



Complete Summary

GUIDELINE TITLE

SAGES guidelines for diagnostic laparoscopy.

BIBLIOGRAPHIC SOURCE(S)

Society of American Gastrointestinal Endoscopic Surgeons (SAGES). SAGES guidelines for diagnostic laparoscopy. Los Angeles (CA): Society of American Gastrointestinal Endoscopic Surgeons (SAGES); 2002 Mar. 5 p. [13 references]

COMPLETE SUMMARY CONTENT

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

SCOPE

DISEASE/CONDITION(S)

- Intra-abdominal/retroperitoneal masses
- Liver disease
- Ascites
- Abdominal pain or acute abdomen
- Abdominal trauma
- Miscellaneous conditions, including palpable abdominal mass, abdominal or pelvic pain of unknown origin, acute and chronic abdominal pain in the elderly patient, fever of unknown origin, and in patients with suspected congenital abnormalities

GUIDELINE CATEGORY

Diagnosis
Evaluation
Treatment

CLINICAL SPECIALTY

Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To provide updated clinical guidelines for the utilization of diagnostic laparoscopy in common clinical situations

TARGET POPULATION

Patients with indications for diagnostic laparoscopy

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnostic laparoscopy in an outpatient or inpatient setting under local or general anesthesia

MAJOR OUTCOMES CONSIDERED

Not stated

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

In preparing this update, a literature search (MEDLINE) was performed, and additional references were obtained from the bibliographies of the identified articles and from the recommendations of expert consultants.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

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

Not stated

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

This statement was reviewed by the Board of Governors of the Society of American Gastrointestinal Endoscopic Surgeons (SAGES), March 2002.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Clinical Application

Diagnostic laparoscopy is minimally invasive surgery for the diagnosis of a medical ailment. The procedure allows the direct visual examination of intra-abdominal organs including large surface areas of the liver, gallbladder, spleen, peritoneum, pelvic organs, and retroperitoneum (Boyce, 1982; Berci & Cuschieri, 1986). Biopsies, aspiration, and cultures can be obtained, and laparoscopic ultrasound may be used. Laparoscopy allows a surgeon to diagnose and obtain information about dissemination of disease and to diagnose patients with abdominal findings (Mansi et al., 1982; Gandolfi et al., 1985).

Diagnostic laparoscopy is safe and well tolerated and can be performed in an outpatient or inpatient setting under general anesthesia (Sleeman et al., 1995). There may be unique circumstances where local anesthetic may be used. Diagnostic laparoscopy should be performed by physicians trained in laparoscopic techniques and who are able to recognize and treat common complications. The physician should also be able to perform additional therapeutic procedures when indicated. During the procedure, the patient should be continuously monitored ("Monitoring of patients," 1989), and resuscitation capability must be immediately available. Laparoscopy must be performed using sterile technique along with a high level disinfection of the laparoscopic equipment. Overnight observation may be appropriate in some outpatients. There may also be unique circumstances where office based diagnostic laparoscopy may be considered. These circumstances should include only procedures where complications and the need for therapeutic procedures through the same access are extremely unlikely.

Indications

- Intra-abdominal/retroperitoneal masses: diagnostic laparoscopy can be used to perform directed biopsies and stage intra-abdominal tumors (Coupland, Townsend, & Martin, 1981; Bogen, Mancino, & Scott-Conner, 1996). Laparoscopic ultrasound can be of use to identify masses.
- Liver disease: Laparoscopy is indicated for cirrhotic patients when a standard biopsy is inconclusive or not desired (e.g., small liver, large volume ascites) (Brugera, Rodas & Rodas, 1974). Patients with liver disease are more prone to hemorrhage following biopsy, but at laparoscopy, bleeding from the biopsy site can be controlled using electrocoagulation or other techniques.
- Ascites: When the etiology of ascites remains elusive, laparoscopy may prove helpful, especially when the ascites are secondary to tuberculosis or carcinomatosis.
- Abdominal pain or acute abdomen: Laparoscopy can be helpful in diagnosing acalculous cholecystitis, perforated viscus, acute appendicitis, mesenteric ischemia, or other surgical emergencies in patients who are critically ill and have an equivocal abdominal exam.
- Abdominal Trauma: Laparoscopy for specific problems (i.e., anterior and lateral stab wounds, tangential gunshot wounds) may be helpful in avoiding a full laparotomy. Laparoscopy for blunt abdominal trauma is currently debated (Poole, Thomae, & Hauser, 1996; Ivatury, Simon, & Stahl, 1993).
- Miscellaneous Conditions: Other indications where laparoscopy may be helpful include a palpable abdominal mass, abdominal or pelvic pain of unknown origin, acute and chronic abdominal pain in the elderly patient, fever of unknown origin, and in patients with suspected congenital abnormalities.

Contraindications

Contraindications may include hemodynamic instability, mechanical or paralytic ileus, uncorrected coagulopathy, generalized peritonitis, severe cardiopulmonary disease, abdominal wall infection, multiple previous abdominal procedures, and late pregnancy (Halpern, 1998; Gurbuz & Peetz, 1997). However, the final decision is determined not only by the clinical conditions, but also by the surgeon's judgment.

Technique

Instruments used in diagnostic laparoscopy should include but are not limited to a laparoscope, trocar, grasping, biopsy, and retracting instruments as needed. Most instruments will range in size from 2 to 10 mm in diameter. Personnel should include the laparoscopist and a trained assistant to monitor blood pressure, pulse, respiratory rate, oxygen saturation, electrocardiogram (EKG), and level of sedation. Some patients requiring diagnostic laparoscopy can have the procedure performed under local anesthesia with intravenous sedation as necessary. When general anesthesia is necessary, a trained anesthetist or anesthesiologist should be present.

Initial entry into the abdomen can be obtained by the Veress needle or cut down technique. The abdomen is appropriately insufflated and additional trocars inserted as needed. Insufflation pressure should be limited to 10 mm Hg in a spontaneously breathing patient. Routine laparoscopic examination of the abdomen may include evaluation of peritoneal surfaces, diaphragm, liver, spleen, gallbladder, stomach, small intestine, colon, pelvic organs, and retroperitoneal tissues and organs. Appropriate biopsies, cytology, intraoperative ultrasound, cultures, and fluid analysis may be performed as necessary, and/or other imaging modalities may be useful.

Complications

Complications may occur during creation of the pneumoperitoneum, trocar insertion, or the diagnostic exam. These complications include, but are not limited to, cardiac arrhythmias, hemodynamic instability due to decreased venous return, bleeding, bile leak, perforation of a hollow viscus, laceration of a solid organ, vascular injury, gas embolism, and subcutaneous or extraperitoneal dissection of the insufflation gas. Wound infection or leakage of ascites may occur postoperatively. Failure to accurately diagnose the extent of intra-abdominal pathology is another potential complication.

Conclusion

Diagnostic laparoscopy is useful for patients in whom the diagnosis or extent of the disease is unclear or the abdominal findings are equivocal. It can be performed safely in an inpatient or outpatient setting, potentially expediting diagnosis and treatment.

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 type of supporting evidence was not specifically stated for each recommendation. As little data exists from well-designed prospective trials, emphasis was given to the results from large series and reports from recognized experts.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate utilization of laparoscopy: Diagnostic laparoscopy is useful for patients in whom the diagnosis or extent of the disease is unclear or the abdominal findings are equivocal. It can be performed safely in an inpatient or outpatient setting, potentially expediting diagnosis and treatment.

POTENTIAL HARMS

Complications may occur during creation of the pneumoperitoneum, trocar insertion, or the diagnostic exam. These complications include, but are not limited to, cardiac arrhythmias, hemodynamic instability due to decreased venous return, bleeding, bile leak, perforation of a hollow viscus, laceration of a solid organ, vascular injury, gas embolism, and subcutaneous or extraperitoneal dissection of the insufflation gas. Wound infection or leakage of ascites may occur postoperatively. Failure to accurately diagnose the extent of intra-abdominal pathology is another potential complication.

CONTRAINDICATIONS

CONTRAINDICATIONS

Potential contraindications for diagnostic laparoscopy include:

- hemodynamic instability
- mechanical or paralytic ileus
- uncorrected coagulopathy
- generalized peritonitis
- severe cardiopulmonary disease
- abdominal wall infection
- multiple previous abdominal procedures
- late pregnancy

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Clinical consideration may justify a course of action at a variance from these recommendations.

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

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

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

DATE RELEASED

1998 Apr (revised 2002 Mar)

GUIDELINE DEVELOPER(S)

Society of American Gastrointestinal Endoscopic Surgeons - Medical Specialty Society

SOURCE(S) OF FUNDING

Society of American Gastrointestinal Endoscopic Surgeons (SAGES). No outside funding sources were used.

GUIDELINE COMMITTEE

Committee on Standards of Practice

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

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

Print copies: Available from the Society of American Gastrointestinal Endoscopic Surgeons (SAGES), 2716 Ocean Park Boulevard, Suite 3000, Santa Monica, CA 90405; Web site: www.sages.org.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on November 19, 1999. The information was verified by the guideline developer on February 15, 2000. This summary was updated by ECRI on March 22, 2004. The information was verified by the guideline developer on April 27, 2004.

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Date Modified: 11/8/2004

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