



Getting started with
CareSelect for Epic

Welcome!

In this guide we show you how to get started with CareSelect for point-of-order medical imaging guidance. Mary Washington Healthcare has chosen to implement CareSelect with Epic CPOE for the following modalities:

Modalities

- CT
 - MRI
 - Nuclear Medicine
 - PET
-

What is CareSelect?

CareSelect, provided by National Decision Support Company, is a “national standard” imaging decision support system based on the American College of Radiology (ACR) Appropriateness Criteria® (AC).

Why CareSelect?

CareSelect, with ACR AC®, is the most comprehensive and widely recognized set of evidence-based imaging guidelines covering all modalities and clinical scenarios. More than 300 volunteer physicians, representing more than 20 radiology and non-radiology specialty organizations, participate on the ACR AC expert panels. They are continuously updating these nationally transparent guidelines and providing real-time access to the latest medical imaging decision support. CareSelect is integrated with your Epic CPOE workflow and guides ordering providers to the most appropriate medical imaging exam ensuring that the right patient gets the right scan for the right indication.

Need help? For questions, comments, and support, please contact: 741-1122

Information on the CareSelect Imaging Appropriateness Criteria Scoring

As mentioned above, the CareSelect Imaging Appropriateness Criteria was created by expert panels using evidence and professional opinions. The American College of Radiology (ACR) content [which includes Society of Pediatric Radiology (SPR)/Pediatric Rapid Response Committee (PRRC), Rapid Response Committee (RRC), and Massachusetts General Hospital (MGH) content as well], and Society of Nuclear Medicine and Molecular Imaging (SNMMI) prefer to give their scores numerically on a scale of 1 to 9, which is divided into three groups based on order and indication combination appropriateness: 1-3 (Usually Not Appropriate), 4-6 (May Be Appropriate), and 7-9 (Usually Appropriate). The American College of Cardiology (ACC) and National Comprehensive Cancer Network (NCCN) prefer to give their scores textually as opposed to numerically, also divided into the same three groups that can be equivocated numerically to the average of each numerical group (averages of each numeric group used: 2, 5 and 8).

The first category is “Usually Not Appropriate” (represented by the color red) that includes numerical scores of 1, 2, and 3, as well as the “Not Recommended” textual score (average numerical score of 2) used by ACC and NCCN. This category indicates that the harm of doing the procedure generally outweighs the benefits. The second category is “May Be Appropriate” (represented by the color yellow) that includes numerical scores of 4, 5, and 6, as well as the “May Be Appropriate” textual score (average numerical score of 5) used by ACC and NCCN. This middle category is used when the risks and benefits are equal or unclear. The third category is “Usually Appropriate” (represented by the color green) that includes numerical scores of 7, 8, and 9, as well as the “Recommended” textual score (average numerical score of 8) used by ACC and NCCN. This category indicates that the benefits of doing the procedure usually outweigh the harms or risks.

Some risks or benefits may vary due to specific patient information or scenarios. Because of this, the final decision made by the provider may be different than what the medical evidence and expert opinion suggest.

For some scenarios, all exams presented to the ordering provider may be scored in the red range (scores of 1, 2, or 3, as well as the “Not Recommended” textual score used by ACC and NCCN). In these cases, research indicates that imaging is usually not appropriate.

CONTENT SOURCE SCORING DIFFERENCES			
Numeric Scores (ACR, SNMMI & PRRC)	Textual Scores (ACC & NCCN)	Category Definition	Disagreement
1, 2 or 3: Usually Not Appropriate (Red)	Not Recommended (Red)	The imaging procedure or treatment is unlikely to be indicated in the specified clinical scenarios, or the risk-benefit ratio for patients is likely to be unfavorable.	The dispersion of the individual ratings from the panel median rating is assessed to determine if there is no disagreement. When the individual ratings are too dispersed from the panel median (disagreement), "May be appropriate" is the designated rating category.
4, 5 or 6: May Be Appropriate (Yellow)	May Be Appropriate (Yellow)	The imaging procedure or treatment may be indicated in the specified clinical scenarios as an alternative to imaging procedures or treatments with a more favorable risk-benefit ration, or the risk-benefit ration for patients is equivocal.	
7, 8 or 9: Usually Appropriate (Green)	Recommended (Green)	The imaging procedure or treatment is indicated in the specified clinical scenarios at a favorable risk-benefit ration for patients.	

Guidance at the point-of-order

National Decision Support Company and Epic have collaborated to ensure an optimal user experience. The entire workflow takes place directly in Epic with minimal changes to your existing order entry workflow. Feedback is immediate, so there is no disruption to the doctor-patient relationship.

When CareSelect is enabled, the user is first presented with a **reason for exam** from a list of clinical scenarios (vs. free-text reason for exam). CareSelect provides feedback related to the appropriateness of the order being placed as well as any suggested alternatives (each scenario includes links to supporting evidence which the user may choose to view). After reviewing the guidance, the user may proceed with the original order or select one of the alternates. The CareSelect knowledge base has also been integrated into Epic's Active Guidelines workflow as a reference tool to aid in researching care pathways and as a patient engagement tool.

Minimal changes to your existing order entry workflow

When enabled, CareSelect simply presents a context-aware list of structured clinical scenarios to choose from. After selecting an exam, a list of potential clinical scenarios is presented to the user.

In the screen shot below, the user has chosen to order a CT of the Head with Contrast.

CT Head w IV Contrast Protocol Accept Cancel

Priority:

Frequency:

Starting: At:

First Occurrence: **Today 0919**

Scheduled Times

10/15/19 0919

Reason for Exam:

Common Indications for Exam

<input type="checkbox"/> Altered mental status	<input type="checkbox"/> Headache, chronic, with new features	<input type="checkbox"/> Seizure, nontraumatic (Age 18-40y)
<input type="checkbox"/> Ataxia, stroke suspected	<input type="checkbox"/> Headache, infection suspected	<input type="checkbox"/> Stroke, follow up
<input type="checkbox"/> Dizziness, non-specific	<input type="checkbox"/> Headache, intracranial hemorrhage suspected	<input type="checkbox"/> Syncope, recurrent
<input type="checkbox"/> Dizziness, persistent/recurrent, cardiac or vascular cause suspected	<input type="checkbox"/> Neuro deficit, acute, stroke suspected	<input type="checkbox"/> Syncope, simple, abnormal neuro exam
<input type="checkbox"/> Headache, chronic, no new features	<input type="checkbox"/> Seizure, abnormal neuro exam	<input type="checkbox"/> Syncope, simple, normal neuro exam

Oncology Indications for Exam

Trauma Indications for Exam

Reason for Exam (Free Text):

Caption: Based on their selection, CareSelect has presented a list of clinical scenarios that match the exam. The user simply selects the best clinical scenario instead of entering a free-text reason for exam.

Feedback presented to user

If the selected **reason for exam** has a high appropriateness score, the order is simply placed. If the appropriateness score of the exam falls below your organization's threshold, the user will be presented with feedback and a list of alternative exams as provided by CareSelect. The user can follow links provided by CareSelect to read detailed rationale for the particular appropriateness scores provided.

BestPractice Advisory - Integrated, Forty Three

Appropriateness rankings for a 39 year old female

Indications: Headache, chronic, no new features

Appropriateness	Procedure	Cost	RRL
Selected Procedure			
3	CT HEAD W IV CONTRAST PROTOCOL	\$\$	☠☠☠☠☠
Alternate Procedures to Consider			
4	MR BRAIN W AND WO IV CONTRAST PROTOCOL	\$\$\$	
4	MR BRAIN WO IV CONTRAST	\$\$	
3	CT HEAD W AND WO IV CONTRAST PROTOCOL	\$\$	☠☠☠☠☠

[Click here for ACR Appropriateness Criteria reference information](#)

Remove the following orders?

CT Head w IV Contrast Protocol
Routine, Once, First occurrence today at 0919 Is the patient pregnant? No Reason for Exam: Headache, chronic, no new features
Score 3

Apply the following?

Score 4 (MRI Brain w and wo IV Contrast Protocol)

Score 4 (MRI Brain wo IV Contrast)

! Acknowledge Reason

Caption: The user is presented with a soft stop and may elect to continue placing the order or choose to place an order for a new exam from the list of alternate exams.

Soft stop

If the user determines the exam is clinically necessary despite the low appropriateness score, they may simply select one of the acknowledgment reasons available below the alternate exams listed and provide comment if necessary.

BestPractice Advisory - Integrated, Forty Three

Appropriateness rankings for a 39 year old female

Indications: Headache, chronic, no new features

Appropriateness	Procedure	Cost	RRL
Selected Procedure			
3	CT HEAD W IV CONTRAST PROTOCOL	\$\$	
Alternate Procedures to Consider			
4	MR BRAIN W AND WO IV CONTRAST PROTOCOL	\$\$\$	
4	MR BRAIN WO IV CONTRAST	\$\$	
3	CT HEAD W AND WO IV CONTRAST PROTOCOL	\$\$	

[Click here for ACR Appropriateness Criteria reference information](#)

Remove the following orders?

CT Head w IV Contrast Protocol
Routine, Once, First occurrence today at 0919 Is the patient pregnant? No Reason for Exam:
Headache, chronic, no new features
Score 3

Apply the following?

Score 4 (MRI Brain w and wo IV Contrast Protocol)

Score 4 (MRI Brain wo IV Contrast)

Acknowledge Reason

Disagree with appropriateness score Contraindication to modality (e.g. pregn... Modality unavailable

Patient does not tolerate modality (e.g.... Other

Placing an alternate order

If the user determines they will place an alternate order, they will need to select one of the alternate procedures offered in the bottom section of the BPA window. Upon selecting the alternate order and choosing “Accept”, the updated order will be automatically associated with the reason for exam that was initially chosen.

BestPractice Advisory - Integrated, Forty Three

Appropriateness rankings for a 39 year old female

Indications:

Appropriateness	Procedure	Cost	RRL
3	CT HEAD W IV CONTRAST PROTOCOL	\$\$	
<i>Alternate Procedures to Consider</i>			
4	MR BRAIN W AND WO IV CONTRAST PROTOCOL	\$\$\$	
4	MR BRAIN WO IV CONTRAST	\$\$	
3	CT HEAD W AND WO IV CONTRAST PROTOCOL	\$\$	

[Click here for ACR Appropriateness Criteria reference information](#)

Remove the following orders? ➡ **CT Head w IV Contrast Protocol**

Remove

Keep

Routine, Once, First occurrence today at 0919 Is the patient pregnant? No Reason for Exam: Headache, chronic, no new features
 Score 3

Apply the following? ➡ **Score 4 (MRI Brain w and wo IV Contrast Protocol)**

Order

Do Not Order

➡ **Score 4 (MRI Brain wo IV Contrast)**

Order

Do Not Order

Acknowledge Reason

Consulted with Radiology

Consulted with Other Specialist

Previous imaging result was equivocal or...

Disagree with appropriateness score

Contraindication to modality (e.g. pregn...

Modality unavailable

Patient does not tolerate modality (e.g....

Other

✓ Accept

Cancel

Accessing appropriateness criteria through Epic Active Guidelines

CareSelect can also be used as a research tool and can assist with the ordering process. If the user is unsure of the exact exam they want to place, they can use their right click from the Problem List, and “Search Active Guidelines” to open the CareSelect portal. Within this screen, the user first selects the affected body area, then narrows down the list of clinical indications and scenarios by using the search bar. Next, the user selects the radio button associated with the applicable clinical indication or scenario to display the list of exams and corresponding appropriateness scores. The user may follow the “display evidence” hyperlink to read detailed rationale for the particular appropriateness scores provided. Lastly, the user may then choose the option to “select this exam” to add the exam to a “shopping cart” to pull back into order entry.

The screenshot displays the CareSelect web interface. At the top, there is a navigation bar with the title "Guidelines" and a help icon. Below this, there are tabs for "CareSelect Imaging Rad DS", "UpToDate", and "Micromedex". The CareSelect logo is prominently displayed in a green banner. Below the banner, there are two input fields: "39 year old Female" and "Service: Not Selected". The main content area is titled "Indication Information" and contains a search bar with a magnifying glass icon. Below the search bar, a dropdown menu shows the selected indication: "Chronic cluster headache, intractable (G44.021)". To the right of the search bar, there is a section titled "Indications Based on Diagnosis (11)" which lists 11 clinical indications, each with an unchecked checkbox:

- Ataxia, stroke suspected
- Carotid or vertebral dissection suspected
- Headache, abnormal ICP suspected
- Headache, cancer or immunocompromise
- Headache, chronic, no new features
- Headache, chronic, with new features
- Headache, cluster/trigeminal
- Headache, infection suspected
- Headache, new in pregnancy
- Headache, post traumatic
- Headache, sinus or mastoid

At the bottom of the page, there is a "Feedback" link.

Guidelines

CareSelect Imaging Rad DS | UpToDate | Micromedex



39 year old Female

Service: Not Selected

Indication(s):

Headache, cluster/trigeminal ✕

Edit

Appropriateness rankings for a 39 year old Female

Appropriateness	Service	Cost	RRL	Display Evidence...
8	MR BRAIN W AND WO IV CONTRAST PROTOCOL	\$\$\$		Select this service
7	MR BRAIN WO IV CONTRAST	\$\$		Select this service
6	CT HEAD W AND WO IV CONTRAST PROTOCOL	\$\$	☠☠☠	Select this service
5	CT HEAD ANGIO W AND WO IV CONTRAST PROTOCOL	\$\$\$	☠☠☠	Select this service
5	CT HEAD W IV CONTRAST PROTOCOL	\$\$	☠☠☠	Select this service
5	CT HEAD WO IV CONTRAST	\$\$	☠☠☠	Select this service
5	MR HEAD ANGIO WO IV CONTRAST	\$\$\$		Select this service
4	MR HEAD ANGIO W AND WO IV CONTRAST PROTOCOL	\$\$\$		Select this service

Feedback

Other Considerations

User Preference Lists

Reasons for exam that have been defaulted in user defined preference lists will need to be updated upon the implementation of CareSelect. Providers who have previously defaulted reasons for exam in their user defined preference lists will be notified to save a default structured indication the next time they access their user-saved order.