



## Complete Summary

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### GUIDELINE TITLE

Lung cancer. Practice organization

### BIBLIOGRAPHIC SOURCE(S)

Alberts WM, Bepler G, Hazelton T, Ruckdeschel JC, Williams JH Jr. Lung cancer. Practice organization. Chest 2003 Jan;123(1 Suppl):332S-7S. [12 references]  
[PubMed](#)

### GUIDELINE STATUS

This is the current release of the guideline.

## COMPLETE SUMMARY CONTENT

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

## SCOPE

### DISEASE/CONDITION(S)

Lung cancer

### GUIDELINE CATEGORY

Management

### CLINICAL SPECIALTY

Oncology  
Pathology  
Pulmonary Medicine  
Radiation Oncology  
Radiology  
Thoracic Surgery

## **INTENDED USERS**

Health Care Providers  
Nurses  
Physicians  
Social Workers

## **GUIDELINE OBJECTIVE(S)**

To provide clinically relevant, evidence-based guidelines for practice organization in the management of patients with suspected or known lung cancer

## **TARGET POPULATION**

Patients with suspected or known lung cancer

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **General**

1. Patient referral to a multidisciplinary team of physicians or experienced lung cancer management physician
2. Regular multidisciplinary conference meetings; establishment of a multispecialty lung cancer clinic
3. Expedited evaluation, diagnosis, and treatment planning
4. Specialist referral when tissue diagnosis or staging is incomplete

### **Management**

1. Identified care coordinator
2. Patients evaluated as potential clinical trial candidates
3. Management decisions guided by agreed-upon clinical practice guidelines or other evidence
4. Explicit follow-up and surveillance treatment plan; patient advised of who to contact and how to access assistance
5. Patients and their families offered clear, full, prompt, and culturally appropriate information, in both verbal and written form regarding diagnosis, treatment, and possible outcomes
6. Management care plan information relayed to all health professionals involved in the patients care
7. Significant clinical status change information relayed to all team members

## **MAJOR OUTCOMES CONSIDERED**

- Patient satisfaction
- Time from diagnosis to treatment
- Appropriateness of care

## 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

As a first step in identifying the evidence for each topic, the guideline developers sought existing evidence syntheses including guidelines, systematic reviews, and meta-analyses. They searched computerized bibliographic databases including MEDLINE, Cancerlit, CINAHL and HealthStar, the Cochrane Collaboration Database of Abstracts of Reviews of Effectiveness, the National Guideline Clearinghouse, and the National Cancer Institute Physician Data Query database. Computerized searches through July 2001 used the MeSH terms *lung neoplasms* (exploded) and *bronchial neoplasms* or text searches for lung cancer combined with review articles, practice guidelines, guidelines, and meta-analyses. They also searched and included studies from the reference lists of review articles, and queried experts in the field. An international search was conducted of Web sites of provider organizations that were likely to have developed guidelines. Abstracts of candidate English language articles were reviewed by two physicians (one with methodological expertise and one with content area expertise) and a subset was selected for review in full text. Full-text articles were reviewed again by two physicians to determine whether they were original publications of a synthesis and were pertinent to at least one of the topics of the guideline. Articles described as practice guidelines, systematic reviews, or meta-analyses were included, as were review articles that included a "Methods" section. Included articles were classified according to topic.

### NUMBER OF SOURCE DOCUMENTS

Not stated

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

Expert Consensus  
Weighting According to a Rating Scheme (Scheme Given)

### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The United States Preventive Services Task Force (USPSTF) scheme offers general guidelines to assign one of the following grades of evidence: **good**, **fair**, or **poor**. In general, **good** evidence included prospective, controlled, randomized clinical trials, and **poor** evidence included case series and clinical experience. Trials with **fair** quality of evidence, for instance, historically controlled trials or retrospective analyses, were somewhere in between. In addition to the strength of the study design, however, study quality also was considered. The United States Preventive Services Task Force approach considers well-recognized criteria in rating the quality of individual studies for a variety of different types of study design (e.g.,

diagnostic accuracy studies and case-control studies). The thresholds for distinguishing good vs fair and fair vs poor evidence are not explicit but are left to the judgment of panelists, reviewers, and members of the executive committee.

### **Assessment of the Scope and Quality of Clinical Practice Guidelines**

Clinical practice guidelines identified from the systematic search were evaluated by at least four reviewers using the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument.

## **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**

Informal Consensus

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

Each writing committee received a comprehensive list of existing systematic reviews and meta-analyses as well as guidelines published by other groups. In addition, for five key topics (prevention, screening, diagnosis, and staging [invasive and noninvasive]), new systematic reviews were undertaken (see "Description of Methods Used to Collect the Evidence" and "Description of Methods Used to Analyze the Evidence" fields). For all other topics, writing committees were responsible for identifying and interpreting studies that were not otherwise covered in existing syntheses or guidelines.

The guidelines developed by the writing committee were distributed to the entire expert panel, and comments were solicited in advance of a meeting. During the meeting, proposed recommendations were reviewed, discussed, and voted on by the entire panel. Approval required consensus, which was defined as an overwhelming majority approval. Differences of opinion were accommodated by revising the proposed recommendation, the rationale, or the grade until consensus could be reached. The evidence supporting each recommendation was summarized, and recommendations were graded as described. The assessments of level of evidence, net benefit, and grade of recommendation were reviewed by the executive committee.

## **Values**

The panel considered data on functional status, quality and length of life, tolerability of treatment, and relief of symptoms in formulating guideline recommendations. Cost was not explicitly considered in the guideline development process. Data on these outcomes were informally weighted, without the use of

explicit decision analysis or other modeling. The values placed on types of outcomes varied with clinical scenarios. For example, in some situations they considered life expectancy, such as the effects of early detection. In other situations they weighed quality of life more heavily, such as in palliative care and in interpreting small increases in life expectancy with chemotherapy for stage IV disease.

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

The guideline developer's grading scheme is a modification of the United States Preventive Services Task Force (USPSTF) grades to allow recommendations for a service when (1) evidence is poor, (2) the assessment of the net benefit is moderate to high, and (3) there is consensus among the expert panel to recommend it. This change was necessary because, unlike preventive services (i.e., the routine offering of tests or treatments to well people) in which the burden of proof is high, clinical decisions about the treatment of patients with lung cancer often must be based on an interpretation of the available evidence, even if it is of poor quality. This adaptation distinguished between interventions with poor evidence for which there is consensus (grade C) and interventions with poor evidence for which there is not consensus (grade I).

### **Grades of Recommendations and Estimates of Net Benefit**

The grade of the strength of recommendations is based on both the quality of the evidence and the net benefit of the service (i.e., test, procedure, etc).

**Grade A** The panel strongly recommends that clinicians routinely provide [the service] to eligible patients. An "A" recommendation indicates good evidence that [the service] improves important health outcomes and that benefits substantially outweigh harms.

**Grade B** The panel recommends that clinicians routinely provide [the service] to eligible patients. A "B" recommendation indicates at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.

**Grade C** The panel recommends that clinicians routinely provide [the service] to eligible patients. A "C" recommendation indicates that there was consensus among the panel to recommend [the service] but that the evidence that [the service] is effective is lacking, of poor quality, or conflicting, or the balance of benefits and harms cannot be reliably determined from available evidence.

**Grade D** The panel recommends against clinicians routinely providing [the service]. A "D" recommendation indicates at least fair evidence that [the service] is ineffective or that harm outweighs benefit.

**Grade I** The panel concludes that the evidence is insufficient to recommend for or against [the service]. An "I" recommendation indicates that evidence that [the service] is effective is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined, and that the panel lacked a consensus to recommend it.

## Net Benefit

The levels of net benefit are based on clinical assessment. Estimated net benefit may be downgraded based on uncertainty in estimates of benefits and harms.

**Substantial Benefit:** Benefit greatly outweighs harm

**Moderate Benefit:** Benefit outweighs harm

**Small/weak Benefit:** Benefit outweighs harm to a minimally clinically important degree

**None/negative Benefit:** Harms equal or outweigh benefit, less than clinically important

## COST ANALYSIS

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

## METHOD OF GUIDELINE VALIDATION

Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

After extensive review within the expert panel and executive committee, the guidelines were reviewed and approved by the American College of Chest Physicians (ACCP) Health and Science Policy Committee and then by the American College of Chest Physicians Board of Regents.

# RECOMMENDATIONS

## MAJOR RECOMMENDATIONS

Each recommendation is rated based on the levels of evidence (good, fair, poor), net benefit (substantial, moderate, small/weak, none/negative), and the grades of the recommendations (A, B, C, D, I). Definitions are presented at the end of the "Major Recommendations" field.

### Multidisciplinary Approach

1. All cancer units, treatment facilities, and centers should have a multidisciplinary lung cancer conference that meets on a regular and continuing basis. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**
2. Multidisciplinary lung cancer teams should consider establishing a multispecialty lung cancer clinic. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**

## Referral Pattern

3. All patients with known or suspected lung cancer should be referred to a multidisciplinary team of physicians or a physician with experience in the management of lung cancer. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**
4. For patients in whom tissue diagnosis or staging remains incomplete, referral should be to a specialist with expertise in these areas. When completed, the choice of referral may vary with the interventions(s) proposed. **Quality of evidence: poor; net benefit: moderate; strength of recommendation: C**
5. A multidisciplinary group is particularly valuable for management of patients who may be offered multimodality therapy. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**

## Management Decisions

6. Management decisions emanating from the multidisciplinary conference should be guided by locally agreed-on adaptations of clinical practice guidelines or other evidence. **Quality of evidence: fair; net benefit: substantial; strength of recommendation: B**
7. All patients should be evaluated as potential candidates for clinical trials and enrollment should be encouraged. **Quality of evidence: poor; net benefit: none/negative; strength of recommendation: I**
8. A specific coordinator of care should be identified to the patient and caregivers. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**

## Timetable

9. For patients with suspected lung cancer, evaluation, diagnosis, and treatment planning should be expedited. **Quality of evidence: fair; net benefit: substantial; strength of recommendation: B**

## Communication

10. Patients with lung cancer should have clear understandable information about their diagnosis, treatment, and possible outcomes. Patients and their families should be offered clear, full, prompt, and culturally appropriate information, preferably in both verbal and written form. **Quality of evidence: fair; net benefit: substantial; strength of recommendation: B**
11. All health professionals involved in the care of the patient should be aware of the management plan. This communication should include the clinical staging, what the patient has been told, and the proposed treatment plan. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**

## Ongoing Care

12. For all patients with lung cancer, explicit guidelines for follow-up and surveillance after the initial treatment should be developed. It should be clear to the patient who will be supervising their ongoing care and surveillance.

Patients should be aware of who and how to access assistance for urgent problems. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**

13. For patients with lung cancer in whom death or a significant change in clinical status occurs, the primary care physician and all management team members should be advised. Likewise, the primary care physician should notify the management team and all interested parties if a change in clinical status of the patient should occur at home. **Quality of evidence: poor; net benefit: substantial; strength of recommendation: C**

## **Definitions:**

### **Levels of Evidence**

In general, **good** evidence included prospective, controlled, randomized clinical trials, and **poor** evidence included case series and clinical experience. Trials with **fair** quality of evidence, for instance, historically controlled trials or retrospective analyses, were somewhere in between.

### **Grades of Recommendations and Estimates of Net Benefit**

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**Grade B** The panel recommends that clinicians routinely provide [the service] to eligible patients. A "B" recommendation indicates at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.

**Grade C** The panel recommends that clinicians routinely provide [the service] to eligible patients. A "C" recommendation indicates that there was consensus among the panel to recommend [the service] but that the evidence that [the service] is effective is lacking, of poor quality, or conflicting, or the balance of benefits and harms cannot be reliably determined from available evidence.

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### **Net Benefit**

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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**

These guidelines may help to establish a seamless, coordinated approach to the management of the patient with lung cancer. Such an approach is critical for state-of-the-art diagnosis, treatment, and care.

### **POTENTIAL HARMS**

Not stated

## **IMPLEMENTATION OF THE GUIDELINE**

### **DESCRIPTION OF IMPLEMENTATION STRATEGY**

1. The American College of Chest Physicians (ACCP) is developing a set of PowerPoint slide presentations for physicians to download and use for physician and allied health practitioners education programs.
2. The ACCP is developing a Quick Reference Guide (QRG) in print and PDA formats for easy reference.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

End of Life Care  
Getting Better  
Living with Illness

### IOM DOMAIN

Patient-centeredness  
Timeliness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Alberts WM, Beppler G, Hazelton T, Ruckdeschel JC, Williams JH Jr. Lung cancer. Practice organization. Chest 2003 Jan;123(1 Suppl):332S-7S. [12 references]  
[PubMed](#)

### ADAPTATION

Not applicable: Guideline was not adapted from another source.

### DATE RELEASED

2003 Jan

### GUIDELINE DEVELOPER(S)

American College of Chest Physicians - Medical Specialty Society

### GUIDELINE DEVELOPER COMMENT

The guideline development panel was composed of members and nonmembers of the American College of Chest Physicians (ACCP) who were known to have expertise in various areas of lung cancer management and care, representing multiple specialties from the following 13 national and international medical associations:

- Alliance for Lung Cancer Advocacy, Support, and Education (a patient support group)
- American Association for Bronchology
- American Cancer Society
- American College of Physicians
- American College of Surgeons Oncology Group
- American Society of Clinical Oncology
- American Society for Therapeutic Radiology and Oncology

- American Thoracic Society
- Association of Community Cancer Centers
- Canadian Thoracic Society
- National Comprehensive Cancer Network
- Oncology Nurses Society
- Society of Thoracic Surgeons

The specialties included pulmonary/respiratory medicine, critical care, medical oncology, thoracic surgery, radiation oncology, epidemiology, law, and medical ethics.

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

Funding for both the evidence reviews and guideline development was provided through an unrestricted educational grant from Bristol-Myers Squibb, which had no other role in the evidence review or guideline development process or content.

## **GUIDELINE COMMITTEE**

American College of Chest Physicians (ACCP) Expert Panel on Lung Cancer Guidelines

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

*Primary Authors:* W. Michael Alberts, MD, MBA, FCCP; Gerold Bepler, MD; Todd Hazelton, MD; John C. Ruckdeschel, MD, FCCP; James H. Williams, Jr., MD, FCCP

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

Information about potential conflicts of interest were collected from each member of the expert panel or writing committee at the time of their nomination in accordance with the policy of the American College of Chest Physicians (ACCP). Information on conflicts of interest for each panelist is listed in the guideline.

## **GUIDELINE STATUS**

This is the current release of the guideline.

## **GUIDELINE AVAILABILITY**

Electronic copies: Available to subscribers of [Chest - The Cardiopulmonary and Critical Care Journal](#).

Print copies: Available from the American College of Chest Physicians, Products and Registration Division, 3300 Dundee Road, Northbrook IL 60062-2348.

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following are available:

## Background Articles

- Alberts WM. Lung cancer guidelines. Introduction. Chest 2003 Jan;123(1 Suppl):1S-2S
- McCrory DC, Colice GL, Lewis SZ, Alberts WM, Parker S. Overview of methodology for lung cancer evidence review and guideline development. Chest 2003 Jan;123(1 Suppl):3S-6S.
- Harpole LH, Kelley MJ, Schreiber G, Toloza EM, Kolimaga J, McCrory DC. Assessment of the scope and quality of clinical practice guidelines in lung cancer. Chest 2003 Jan;123(1 Suppl):7S-20S.
- Alberg AJ, Samet JM. Epidemiology of lung cancer. Chest 2003 Jan;123(1 Suppl):21S-49S.

Electronic copies: Available to subscribers of [Chest - The Cardiopulmonary and Critical Care Journal](#).

Print copies: Available from the American College of Chest Physicians, Products and Registration Division, 3300 Dundee Road, Northbrook IL 60062-2348.

## PATIENT RESOURCES

None available

## NGC STATUS

This NGC summary was completed by ECRI on September 3, 2003. The information was verified by the guideline developer on October 1, 2003.

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