Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

General

Guideline Title

SCENIC international consensus statement on surveillance and management of dysplasia in inflammatory bowel disease.

Bibliographic Source(s)

Laine L, Kaltenbach T, Barkun A, McQuaid KR, Subramanian V, Soetikno R, SCENIC Guideline Development Panel. SCENIC international consensus statement on surveillance and management of dysplasia in inflammatory bowel disease. Gastrointest Endosc. 2015 Mar;81(3):489-501.e26. [106 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Definitions for the quality of evidence (High, Moderate, Low, Very low) and strength of recommendation (Strong, Conditional) are provided at the end of the "Major Recommendations" field.

Detection of Dysplasia on Surveillance Colonoscopy

1. When performing surveillance with white-light colonoscopy, high definition is recommended rather than standard definition (Strong recommendation, Low-quality evidence).
2. When performing surveillance with standard-definition colonoscopy, chromoendoscopy is recommended rather than white-light colonoscopy (Strong recommendation, Moderate-quality evidence).
3. When performing surveillance with high-definition colonoscopy, chromoendoscopy is suggested rather than white-light colonoscopy (Conditional recommendation, Low-quality evidence).
4. When performing surveillance with standard-definition colonoscopy, narrow-band imaging is not suggested in place of white-light colonoscopy (Conditional recommendation, Low-quality evidence).
5. When performing surveillance with high-definition colonoscopy, narrow-band imaging is not suggested in place of white-light colonoscopy (Conditional recommendation, Moderate-quality evidence).
6. When performing surveillance with image-enhanced high-definition colonoscopy, narrow-band imaging is not suggested in place of chromoendoscopy (Conditional recommendation, Moderate-quality evidence).

Management of Dysplasia Discovered on Surveillance Colonoscopy

7. After complete removal of endoscopically resectable polypoid dysplastic lesions, surveillance colonoscopy is recommended rather than colectomy (Strong recommendation, Very low-quality evidence).
8. After complete removal of endoscopically resectable nonpolypoid dysplastic lesions, surveillance colonoscopy is suggested rather than colectomy (Conditional recommendation, Very low-quality evidence).
9. For patients with endoscopically invisible dysplasia (confirmed by a gastrointestinal [GI] pathologist) referral is suggested to an endoscopist with expertise in inflammatory bowel disease (IBD) surveillance using chromoendoscopy with high definition colonoscopy (Conditional recommendation, Very low-quality evidence).

Definitions

Quality of Evidence

Quality of Evidence	Definition
High quality	Further research is very unlikely to change confidence in the estimate of effect.
Moderate quality	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.
Low quality	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.
Very low quality	Any estimate of effect is very uncertain.

Strength of Recommendation

Strong	Strong recommendations mean panelists are confident that the desirable effects outweigh the undesirable effects; therefore, most informed patients would choose the recommended management, and clinicians would provide the intervention to most patients.
Conditional	Conditional recommendations mean the desirable and undesirable effects of the intervention are closely balanced or appreciable uncertainty exists regarding the balance; therefore, informed patients' choices will vary according to their values and preferences, with many not wanting the intervention, and clinicians must ensure that patients' care is in keeping with their values and preferences.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Inflammatory bowel disease (IBD)
  - Ulcerative colitis
  - Crohn's disease
- Colon dysplasia (polypoid and nonpolypoid dysplastic lesions)

Guideline Category

Evaluation

Management

Screening

Clinical Specialty

Colon and Rectal Surgery

Gastroenterology

Intended Users

Physicians

Guideline Objective(s)

To develop unifying consensus recommendations addressing two issues:

1. How should surveillance colonoscopy for detection of dysplasia be performed?
2. How should dysplasia identified at colonoscopy be managed?

Target Population

Patients with inflammatory bowel disease (IBD)

Interventions and Practices Considered

1. Detection of dysplasia on surveillance colonoscopy
    - High-definition vs. standard definition colonoscopy
    - White-light colonoscopy
    - Image-enhanced high-definition colonoscopy
    - Chromoendoscopy
2. Management of dysplasia discovered on surveillance colonoscopy
    - Removal of endoscopically resectable polypoid and nonpolypoid dysplastic lesions
    - Surveillance colonoscopy
    - Referral to endoscopist

Note: The following were considered but not recommended: narrow band imaging and colectomy.

Major Outcomes Considered

- Detection of dysplasia (low-grade or high-grade)
- Colorectal cancer (CRC) incidence
- Mortality

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Formulation of Focused Clinical Questions

The participants formulated clinically pertinent focused statements related to the detection and management of dysplasia in inflammatory bowel disease (IBD) and framed each statement in terms of population, intervention, comparator, and outcome (PICO).

Systematic Literature Search

A systematic literature search of multiple bibliographic databases (EMBASE 1980 to 2013 Week 38; Cochrane Central Register of Controlled Trials 1898 to August 2013; Ovid MEDLINE, 1946 to present, in-process and other non-indexed citations, and daily update September 24, 2013) was performed for each focused statement by the Cochrane Upper Gastrointestinal Pancreatic Diseases Review Group. Additional searches from major gastroenterology scientific meetings (e.g., Digestive Disease Week, American College of Gastroenterology, United European Gastroenterology Week) for 2009-2013 and of reference lists from selected articles were also performed (see the figure in the original guideline document). The search strategy keywords were framed for the PICO-formatted focused clinical statements (see Appendix 3 in original guideline document). The search was limited to human studies without any language restriction. Two reviewers performed the initial title and abstract review, review of full-text articles for inclusion, and data extraction independently. Following full text review and article selection, a third person adjudicated any discrepancies.

By using pre-specified criteria, the guideline group excluded abstracts/articles when (1) the population did not include colonic inflammatory bowel disease; (2) the intervention or comparator did not include sigmoidoscopy or colonoscopy for the detection, diagnosis or management of colorectal neoplasia, dysplasia or early cancer; (3) the outcome did not include colorectal neoplasia, dysplasia or cancer-related detection, incidence or mortality; (4) the article type was a case report or series; (5) the article contained duplicate data; (6) the article had relevant missing data that could not be obtained despite attempts to contact corresponding authors; (7) the author had articles on the topic retracted from the literature; and (8) the studies included data from the fiberoptic endoscope era (predating 1990).

Number of Source Documents

The guideline group identified 4917 abstracts and selected 102 for full article retrieval based on the pre-defined inclusion criteria. They ultimately included 33 articles for qualitative synthesis for the statements (see the flow diagram in the original guideline document).

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Quality of Evidence

Quality of Evidence	Definition
High quality	Further research is very unlikely to change confidence in the estimate of effect.
Moderate quality	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.
Low quality	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.

Quality of Evidence	Definition
Very low quality	Any estimate of effect is very uncertain.

Methods Used to Analyze the Evidence

Meta-Analysis

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Meta-analyses

Risk of bias for individual studies was assessed independently by two reviewers with the Quality Assessment for Diagnostic Accuracy Studies (QUADAS)-2 tool for observational diagnostic studies and a modified Jadad score (one point added if allocation was concealed) for randomized trials; a third person adjudicated any discrepancies. The quality of the evidence for each statement was rated by two reviewers independently as very low quality, low quality, moderate quality, and high quality based on the Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology; disagreements were resolved by discussion (see the "Rating Scheme for the Strength of the Evidence" field).

Meta-analyses were performed when multiple studies relevant to a focused question were found and could be appropriately pooled. The guideline group used a fixed effect model, except in cases of significant heterogeneity when it used a DerSimonian-Laird random effects model. The guideline group used the Cochran Q test and I^2 statistic to assess heterogeneity. Significant heterogeneity was defined as a $P < .10$ for the Cochran Q test or I^2 statistic >50%. The guideline group performed the data analysis by using the Comprehensive Meta Analysis version 2.2 (Biostat, Englewood, NJ) statistical package.

Methods Used to Formulate the Recommendations

Expert Consensus (Consensus Development Conference)

Description of Methods Used to Formulate the Recommendations

Development Panel

A 5-member executive committee of content experts, general gastroenterologists, and methodologists oversaw the development process. The executive committee selected a multidisciplinary panel to represent a wide spectrum of stakeholders in the diagnosis and management of dysplasia in patients with inflammatory bowel disease (IBD) and to provide international viewpoints. This 21-member panel included IBD experts, general gastroenterologists, advanced endoscopists, methodologists, pathologists, a surgeon, an advanced practice IBD nurse, and a patient representative from an IBD non-profit organization. Representation from a wide spectrum of stakeholders and attitudes toward the detection and management of dysplasia in IBD was emphasized. An additional 8 non-voting physicians, chosen for their expertise in areas such as endoscopic techniques or guideline dissemination/ implementation, attended the meeting to provide information as requested by voting panelists. The list of participants is provided in Appendix 1 of the original guideline document.

Consensus Process for Development of Recommendations

The guideline group deployed an online consensus platform to facilitate most aspects of the consensus process. The panel received evidence reports for each statement. Two rounds of voting on level of agreement with the statements were conducted by using the online platform prior to a face-to-face meeting of all participants to determine consensus on the recommendations. Modifications to the wording of the statements were made as needed in response to the participants' comments after each round of voting.

The guideline group held a one and a half-day consensus conference in March 2014, where data were presented, wording of the statements was discussed and finalized, and participants voted on their level of agreement by using a 5-point scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). They defined the criterion for accepting a statement as a recommendation as ≥80% of participants voting 4 (agree) or 5 (strongly agree). If a panel member was absent or did not vote at the time of a vote, the denominator of panelists who were present and voted

was used. Once a recommendation was accepted, panelists voted on whether to label the recommendation as strong or conditional according to Grading of Recommendations Assessment, Development and Evaluation (GRADE) criteria. Wording of recommendations was based on the strength of recommendation: *recommend* was used for strong recommendations, and *suggest* was used for conditional recommendations. Voting percentages for individual statements could vary based on the number of voting members in attendance at the time of voting on the statement. The executive committee drafted the manuscript, which was then reviewed by the voting panel members and also by the 8 non-voting physicians with expertise in areas including IBD and advanced endoscopic imaging techniques who had attended the guideline meeting to provide information to panelists. The manuscript was revised based on these comments and approved by the participants. Additional revisions for clarity and description were made in response to comments from the peer review process.

Rating Scheme for the Strength of the Recommendations

Strength of Recommendation

Strong	Strong recommendations mean panelists are confident that the desirable effects outweigh the undesirable effects; therefore, most informed patients would choose the recommended management, and clinicians would provide the intervention to most patients.
Conditional	Conditional recommendations mean the desirable and undesirable effects of the intervention are closely balanced or appreciable uncertainty exists regarding the balance; therefore, informed patients' choices will vary according to their values and preferences, with many not wanting the intervention, and clinicians must ensure that patients' care is in keeping with their values and preferences.

Cost Analysis

An economic analysis concluded that chromoendoscopy with targeted biopsies was less costly and more effective than white-light colonoscopy with random biopsies, suggesting that chromoendoscopy should be used in place of white-light endoscopy when surveillance colonoscopy is performed. The cost-effectiveness of chromoendoscopy increased with increasing surveillance interval, suggesting that varying the surveillance interval based on the risk of colorectal cancer (CRC) may be appropriate and could increase the cost-effectiveness of surveillance colonoscopy.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This document was reviewed and approved by the Governing Boards of the American Society for Gastrointestinal Endoscopy and the American Gastroenterological Association.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Detection and appropriate management of dysplasia

The evidence of benefits of specific interventions is provided in the "Summary of evidence and discussion" sections following each recommendation statement.

Potential Harms

Surveillance colonoscopy should be performed when the disease is in remission in order to minimize potential misdiagnosis between inflammatory changes and dysplasia.

Qualifying Statements

Qualifying Statements

The views expressed in the consensus statement are those of the authors and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, U.S. Army Office of the Surgeon General, Department of the Army, Department of the Air Force, Department of Defense, Department of Veterans Affairs, or U.S. Government.

Implementation of the Guideline

Description of Implementation Strategy

Implementation of High-Quality Endoscopic Surveillance

Widespread implementation of high-quality endoscopic surveillance in patients with inflammatory bowel disease (IBD) will require a variety of initiatives, which will be discussed in a separate publication. Resources will be needed to train endoscopists in endoscopic surveillance and recognition of visible dysplasia with both white-light endoscopy and chromoendoscopy. These may include training courses, photographic atlases, and video repositories. Quality metrics and methods to document acceptable performance quality also should be developed. In addition, techniques such as chromoendoscopy should be standardized to allow implementation in endoscopy units, and endoscopic resection techniques for nonpolypoid lesions should be taught and disseminated. Development of a procedure code for chromoendoscopy and reimbursement for the increased time and intensity required for chromoendoscopy would increase implementation, at least in the United States.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2015 Mar

Guideline Developer(s)

American Gastroenterological Association Institute - Medical Specialty Society

American Society for Gastrointestinal Endoscopy - Medical Specialty Society

Source(s) of Funding

Two non-profit charitable foundations, the Maxine and Jack Zarrow Family Foundation and the William K. Warren Foundation, provided unrestricted gifts supporting the guideline development process. Focus Medical Communications administered all aspects of the meeting. The funding sources had no involvement at any stage of the development process, no representation at the consensus meeting, and no role in the drafting or approval of the manuscript.

Guideline Committee

SCENIC (Surveillance for Colorectal Endoscopic Neoplasia Detection and Management in Inflammatory Bowel Disease Patients: International Consensus Recommendations) Development Panel

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Ethics

An ethics consultant without personal or other conflicts of interest (COI) and an ad hoc ethics advisory committee developed and implemented an ethics framework and distributed it to all participants, with set policies for declarations of interest. Mandatory written disclosures of financial conflicts of interests within 24 months before the meeting and of non-financial conflicts of interest were obtained a priori from all participants. Financial conflicts were disclosed to the entire group and included in conference materials. All potential COIs were reviewed and resolved through proportionality: depending on the judged extent of the COI by the ad hoc ethics committee, resolution was achieved through disclosure for minor COIs and recusal in the case of major COIs. No statement of related COI was deemed to be at such a high risk that recusal was required for any participant. Further information regarding disclosures is provided in Appendix 1 of the original guideline document.

Disclosure

T. Kaltenbach is a consultant and has received research support from Olympus. A. Barkun is a consultant for Cook, is on the advisory board for Pendopharm and Olympus, and has received research support from Boston Scientific and Cook. He is a member of the speakers' bureau for AstraZeneca, Pendopharm, and Takeda. R. Soetikno is a consultant and has received research support from Olympus. Honoraria were provided to panel members as compensation for the time involved in the development process and meeting. Full disclosures for all panel members are provided in Appendix 1 of the original guideline document.

Guideline Endorser(s)

Asian Pacific Association of Gastroenterology - Medical Specialty Society

British Society of Gastroenterology - Medical Specialty Society

Canadian Association of Gastroenterology - Medical Specialty Society

European Society of Gastrointestinal Endoscopy - Medical Specialty Society

Japan Gastroenterological Endoscopy Society - Medical Specialty Society

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available from the Gastrointestinal Journal Web site .

Availability of Companion Documents

Supplemental figures are available from the Gastrointestinal Endoscopy (GIE) Journal Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on August 3, 2016. The information was verified by the guideline developer on August 4, 2016.

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