



## Complete Summary

---

### GUIDELINE TITLE

ACR Appropriateness Criteria® recurrent rectal cancer.

### BIBLIOGRAPHIC SOURCE(S)

Konski AA, Herman J, Suh WW, Blackstock AW, Mohiuddin M, Poggi MM, Regine WF, Rich TA, Cosman BC, Saltz L, Expert Panel on Radiation Oncology-Rectal/Anal Cancer. ACR Appropriateness Criteria® recurrent rectal cancer. [online publication]. Reston (VA): American College of Radiology (ACR); 2008. 7 p. [30 references]

### GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American College of Radiology (ACR), Expert Panel on Radiation Oncology-Rectal/Anal Work Group. Locally unresectable rectal cancer. Reston (VA): American College of Radiology (ACR); 2002. 10 p. (ACR appropriateness criteria). [30 references]

The appropriateness criteria are reviewed annually and updated by the panels as needed, depending on introduction of new and highly significant scientific evidence.

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
RECOMMENDATIONS  
EVIDENCE SUPPORTING THE RECOMMENDATIONS  
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
QUALIFYING STATEMENTS  
IMPLEMENTATION OF THE GUIDELINE  
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
CATEGORIES  
IDENTIFYING INFORMATION AND AVAILABILITY  
DISCLAIMER

## SCOPE

### DISEASE/CONDITION(S)

Recurrent rectal cancer

## **GUIDELINE CATEGORY**

Evaluation  
Management  
Treatment

## **CLINICAL SPECIALTY**

Colon and Rectal Surgery  
Family Practice  
Gastroenterology  
Internal Medicine  
Oncology  
Radiation Oncology  
Radiology

## **INTENDED USERS**

Health Plans  
Hospitals  
Managed Care Organizations  
Physicians  
Utilization Management

## **GUIDELINE OBJECTIVE(S)**

To evaluate the appropriateness of treatment procedures for recurrent rectal cancer

## **TARGET POPULATION**

Patients with recurrent rectal cancer

## **INTERVENTIONS AND PRACTICES CONSIDERED**

1. Radiation therapy (RT) before, during, or after surgical procedure
  - Hyperfractionated external beam radiation
  - Low-dose-rate or high-dose-rate brachytherapy
  - Permanent radioactive implant of symptomatic lesion
2. Combination of radiotherapy with 5-fluorouracil (5FU)-based or FOLFOX (oxaliplatin, 5-fluorouracil, and folinic acid) chemotherapy
3. Surgery
  - Tumor excision and abdominoperineal resection followed by external beam RT
  - Resection of primary rectal tumor with or without intraoperative radiation therapy boost followed by adjuvant chemoradiation

## **MAJOR OUTCOMES CONSIDERED**

- Local control
- 2- and 5-year survival rates

- Median overall survival time
- Relapse-free survival rate
- Treatment-related toxicity

## METHODOLOGY

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The guideline developer performed literature searches of recent peer-reviewed medical journals and the major applicable articles were identified and collected.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Not Given)

### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

Not stated

### **METHODS USED TO ANALYZE THE EVIDENCE**

Systematic Review with Evidence Tables

### **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

One or two topic leaders within a panel assume the responsibility of developing an evidence table for each clinical condition, based on analysis of the current literature. These tables serve as a basis for developing a narrative specific to each clinical condition.

### **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus (Delphi)

### **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Since data available from existing scientific studies are usually insufficient for meta-analysis, broad-based consensus techniques are needed to reach agreement in the formulation of the appropriateness criteria. The American College of

Radiology (ACR) Appropriateness Criteria panels use a modified Delphi technique to arrive at consensus. Serial surveys are conducted by distributing questionnaires to consolidate expert opinions within each panel. These questionnaires are distributed to the participants along with the evidence table and narrative as developed by the topic leader(s). Questionnaires are completed by the participants in their own professional setting without influence of the other members. Voting is conducted using a scoring system from 1-9, indicating the least to the most appropriate imaging examination or therapeutic procedure. The survey results are collected, tabulated in anonymous fashion, and redistributed after each round. A maximum of three rounds is conducted and opinions are unified to the highest degree possible. Eighty percent agreement is considered a consensus. This modified Delphi technique enables individual, unbiased expression, is economical, easy to understand, and relatively simple to conduct.

If consensus cannot be reached by the Delphi technique, the panel is convened and group consensus techniques are utilized. The strengths and weaknesses of each test or procedure are discussed and consensus reached whenever possible. If "No consensus" appears in the rating column, reasons for this decision are added to the comment sections.

## **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**

Internal Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

Criteria developed by the Expert Panels are reviewed by the American College of Radiology (ACR) Committee on Appropriateness Criteria.

# **RECOMMENDATIONS**

## **MAJOR RECOMMENDATIONS**

### **ACR Appropriateness Criteria®**

#### **Clinical Condition: Recurrent Rectal Cancer**

**Variant 1: 56-year-old patient with recurrent rectal bleeding and pain with defecation. Two years ago underwent a low anterior resection (pT3N0) and 6 months of adjuvant chemotherapy. Endoscopic ultrasound (EUS) now shows anastomotic recurrence 6 cm above the anal verge.**

**Biopsy positive for adenocarcinoma. No sites of metastatic disease.  
Tumor currently unresectable and nonobstructing. KPS 90.**

<b>Treatment</b>	<b>Rating</b>	<b>Comments</b>
<b>Initial Radiation Therapy Treatment</b>		
30 Gy/3.0 Gy to pelvis	1	
30 Gy/3.0 Gy to pelvis with 5FU-based chemotherapy	2	
50.4Gy/1.8 Gy to pelvis	2	
50.4/1.8 Gy to pelvis with 5FU-based chemotherapy	9	
50.4 Gy/1.8 Gy to pelvis with FOLFOX chemotherapy	4	Preferred to use only on clinical trial
59.4-64.8 Gy/1.8 Gy to pelvis	3	
59.4-64.8 Gy/1.8 Gy to pelvis with 5FU-based chemotherapy	4	
<b>Surgery</b>		
Preoperative RT +/- 5FU-based chemotherapy and reevaluate operability	9	
Tumor excision and abdominoperineal resection (APR) before external beam RT	2	
No surgery	1	
<b>5FU-based Chemotherapy Duration</b>		
4-6 months after therapy to primary	8	
12 months after therapy to primary	3	
Induction chemotherapy prior to RT	2	

Treatment	Rating	Comments
<b>Rating Scale: 1 = Least appropriate 9 = Most appropriate</b>		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

**VARIANT 2: 56-year-old patient with recurrent rectal bleeding and pain with defecation. Two years ago underwent a low anterior resection (pT3N0) and 6 months of adjuvant chemotherapy. EUS now shows an anastomotic recurrence 6 cm above anal verge. Biopsy positive for adenocarcinoma. Lesion fixed to the pelvic sidewall on physical examination and CT. Tumor unresectable. Patient now has a biopsy-proven resectable liver metastasis involving the right lobe (5cm). KPS 90.**

Treatment	Rating	Comments
<b>Radiation Therapy</b>		
30 Gy/3.0 Gy to pelvis	1	
30 Gy/3.0 Gy to pelvis with 5FU-based chemotherapy	2	
50.4 Gy/1.8 Gy to pelvis with 5FU-based chemotherapy	8	
50.4 Gy/1.8 Gy to pelvis with FOLFOX chemotherapy	4	Preferred to use only on clinical trial
50.4 Gy/1.8 Gy to pelvis	2	
<b>Treatment of Rectal Primary</b>		
Preoperative RT +/- 5FU-based chemotherapy and reevaluate operability	8	
Resection of primary rectal tumor +/- IORT boost followed by adjuvant chemoradiation (5-FU-based)	3	
No surgery	2	
<b>Treatment of Liver Metastasis</b>		

<b>Treatment</b>	<b>Rating</b>	<b>Comments</b>
After resection of primary rectal tumor	5	
At the same time as the resection of the primary rectal tumor	7	
After 3-6 months post-surgical chemotherapy	6	
Before resection of primary site, after preoperative RT	2	
Before resection of primary site, before preoperative RT	2	
<b>5FU-based Chemotherapy Timing</b>		
4-6 months after therapy to primary	8	
12 months after therapy to primary	3	
Induction chemotherapy prior to RT/surgery	2	
<b>Rating Scale: 1 = Least appropriate 9 = Most appropriate</b>		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

**Variant 3: 56-year-old male with severe pain that radiates to perineal region. Two years ago was diagnosed with T3N1 rectal cancer 6 cm from anal verge. Underwent an abdominal-perineal resection, pelvic RT totaling 50.4 Gy plus 5FU, followed by 6 months of adjuvant chemotherapy. CT of abdomen and pelvis reveal rectal mass (4 cm) invading bony pelvis at sciatic notch. No sites of metastatic disease. KPS 90.**

<b>Treatment</b>	<b>Rating</b>	<b>Comments</b>
<b>Radiation Therapy</b>		
10-30 Gy/2.0 Gy to pelvis	2	
10-30 Gy/2.0 Gy to pelvis with 5FU-based	3	

<b>Treatment</b>	<b>Rating</b>	<b>Comments</b>
chemotherapy		
10-30 Gy/2.0 Gy to pelvis with 5FU-based chemotherapy + IORT boost to pelvic sidewall	3	
Permanent radioactive implant of symptomatic lesion	2	
Hyperfractionated radiation with 5-FU based chemotherapy to 40 Gy followed by reevaluation for surgical resection +/- IORT	7	
<b>Surgery</b>		
Reevaluate operability after preoperative RT +/-5FU	8	
Surgery post external beam RT +/- 5FU +/- IORT boost	7	
Attempt tumor removal + IORT	2	
Reevaluate operability after permanent implant	2	
<b>Rating Scale: 1 = Least appropriate 9 = Most appropriate</b>		

Note: Abbreviations used in the tables are listed at the end of the "Major Recommendations" field.

### **Summary of Literature Review**

Local or regional failure in rectal cancer presents a major dilemma. Therapy strategies for patients with local pelvic recurrences are individualized, depending on the site of local recurrence as well as the type of therapy previously received.

For new patients with recurrences at the anastomoses from a previous low anterior resection who had heretofore not received adjuvant radiation therapy, appropriate treatment would include either re-resection followed by postoperative combined-modality therapy (CMT) or a preoperative CMT approach followed by

surgical intervention with or without intraoperative radiation if technically and medically feasible.

### **Radiation versus Chemoradiation**

In the setting of a patient presenting with a local pelvic or perineal scar recurrence after abdominal-perineal resection (APR), surgery remains an option, followed by CMT if the patient had not previously been treated. Type of primary surgery, symptoms, location of the recurrence, and whether the tumor is fixed to adjacent structures affect overall prognosis, with a median survival of 28 months with a R0 resection compared to 12 months with an R1 or R2 resection. A high postoperative morbidity rate can occur in patients undergoing radical resection, including sacrectomy. Alternatively, preoperative radiation therapy with curative intent could also be given for local recurrences in the setting of a previous APR. Patients with poor performance status could be treated with palliative CMT alone. 5-fluorouracil (5FU) is generally incorporated with radiation therapy in an effort to increase radio responsiveness; however, the effectiveness of chemoradiation compared to radiation alone in this setting or in patients with other sites of pelvic recurrence is debatable.

One study reported on the M.D. Anderson Cancer Center's experience with locally advanced or recurrent rectal cancer. A retrospective comparison was made between patients treated preoperatively with radiation alone from 1977 to 1986 and patients receiving chemoradiation that included continuous infusion of cisplatin alone, 5FU, or both beginning in 1987. It was not possible to determine the advantage of chemoradiation in the patients with locally recurrent rectal cancer, as all but one patient received CMT; however, the chemoradiation did not appear to increase operative morbidity in this group of patients or in patients with locally advanced primary disease. The authors suggested that CMT may have facilitated a sphincter-sparing surgery with improved tumor downstaging; however, improvements in surgical techniques may have also contributed.

Another study reported on a randomized trial of radiotherapy alone (50 Gy/5 weeks + 10-20 Gy boost) or given simultaneously with weekly 5FU (600 mg/m<sup>2</sup>) given before treatment every Monday during the first 5 weeks in patients with locally recurrent or inoperable colorectal cancer. The addition of 5FU failed to demonstrate an improvement in local response or diminish the development of distant metastasis. The acute complication rate increased to 33% versus 13% after radiation alone. Despite the lack of survival improvement in these studies, CMT is generally recommended in an effort to improve local control. Dose may be important, with higher doses producing greater symptomatic response.

### **Importance of Preoperative or Definitive Radiation (with or without Chemotherapy) in Patients with Locally Recurrent Rectal Cancer**

One study compared the results of preoperative radiotherapy and surgery to surgery alone in patients with recurrent rectal cancer. Local control after preoperative treatment was statistically significantly higher at 3 and 5 years compared to the surgery-alone group. There was, however, no difference in overall or metastases-free survival between the groups. Another study evaluated preoperative and perioperative risk factors for morbidity and mortality after irradiation and surgery in patients >75 years of age with locally advanced or

recurrent rectal cancer. A 46% R0 resection rate was reported in patients with recurrent cancers. Margin status was found to be predictive of disease-free survival rates in patients undergoing aggressive surgery including sacrectomy for recurrent rectal cancer. However, a 42% significant complication rate was reported with patients undergoing sacrectomy having a higher complication rate.

Surgery also provided a longer median survival time, 21 months, compared to combined radiotherapy and chemotherapy alone, 12 months, in a population-based study of 141 patients with recurrent rectal cancers. A 57% 5-year survival rate was reported in 25 patients undergoing a curative resection.

The use of three-dimensional conformal radiotherapy combined with FOLFOX4 chemotherapy was investigated in 48 patients with unresectable recurrent rectal cancer. A >90% relief in pain with a 56.5% overall response rate was reported in the study group. However, more peripheral neuropathy in the study group was reported compared to the control group.

### **Reirradiation**

For patients with locally recurrent rectal cancer following high-dose pelvic radiation, management decisions have generally been directed towards palliative care employing diverting colostomies and chemotherapy. Although historically considered unsafe, reirradiation in the pelvis has recently been investigated in selected patients with locally recurrent rectal cancer and found to be reasonably well tolerated and to provide symptomatic relief in the majority of patients. Additionally, a significant percentage of patients were able to undergo radical surgical salvage, with a 2-year survival rate of 66% in this group. An update from the same institution included 52 patients with recurrent rectal cancer who underwent reirradiation. A 15% bowel obstruction rate and a 7% fistula rate were reported when reirradiation was combined with surgery. The median reirradiation dose was 30.6 Gy. Twenty-two patients were treated in a hyperfractionated approach (1.2 Gy twice daily [BID]). Total cumulative doses ranged from 66.6 to 104.9 Gy with a median total dose of 84.4 Gy. The whole pelvis was not treated, and small bowel and bladder were excluded from the reirradiation field. The actuarial survival at 2 years was 25%, decreasing to 14% at 3 years. Bleeding was stopped in 100% of patients with palliation of pain seen in 65%. The incidences of Radiation Therapy Oncology Group (RTOG®) grade 3 and 4 late toxicity were 23% and 10%, respectively. The use of hyperfractionated radiation therapy resulted in reduced late toxicity in comparison to conventionally treated patients receiving once-daily irradiation. Thus, reirradiation with or without surgical salvage may be a reasonable option in selected patients with recurrent rectal cancer.

### **Hyperfractionated External Beam Radiation**

One study evaluated the response rate, respectability rate, local control, and treatment-related toxicity of preoperative hyperfractionated chemoradiation for patients with locally recurrent rectal cancer who had received previous radiation. The study found that 86.4% of patients had treatment completed without any interruption, with only a 5.1% rate of acute lower gastrointestinal (GI) toxicity. The authors also reported a 39% 5-year survival rate. Another study reported a 72% good or complete palliative effect for a median of 6 months in patients

receiving reirradiation and hyperthermia. A third study reported a median overall survival time of 38 months with an estimated 40% 5-year survival rate in patients having resection of isolated pelvic recurrences. In this study, 56 of 88 patients had additional radiation, including 24 treated with brachytherapy, eight treated with intraoperative radiation therapy (IORT), and 24 treated with external beam radiation. Preoperative carcinoembryonic antigen (CEA) and final margin status was a statistically significant predictor of outcome.

Patients selected for this experimental approach might include those with locally recurrent disease alone or in combination with metastatic cancer, when suffering from intractable pain and/or bleeding. They should have a Karnofsky performance status (KPS) of  $\geq 70\%$  and have no prior history of bowel obstruction within the pelvis. The optimal reirradiation dose has yet to be determined; however, final cumulative dose decisions should be determined based on the initial radiation dose given, the amount of small bowel in the radiation treatment field, the distance in time to recurrence, and the volume previously treated, as well as the intended volume to be retreated with irradiation. When reirradiating the pelvis, every effort should be made to limit the dose to the bowel or bladder.

### **Review of Intraoperative Radiation Therapy**

IORT provides an additional therapy option in patients with locally recurrent rectal cancer, including those who have received prior external beam pelvic radiation. IORT involves radiation treatment delivered during a surgical procedure to the tumor bed, with the advantage of sparing surrounding normal tissues. Radiation is delivered either by a linear accelerator, resulting in the production of electron beams, or in the form of either low-dose-rate (LDR) or high-dose-rate (HDR) brachytherapy. LDR brachytherapy involves permanent placement of radioactive I-125 or Pd-103 seeds in the tumor bed.

HDR brachytherapy employs a machine housing a high-activity  $I^{192}$  source that can be connected to a multichannel applicator that can conform to the tumor bed. With HDR IORT the dose distribution (depth and location) can be individualized by altering source dwell positions. A dose of 10-20 Gy can be delivered over several minutes, compared to hours with LDR brachytherapy. Electron beam IORT (IOERT) has been used in an effort to improve local control and quality of life. IOERT requires less planning and setup time when compared to HDR-IORT; however, it is more challenging for treating larger areas, and dosimetry planning is not as reliable. Ideally, each department could benefit from the flexibility of having both HDR-IORT and IOERT in order to accommodate diverse cases.

One study reported that the extent of surgical resection was the most important factor for improving local control in patients undergoing IORT, with a local control rate of 50% and a 2-year actuarial local relapse-free survival rate of 56% reported in this group of patients. Overall, including patients unable to undergo a complete resection, the two-year actuarial local relapse-free survival rate was only 14%. Similar findings have been reported at other centers incorporating IORT for recurrent rectal cancer with distant metastatic rates remaining high. Use of IOERT with close or positive resection margins has historically resulted in inferior outcomes in patients with locally recurrent rectal cancer. However, one study reported a 14% local failure rate within the HDR-IORT field in 37 patients

with close or positive margins following resection. Therefore controversy exists as to the importance of final margin status in patients undergoing HDR-IORT.

Toxicity attributable to IORT can be difficult to distinguish from disease-related toxicity. RTOG® 85-08 reported a 16% significant 2-year actuarial complication rate in 42 patients with advanced or recurrent rectal cancer who received IORT as a component of their treatment. Multiple single-institution studies have now demonstrated improved local control and in some cases survival when IORT is combined with preoperative chemoradiation and aggressive surgery. Patient selection is crucial and should be determined in a multidisciplinary setting.

Additional studies are needed to determine how to optimally combine external beam radiation and IORT with modern systemic chemotherapy to improve quality of life, limit toxicity, and improve survival in patients with recurrent rectal cancer.

### **Abbreviations**

- CT, computed tomography
- FOLFOX, oxaliplatin, 5-fluorouracil, and folinic acid
- 5FU, 5-fluorouracil
- IORT, intra-operative radiation therapy
- KPS, Karnofsky performance status
- RT, radiation therapy

### **CLINICAL ALGORITHM(S)**

None provided

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The recommendations are based on analysis of the current literature and expert panel consensus.

## **BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**

### **POTENTIAL BENEFITS**

Selection of appropriate procedures for treatment and management of patients with recurrent rectal cancer

### **POTENTIAL HARMS**

- Toxicity of chemotherapy
- Toxicity of radiation therapy (e.g., bowel obstruction, fistula)
- Complications of surgery

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

An American College of Radiology (ACR) Committee on Appropriateness Criteria and its expert panels have developed criteria for determining appropriate imaging examinations for diagnosis and treatment of specified medical condition(s). These criteria are intended to guide radiologists, radiation oncologists, and referring physicians in making decisions regarding radiologic imaging and treatment. Generally, the complexity and severity of a patient's clinical condition should dictate the selection of appropriate imaging procedures or treatments. Only those exams generally used for evaluation of the patient's condition are ranked. Other imaging studies necessary to evaluate other co-existent diseases or other medical consequences of this condition are not considered in this document. The availability of equipment or personnel may influence the selection of appropriate imaging procedures or treatments. Imaging techniques classified as investigational by the U.S. Food and Drug Administration (FDA) have not been considered in developing these criteria; however, study of new equipment and applications should be encouraged. The ultimate decision regarding the appropriateness of any specific radiologic examination or treatment must be made by the referring physician and radiologist in light of all the circumstances presented in an individual examination.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### IMPLEMENTATION TOOLS

Personal Digital Assistant (PDA) Downloads

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

Getting Better  
Living with Illness

### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### **BIBLIOGRAPHIC SOURCE(S)**

Konski AA, Herman J, Suh WW, Blackstock AW, Mohiuddin M, Poggi MM, Regine WF, Rich TA, Cosman BC, Saltz L, Expert Panel on Radiation Oncology-Rectal/Anal Cancer. ACR Appropriateness Criteria® recurrent rectal cancer. [online publication]. Reston (VA): American College of Radiology (ACR); 2008. 7 p. [30 references]

### **ADAPTATION**

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

### **DATE RELEASED**

1998 (revised 2008)

### **GUIDELINE DEVELOPER(S)**

American College of Radiology - Medical Specialty Society

### **SOURCE(S) OF FUNDING**

The American College of Radiology (ACR) provided the funding and the resources for these ACR Appropriateness Criteria®.

### **GUIDELINE COMMITTEE**

Committee on Appropriateness Criteria, Expert Panel on Radiation Oncology-Rectal/Anal Cancer

### **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

*Panel Members:* Andre A. Konski, MD; Joseph Herman, MD, MSc; W. Warren Suh, MD; A. William Blackstock, MD; Mohammed Mohiuddin, MD; Matthew M. Poggi, MD; William F. Regine, MD; Tyvin A. Rich, MD; Bard C. Cosman, MD; Leonard Saltz, MD

### **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

### **GUIDELINE STATUS**

This is the current release of the guideline.

This guideline updates a previous version: American College of Radiology (ACR), Expert Panel on Radiation Oncology-Rectal/Anal Work Group. Locally unresectable

rectal cancer. Reston (VA): American College of Radiology (ACR); 2002. 10 p. (ACR appropriateness criteria). [30 references]

The appropriateness criteria are reviewed annually and updated by the panels as needed, depending on introduction of new and highly significant scientific evidence.

## **GUIDELINE AVAILABILITY**

Electronic copies: Available in Portable Document Format (PDF) from the [American College of Radiology \(ACR\) Web site](#).

ACR Appropriateness Criteria® *Anytime, Anywhere*™ (PDA application). Available from the [ACR Web site](#).

Print copies: Available from the American College of Radiology, 1891 Preston White Drive, Reston, VA 20191. Telephone: (703) 648-8900.

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following are available:

- ACR Appropriateness Criteria®. Background and development. Reston (VA): American College of Radiology; 2 p. Electronic copies: Available in Portable Document Format (PDF) from the [American College of Radiology \(ACR\) Web site](#).
- ACR Appropriateness Criteria® radiation dose assessment introduction. American College of Radiology. 2 p. Electronic copies: Available from the [ACR Web site](#).

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This summary was completed by ECRI on March 31, 2003. The information was verified by the guideline developer on April 21, 2003. This summary was updated by ECRI Institute on June 15, 2009.

## **COPYRIGHT STATEMENT**

Instructions for downloading, use, and reproduction of the American College of Radiology (ACR) Appropriateness Criteria® may be found on the [ACR Web site](#).

## **DISCLAIMER**

### **NGC DISCLAIMER**

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

#### [Copyright/Permission Requests](#)

Date Modified: 7/27/2009

