	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	6	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	

Scenario 107:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	May Be Appropriate	6	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	
Scenario 108:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing not consistent with carpal tunnel syndrome, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Appropriate	8	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	5	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	6	

Scenario 109:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	+
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	8	+
	Carpal Tunnel Release (Operative Treatment)	Rarely Appropriate	3	
Scenario 110:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 111:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	4	-
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 112:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	6	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	

Scenario 113:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	+
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+
Scenario 114:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 115:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	+
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 116:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	8	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 117:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a mild median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	5	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	2	+
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 118:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Appropriate	7	
	Splint (Non-operative treatment)	Appropriate	8	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	May Be Appropriate	5	

Scenario 119:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 120:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	+

Scenario 121:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 122:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+

Scenario 123:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	May Be Appropriate	4	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	2	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	4	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 124:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	

Scenario 125:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	2	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+
Scenario 126:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a moderate median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	3	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	4	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+

Scenario 127:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	+
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	7	
Scenario 128:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+

Scenario 129:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Low Severity (examples: nighttime pain/sensory disturbances, and/or episodic/infrequent symptoms), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Rarely Appropriate	2	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	
	Splint (Non-operative treatment)	Rarely Appropriate	2	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	8	+
Scenario 130:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	5	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+

Scenario 131:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	May Be Appropriate	4	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	May Be Appropriate	6	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+
Scenario 132:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, Moderate Severity (examples: pain/sensory disturbances, tingling, frequent activity-related symptoms, and/or difficulty with fine motor coordination), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	2	+
	Splint (Non-operative treatment)	Rarely Appropriate	2	+
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	+
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+

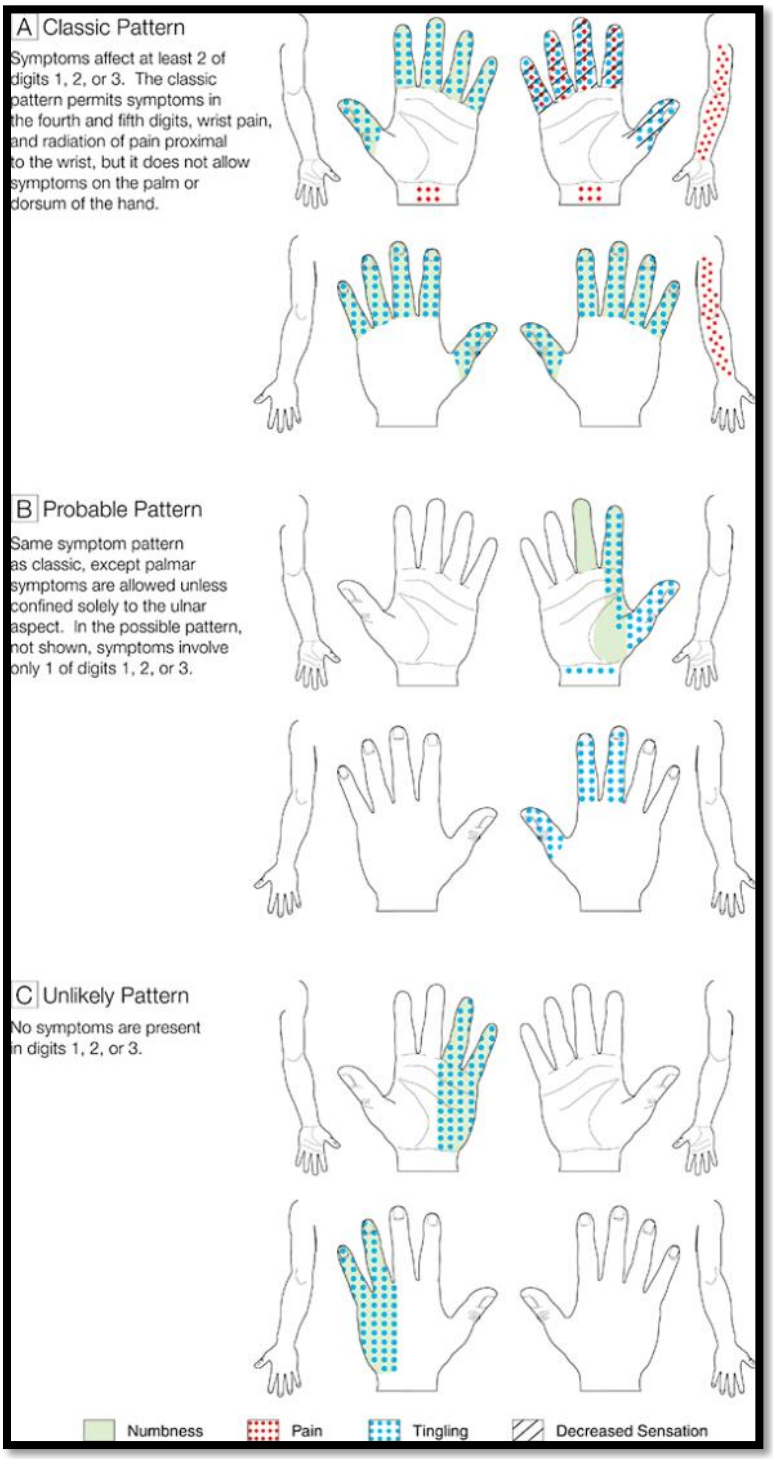
Scenario 133:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), No previous non-operative treatment for CTS	Investigate alternative diagnosis	Rarely Appropriate	1	+
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	Appropriate	7	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+
Scenario 134:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Positive response to non-operative treatment and subsequent recurrence of symptoms	Investigate alternative diagnosis	Rarely Appropriate	1	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	3	
	Splint (Non-operative treatment)	May Be Appropriate	5	
	Steroid Injection (Non-operative treatment)	Appropriate	7	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+

Scenario 135:	**Treatment**	Appropriateness	Median Rating	Agreement
High Probability of CTS, Electrodiagnostic testing consistent with a severe median mononeuropathy at the wrist, High Severity (examples: constant sensory loss, motor clinical findings such as muscle weakness, and/or thenar atrophy), Failure to respond to non-operative treatment	Investigate alternative diagnosis	Rarely Appropriate	3	
	Investigate further: Electrodiagnostic Study	Rarely Appropriate	1	+
	Oral Steroids or Ketoprofen Phonophoresis (Non-operative treatment)	Rarely Appropriate	1	+
	Splint (Non-operative treatment)	Rarely Appropriate	2	
	Steroid Injection (Non-operative treatment)	Rarely Appropriate	3	
	Carpal Tunnel Release (Operative Treatment)	Appropriate	9	+

V. APPENDICES

APPENDIX A. DIAGNOSTIC TOOLS

KATZ HAND DIAGRAM[7]



CTS-6 [5,6]

CTS-6

A clinical aid for diagnosing carpal tunnel syndrome

Symptoms and history

Numbness predominately or exclusively in median nerve territory **3.5**
Sensory symptoms are mostly in the thumb, index, middle and/or ring fingers

Nocturnal numbness **4**
Symptoms are prominent when patient sleeps; numbness wakes patient from sleep

Physical examination

Thenar atrophy and/or weakness **5**
The bulk of the thenar area is reduced or *manual motor testing shows strength of grade 4 or less*

Positive Phalen test **5**
Flexion of the wrist reproduces or worsens symptoms of numbness in the median nerve territory

Loss of 2 point discrimination **4.5**
A failure to discriminate two points held 5mm or less apart from one another, in the median nerve innervated digits, is a positive test suggestive of CTS

Positive Tinel sign **4**
Light tapping over the median nerve at the level of the carpal tunnel causing
radiating paraesthesiae into the median nerve innervated digits (not proximally) is a positive test

APPENDIX B. DOCUMENTATION OF APPROVAL

AAOS BODIES THAT APPROVED THIS APPROPRIATE USE CRITERIA

Evidence-Based Quality and Value Committee: Approved on 9/10/2016
The AAOS Committee on Evidence Based Quality and Value consists of 22 AAOS members. The overall purpose of this committee is to plan, organize, direct, and evaluate initiatives related to Clinical Practice Guidelines and Appropriate Use Criteria.

Council on Research and Quality: Approved on 10/14/2016
To enhance the mission of the AAOS, the Council on Research and Quality promotes the most ethically and scientifically sound basic, clinical, and translational research possible to ensure the future care for patients with musculoskeletal disorders. The Council also serves as the primary resource to educate its members, the public, and public policy makers regarding evidenced-based medical practice, orthopaedic devices and biologics regulatory pathways and standards development, patient safety, occupational health, technology assessment, and other related areas of importance.

Board of Directors: Approved on 12/09/2016
The 16 member AAOS Board of Directors manages the affairs of the AAOS, sets policy, and determines and continually reassesses the Strategic Plan.

APPENDIX C. DISCLOSURE INFORMATION

CARPAL TUNNEL AUC WRITING PANEL

Noah Matthew Raizman, MD (This individual reported nothing to disclose); Submitted on: 06/25/2015

Gary K Frykman, MD (This individual reported nothing to disclose); Submitted on: 07/06/2015

Min Jung Park, MD, MSc Submitted on: 06/16/2015
American Society for Surgery of the Hand: Board or committee member ($0)
Orthopaedic Research Society: Board or committee member ($0)
Pontis: Unpaid consultant

Charles T Resnick, MD Submitted on: 06/29/2015
Innomed: IP royalties ($0)

Murray J Goodman, MD Submitted on: 04/18/2015
AAOS: Board or committee member ($0) Chair, AAOS Committee on Professionalism
American Society for Surgery of the Hand: Board or committee member ($0) Member, Ethics & Professionalism Committee
Amgen Co: Stock or stock Options Number of Shares: 190 Trust(Self)
Emmi Solutions: Publishing royalties, financial or material support ($100) Access for my patients(Self)
Massachusetts Orthopaedic Association: Board or committee member ($0) (Self) Member Board of Directors
Merck: Stock or stock Options Number of Shares: 362 Pension Trust(Self)
Pfizer: Stock or stock Options Number of Shares: 1,511 Pension Trust(Self)
Procter & Gamble: Stock or stock Options Number of Shares: 205 Pension Trust(Self)
Stryker: Stock or stock Options Number of Shares: 250 Trust(Self)

Robert A Werner, MD, MS Submitted on: 01/05/2016
American Association of Neuromuscular and Electrodiagnostic Medicine: Board or committee m ember ($0)
American Association of Physical Medicine and Rehabilitation: Board or committee member ($0)
Johnson & Johnson: Stock or stock Options Number of Shares: 0
Journal of Occupational Rehabilitation: Editorial or governing board ($0)
Pfizer: Stock or stock Options Number of Shares: 0

Warren C Hammert, MD Submitted on: 07/22/2015
American Association for Hand Surgery: Board or committee member ($0)
American Society for Surgery of the Hand: Editorial or governing board ($0)

Joy C MacDermid, PhD Submitted on: 05/13/2015

American Association for Hand Surgery: Board or committee member ($0)
Journal of Orthopaedic and Sports Physical TherapyJournal of Hand TherapyOpen Orthopedics: Editorial or governing board ($0)
SLACK Incorporated: Publishing royalties, financial or material support ($2,000) editor evidence-based rehabilitation(Self)

Diana Deane Carr, MD (This individual reported nothing to disclose); Submitted on: 08/16/2015

Michael S Cartwright, MD, MS Submitted on: 09/02/2015
American Association of Neuromuscular and Electrodiagnostic Medicine - Ultrasound Committee: Board or committee member ($0)
Elsevier - Royalties for the textbook "Neuromuscular Ultrasound": Publishing royalties, financial or material support ($0)

Brent Graham, MD Submitted on: 05/06/2015
Journal of Bone and Joint Surgery - American: Publishing royalties, financial or material support ($25,000) (Self); Deputy Editor Methodology and Statistics; Journal of Bone and Joint Surgery - American: Editorial or governing board ($25,000) (Self) Deputy Editor, Methodology and Statistics

CARPAL TUNNEL AUC VOTING PANEL

Philip E Blazar, MD: Techniques in Hand and Upper Extremity: Editorial or governing board; Submitted on: 05/02/2016

Charles A Goldfarb, MD: AAOS: Board or committee member; American Society for Surgery of the Hand: Board or committee member; Arthrex, Inc: Paid consultant; Wolters Kluwer Health - Lippincott Williams & Wilkins: Publishing royalties, financial or material support; Submitted on: 04/03/2016

John C Kincaid, MD: Americna Association of Neuromuscular & Electrodiagnositic Medicine: Board or committee member; Ionis pharmaceuticals Carlsbad CA: Research support; Submitted on: 05/12/2016

Gary Mlady, MD: (This individual reported nothing to disclose); Submitted on: 04/07/2016

Kathryn L Mueller, MD, MPH: American Medical Association Publications: Editorial or governing board**;** Submitted on: 05/04/2016

Atul T Patel, MD: Allergan: Paid presenter or speaker; Research support; American Academy of Physical Medicine & Rehabilitation: Board or committee member; American Association of Neuromuscular and Electrodiagnotic Medicine: Board or committee member; IPSEN: Research support
Merz: Research support; Revance: Research support; Submitted on: 04/15/2016

Marc Joseph Richard, MD: Acumed, LLC: Paid consultant; Paid presenter or speaker; Research support; American Society for Surgery of the Hand: Board or committee member; Osteomed: Paid consultant; Submitted on: 04/05/2016

Shafic A Sraj, MD: (This individual reported nothing to disclose); Submitted on: 05/26/2016

Caroline W Stegink Jansen, PT: (This individual reported nothing to disclose); Submitted on: 05/01/2016

Theresa O Wyrick, MD: (This individual reported nothing to disclose); Submitted on: 04/06/2016

Moderators

Pekka A Mooar, MD, Moderator: AAOS: Board or committee member, Aesculap/B.Braun: Paid presenter or speaker; web MD: Editorial or governing board; Submitted on: 06/13/2016

William J Doherty, MD, Trainee: AAOS: Board or committee member; Eli Lilly: Stock or stock Options; Pfizer: Stock or stock Options; The Medicines Co: Stock or stock Options; Submitted on: 03/11/2016

(n) = Respondent answered 'No' to all items indicating no conflicts.
1= Royalties from a company or supplier; 2= Speakers bureau/paid presentations for a company or supplier; 3A= Paid employee for a company or supplier; 3B= Paid consultant for a company or supplier; 3C= Unpaid consultant for a company or supplier; 4= Stock or stock options in a company or supplier; 5= Research support from a company or supplier as a PI; 6= Other financial or material support from a company or supplier; 7= Royalties, financial or material support from publishers; 8= Medical/Orthopaedic publications editorial/governing board; 9= Board member/committee appointments for a society.

APPENDIX D. REFERENCES

(1) American Academy of Orthopaedic Surgeons. The Burden of Musculoskeletal Diseases in the United States. American Academy of Orthopaedic Surgeons; 2008.

(2) Fitch K, Bernstein SJ, Aguilar MD et al. *The RAND/UCLA Appropriateness Method User's Manual*. Santa Monica, CA: RAND Corporation; 2001.

(3) Ahldén, M., Samuelsson, K., Sernert, N., Forssblad, M., Karlsson, J., Kartus, J.The Swedish National Anterior Cruciate Ligament Register: a report on baseline variables and outcomes of surgery for almost 18,000 patients. Am J Sports Med. 2012 October; 40(10): 2230–2235. Published online 2012 September 7. doi: 10.1177/0363546512457348

(4) American Academy of Orthopaedic Surgeons. Management of Carpal Tunnel Syndrome Clinical Practice Guideline. www.orthoguidelines.org/ctsguideline. Published February 29, 2016.

(5) Graham,B. The value added by electrodiagnostic testing in the diagnosis of carpal tunnel syndrome. *J Bone Joint Surg Am* 2008/12; 12: 2587-2593

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(7) Katz JN, Stirrat CR. A self-administered hand diagram for the diagnosis of carpal tunnel syndrome. J Hand Surg. 1990;15A:360–363