

ACR Appropriateness Criteria® Topic Development Process

The ACR Appropriateness Criteria® (AC) are evidence-based guidelines to assist referring physicians and other providers in making the most appropriate imaging or treatment decision for a specific clinical condition. The AC assess the benefits and harms of recommended medical care or advanced diagnostic imaging options using scientific evidence to the extent possible using clinical judgment and expert consensus as necessary. The guidelines are developed by experts in diagnostic imaging, interventional radiology, and radiation oncology with participation from over [20 medical specialty societies](#).

New topics must be approved by the Chair of the Committee on Diagnostic Imaging/Interventional Radiology (DI/IR) AC and the Chair of the Commission on Quality and Safety or, for radiation oncology topics, by the Chair of the Committee on Radiation Oncology (RO) AC and Chair of the Commission on Radiation Oncology. All topics are reviewed at least every three years and updated as needed.

Each AC topic has a narrative, an evidence table (ET), and a literature search summary.

The narrative includes the variant tables, a discussion of the medical literature, and an evidence summary. The variant tables summarize the recommendations of the panel for the procedures or treatments based on the risks and benefits. They also provide population estimates of radiation levels (relative radiation level designations) for diagnostic procedures that use ionizing radiation and the strength of evidence for the recommendation. When the strength of evidence does not appear on the table, a summary of the evidence is provided in the narrative. The discussion of the medical literature (labeled “summary of the literature review”) describes evidence for the clinical scenario(s) and the strengths or limitations of the relevant radiology procedures or treatments.

The ET summarizes the information about the citations embedded in the narrative, including the study type, number of patients, study objective, study results, and an assessment of the study’s quality.

The literature search summary document provides the strategy used to identify the peer reviewed literature and summarizes the articles included in and excluded from the narrative.

Process Overview

- ACR staff searches the peer-reviewed literature to identify the articles related to the topic using keywords provided by the author and other defined search parameters. (See [Literature Search Process](#) for more information.)
- The author assesses the literature to identify relevant articles to include in the topic. The author may request staff conduct additional searches, may use citations found in the bibliographies of relevant articles, or incorporate a limited number of citations they know of from personal expertise.
- The author creates (or revises) the variant descriptions to reflect the most likely or relevant presentations of the clinical condition. The author selects (or adds or removes) the relevant procedures/treatments that reflect current technology and medical practice. The author drafts (or revises) the summary of literature review, which interprets and summarizes the evidence, and embeds the relevant citations identified from the literature search.
- ACR staff completes the ET information for all of the citations embedded in the narrative. (See [ET Development](#) for more information.)
- ACR staff sends the narrative and ET to the author and chair for approval. Some modifications to the document may be incorporated as well as additional citations.
- ACR staff sends the narrative and ET to the AC panel members for review and comments.
- The author assesses the panel members’ comments and may modify the document as well as the citations based on these comments.
- ACR staff sends the latest version of the narrative and ET to the panel in preparation for rating appropriateness.

- The panel members rate the appropriateness of the procedures/treatments on the variant tables using a modified Delphi method based on the [RAND/UCLA Appropriateness Method](#). (See [Rating Round Information](#) for more information.)
- After the rating round is completed, the ACR staff summarizes the results for each procedure/treatment that was rated, which includes: 1) a histogram showing the distribution of the individual ratings, 2) the median panel rating, 3) any comments or issues raised by the panel, and 4) whether there was too much dispersion of individual ratings from the median panel rating (i.e., disagreement) or if the dispersion of individual ratings from the median panel rating was within an acceptable range (i.e., no disagreement) This disagreement/no disagreement calculation is based on the IPRAS calculation described in the [RAND/UCLA Appropriateness Method](#).
- A conference call is held to review the results of the first rating round. The call focuses on the clarity of the variant description, the evidence supporting the recommendations, and the benefits/harms of performing the procedures/treatments.
- The author edits the narrative based on the results of the first rating round and conference call.
- A second rating round is conducted after the conference call for those procedures/treatments with disagreement and any others for which a re-rating was requested during the conference call. Notes from the call are provided to remind members of the discussion.
- After the second rating round, the ACR staff summarizes the results and sends them to the author and chair for approval. Some modifications to the document may be incorporated as well as additional citations.
- ACR staff sends the revised narrative and ET to the AC panel for final review.
- The author incorporates final revisions.
- ACR staff sends the narrative to a professional editor.
- ACR staff sends the narrative to the Committee on DI/IR AC or Committee on RO AC for review.
- ACR staff sends the final narrative and ET to the panel.
- The topic is posted on the ACR web site in the next release and submitted to the [National Guideline Clearinghouse](#).