Welcome to the meeting. We will begin shortly.

Type a comment/question in Q&A (only seen by organizers)

Type a comment/question in the chat (can be seen by all)

Questions and comments can be entered in the Q&A field
CTC Training Webinar Series

Part 1: How to Benchmark Your Practice and Help Advance the Field

NRDR

CTC™

CT Colonography Registry

AMERICAN COLLEGE OF RADIOLOGY
Learning Objectives

1. Determine how participating in the CTC registry helps the radiology community learn from each other, benchmark our practices, and collect data for advocacy.

2. Identify key data elements and how they populate CTC reports and quality measures.

3. Recall knowledge from a case example to begin to operationalize CTC registry participation at your institution.
Moderator

Zach Smith
Sr. Quality Programs Assistant, ACR
Speakers

Courtney C. Moreno, MD
Chair, CTC Registry Committee
Associate Professor of Radiology, Emory University School of Medicine

Kevin Chang, MD, FACR, FSAR
Director of MRI, Dept. of Radiology, Boston University Medical Center
Associate Professor of Radiology, Boston University School of Medicine
Adj. Associate Professor of Diagnostic Imaging, The Warren Alpert Medical School of Brown University
Speakers

Vasantha Vasan, MD
Associate Professor of Radiology, Abdominal Imaging Division, UT Southwestern Medical Center

Thomas Law, RN
Patient Navigator, UT Southwestern Medical Center
Disclosures

- None
Welcome to the meeting. We will begin shortly.

Type a comment/question in Q&A (only seen by organizers)

Type a comment/question in the chat (can be seen by all)

Questions and comments can be entered in the Q&A field
Attendee Demographics – Poll 1

What is your role at your institution?

A. Radiologist
B. Physician
C. Technologist
D. Administrator
E. Other
Attendee Demographics – Poll 2

What practice setting do you work in?
A. Private practice
B. Academic institution
C. Community hospital
D. Other
Current State of CT Colonography

Current Colorectal Cancer Screening Recommendations in the US
American Cancer Society 2018 Recommended Screening Options

Average risk individuals should be screened from age 45 to 75-85.

**Prevention Tests:**
- Colonoscopy every 10 years (OC)
- CT colonography every 5 years (CTC)
- Flexible sigmoidoscopy every 5 years
- Double contrast barium enema every 5 years

**Detection Tests:**
- Fecal occult blood test (gFOBT) every year
- Fecal immunochemical test (FIT) every year
- Stool DNA test (sDNA), every 3 years
# USPSTF 2016 Screening Strategies

<table>
<thead>
<tr>
<th>Screening Method</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stool-Based Tests</strong></td>
<td></td>
</tr>
<tr>
<td>gFOBT</td>
<td>Every year</td>
</tr>
<tr>
<td>FIT</td>
<td>Every year</td>
</tr>
<tr>
<td>FIT-DNA</td>
<td>Every 1 or 3 y</td>
</tr>
<tr>
<td><strong>Direct Visualization Tests</strong></td>
<td></td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>Every 10 y</td>
</tr>
<tr>
<td>CT Colonography</td>
<td>Every 5 y</td>
</tr>
<tr>
<td>Flexible sigmoidoscopy</td>
<td>Every 5 y</td>
</tr>
<tr>
<td>Flexible sigmoidoscopy with FIT</td>
<td>Flex sig every 10 y plus FIT</td>
</tr>
<tr>
<td>Every year</td>
<td>Every year</td>
</tr>
<tr>
<td>Every 1 or 3 y</td>
<td>Every 1 or 3 y</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### USPSTF 2016 Final Recommendation

<table>
<thead>
<tr>
<th>Population</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults aged <strong>50 to 75 years</strong></td>
<td>The USPSTF recommends screening for colorectal cancer starting at age 50 years and continuing until age 75 years. The risks and benefits of different screening methods vary. See the Clinical Considerations section and the Table for details about screening strategies.</td>
<td>A</td>
</tr>
</tbody>
</table>
| Adults aged **76 to 85 years** | The decision to screen for colorectal cancer in adults aged 76 to 85 years should be an individual one, taking into account the patient’s overall health and prior screening history.  
  • Adults in this age group who have never been screened for colorectal cancer are more likely to benefit.  
  • Screening would be most appropriate among adults who 1) are healthy enough to undergo treatment if colorectal cancer is detected and 2) do not have comorbid conditions that would significantly limit their life expectancy. | C     |
The USPSTF recommends screening for colorectal cancer in all adults ages 50 to 75 years. See the "Practice Considerations" section and Table 1 for details about screening strategies.

The USPSTF recommends screening for colorectal cancer in adults ages 45 to 49 years. See the "Practice Considerations" section and Table 1 for details about screening strategies.

The USPSTF recommends that clinicians selectively offer screening for colorectal cancer in adults ages 76 to 85 years. Evidence indicates that the net benefit of screening all persons in this age group is small. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the patient’s overall health and prior screening history.
Insurance Coverage of CT Colonography

Private Payors

Medicare/Medicaid
Private Payor Covered Indications

- **Screening**
  - Affordable Care Act (ACA) requires private insurers to fully cover USPSTF-recommended screening options including CT Colonography
  - Most payors covered screening even prior to ACA including the top 5: United, Anthem, Aetna, Cigna, most BCBS
- **Incomplete colonoscopy**
- **Contraindication to colonoscopy**
Medicare/Medicaid Covered Indications

- **Incomplete colonoscopy:**
  - Can be performed on the same day for any reason except *inadequate prep*

- **Contraindication to colonoscopy**
  - Anticoagulation
  - Difficulty with prior colonoscopy
  - Difficulty with or high risk for sedation
ACR Practice Parameters for CTC

- **Technical Guidelines**
  - Colonic Preparation and Tagging preferred
  - Colonic Insufflation (CO₂ or Room Air)
  - Low Radiation Dose 16+ slice MDCT ($CTDI_{vol} < 5\text{mGy}$)
  - At least 2 patient positions (each segment distended in at least 1 position)
  - Full colonic coverage

- **Interpretation**
  - 2D & 3D workstation recons
  - C-RADS (Colonic & Extracolonic Findings)
Registry Participation – Poll 1

What is your current participation with the CTC?
A. Enrolled and submitting data
B. Enrolled, but never started submitting data
C. Enrolled and previously submitted data, but stopped
D. Not enrolled
Registry Participation – Poll 2

Which other NRDR registries does your institution participate in?

A. General Radiology Improvement Database (GRID)
B. National Mammography Database (NMD)
C. Dose Index Registry (DIR)
D. Lung Cancer Screening Registry (LCSR)
E. I don’t participate in any other registries
Data Collected
Simplified December 2020

- Demographic information
  - Age, gender, race, ethnicity
- Exam-related
  - Screening or diagnostic?
  - Incomplete colonoscopy?
  - Supine, prone, and/or decubitus?
Polyp Data

*Simplified December 2020*

- At least one polyp $\geq 10$ mm?
- Was polyp confirmed at optical colonoscopy or surgery?
- Option to indicate that colonoscopy not performed or unknown (outside referral)
- Indicate histology of confirmed polyp(s)
Outcome Measures

Tabulated by ACR & Reported to You

- Rate of colonic perforation
- True positive rate
- Clinically significant extracolonic findings
Benefits of Participation

- Semi-annual reports from ACR
- Free access to registry data & ACR analyst
- Satisfies ABR MOC part 4 requirement
- Marketing toolkit
Semi-Annual Reports

National Radiology Data Registry

Facility Report, 2020 Jul-Dec

Sample Facility
(Facility ID: 100853)

cdr.acr.org

American College of Radiology
Semi-Annual Reports

CT Colonography
Jul 2020 - Dec 2020
Trend Chart: Adequacy of Screening CTC Exam

For exams submitted before October 7, 2008, screening adequacy rates were calculated using colimation and AIP, effective mAs and quality reference mAs.
For exams submitted on or after October 7, 2008, screening adequacy rates were calculated using CTDIvol.

Facility Report: ID 100053
Page 8
Jul 2020 - Dec 2020
Use of Screening CT Colonography by Age and Race: A Study of Potential Access Barriers Related to Medicare Noncoverage Based on Data From the ACR’s National CT Colonography Registry

Courtney C. Moreno, MD1, Judy Yee, MD2, Abraham H. Bachman, MD3, Richard DuPlessis Jr, MD3, Lenka Goldman, MS4, Michael Homij, PhD, MD5

Abstract

Objective: The primary objectives of this investigation were to evaluate the use of screening CT colonography (CTC) examinations by age comparing individuals of Medicare-eligible age to younger cohorts and to determine if the association between use of CTC and Medicare-eligible age varies by race. Although the Affordable Care Act requires commercial insurance coverage of screening CTC, Medicare does not cover screening CTC.

Methods and Materials: Using the ACR’s CTC registry, the distribution of procedures by age was evaluated using a negative binomial model with patient age (to capture overall trend), indicator of Medicare-eligible age (to capture interaction changes in trend at age 65), and race (to capture racial changes after age 65) as independent variables. The association between the number of screening CTCs and age was compared by race/ethnicity.

Results: The CTC registry contained data on 12,048 screening examinations. Between ages 52 and 64, the number of screening examinations increased each additional year of age. Medicare-eligible age was associated with a 5.3% increase in the number of screenings. However, after age 65, the number of screening examinations decreased by 6.9% per additional year of age above 65 compared with the trend between ages 52 and 64 (P < .001). The model age group for CTC use was 65 to 69 years in white and 55 to 59 in black individuals.

Conclusions: After age 65, the number of screening CTC examinations decreased, likely due, at least in part, to lack of Medicare coverage. Medicare noncoverage may have a disproportionate impact on Black patients and other racial minorities.

Key Words: Colorectal cancer screening, CT colonography, health care disparities, Medicare noncoverage

1 Am J Gastroenterol 2021;116:19-26. Copyright © 2020 American College of Radiology
Satisfies ABR MOC Part 4 Requirement

Part 4 requires that you complete a PQI Project or Participatory Activity, as defined by the ABR, during the period from 2018 to the present.

I have completed a PQI Project or Participatory Activity, as defined by the ABR, during the period from 2018 to the present.
Marketing Toolkit

Participant seal files for use on reports, bills, letterhead, website, etc.

Customizable ad templates

Customizable table top signs

Quality Improvement for Excellent Patient Care

Through voluntary participation in the ACR CT Colonography Registry, our facility compares its practice performance to other facilities nationwide.

We use these objective comparisons to advance our practice of CT colonography, target specific areas for improvement, implement quality improvement programs and improve patient care.

This area is customizable

Quality Improvement for Excellent Patient Care

To implement quality improvement programs and improve patient care, our facility compares its practice performance to other facilities nationwide.

YOUR LOGO HERE

This area is customizable

Source: acr.org/CTCtoolkit
Customizable press release

Marketing Toolkit

[Logo]

NEWSPRESS

[Text]

For Immediate Release

[Facility Name here] Participates in ACR CT Colonography Registry

[City, State] (May 1, 2023) — [Facility Name here] is now participating in the American College of Radiology (ACR) CT Colonography (CTC) Registry which is designed to improve quality of care for patients undergoing CT colonography (or virtual colonoscopy). The registry monitors evidence-based outcomes and process data and allows our facility to compare performance results to regional and national benchmark for quality improvement. Participation in the registry is voluntary.

CTC participants benchmark their facilities’ performance against peers for quality improvement in these process and these outcome measures. Process measures include optimal bowel cleansing and donation, rate of adequacy for diagnostic CTC examinations and rate of adequacy for screening CTC examinations. Outcome measures include rate of colon polyp detection, true positive rate and rate of advanced findings.

The CTC registry is part of the ACR National Radiation Data Registry (NRDR™), which leads the effort in developing benchmarks and comparisons to help imaging facilities improve quality of patient care.

The ACR is a national professional organization serving more than 36,000 diagnostic/interventional radiologists, radiation oncologists, nuclear medicine physicians and medical physicists with programs focusing on the practice of medical imaging and radiation oncology and the delivery of comprehensive health care services.

For more information, or to schedule an interview with a [Facility Name here] spokesperson, please contact [Contact Name here] at [phone number] or [email address].

Source: acr.org/CTCtoolkit
Participation Cost

- **FREE** if your site participates in ACR’s Dose Index Registry (DIR) or General Radiology Improvement Database (GRID)
- A la carte pricing based on # of submitting radiologists & sites
  - $500 per year 1-5 radiologists, 1-5 sites
CTC practice at UT Southwestern

- Clements University Hospital is an academic health center in Dallas, Texas
- Wide range of cases from screening to complex inpatient cases awaiting transplant
- Volume is approx. 2 to 3 cases/week
- 4 radiologists trained to read CTC
Team Approach

- Partnered with our gastroenterologists
- Share a nurse navigator who helps scheduling and educating patients on bowel preps for both traditional colonoscopy and CTC
- Nurse navigator enters CTC data into the NRDR
CTC Report Template

- Standardizes the report
- Simplifies data extraction

HISTORY: [ ] Indication category: [ ]

TECHNIQUE: Contrast - No IV contrast was given. Patient received the standard virtual colonoscopy bowel preparation and tagging oral regime. Automated carbon dioxide insufflations per rectum.
Noncontrast phase - abdomen and pelvis [prone and supine]
3-D imaging - TeraRecon 3-D imaging system was utilized under concurrent supervision
Coverage: [ ]
Adequacy comment: [Adequate bowel preparation and bowel distention]
Complication: [ ]

COMPARISON: [None]

FINDINGS:
Statements: CT colonography is not intended for the detection of diminutive colonic polyps (tiny polyps less than or equal to 5 mm), the presence or absence of which will not change management of the patient. Extracolonie evaluation is compromised by the (low-dose) CT technique and the lack of IV contrast. [ ]
Quality Assessment

- Benchmarking our practice to NRDR
- Data provided quarterly

CT Colonography
Jul 2020 – Dec 2020

Adequacy of Screening CTC Exam

- Registry
- Your Facility
- Reader 1
- Reader 2
- Reader 3
- Reader 4
Data Submission

- Submitted by our Colon Cancer Screening Patient Navigator as reports become available from Radiologist
- Manually loaded from EMR to Excel spreadsheet
- Create the file to transmit to NRDR

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<thead>
<tr>
<th>Update Method</th>
<th>File Version Number</th>
<th>Facility ID</th>
<th>Social Security Number</th>
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<th>Middle name</th>
<th>Last name</th>
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</tbody>
</table>

Text file format for transmission to NRDR
Data Submission, Cont’d

- Data is manually converted from Excel Spreadsheet to Text tab delimited file to upload to the NRDR website.
- Data can be updated as needed via the website.

Upload Data

Data file can be uploaded in .txt or .xlsx format. If you would like to upload data in .xlsx format please download the Excel template.

- CTC Exam Version 1.2: ctc_exam_yyyymmdd_hhmmss.xlsx

Locate the file that contains your CTC data and click Upload.
Data Submission, Cont’d

- Submission of follow-up data for positive cases is completed on the NRDR website in patient’s exam form.
Data Submission, Cont’d

- Follow up for positive cases occurs twice a month (C-3/C4) or based on ordering provider’s recommendations.

- No specific time frame for final data submission as each case is subject to patient needs.
Registry Start-up Guide

- This guide includes step-by-step instructions for preparing for and beginning participation with the CTC and includes links to articles in the NRDR Knowledge Base.

CTC Registry Start up Guide

Thank you for your interest in joining the CT Colonography (CTC) Registry! We hope this step-by-step Start-up Guide helps you to get underway with submitting your data and to obtain the most value out of your registry participation.

The following steps pertain to getting underway with the CTC Registry and include links to articles in Knowledge Base, the National Radiology Data Registry (NRDR) user guide.

The NRDR Team welcomes suggestions for how we can improve this guide and your overall experience with CTC Registry start up and ongoing participation. Please send your suggestions and comments to NRDRSupport@acr.org.

I. Assemble Your Team

Bringing together a team comprised of individuals who can contribute varied expertise will help ensure a successful launch and continued operation of the CTC Registry at your institution. Examples of potential roles (some individuals may have multiple roles) are briefly described below.

- **Physician Champion**: oversees the registry implementation process and ongoing participation efforts. The champion likely would be an abdominal radiologist involved with quality improvement efforts.
- **Data Coordinator**: enters case data into the online CTC forms. This should be someone very familiar with CTC procedures such as a lead technologist or nurse.
- **Information Technology (IT) Specialist**: interfaces with multiple hospital...
Registry Participation – Poll 3

If you are not currently enrolled in or not submitting data to the CTC Registry, how likely is your facility to participate within the next year?

- Very likely
- Likely
- Not sure
- Unlikely
- Very unlikely
NRDR Knowledge Base

NRDR - National Radiology Data Registry Support

How can we help you today?
Enter your search term here... SEARCH

New support ticket
Check ticket status

Knowledge base

NRDR - Overview

Benefits of Participation (3)
- Introducing the NRDR
- Benefits For Clinicians
- About the NRDR Knowledge Base

Support for CMS Regulations (3)
- Key Dates and Milestones
- Merit-based Incentive Payment System (MIPS)
- MIPS Educational Material

Features of Individual NRDR Registries (9)
- CDS Registry (CDSR)
- CT Colonography Registry (CTC)
- Dose Index Registry (DIR)
- General Radiology Improvement Database (GRID)
- Interventional Radiology Registry (IR)
  » See all 9 articles

Announcements (11)
- NRDR 13.8 Release Notes
Q&A
Engaging with CTC

- NRDR Knowledge Base
  - [https://nrdrsupport.acr.org/support/home](https://nrdrsupport.acr.org/support/home)
  - FAQ of questions from today will be sent after webinar

- Provide CTC feedback through our survey!
  - [https://app.smartsheet.com/b/form/7613389ae5d947b2a2ae0c9877980e7f](https://app.smartsheet.com/b/form/7613389ae5d947b2a2ae0c9877980e7f)

- Join us for **Part 2: Getting Started with the CTC Registry: From Enrollment to Data Entry** in May 2021
CE Credit Claiming

CE Credit claiming instructions will be sent to you via email from alacount@acr.org following the activity, by Friday, April 9, 2021. Please click on the link and follow the instructions in the email to claim your credit, complete the activity evaluation, and receive your certificate. All evaluations and credit claiming requests must be completed no later than 11:59 EDT, Wednesday, June 30, 2021.

For questions regarding the credit claiming of this activity, please contact Alexis LaCount: alacount@acr.org.