Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

General

Guideline Title

The role of endoscopy in the assessment and treatment of esophageal cancer.

Bibliographic Source(s)

ASGE Standards of Practice Committee, Evans JA, Early DS, Chandraskhara V, Chathadi KV, Fanelli RD, Fisher DA, Foley KQ, Hwang JH, Jue TL, Pasha SF, Sharaf R, Shergill AK, Dominitz JA, Cash BD. The role of endoscopy in the assessment and treatment of esophageal cancer. Gastrointest Endosc. 2013 Mar;77(3):328-34. [101 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Jacobson BC, Hirota W, Baron TH, Leighton JA, Faigel DO. The role of endoscopy in the assessment and treatment of esophageal cancer. Gastrointest Endosc. 2003 Jun;57(7):817-22.

Recommendations

Major Recommendations

Definitions for the quality of the evidence (++++, +++O, ++OO, and +OOO) and for the strength of the recommendations ("recommends" or "suggests") are provided at the end of the "Major Recommendations" field.

1. The Practice Committee recommends endoscopic ultrasound (EUS) and fine needle aspiration (FNA) (when indicated), in conjunction with cross-sectional imaging, for the accurate staging of esophageal carcinoma (+++O).
2. The Practice Committee suggests that endoscopic mucosal dissection (EMR) or endoscopic submucosal dissection (ESD) be used for the treatment and staging of nodular Barrett's esophagus (BE) and suspected intramucosal squamous cell carcinoma (SCC) and adenocarcinoma (++OO).
3. The Practice Committee suggests that argon plasma coagulation (APC), heater probe, cryotherapy, or radiofrequency ablation not be used as monotherapy with curative intent for mucosal esophageal cancer (++OO).
4. The Practice Committee suggests that ablative techniques such as APC, heater probe, cryotherapy, or radiofrequency ablation may have a role in ablation of remaining high-risk tissue following resection (++OO).
5. The Practice Committee recommends that esophageal stent placement is the preferred method for palliation of dysphagia and fistulae secondary to esophageal cancer because it provides immediate and durable relief in the majority of patients (+++O).
6. The Practice Committee suggests that a variety of factors, including patient preferences, quality of life, and prognosis be addressed with the patient and family before initiating endoscopic palliation for esophageal malignancy (++OO).

Definitions:

GRADE (Grading of Recommendations, Assessment, Development and Evaluation) System for Rating the Quality of Evidence for Guidelines

Quality of Evidence	Definition	Symbol
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.	+++O
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.	++OO
Very low quality	Any estimate of effect is very uncertain.	+OOO

Adapted from Guyatt GH, Oxman AD, Vist GE, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ 2008;336:924-6.

Recommendation Strength

The strength of individual recommendations is based on both the aggregate evidence quality and an assessment of the anticipated benefits and harms. Weaker recommendations are indicated by phrases such as "the Practice Committee suggests," whereas stronger recommendations are typically stated as "the Practice Committee recommends."

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Esophageal cancer including:

- Adenocarcinoma
- Squamous cell carcinoma

Guideline Category

Evaluation

Management

Clinical Specialty

Gastroenterology

Oncology

Intended Users

Physicians

Guideline Objective(s)

- To update the 2003 American Society for Gastrointestinal Endoscopy (ASGE) guidelines describing the endoscopic aspects of managing esophageal cancer
- To discuss diagnosis, staging, endoscopic treatments, and palliation of esophageal cancer

Target Population

Patients with suspected or confirmed esophageal cancer

Interventions and Practices Considered

1. Endoscopic ultrasound (EUS) and fine-needle aspiration (FNA) in conjunction with cross-sectional imaging for staging of esophageal carcinoma
2. Endoscopic mucosal resection (EMR) or endoscopic submucosal dissection (ESD) for staging and treatment of nodular Barrett's esophagus, intramucosal squamous cell carcinoma, and adenocarcinoma
3. Ablative techniques following resection:
    - Cryotherapy
    - Argon plasma coagulation (APC)
    - Heater probe treatment
    - Radiofrequency ablation (RFA)
4. Esophageal stent placement for palliation
5. Evaluation of factors such as patient preferences, quality of life, and prognosis before initiating palliative therapy

Note: APC, heater probe, cryotherapy, or radiofrequency ablation as monotherapy with curative intent for mucosal esophageal cancer was considered but not recommended.

Major Outcomes Considered

- Incidence of esophageal adenocarcinoma (EAC)
- Risk factors
- Sensitivity of diagnostic tests
- Predictive value of diagnostic tests
- Quality of life
- Morbidity and 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

In preparing this guideline, a search of the medical literature was performed for the years 1980 to 2012 by using PubMed. Additional references were obtained from the bibliographies of the identified articles and from recommendations of expert consultants. When few or no data exist from well-designed prospective trials, emphasis is given to results from large series and reports from recognized experts.

Number of Source Documents

Not stated

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

GRADE (Grading of Recommendations, Assessment, Development and Evaluation) System for Rating the Quality of Evidence for Guidelines

Quality of Evidence	Definition	Symbol
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.	+++O
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.	++OO
Very low quality	Any estimate of effect is very uncertain.	+OOO

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Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Guidelines for appropriate use of endoscopy are based on a critical review of the available data and expert consensus at the time that the guidelines are drafted.

Rating Scheme for the Strength of the Recommendations

The strength of individual recommendations is based on both the aggregate evidence quality and an assessment of the anticipated benefits and harms. Weaker recommendations are indicated by phrases such as "the Practice Committee suggests," whereas stronger recommendations are typically stated as "the Practice Committee recommends."

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

This document is a product of the Standards of Practice Committee. The document was reviewed and approved by the Governing Board of the American Society for Gastrointestinal Endoscopy.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

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

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate use of endoscopy in the assessment and treatment of esophageal cancer

Potential Harms

- Potential complications of endoscopic mucosal resection (EMR) are bleeding, perforation, and stricture formation. Delayed bleeding is rare, but immediate, postresection bleeding can occur in 10% of patients. Perforation rates are reported to be less than 3%. Rates of stricture formation vary depending on the circumference and length of mucosa removed by EMR, but can occur in up to 37% of cases.
- Complications of cryotherapy include chest pain, dysphagia, and, rarely, perforation.
- Stent complications include intolerable chest pain, perforation, migration, tumor ingrowth, bleeding, and fistula formation.
- In one study, rates of migration (11% vs 2%), tissue reaction, and bleeding were all higher in the self-expandable plastic stents (SEPS) group. Self-expandable metal stents (SEMS) were noted to have higher rates of tumor overgrowth, fistula formation, and food impaction. Airway compromise after SEMS placement for a tracheoesophageal fistula has been reported and careful evaluation of the patient with a multidisciplinary approach and concomitant airway management should be considered before the procedure.
- Tissue sampling contamination may occur when the endoscope traverses the tumor and it must be appreciated that false positive fine-needle aspiration (FNA) is possible when detached malignant cells that are present within the gastrointestinal (GI) lumen are picked up by the needle.

Qualifying Statements

Qualifying Statements

- Further controlled clinical studies may be needed to clarify aspects of this guideline. This guideline may be revised as necessary to account for changes in technology, new data, or other aspects of clinical practice.
- This guideline is intended to be an educational device to provide information that may assist endoscopists in providing care to patients. This guideline is not a rule and should not be construed as establishing a legal standard of care or as encouraging, advocating, requiring, or discouraging any particular treatment. Clinical decisions in any particular case involve a complex analysis of the patient's condition and available courses of action. Therefore, clinical considerations may lead an endoscopist to take a course of action that varies from these guidelines.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

End of Life Care

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

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

Date Released

2003 Jun (revised 2013 Mar)

Guideline Developer(s)

American Society for Gastrointestinal Endoscopy - Medical Specialty Society

Source(s) of Funding

American Society for Gastrointestinal Endoscopy

Guideline Committee

Standards of Practice Committee

Composition of Group That Authored the Guideline

Committee Members: John A. Evans, MD; Dayna S. Early, MD; Vinay Chandraskhara, MD; Krishnavel V. Chathadi, MD; Robert D. Fanelli, MD, SAGES Representative; Deborah A. Fisher, MD; Kimberly Q. Foley, RN, BSN, CGRN, SGNA Representative; Joo Ha Hwang, MD; Terry L. Jue, MD; Shabana F. Pasha, MD; Ravi Sharaf, MD; Amandeep K. Shergill, MD; Jason A. Dominitz, MD, MPH (*Prior Chair*); Brooks D. Cash, MD (*Committee Chair*)

Financial Disclosures/Conflicts of Interest

Dr. Fisher, consultant for Epigenomics Inc. All other authors disclosed no financial relationships relevant to this publication.

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Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the American Society for Gastrointestinal Endoscopy (ASGE) Web site .

Print copies: Available from the American Society for Gastrointestinal Endoscopy, 1520 Kensington Road, Suite 202, Oak Brook, IL 60523

Availability of Companion Documents

None available

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI on March 23, 2005. The information was verified by the guideline developer on March 31, 2005. This summary was updated by ECRI Institute on June 5, 2013.

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