



Complete Summary

GUIDELINE TITLE

Staging laparoscopy for esophageal tumors. In: Diagnostic laparoscopy guidelines.

BIBLIOGRAPHIC SOURCE(S)

Staging laparoscopy for esophageal tumors. In: Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). Diagnostic laparoscopy guidelines. Los Angeles (CA): Society of American Gastrointestinal and Endoscopic Surgeons (SAGES); 2007 Nov. p. 40-4.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). SAGES guidelines for diagnostic laparoscopy. Los Angeles (CA): Society of American Gastrointestinal and Endoscopic Surgeons (SAGES); 2002 Mar. 5 p.

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SCOPE

DISEASE/CONDITION(S)

Esophageal cancer

GUIDELINE CATEGORY

Diagnosis
Evaluation

CLINICAL SPECIALTY

Gastroenterology
Oncology
Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To assist surgeons' decisions about the appropriate use of staging laparoscopy in patients with esophageal cancer
- To update the previous 2002 guidelines on this topic

TARGET POPULATION

Patients with esophageal cancer

INTERVENTIONS AND PRACTICES CONSIDERED

Staging laparoscopy (SL) in patients with esophageal cancer

MAJOR OUTCOMES CONSIDERED

- Procedure-related/intraoperative complications
- Procedure-related morbidity
- Time to initiation of treatment
- Postoperative hospital length of stay
- Cost-effectiveness
- Mortality

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

A systematic literature search of MEDLINE for the period 1995-2005 was limited to English language articles. The search strategy is shown in Figure 1 in the original guideline document. Using the same strategy, the Cochrane database of evidence-based reviews and the Database of Abstracts of Reviews of Effects (DARE) were searched.

Abstracts were reviewed by three committee members and into the following categories:

- Randomized studies, meta-analyses, and systematic reviews
- Prospective studies
- Retrospective studies
- Case reports
- Review articles

Randomized controlled trials, meta-analyses, and systematic reviews were selected for further review along with prospective and retrospective studies that included at least 50 patients; studies with smaller samples were reviewed when other available evidence was lacking. The most recent reviews were also included. All case reports, old reviews, and smaller studies were excluded.

The reviewers graded the level of evidence of each article and manually searched the bibliographies for additional articles that may have been missed by the search. Any additional relevant articles were included in the review and grading.

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

Levels of Evidence

Level I	Evidence from properly conducted randomized, controlled trials
Level II	Evidence from controlled trials without randomization Or Cohort or case-control studies Or Multiple time series, dramatic uncontrolled experiments
Level III	Descriptive case series, opinions of expert panels

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

To maximize the efficiency of the review, articles were divided into three subject categories:

- Staging laparoscopy for cancer
- Diagnostic laparoscopy for acute conditions
- Diagnostic laparoscopy for chronic conditions

Reviewers graded the level of each article (see "Rating Scheme for the Strength of the Evidence.")

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The guidelines were developed under the auspices of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and revised by the SAGES Guidelines Committee.

The statements included in this guideline are the product of a systematic review of published work on the topic, and the recommendations are explicitly linked to the supporting evidence. The strengths and weaknesses of the available evidence are described and expert opinion sought where the evidence is lacking. This is an update of previous guidelines on this topic (last revision 2002) as new information has accumulated.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Scale Used for Recommendation Grading

Grade A	Based on high-level (level I or II), well-performed studies with uniform interpretation and conclusions by the expert panel
Grade B	Based on high-level, well-performed studies with varying interpretation and conclusions by the expert panel
Grade C	Based on lower-level evidence (level II or less) with inconsistent findings and/or varying interpretations or conclusions by the expert panel

COST ANALYSIS

A trial comparing computed tomography scan, endoscopic ultrasound-fine needle aspiration, positive emission tomography (PET), combined thoracoscopy and laparoscopy, and combinations of these has shown that the combination of PET scan with endoscopic ultrasound-fine needle aspiration is the most cost-effective.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The recommendations of each guideline undergo multidisciplinary review and are considered valid at the time of production based on the data available. This statement was reviewed by the Board of Governors of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES), November 2007.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions of the grades of the recommendations (**A, B, C**) and the levels of evidence (**I, II, III**) are provided at the end of the "Major Recommendations" field.

General Recommendations for Diagnostic Laparoscopy

Diagnostic laparoscopy is a safe and well tolerated procedure that can be performed in an inpatient or outpatient setting under general or occasionally local anesthesia with intravenous sedation in carefully selected patients. Diagnostic laparoscopy should be performed by physicians trained in laparoscopic techniques who can recognize and treat common complications and can perform additional therapeutic procedures when indicated. During the procedure, the patient should be continuously monitored, and resuscitation capability must be immediately available. Laparoscopy must be performed using sterile technique along with meticulous disinfection of the laparoscopic equipment. Overnight observation may be appropriate in some outpatients.

Staging Laparoscopy (SL) for Esophageal Cancer

Technique

The patient is placed in the supine position, and pneumoperitoneum is established. A 30-degree laparoscope is recommended for optimal visualization. Additional ports in the left upper quadrant and epigastric area can be placed as needed. Full inspection of the peritoneal cavity helps evaluate for peritoneal or liver metastases. If no distant disease is discovered, then the left lateral lobe of the liver is elevated to expose the gastroesophageal junction, and the patient is placed in steep reverse Trendelenburg position. The tumor is inspected for extension into the surrounding area. Lymph nodes in the gastrohepatic ligament or celiac axis suspected to be malignant are biopsied. An optional laparoscopic feeding jejunostomy can be placed when neoadjuvant therapy is planned. In addition, combined thoracoscopic/laparoscopic staging has been described to improve staging for esophageal cancer by increasing the number of positive lymph nodes identified compared with conventional staging (**Level II**). Specifically for the thoracoscopic evaluation, the patient is in full, left lateral decubitus position with single-lung ventilation. Two to three thoracic trocars are placed, and the mediastinal pleura overlying the esophagus is incised to identify and biopsy lymph nodes as needed.

Indications

SL should be used for patients with esophageal cancer who are potential candidates for curative surgical resection based on a negative preoperative staging for lymph node or distant metastases. Furthermore, the procedure can be used for the placement of enteral feeding access in patients when a percutaneous endoscopic gastrostomy cannot be undertaken, and the patients are candidates for neoadjuvant chemotherapy.

Recommendations

SL can be performed safely in patients with esophageal cancer (**Grade B**). Patients who are considered to be candidates for curative resection (early stage esophageal cancer with no evidence for distant or lymph node metastases on high quality preoperative imaging) may benefit from SL (**Grade B**). SL also provides the opportunity for enteral feeding tube placement without the need for laparotomy. The procedure may also facilitate a shorter time to adjuvant therapy initiation compared with laparotomy, but data are too limited to provide a firm recommendation. Positive emission tomography scan and endoscopic ultrasound-fine needle aspiration may be more cost-effective compared with laparoscopy, but more evidence is needed to determine this. (**Grade C**)

For details of the rationale for the procedure and its diagnostic accuracy, see the original guideline document.

Definitions:

Levels of Evidence

Level I	Evidence from properly conducted randomized, controlled trials
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Level III	Descriptive case series, opinions of expert panels

Scale Used for Recommendation Grading

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

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

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Accurate preoperative staging can identify patients with an early stage cancer in whom curative resection is possible. The patients with distant or lymph node metastasis are best treated with chemotherapy and radiation as neoadjuvant therapy or even palliation. Since patients undergoing staging laparoscopy (SL) may have a faster postoperative recovery than those undergoing exploratory laparotomy, the time interval to adjuvant therapy may be shorter. In addition, laparoscopic feeding jejunostomy can be placed during SL when neoadjuvant therapy is anticipated.

POTENTIAL HARMS

- Procedure- and anesthesia-related complications (see "Procedure-related Complications and Patient Outcomes" section in the original guideline document)
- False negative studies that lead to unnecessary laparotomy
- Delay in definitive treatment when the procedure does not coincide with planned laparotomy
- Unnecessary cost if procedure has a very low yield
- Potential adverse oncologic effects of the procedure

CONTRAINDICATIONS

CONTRAINDICATIONS

The primary contraindication is known metastatic disease. In addition, dense intra-abdominal adhesions, particularly in the upper abdomen, from prior surgery may be a relative contraindication.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Clinical practice guidelines are intended to indicate the best available approach to medical conditions as established by systematic review of available data and

expert opinion. The approach suggested may not be the only acceptable approach given the complexity of the health care environment. These guidelines are intended to be flexible, as the surgeon must always choose the approach best suited to the patient and variables in existence at the time of the decision.

Limitations of the Available Literature

The studies regarding staging laparoscopy (SL) for esophageal cancer patients are limited, and no level I evidence exists. There are a small number of reports from highly specialized centers, which may make the reproducibility of their results difficult. In addition, studies differ in their technique and intended hypotheses. The impact of surgeon's expertise on the diagnostic accuracy of the procedure is unknown. The overall analysis of SL in esophageal cancer is difficult, given the inconsistency of the reported data.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Foreign Language Translations
Patient Resources

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

End of Life Care
Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

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guidelines. Los Angeles (CA): Society of American Gastrointestinal and Endoscopic Surgeons (SAGES); 2007 Nov. p. 40-4.

ADAPTATION

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

DATE RELEASED

1998 Apr (revised 2007 Nov)

GUIDELINE DEVELOPER(S)

Society of American Gastrointestinal and Endoscopic Surgeons - Medical Specialty Society

SOURCE(S) OF FUNDING

Society of American Gastrointestinal and Endoscopic Surgeons (SAGES)

GUIDELINE COMMITTEE

Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Members of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) disclose potential conflicts of interest and pertinent financial relationships prior to serving as faculty for SAGES-sponsored educational events, delivering presentations at scientific meetings, etc. Additionally, members of SAGES Committees disclose their potential conflicts of interest and pertinent financial relationships annually as a condition of committee membership.

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GUIDELINE AVAILABILITY

Electronic copies: Available from the [Society of American Gastrointestinal and Endoscopic Surgeons \(SAGES\) Web site](#).

Print copies: Available from the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES), 11300 W. Olympic Blvd., Suite 600, Los Angeles, CA 90064; Web site: www.sages.org.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available:

- Patient information for diagnostic laparoscopy from SAGES. Available in English and Polish from the [Society of American Gastrointestinal and Endoscopic Surgeons \(SAGES\) Web site](http://www.sages.org).

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

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