General

Guideline Title


Bibliographic Source(s)


Guideline Status

This is the current release of the guideline.


Recommendations

Major Recommendations

The grades of recommendation (1A–2C) and the approach to rating the quality of evidence are defined at the end of the "Major Recommendations" field.

General Approach to Patients

Recommendations (Adapted From First and Second Editions)

In patients with a good performance status (PS) (i.e., Eastern Cooperative Oncology Group [ECOG] level 0 or 1) and stage IV non-small cell lung cancer (NSCLC), a platinum-based chemotherapy regimen is recommended based on the survival advantage and improvement in quality of life (QOL) over best supportive care (BSC) (Grade 1A).

Remark: Patients may be treated with several chemotherapy regimens (carboplatin and cisplatin are acceptable, and can be combined with paclitaxel, docetaxel, gemcitabine, pemetrexed, or vinorelbine).

In patients with stage IV NSCLC and a good PS, two-drug combination chemotherapy is recommended.
The addition of a third cytotoxic chemotherapeutic agent is not recommended because it provides no survival benefit and may be harmful (Grade 1A).

First-line Chemotherapy

Histology-based Chemotherapy Selection

In patients receiving palliative chemotherapy for stage IV NSCLC, it is recommended that the choice of chemotherapy is guided by the histologic type of NSCLC (Grade 1B).

Remark: The use of pemetrexed (either alone or in combination) should be limited to patients with non-squamous NSCLC.

Remark: Squamous histology has not been identified as predictive of better response to any particular chemotherapy agent.

Targeted Chemotherapy

In patients with known epidermal growth factor receptor (EGFR) mutations and stage IV NSCLC, first-line therapy with an EGFR tyrosine kinase inhibitor (TKI) (gefitinib or erlotinib) is recommended based on superior response rates, progression-free survival (PFS) and toxicity profiles compared with platinum-based doublets (Grade 1A).

Use of Vascular Endothelial Growth Factor Inhibitors

Bevacizumab improves survival combined with carboplatin and paclitaxel in a clinically selected subset of patients with stage IV NSCLC and good PS (non-squamous histology, lack of brain metastases, and no hemoptysis). In these patients, addition of bevacizumab to carboplatin and paclitaxel is recommended (Grade 1A).

In patients with stage IV non-squamous NSCLC and treated, stable brain metastases, who are otherwise candidates for bevacizumab therapy, the addition of bevacizumab to first-line, platinum-based chemotherapy is a safe therapeutic option (Grade 2B).

Remark: No recommendation can be given about the use of bevacizumab in patients receiving therapeutic anticoagulation or with an ECOG PS of 2.

Maintenance Chemotherapy

Maintenance EGFR TKI Therapy

In patients with stage IV non-squamous NSCLC who do not experience disease progression after 4 cycles of platinum-based therapy (which does not include pemetrexed), treatment with switch maintenance pemetrexed is suggested (Grade 2B).

In patients with stage IV NSCLC, switch maintenance therapy with chemotherapy agents other than pemetrexed has not demonstrated an improvement in overall survival and is not recommended (Grade 1B).

In patients with stage IV non-squamous NSCLC who do not experience disease progression after 4 cycles of platinum-pemetrexed therapy, continuation pemetrexed maintenance therapy is suggested (Grade 2B).

In patients with stage IV NSCLC who do not experience disease progression after 4 cycles of platinum-based double agent chemotherapy, maintenance therapy with erlotinib is suggested (Grade 2B).

Targeted Therapy Together with Cytotoxic Chemotherapy

In patients with stage IV NSCLC the addition of cetuximab in combination with chemotherapy is suggested not to be used outside of a clinical trial (Grade 2B).

Second- and Third-line Chemotherapy
In patients with stage IV NSCLC who have good PS (ECOG 0-2), second-line treatment with erlotinib or docetaxel (or equivalent single-agent such as pemetrexed) is recommended (Grade 1A).

In patients with stage IV NSCLC who have good PS (ECOG 0-2), third-line treatment with erlotinib improves survival compared with BSC and is recommended (Grade 1B).

Remark: No recommendation can be given about the optimal chemotherapeutic strategy in patients with stage IV NSCLC who have received three prior regimens for advanced disease.

Treatment of Elderly Patients

In elderly patients (age ≥70–79 years) with stage IV NSCLC who have good PS and limited comorbidities, treatment with the two drug combination of monthly carboplatin and weekly paclitaxel is recommended (Grade 1A).

Remark: In patients with stage IV NSCLC who are 80 years or over, the benefit of chemotherapy is unclear and should be decided based on individual circumstances.

Treatment of Patients with Poor PS Health-related QOL

For patients with stage IV NSCLC with a PS of 2 in whom the PS is caused by the cancer itself, double agent chemotherapy is suggested over single agent chemotherapy (Grade 2B).

In patients with stage IV NSCLC who are an ECOG PS of 2 or greater, it is suggested not to add bevacizumab to chemotherapy outside of a clinical trial (Grade 2B).

The Role of Palliative Care in Stage IV NSCLC

In patients with stage IV NSCLC early initiation of palliative care is suggested to improve both QOL and duration of survival (Grade 2B).

Definitions:

Strength of the Recommendations Grading System

<table>
<thead>
<tr>
<th>Grade of Recommendation</th>
<th>Benefit vs. Risk and Burdens</th>
<th>Methodologic Quality of Supporting Evidence</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong recommendation, high-quality evidence, Grade 1A</td>
<td>Benefits clearly outweigh risk and burdens or vice versa</td>
<td>Consistent evidence from randomized controlled trials (RCTs) without important limitations or exceptionally strong evidence from observational studies</td>
<td>Recommendation can apply to most patients in most circumstances. Further research is very unlikely to change confidence in the estimate of effect</td>
</tr>
<tr>
<td>Strong recommendation, moderate-quality evidence, Grade 1B</td>
<td>Benefits clearly outweigh risk and burdens or vice versa</td>
<td>Evidence from RCTs with important limitations (inconsistent results, methodologic flaws, indirect or imprecise), or very strong evidence from observational studies</td>
<td>Recommendation can apply to most patients in most circumstances. Higher quality research may well have an important impact on confidence in the estimate of effect and may change the estimate</td>
</tr>
<tr>
<td>Strong recommendation, low- or very-low-quality evidence, Grade 1C</td>
<td>Benefits clearly outweigh risk and burdens or vice versa</td>
<td>Evidence for at least one critical outcome from observational studies, case series, or from RCTs with serious flaws or indirect evidence</td>
<td>Recommendation can apply to most patients in many circumstances. Higher-quality research is likely to have an important impact on confidence in the estimate of effect and may well change the estimate</td>
</tr>
<tr>
<td>Weak recommendation, high-quality</td>
<td>Benefits closely balanced with risks and burden</td>
<td>Consistent evidence from RCTs without important limitations or</td>
<td>The best action may differ depending on circumstances or patient’s or societal values.</td>
</tr>
</tbody>
</table>
**Clinical Algorithm(s)**

None provided

**Scope**

**Disease/Condition(s)**

Stage IV non-small cell lung cancer (NSCLC)

**Guideline Category**

Management

Treatment

**Clinical Specialty**

Family Practice

Internal Medicine

Oncology

Pulmonary Medicine

Radiation Oncology

Thoracic Surgery

**Intended Users**

Advanced Practice Nurses

Allied Health Personnel

Health Care Providers
Nurses
Patients
Physicians
Psychologists/Non-physician Behavioral Health Clinicians
Social Workers

**Guideline Objective(s)**
To inform the clinical decisions that must be jointly made by physicians and patients in developing diagnostic, treatment, and management plans so that they can enhance the benefits and reduce the harms associated with various options

**Target Population**
Patients with stage IV non-small cell lung cancer (NSCLC)

**Interventions and Practices Considered**

1. General approach to patients
   - Platinum-based chemotherapy
   - Two-drug combination chemotherapy
2. First-line chemotherapy
   - Histology-based chemotherapy
   - Targeted chemotherapy with epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor (TKI) (gefitinib or erlotinib)
   - Vascular endothelial growth factor inhibitors (bevacizumab) in combination with other agents
   - Maintenance chemotherapy (maintenance pemetrexed, maintenance therapy with erlotinib)
   - Cetuximab in combination with chemotherapy (only in clinical trial)
3. Second- and third-line chemotherapy
   - Erlotinib
   - Docetaxel
4. Treatment of elderly patients: two drug combination of monthly carboplatin and weekly paclitaxel
5. Treatment of patients with poor performance status
   - Double agent chemotherapy
   - Addition of bevacizumab to chemotherapy (only in clinical trial)

**Major Outcomes Considered**
- Overall survival
- Progression-free survival
- Quality of life
- Toxicity of treatment

**Methodology**

Methods Used to Collect/Select the Evidence
Description of Methods Used to Collect/Select the Evidence

A writing committee was assembled and approved according to American College of Chest Physicians (ACCP) policies as described in the methodology article of the lung cancer guidelines (see the "Availability of Companion Documents" field). This committee, in conjunction with the executive committee, formulated clinical questions in a population, intervention, comparator, and outcome (PICO) format (see Table S1 in the supporting data [see the "Availability of Companion Documents" field]), and the search and study selection was structured around these questions. The primary questions are summarized below:

Should the choice of first-line chemotherapy be based on histology in patients with advanced stage IV non-small cell lung cancer (NSCLC)?
Are epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors (TKIs) a more effective first-line treatment than standard or platinum-based chemotherapy for patients with advanced stage IV NSCLC with EGFR mutations?
Is bevacizumab with chemotherapy safe for patients with advanced stage IV NSCLC and treated brain metastases, anticoagulation, or a poor PS than chemotherapy alone?
Do patients with advanced stage IV NSCLC receiving either continuation or switch maintenance chemotherapy have better outcomes than patients receiving no maintenance chemotherapy?
Do patients with advanced stage IV NSCLC receiving continuation maintenance chemotherapy have better outcomes than patients receiving no maintenance chemotherapy?
Do patients with advanced stage IV NSCLC receiving switch maintenance chemotherapy have better outcomes than patients receiving no chemotherapy?
Do patients with advanced stage IV NSCLC receiving maintenance EGFR TKIs have better outcomes than patients receiving no chemotherapy?
Is chemotherapy with cetuximab (anti-EGFR antibodies) more effective in improving survival than chemotherapy alone for patients with advanced stage IV NSCLC?
Will second-/third-line chemotherapy lead to better survival than no second-/third-line chemotherapy for patients with advanced stage IV NSCLC with prior therapy?
Is doublet chemotherapy more effective than single-agent chemotherapy for patients >70 years of age with advanced stage IV NSCLC?
Is doublet chemotherapy more effective than single-agent chemotherapy for patients with a performance status (PS) of 2 with advanced stage IV NSCLC?
Is palliative care more effective in improving survival than no palliative care for patients with advanced stage IV NSCLC?

To update previously published guidelines for the palliative treatment of stage IV NSCLC, the writing committee repeated prior searches of MEDLINE for studies of therapy for stage IV NSCLC and performed new systematic searches of the PubMed/MEDLINE, EMBASE, and Cochrane databases up to December 2011, limited to research on humans and only articles written in English. Additional articles were identified by searching personal files and by reviewing the reference lists of included studies. Titles and, if relevant, abstracts were reviewed; articles were selected for inclusion if they addressed the population and outcomes of interest. The panel focused primarily on randomized trials, selected meta-analyses, practice guidelines, and reviews. In addition, phase 2 controlled studies that provided relevant information (e.g., for toxicity or particular patient subgroups) were included. Details of the search process are available on request.
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

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Assessment of Study Quality

Systematic reviews and meta-analyses were assessed using Documentation and Appraisal Review Tool (DART) (R. L. Diekemper; B. K. Ireland, MD; and L. R. Merz, PhD, MPH, DART, unpublished data, 2012), which was developed as an improved alternative to the existing tools for use in a clinical setting. However, this tool has been adopted for use in American College of Chest Physicians (ACCP) guidelines and consensus statements since 2011.

Quality was assessed for each study as well as for the body of relevant evidence. Based on the population, intervention, comparator, and outcome (PICO) questions and volume of available literature, multiple study designs were included in the systematic reviews of the literature. Randomized controlled trials (RCTs) primarily indicate benefits, but whenever observational studies met inclusion criteria they were often helpful in identifying harms. Observational studies were also examined when RCTs were not available to answer a particular PICO question. Allowing for multiple study designs resulted in the need for multiple quality assessment tools. Tools were chosen for assessing RCTs, observational studies, and diagnostic studies. The quality assessment tool for RCTs (R. L. Diekemper, B. K. Ireland, and L. R. Merz, unpublished data, 2012) was used for assessing the quality of RCTs, and a tool developed by the committee of the ninth edition of the Antithrombotics Guidelines was used for assessing the quality of observational studies. Diagnostic studies were assessed using the Quality Assessment Tool for Diagnostic Accuracy Studies (QUADAS).

Meta-analyses

If a recently published good-quality meta-analysis was available, then it was used to inform the recommendations. When a good-quality meta-analysis was not available, guideline authors were encouraged to perform their own meta-analyses. Meta-analyses were performed when the data were fairly homogeneous. If a study was deemed poor quality, then it was not included in the pooled analysis. Heterogeneity of the pooled results was assessed using a $\chi^2$ test and Higgins $I^2$, and a forest plot was examined for consistency of the results. The random effects model was chosen a priori as the appropriate model for pooling the data because it accounts for heterogeneity among the included studies. Results from the meta-analyses are available in the supplementary materials that can be downloaded from the Journal website under the corresponding article in the table of contents.

Methods Used to Formulate the Recommendations
Description of Methods Used to Formulate the Recommendations

Panel Composition and Responsibilities

A call for applications to serve on the 3rd edition of the American College of Chest Physicians (ACCP) Lung Cancer Guidelines (LC III) panel was put forth to the ACCP membership, to past panelists, and to other organizations that have previously endorsed earlier editions of these guidelines or appointed representatives to serve on those panels. Guiding the team was the LC III Executive Committee, composed of a Panel Chair, Vice Chair, Liaison to the Guidelines Oversight Committee (GOC), and two staff members, one serving as an adviser and the other as the lead methodologist. The GOC appointed the Liaison and the Chair, who was required to be free of conflicts of interest (COI). This Executive Committee provided general oversight and guidance; multiple reviews of research questions, article outlines, manuscripts, evidence tables, and other supporting documents; and facilitation of the final conference discussions and voting. As the scope was defined, content experts in each major area were identified to serve as topic editors and nominated by the Panel Chair to be advanced to the GOC for the requisite qualifications and COI review and approval process. These topic editors organized their research and writing teams, oversaw the work of the individual members, edited separate contributions into synthesized manuscripts, presented evidence at the final conference, and managed any of their committee members who were approved with management stipulations relevant to their COIs.

Each topic editor was initially charged with proposing individuals to support their topic committees with expertise in the content area and/or methodology. With the Chair's approval, these individuals were nominated for GOC reviews for COI and expertise. In some cases, GOC staff helped to locate additional methodologic support when it was determined to be necessary for various article committees. This resulted in an international panel of >100 multidisciplinary experts across 24 articles representing the fields of pulmonary medicine, critical care medicine, thoracic surgery, medical and radiation oncology, pathology, integrative medicine, primary care, health-care research, guidelines methodology, and epidemiology. Nineteen international organizations that are also dedicated to advancing research and practice in the area of lung cancer were invited to appoint representatives to this guideline project as adjunct participants. These individuals, unless already approved panelists, were not considered full voting members of the panel, since they had not been through the same ACCP COI review, but were included at the final conference, participated fully in the discussions, and provided external review and feedback on the manuscripts and supporting documentation.

Formulating the Recommendations

In most cases the topic editors, along with the other completely non-conflicted members of the article committee, formulated the recommendations. The summarized evidence tables and profiles (where profiles existed) provided the foundation for the recommendations. In formulating the recommendations, panelists considered not only the body of evidence but also the balance between the benefits and harms and considerations of other factors, such as cost or resource availability considerations and patient values and preferences, which might vary widely for some recommendations. These additional considerations are described in a Remarks section, which appears just below the relevant recommendation in the publication, each time the recommendation appears.

Grading the Recommendations

Recommendations that are strong must be differentiated from those that are weak or weaker. Thus, the ACCP Grading System was used (see the "Rating Scheme for the Strength of the Recommendations" field), and the wording of the recommendations is explicit. This grading system has been used since 2005 and is based on two dimensions: the balance of benefits to harms and the quality of the evidence base. If the benefits clearly outweigh the harms or the harms clearly outweigh the benefits, the strength of the recommendation is considered strong and graded as a 1. In most cases, when there is strong confidence that the benefits outweigh the harms, most patients would choose the intervention endorsed in that
recommendation. However, when the tradeoffs between desirable and undesirable consequences are not as clear, variability in patient preferences and values often becomes germane to the decision-making conversation.

Weak recommendations are those for which the benefits and harms are more equally balanced, and thus a clear choice is not as obvious; these are graded with a 2. Strong recommendations are phrased, "the panel recommends," whereas weak recommendations are phrased "the panel suggests." Accompanying these indications of the strength of a recommendation is a letter score (A, B, or C) representing the grading of the body of relevant literature.

In grading the quality of the evidence, RCTs start with a high score but might be downgraded to moderate or even low based on the following criteria: limitations in the study design or conduct of the trial, imprecision, indirectness relative to the specifics of the PICO question, inconsistency in the results, and risk of reporting bias. Observational studies, on the other hand, start off as low-level evidence but can be upgraded to moderate or even high if exceptionally large and consistent treatment effects increase confidence in the findings, especially if there is a strong dose-response gradient.

The final grades are combinations reflecting the strength of the recommendation and the quality of the evidence. Strong recommendations with high quality evidence, grade of 1A, are less common than in past editions of these guidelines, since the evidence is assessed with greater rigor for most topics, and few studies without important limitations are available.

However, recommendations that do attain this score are those for which the panel could state with confidence that new studies would be unlikely to change the direction of the effect. These recommendations apply to most patients in most circumstances. But as the grades decline, patient values and preferences likely would play an increasingly greater role in determining the best treatments or interventions for each patient.

The Final Conference

As the evidence reviews were completed and the tables and profiles prepared, the manuscripts and recommendations were drafted. Members of the article committees convened by phone or e-mail to discuss the evidence and work on drafting and grading the recommendations. These discussions generally resulted in agreement on both the quality of the evidence and strength of the recommendations.

The manuscripts and supporting tables were then reviewed by members of the Executive Committee and, after several iterations, the revised versions were shared among all panelists and the representatives of invited organizations in advance of the conference. The other panelists and representatives were asked not only to provide feedback but also to review the recommendations to identify any controversies. A recommendation was deemed to be controversial if at least one person disagreed with the wording or the grading, if there was controversy in practice, if there were wide variations in practice, or if at least one person asked that it be discussed among the broader panel and association representatives. These identified controversies composed the main agenda for the conference.

See the "Methodology for Development of Guidelines for Lung Cancer" (see the "Availability of Companion Documents" field) for more information.

Rating Scheme for the Strength of the Recommendations

Strength of the Recommendations Grading System

<table>
<thead>
<tr>
<th>Grade of Recommendation</th>
<th>Benefit vs. Risk and Burdens</th>
<th>Methodologic Quality of Supporting Evidence</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong recommendation, high-quality evidence, Grade</td>
<td>Benefits clearly outweigh risk and burdens or vice versa</td>
<td>Consistent evidence from randomized controlled trials (RCTs) without important limitations or</td>
<td>Recommendation can apply to most patients in most circumstances. Further research is very unlikely to change confidence</td>
</tr>
<tr>
<td>Grade of Recommendation</td>
<td>Benefit vs. Risk and Burdens</td>
<td>Methodologic Quality of Supporting Evidence</td>
<td>Implications</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------</td>
<td>-------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Strong recommendation, moderate-quality evidence, Grade 1B</td>
<td>Benefits clearly outweigh risk and burdens or vice versa</td>
<td>Evidence from RCTs with important limitations (inconsistent results, methodologic flaws, indirect or imprecise), or very strong evidence from observational studies</td>
<td>Recommendation can apply to most patients in most circumstances. Higher quality research may well have an important impact on confidence in the estimate of effect and may change the estimate</td>
</tr>
<tr>
<td>Strong recommendation, low- or very-low-quality evidence, Grade 1C</td>
<td>Benefits clearly outweigh risk and burdens or vice versa</td>
<td>Evidence for at least one critical outcome from observational studies, case series, or from RCTs with serious flaws or indirect evidence</td>
<td>Recommendation can apply to most patients in many circumstances. Higher-quality research is likely to have an important impact on confidence in the estimate of effect and may well change the estimate</td>
</tr>
<tr>
<td>Weak recommendation, high-quality evidence, Grade 2A</td>
<td>Benefits closely balanced with risks and burden</td>
<td>Consistent evidence from RCTs without important limitations or exceptionally strong evidence from observational studies</td>
<td>The best action may differ depending on circumstances or patient’s or societal values. Further research is very unlikely to change confidence in the estimate of effect</td>
</tr>
<tr>
<td>Weak recommendation, moderate-quality evidence, Grade 2B</td>
<td>Benefits closely balanced with risks and burden</td>
<td>Evidence from RCTs with important limitations (inconsistent results, methodologic flaws, indirect or imprecise) or very strong evidence from observational studies</td>
<td>Best action may differ depending on circumstances or patient’s or societal values. Higher-quality research may well have an important impact on confidence in the estimate of effect and may change the estimate</td>
</tr>
<tr>
<td>Weak recommendation, low- or very-low-quality evidence, Grade 2C</td>
<td>Uncertainty in the estimates of benefits, risks, and burden; benefits, risk, and burden may be closely balanced</td>
<td>Evidence for at least one critical outcome from observational studies, case series, or RCTs, with serious flaws or indirect evidence</td>
<td>Other alternatives may be equally reasonable. Higher-quality research is likely to have an important impact on confidence in the estimate of effect and may well change the estimate</td>
</tr>
</tbody>
</table>

**Cost Analysis**

American College of Chest Physicians (ACCP) guidelines include consideration of resources in recommendations under selected circumstances. If it is likely that resource considerations would impact the direction or strength of a recommendation, a search for cost-effectiveness studies may have been conducted. Most recommendations in these guidelines do not include a full assessment of resource considerations. However, they can be adapted to middle- and low-income countries using the ADAPTE strategies.

**Method of Guideline Validation**

External Peer Review

Internal Peer Review

**Description of Method of Guideline Validation**

Internal and External Peer Review

Once Executive Committee approval was received, the articles were submitted to American College of Chest Physicians (ACCP) staff for several layers of review. All reviewers were required to undergo a full
conflict of interest (COI) appraisal before being approved. In the first round of reviews, the Thoracic Oncology NetWork reviewed the content of the manuscripts and the members of the Guidelines Oversight Committee (GOC) assessed the manuscripts for adherence to the methodology and conformance with the evidence. The ACCP President also appointed members of the Board of Regents to evaluate the guidelines in depth. All comments were collated into spreadsheets to ensure that they were appropriately answered. GOC and board reviewers discussed each comment and determined which should be mandatory for the authors to amend and which were provided as suggestions for improvement. All reviews and comments were anonymous, and authors were required to respond to all mandatory issues either by revising the manuscripts or providing written justification explaining why they did not agree with the reviewers’ comments.

The revised manuscripts were submitted for round II review, simultaneously with the Journal peer review. Once the GOC and board reviewers approved the manuscripts, the ACCP President, President Elect, President Elect Designee, and Immediate Past President reviewed the guidelines. Approval was granted pending confirmation from the Board of Regents, before submission to the journal for final review by the Journal Editor. In addition to this extensive review process, which included nearly 30 individual reviewers from the ACCP leadership, external organizations were provided with opportunities to provide feedback before, during, and just after the conference. This final version was submitted for consideration for endorsement to all of the invited organizations, whether or not they sent representatives to the conference. However, once the guidelines were approved by the ACCP Board of Regents, no further changes were accepted. Organizations that provided endorsements are listed in each article.

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 treatment of patients with stage IV non-small cell lung cancer (NSCLC)

Potential Harms

Toxicity of chemotherapy

Qualifying Statements

- American College of Chest Physicians (ACCP) guidelines are intended for general information only, are not medical advice, and do not replace professional medical care and physician advice, which always should be sought for any medical condition. The complete disclaimer for this guideline can be accessed at the CHEST Web site [CHEST Web site].
Although the ACCP is moving toward the production of evidence profiles for all guideline recommendations, there were many recommendations for which profiles were not developed, mostly because of resource constraints. When possible, methodologists created evidence profiles, and all panelists were educated on how to read and interpret them. The population, intervention, comparator, and outcome (PICO)-based systematic literature review process was followed for most recommendations, but there were some that could have benefited from meta-analyses.

One limitation of all guidelines today is that they are not able to adequately address complex patients with multiple morbidities. This is largely because these patients are generally excluded from clinical trials and are often not included in observational studies. Since guidelines are reliant on evidence published in the peer-reviewed literature, the scientific foundation impedes the process of providing good guidance for these patients and is a limitation in these guidelines. Therefore, the ACCP encourages funding agencies to ensure that topics with limited evidence are addressed in future research.

Implementation of the Guideline

Description of Implementation Strategy

Dissemination and Implementation

These guidelines are widely disseminated through the CHEST journal publication, National Guideline Clearinghouse, and Guidelines International Network library. Additional clinical resources will soon be available to users of CHEST Evidence, an upcoming tool for searching the content of America College of Chest Physicians (ACCP) guidelines.

As the expanding research into diagnostic techniques and treatment options continues to evolve, the guidelines must be updated and kept current. This edition of the ACCP Lung Cancer Guidelines will be the last to be published as a complete collection, as the ACCP is now embarking on a new living guidelines model (LGM) for revising existing recommendations and developing new recommendations as the literature evolves. This will include a continual assessment of the currency of these recommendations relevant to new research studies as they are published. The review cycle for the ACCP Lung Cancer Guidelines will begin 1 year after publication unless the content experts who monitor the literature bring a recommendation or set of related recommendations to the attention of the Guideline oversight Committee (GOC), suggesting that those recommendations are in need of updating sooner. The new LGM will permit a more nimble approach to guideline development but also requires a point-of-care accessible vehicle, CHEST Evidence, for the users to readily search for the most current version. These features will be described in greater detail in upcoming publications. As a step in this direction, these guidelines will be published primarily online with a printed version of the Executive Summary, containing all of the recommendations, the introduction, and this article on methodology. All narratives for each article with their supporting tables, figures, and algorithms will be available online at journal.publications.chestnet.org.

Implementation Tools

Mobile Device Resources

Patient Resources

Quick Reference Guides/Physician Guides

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

Identifying Information and Availability

Bibliographic Source(s)


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

Date Released
2003 Jan (revised 2013 May)

Guideline Developer(s)
American College of Chest Physicians - Medical Specialty Society

Source(s) of Funding
- The development of this guideline was supported primarily by the American College of Chest Physicians (ACCP). The lung cancer guidelines conference was supported in part by a grant from the Lung Cancer Research Foundation. The publication and dissemination of the guidelines was supported in part by a 2009 independent educational grant from Boehringer Ingelheim Pharmaceuticals, Inc.
- Role of sponsors: The ACCP was solely responsible for the development of these guidelines. The remaining supporters played no role in the development process. External supporting organizations cannot recommend panelists or topics, nor are they allowed prepublication access to the manuscripts and recommendations. Further details on the Conflict of Interest (COI) Policy are available online at
See the methodology companion (see the "Availability of Companion Documents" field) for a complete discussion of the source of funding for this guideline.

Guideline Committee

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

Composition of Group That Authored the Guideline

Authors: Mark A. Socinski, MD, FCCP; Tracey Evans, MD; Scott Gettinger, MD; Thomas A. Hensing, MD, FCCP; Lecia VanDam Sequist, MD, MPH; Belinda Ireland, MD; Thomas E. Stinchcombe, MD

Financial Disclosures/Conflicts of Interest

- Conflicts of Interest (COI) grids reflecting the conflicts of interest that were current as of the date of the conference and voting are posted in the online supplementary materials.
- Financial/nonfinancial disclosures: The authors have reported to CHEST the following conflicts of interest: Dr Evans has served as a consultant to Genentech and Lilly Pharmaceuticals within the past 3 years. Dr Evans's husband serves on the speakers' board for Genentech. Dr VanDam Sequist has performed paid consulting for GlaxoSmithKline and Clovis Pharmaceuticals. Dr Socinski has performed unpaid consulting for Boehringer-Ingelheim; Daiichi Sankyo, Inc; and Merrimack Pharmaceuticals Inc. Drs Gettinger, Hensing, Ireland, and Stinchcombe have reported that no potential conflicts of interest exist with any companies/organizations whose products or services may be discussed in this article.

See the methodology companion (see the "Availability of Companion Documents" field) for a complete discussion of the conflict of interest procedures and requirements for the guideline panel.

Guideline Endorser(s)

American Association for Bronchology and Interventional Pulmonology - Medical Specialty Society

European Society of Thoracic Surgeons - Professional Association

Oncology Nursing Society - Professional Association

Society of Thoracic Surgeons - Medical Specialty Society

Guideline Status

This is the current release of the guideline.


Guideline Availability

Available to subscribers of Chest - The Cardiopulmonary and Critical Care Journal. Also available to Chest subscribers through the Chest app for iPhone and iPad.
Availability of Companion Documents

The following are available:


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

The following is also available:

- A lung cancer staging calculator is available from the Staging Lung Cancer Web site.

Patient Resources

The following are available:
