Complete Summary

GUIDELINE TITLE

Colorectal cancer surveillance: 2005 update of an American Society of Clinical Oncology practice guideline.

BIBLIOGRAPHIC SOURCE(S)

Desch CE, Benson AB 3rd, Somerfield MR, Flynn PJ, Krause C, Loprinzi CL, Minsky BD, Pfister DG, Virgo KS, Petrelli NJ. Colorectal cancer surveillance: 2005 update of an American Society of Clinical Oncology practice guideline. J Clin Oncol 2005 Nov 20;23(33):8512-9. [35 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Benson AB, Desch CE, Flynn PJ, Krause C, Loprinzi CL, Minsky BD, Petrelli NJ, Pfister DG, Smith TJ, Somerfield MR. 2000 update of American Society of Clinical Oncology colorectal cancer surveillance guidelines. J Clin Oncol 2000 Oct 15;18(20):3586-8.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Colorectal cancer

GUIDELINE CATEGORY

Evaluation
Risk Assessment

CLINICAL SPECIALTY

Colon and Rectal Surgery
Oncology

INTENDED USERS

Patients
Physicians

GUIDELINE OBJECTIVE(S)

- To update the 2000 American Society of Clinical Oncology guideline on colorectal cancer surveillance
- To determine the most effective, evidence-based, postoperative surveillance strategy for the detection of recurrent colon and rectal cancer

TARGET POPULATION

Adults previously treated with curative intent for Stage I (endoscopy recommendations only), II, or III colon and/or rectal cancer

INTERVENTIONS AND PRACTICES CONSIDERED

Postoperative monitoring of colon and/or rectal cancer, with the following:

1. History, physical examination, risk assessment
2. Laboratory tests
    - Carcinoembryonic antigen levels
3. Imaging procedures
    - Computed tomography (abdominal/liver, thoracic, pelvic)
4. Endoscopic surveillance techniques
    - Colonoscopy
    - Flexible proctosigmoidoscopy for rectal cancer

Interventions considered but not recommended include routine blood tests (i.e., liver function tests, complete blood cell count), periodic fecal occult blood testing, yearly chest x-rays, and use of molecular and cellular markers.

MAJOR OUTCOMES CONSIDERED

- 5-year mortality rates
- 5-year survival rates
- 5-year relapse free survival

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

1999 Guideline

Pertinent information from the published literature as of July 1998 was retrieved for the creation of these guidelines. Searches of MEDLINE (National Library of Medicine, Bethesda, MD) and other databases for pertinent articles were performed. Search words included colon cancer, rectal cancer, follow-up, each specific test considered, cost-effectiveness, and clinical trials. Directed searches were made of the primary articles. In addition, certain authors/investigators were contacted to obtain more recent, unpublished information. Much of the literature on carcinoembryonic antigen testing examined by the ASCO Tumor Marker Guidelines Panel was also relevant. The panel did not review the evidence on carcinoembryonic antigen testing, and instead used the guideline already developed by the ASCO Expert Panel on Tumor Marker Recommendations.

2000 Update

For the 2000 update, computerized literature searches of MEDLINE and CancerLit were performed. The searches of English-language literature from 1997 to 2000 combined the terms colon neoplasms and rectal neoplasms with the term surveillance. The set of articles yielded from this initial search was combined in turn with each of the tests or procedures addressed in the original guideline (i.e., history and physical examination, liver functions test, carcinoembryonic antigen). The searches were limited to human-only studies and clinical trials.

2005 Update

Computerized literature searches of MEDLINE and the Cochrane Collaboration Library were performed. The searches of the English-language literature from 1999 to June 2005 combined the terms "colonic neoplasms," "colorectal neoplasms," and "rectal neoplasms," with the MeSH term, "follow-up studies" and the text words "surveillance" and "follow-up." The set of articles yielded from this initial search was supplemented by articles identified from searches on each of the tests or procedures addressed in the original guideline (eg, history and physical examination, liver function tests, carcinoembryonic antigen), in combination with "surveillance," "follow-up studies," and "follow-up." Supplementary searches were done to address positron emission tomography and magnetic resonance imaging. The searches were limited to human-only studies and to specific study design or publication type: randomized clinical trial, meta-analysis, practice guideline, systematic overview, or systematic review. The literature review centered on randomized clinical trials, and meta-analyses of data from randomized clinical trials.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

For the 2005 update, the Expert Panel completed the review and analysis of data published since 1999. The Expert Panel did not complete an independent meta-analysis of the data from available randomized clinical trials given the availability of three high-quality and recent meta-analyses identified through the literature search. The quality of the three meta-analyses was evaluated using the Oxman-Guyatt Overview Quality Assessment Questionnaire for assessing the quality of systematic reviews and meta-analyses. All three meta-analyses had "minimal flaws," the highest quality rating within this system.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

1999 Guideline

Consensus Development Based on Evidence

The panel followed a process for guideline development established by the American College of Chest Physicians. The process included a systematic weighting of the level of the evidence and a systematic grading of the evidence for making a recommendation.

The panel identified topics to be addressed by the guideline, developed a strategy for completion of the guideline, and reviewed the literature. The panel examined both retrospective and prospective studies that evaluated the effectiveness of surveillance testing in detecting recurrence earlier and positively affecting survival. The recommendations made by the expert panel were based on current methods of detecting the recurrence of colorectal cancer. The guidelines were circulated in draft form through several iterations, and all members of the panel had an opportunity to comment on the recommendations.

The panel did not attempt to codify established practice. The experts reviewed the available evidence and added their best clinical judgment to make final recommendations, using standardized language to characterize the strength of the evidence. In accordance with the American Society of Clinical Oncology (ASCO) Health Services Research Policies and Procedures for guidelines, "recommendation" was used when there was level I or II evidence and panel consensus. "Suggestion" was used when there was level III, IV, or V evidence and panel consensus. "No guideline possible" was used when there were no data or the panel could not reach consensus.

2000 Update

For the 2000 update, the expert panel cochairs completed the review and analysis of data published since 1994. The cochairs held a teleconference to consider the evidence for each of the 1999 recommendations.

2005 Update

ASCO updates a guideline when data or publications might change a prior recommendation or when the Panel feels clarifications are required for the oncology community. For the 2005 update, a subset of the original Expert Panel met in June 2004 and May 2005 to consider the evidence for each of the recommendations from 2000. Additional meetings were conducted via teleconference. The updated review reflects evidence on both specific methods of surveillance and risk stratification.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The 2005 guideline update was circulated in draft form to the full Expert Panel for review and approval.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

1. **History and Physical Examination and Risk Assessment**

Current recommendation. Coordinating physician visits should occur every 3 to 6 months for the first 3 years, every 6 months during years 4 and 5, and subsequently at the discretion of the physician. Physician visits should focus on the initial risk assessment, followed by the implementation of a surveillance strategy and periodic counseling based on estimated risk and feasibility of surgical interventions like hepatic resection.

2. **Laboratory Tests**

Carcinoembryonic antigen (CEA): Current recommendation. Postoperative serum CEA testing should be performed every 3 months in patients with stage II or III disease for at least 3 years after diagnosis, if the patient is a candidate for surgery or systemic therapy. (Note: Adapted from the 2005 American Society of Clinical Oncology (ASCO) Clinical Practice Guidelines for the Use of Tumor Markers in Gastrointestinal Cancer). Since fluorouracil-based therapy may falsely elevate CEA values (Moertel et al., 1993), waiting until adjuvant treatment is finished to initiate surveillance is advised.

Blood tests: Current recommendation. No change from the last update of the guideline. Routine blood tests (i.e., complete blood counts or liver function tests) are not recommended.

Fecal occult blood test: Current recommendation. No change from the last update of the guideline. Periodic fecal occult blood testing is not recommended.

3. **Imaging Procedures**

Computed tomography (CT) in colon and rectal cancer surveillance: Current recommendation. Patients who are at higher risk of recurrence, and who could be candidates for curative-intent surgery, should undergo annual CT of the chest and abdomen for 3 years after primary therapy for colon and rectal cancer. A pelvic CT scan should be considered for rectal cancer surveillance, especially for patients who have not been treated with radiotherapy.

Chest x-ray: Current recommendation. No change from the last update of the guideline. Yearly chest x-rays are not recommended.

4. **Endoscopic Surveillance Techniques**

Colonoscopy: Current recommendation. All patients with colon and rectal cancer should have a colonoscopy for the pre- or perioperative documentation of a cancer- and polyp-free colon. Following the surgical treatment of colorectal cancer, the Panel recommends the surveillance guideline presented by the American Gastroenterology Association (AGA): a colonoscopy at 3 years and then, if normal, once every 5 years thereafter (Winawer et al., 2003). For colorectal cancer patients with high-risk genetic syndromes, the physician should consider the guideline published by the AGA (see Table below):

Table: Colon Cancer Screening Recommendations for People With Familial or Inherited Risk

Familial Risk Category	Screening Recommendations
• First-degree relative affected with colorectal cancer or an adenomatous polyp at age >60 years, or two second-degree relatives affected with colorectal cancer	• Same as average risk but starting at age 40 years
• Two or more first-degree relatives with colon cancer, or a single first-degree relative with colon cancer or adenomatous polyps diagnosed at an age <60 years [a]	• Colonoscopy every 5 years, beginning at age 40 years or 10 years younger than the earliest diagnosis in the family, whichever comes first
• One second-degree or any third-degree relative with colorectal cancer [b c]	• Same as average risk
• Gene carrier or at risk for familial adenomatous polyposis [d]	• Sigmoidoscopy annually, beginning at age 10 to 12 years [e]
• Gene carrier or at risk for hereditary non-polyposis colorectal cancer	• Colonoscopy, every 1 to 2 years, beginning at age 20 to 25 years or 10 years younger than the earliest diagnosis in the family, whichever comes first

NOTE. Reprinted from Colorectal cancer screening and surveillance: Clinical guidelines and rationale--Update based on new evidence. Gastroenterology 124:544-60, 2003; with permission from the American Gastroenterological Association.

[a] First-degree relatives include patients, siblings, and children.

[b] Second-degree relatives include grandparents, aunts, and uncles.

[c] Third-degree relatives include great-grandparents and cousins.

[d] Includes the subcategories of familial adenomatous polyposis, Gardner syndrome, some Turcot syndrome families, and attenuated adenomatous polyposis coli (AAPC).

[e] In AAPC, colonoscopy should be used instead of sigmoidoscopy because of the preponderance of proximal colonic adenomas. Colonoscopy screening in AAPC should probably begin in the late teens or early 20s.

Flexible proctosigmoidoscopy (rectal cancer): Current recommendation. For patients who have not received pelvic radiation, flexible sigmoidoscopy of the rectum every 6 months for 5 years is recommended.

5. **Laboratory-Derived Prognostic and Predictive Factors (Note: This topic is new to the guideline.)**

   Current recommendation. Until prospective data are available, use of molecular or cellular markers should not influence the surveillance strategy.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The recommendations are based on evidence derived from randomized clinical trials and meta-analyses of data from randomized clinical trials.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Effective surveillance strategy leading to improved detection of recurrent colon and rectal cancer

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

It is important to emphasize that guidelines and technology assessments cannot always account for individual variation among patients. They are not intended to supplant physician judgment with respect to particular patients or special clinical situations, and cannot be considered inclusive of all proper methods of care or exclusive of other treatments reasonably directed at obtaining the same result. Accordingly, the American Society of Clinical Oncology considers adherence to this guideline assessment to be voluntary, with the ultimate determination regarding its application to be made by the physician in light of each patient's individual circumstances. In addition, this guideline describes the use of procedures and therapies in clinical practice; it cannot be assumed to apply to the use of these interventions performed in the context of clinical trials, given that clinical studies are designed to evaluate or validate innovative approaches in a disease for which improved staging and treatment is needed. In that guideline development

involves a review and synthesis of the latest literature, a practice guideline also serves to identify important questions and settings for further research.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms
Foreign Language Translations
Patient Resources
Personal Digital Assistant (PDA) Downloads
Quick Reference Guides/Physician Guides
Slide Presentation

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness
Timeliness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Desch CE, Benson AB 3rd, Somerfield MR, Flynn PJ, Krause C, Loprinzi CL, Minsky BD, Pfister DG, Virgo KS, Petrelli NJ. Colorectal cancer surveillance: 2005 update of an American Society of Clinical Oncology practice guideline. J Clin Oncol 2005 Nov 20;23(33):8512-9. [35 references] PubMed

ADAPTATION

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

DATE RELEASED

1999 Apr (revised 2005 Nov 20)

GUIDELINE DEVELOPER(S)

American Society of Clinical Oncology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society of Clinical Oncology (ASCO)

GUIDELINE COMMITTEE

American Society of Clinical Oncology (ASCO) Expert Panel

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Panel Members: Al B. Benson, MD, (*Co-Chair*); Christopher Desch, MD, (*Co-Chair*); Patrick J. Flynn, MD; Carol Krause; Charles L. Loprinzi, MD; Bruce D. Minsky, MD; Nicholas J. Petrelli, MD; David Pfister, MD; Katherine S. Virgo, PhD

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Although all authors completed the disclosure declaration, the following author or immediate family members indicated a financial interest. No conflict exists for drugs or devices used in a study if they are not being evaluated as part of the investigation.

Authors	Employment	Leadership	Consultant	Stock	Honoraria	Research Funds	Testimony	Other
Patrick J. Flynn			Genentech (A); Sanofi (A)					
Dollar Amount Codes (A) < $10,000 (B) $10,000-99,999 (C) ≥ $100,000 (N/R) Not Required								

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GUIDELINE AVAILABILITY

Electronic copies: Available from the American Society for Clinical Oncology (ASCO) Web site.

Print copies: Available from Mark R. Somerfield, American Society of Clinical Oncology, 1900 Duke St, Suite 200, Alexandria, VA 22314; e-mail: guidelines@asco.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- 2005 update of ASCO practice guideline recommendations for colorectal cancer surveillance: guideline summary. Alexandria (VA): American Society of Clinical Oncology; 2005. 3 p. Electronic copies: Available from the American Society of Clinical Oncology (ASCO) Web site. See the related QualityTool summary on the Health Care Innovations Exchange Web site.
- Colorectal cancer surveillance: 2005 update. Slide set. 2005. 27 p. Electronic copies: Available from the ASCO Web site. See the related QualityTool summary on the Health Care Innovations Exchange Web site.
- Colon Cancer Follow-up Sheet. 2005. 1 p. Available from the Journal of Oncology Practice Web site. See the related QualityTool summary on the Health Care Innovations Exchange Web site.
- Rectal Cancer Follow-up Sheet. 2005. 1 p. Available from the Journal of Oncology Web site

Guidelines are available for Personal Digital Assistant (PDA) download from the ASCO Web site.

PATIENT RESOURCES

The following is available:

- ASCO patient guide: follow-up care for colorectal cancer. Oct 2005. 4 p. Available in English and Spanish from the Cancer.Net Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on June 29, 1999. The information was verified by the guideline developer on July 27, 1999. The summary was updated by ECRI in December 2000; the updated summary was verified by the guideline developer as of December 20, 2000. This NGC summary was updated by ECRI on May 11, 2006. The updated information was verified by the guideline developer on June 15, 2006.

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Date Modified: 11/3/2008