Shared Decision Making for Lung Cancer Screening: Definitions, Models, and Strategies

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Overview

1. Define shared decision making and how it relates to beneficiary requirements for screening for lung cancer from CMS.

2. Describe efforts to certify patient decision aids in the U.S.

Shared decision making and how it relates to beneficiary requirements for screening for lung cancer from CMS
Beneficiary receives a written order including the following elements:

- Shared decision making, including the use of one or more decision aids, to include:
  - Benefits and harms of screening
  - Follow-up diagnostic testing
  - Overdiagnosis
  - False positives
  - Total radiation exposure

First preventive service policy requiring shared decision making and the use of patient decision aids!

Shared decision making (SDM) is a collaborative process that allows patients and their health care providers to make health care decisions together, taking into account the best scientific evidence available, as well as the patient’s values and preferences.

SDM honors both the provider’s expert knowledge and the patient’s right to be fully informed of all care options and the potential harms and benefits. This process provides patients with the support they need to make the best individualized care decisions, while allowing providers to feel confident in the care they prescribe.
How do we enhance shared decision making?

- Patient tools – i.e., decision aids
- Clinician training
- Decision “coaches”
- Change reimbursement
- Practice redesign

SDM is a process; patient decision aids can help facilitate the process. BUT, they are not sufficient to ensure a SDM process occurs (and are not necessary for SDM to occur).
What are Patient Decision Support Technologies?

- Decision support interventions help people think about choices they face: they describe where and why choice exists.
- They provide information about options, including, where reasonable, the option of taking no action.
- These interventions help people to deliberate, independently or in collaboration with others, about options, by considering relevant attributes.
- They support people to forecast how they might feel about short, intermediate and long-term outcomes which have relevant consequences, in ways which help the process of constructing preferences and eventual decision making, appropriate to their individual situation.

Patient Decision Support Technologies

• They are **not** designed to:
  – advise people to choose one option over another
  – replace physician consultation

• Bottom line:
  – Patient decision aids prepare patients to make informed, values-based decisions with their health care providers
Decision aids have the potential to...

• Save time during the clinical encounter

• Improve quality of “informed consent”

• Decrease practice variation (and perhaps health care costs) – maybe?
From 2013 Cochrane review compared to standard care, decision aids...

**Improve Decision Quality**
- 14% knowledge
- 79% accurate risk perceptions
- 50% better match between values and choices
- Patient-practitioner communication
- 41% help undecided to decide
- 6% decisional conflict
- 33% passive participation in decision making

**Decisions**
- 20% elective surgery
- 14% PSA testing
- 18% colorectal cancer screening

No/minimal effect on anxiety, depression, regret, consult length, or health-related quality of life.

**Impact on lung cancer screening?**

Stacey, Cochrane Database of Systematic Reviews, 2013.
Efforts to certify patient decision aids in the U.S.
Why are standards needed?

• Hundreds of patient decision aids have been developed.

• Unclear whether the evidence and information provided in aids is reliable.

• Concern about conflicts of interest.
  – developers may have an interest the choices patients make.

Big Challenges with Certification

1. Who will serve as the certifying body?

2. What evidence sources will be deemed credible?
   – Not feasible for certifiers to evaluate quality of evidence.
   – Use existing guidelines, CER reviews?

3. How will conflicts of interest be addressed?
   – Developers may have an interest in “the decision.”
History of the International Patient Decision Aid Standards (IPDAS) Collaboration

• Established in 2003, to enhance the quality and effectiveness of patient decision aids by establishing a framework for improving their content, development, implementation, and evaluation.

• Processes and products:
  – **IPDAS checklist** (2003-2006) – a tool for developers and adopters of decision aids (long and short versions)
  – **Minimal standards** (2009-2013) – minimal set of standards for certification
  – **Updating the evidence** (2011-2013)
  – **Reporting standards** (underway)

Standards for Patient Decision Aids: Updating the evidence

International collaborative of SDM researchers.

- 102 researchers, 10 countries.
- 12 “state-of-the-science” reviews, plus 1 systematic review on implementation.

Inventory of aids, measures, resources or developers
https://decisionaid.ohri.ca/index.html

IPDAS Quality Dimensions

1. Systematic development process
2. Disclosing conflicts of interest
3. Information about options, harms, benefits
4. Up-to-date evidence
5. Balancing the presentation of information and options
6. Presenting probabilities
7. Clarifying values and preferences
8. Use of patient stories
9. Health literacy
10. Coaching and guidance
11. Measuring effectiveness
12. Delivering aids on the internet

http://ipdas.ohri.ca/index.html
Patient Decision Aids: State-level certification efforts

Healthier Washington initiative on Shared Decision Making

Authorizing legislation provides a heightened protection from liability for failure to provide informed consent when a shared decision making process with certified patient decision aids is used.

Washington State Health Care Authority has developed certification criteria for patient decision aids following the IPDAS standards.

18 criteria (8 additional criteria for screening/testing).

A certification process has also been developed.

Launched April 2016.
- First topic area is maternity and labor/delivery decision aids.

http://www.hca.wa.gov/hw/Pages/shared_decision_making.aspx
Patient Decision Aids
National Certification Efforts

National Quality Forum (NQF)
Decision Aids Project

Aims:
1. Build consensus around national standards for certification of decision aids.
2. Identify approaches to measure the quality of decision making and develop measures to assess the impact of shared decision making.

– Funded by the Gordon and Betty Moore Foundation
– January 2016-17. In person meeting June 22-23.

http://www.qualityforum.org/ProjectDescription.aspx?projectId=81912
An Implementation Toolkit for Lung Cancer Screening in the Primary Care Setting

Agency for Healthcare Research and Quality

Lung Cancer Screening Tools

Primary Care Physicians
Implementation Needs Assessment

• Cross-sectional survey
• Clinicians attending the Primary Care Summits sponsored by the Texas Academy of Family Physicians (Dallas and Houston), Oct/Nov, 2014.

• After USPSTF guidelines
• After MEDCAC meeting
• Before CMS draft ruling

Self-administered survey included in course evaluation materials.

Volk et al., Preventive Medicine Reports, 2015.
Characteristics of the PCPs (n=350)

- Family Medicine – >95%
- Year completed residency
  - Median: 1999
  - Range: 1954 to 2014
  - Lower 25\textsuperscript{th} percentile: 1989
  - Upper 25\textsuperscript{th} percentile: 2007
- 16.5% affiliated with residency program
- 38.0% PCMH practice
Current lung cancer screening activities (n=350 PCPs)

10% have a formal lung cancer screening program.

<table>
<thead>
<tr>
<th>Characteristics of structured program</th>
<th>Yes Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify eligible patients for LCS.</td>
<td>34.5%</td>
</tr>
<tr>
<td>Engage patients in shared/informed decision making prior to referral.</td>
<td>42.7%</td>
</tr>
<tr>
<td>Refer patients to high quality “accredited” screening programs.</td>
<td>28.0%*</td>
</tr>
<tr>
<td>Follow up with patients who have abnormal findings.</td>
<td>65.5%*</td>
</tr>
<tr>
<td>For patients diagnosed with lung cancer, manage their other health problems during treatment.</td>
<td>86.2%</td>
</tr>
<tr>
<td>Provide tobacco treatment services to smokers.</td>
<td>89.5%</td>
</tr>
</tbody>
</table>

Volk et al., Preventive Medicine Reports, 2015.

*Lower among PCPs not affiliated with residencies.
Implementation needs of primary care clinicians (n=350)

- Clarity about the guidelines/recommendations
- Eligibility, when to start/stop
- Clarity about insurance/Medicare coverage
- Finding screening centers for referral
- Patient educational tools/decision aids
- Integrating screening programs with EHRs
- Training for clinic staff in implementation
- Toolkits to help with implementation

Volk et al., Preventive Medicine Reports, 2015.
Design goals for a lung cancer screening implementation toolkit

• Provide clinicians with a concise summary of the current clinical evidence and recommendations.

• Provide a way to ensure the patient counseling and shared decision making visit is consistent with CMS beneficiary eligibility criteria.

• A high-quality patient decision aid is needed but not enough.

• Create decision support tools in multiple formats and for use in multiple ways to support deliberation between patients and clinicians.
Released March 2016

AHRQ Lung Cancer Screening Implementation Tools

For Primary Care Clinicians

Lung Cancer Screening: A Summary Guide for Primary Care Clinicians

» To be used by the health care professional in preparation for a shared decisionmaking visit regarding lung cancer screening with LDCT
» Provides an overview of lung cancer screening according to the recommendations from the U.S. Preventive Services Task Force on screening for lung cancer
» Reviews the new eligibility criteria for lung cancer screening with LDCT for Medicare beneficiaries and people with private health insurance
» Presents evidence about the potential benefits and harms of screening with LDCT

AHRQ Publication No. 16-EHC007-10

Lung Cancer Screening: A Clinician’s Checklist

» To be used by the health care team during and after the shared decisionmaking visit
» Provides step-by-step guidance on meeting the beneficiary eligibility requirements for lung cancer screening for people covered by Medicare
» May also be useful for smokers not covered by Medicare

AHRQ Publication No. 16-EHC007-11

AHRQ Lung Cancer Screening Implementation Tools

For Patients

Is Lung Cancer Screening Right for Me? A Decision Aid for People Considering Lung Cancer Screening With Low-Dose Computed Tomography

- To be used by the patient before a visit with a health care professional to discuss lung cancer screening
- Presents information about:
  - Lung cancer screening
  - Eligibility for screening
  - Potential harms and benefits of screening
  - What is important in making a decision to be screened
  - Questions to ask a health care professional about screening
  - Insurance coverage

AHRQ Publication No. 16-EHC007-12

For Patients and Their Health Care Professionals

Is Lung Cancer Screening Right for Me? A Decisionmaking Tool for You and Your Health Care Professional

» To be used by the patient and health care professional together during a visit to help guide shared decisionmaking

» Briefly summarizes the harms and benefits of lung cancer screening, important items in making a decision, and insurance coverage information

AHRQ Publication No. 16-EHC007-13

Download PDF
View HTML

AHRQ Lung Cancer Screening Tools: A Summary Guide for Primary Care Clinicians

Lung Cancer Screening With Low-Dose Computed Tomography (LDCT)

OVERVIEW OF THE EVIDENCE
Published in August 2013, the National Lung Screening Trial (NLST) was the first trial to provide evidence to support screening for lung cancer with LDCT in reducing lung cancer deaths. The NLST randomized 53,054 high-risk individuals aged 55 to 74 years to annual screening with LDCT or standard chest x-rays and followed them for a median of 6.5 years. The study found that people aged 55 to 74 years who were randomized to annual LDCT screening had a 20% lower rate of lung cancer death compared with people randomized to chest x-rays. The mortality reduction is equivalent to those achieved in lung cancer deaths prevented per 1,000 people screened with these annual LDCT scans over 6.5 years. Previous studies had shown that screening with standard chest x-rays does not reduce the mortality rate from lung cancer. As overall survival is mortality was also observed (about five in 1,000 fewer total deaths for individuals receiving LDCT rather than chest x-rays).

Importantly, harms of lung cancer screening with LDCT were also observed. These harms included a high number of false-positive scans and the low predictive value of a positive scan (only about 6 percent of positive scans led to a lung cancer diagnosis). Some people had invasive diagnostic procedures that led to major complications including infection, bleeding in the lung, or a collapsed lung. Radiation exposure from the LDCT screening and higher doses from follow-up diagnostic imaging studies were also concerns. The harms from cumulative radiation exposure such as the risk of development of new cancer are unknown. Concerns have also been raised about overdiagnosis. Data from the NLST trial suggests that 10 to 20 percent of lung cancers diagnosed by LDCT might have never been detected in the patients lifetime in the absence of screening. Screening with LDCT also disclosed incidental findings (pleural effusions, coronary artery calcifications) and other lung findings (pneumothorax, bronchial atelectasis, cardiac tumors). However, the benefits of detecting screening-detected findings other than lung cancer are unclear.

INSURANCE COVERAGE
Both private insurers and Medicare offer coverage for annual LDCT as a screening for lung cancer among eligible high-risk individuals who meet all the eligibility criteria. (See Eligibility Criteria for Lung Cancer Screening table.) Private insurance plans and Medicare cover lung cancer screening with no out-of-pocket costs.

Points to discuss with your patients:
- LDCT is the only currently approved screening approach for lung cancer.
- Smoking is not a substitute for quitting smoking.
- Smoking should be done entirely until the patient no longer believes he or she is a smoker.
- Smoking cessation counseling is an important part of lung cancer screening.
- The patient should be advised to seek help with smoking cessation.
- A complete list of smoking cessation resources can be found at the American Lung Association website.

SUMMARY OF THE EVIDENCE FROM THE NATIONAL LUNG SCREENING TRIAL

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDCT scan compared with chest x-rays in reducing deaths from lung cancer per 1,000 people screened?</td>
<td>500,000</td>
</tr>
<tr>
<td>Deaths from lung cancer during a 5-year follow-up period</td>
<td>1,800</td>
</tr>
<tr>
<td>Deaths from all cancers</td>
<td>75,000</td>
</tr>
<tr>
<td>Deaths from all causes</td>
<td>3,000</td>
</tr>
<tr>
<td>Deaths from lung cancer with LDCT</td>
<td>1,000</td>
</tr>
<tr>
<td>Deaths from lung cancer with chest x-rays</td>
<td>1,200</td>
</tr>
</tbody>
</table>

BENEFICIARY REQUIREMENTS FROM CMS
Initial LDCT Lung Cancer Screening Service: The beneficiary must receive a written order for LDCT screening during a lung cancer screening consultation and must have direct communication with a physician or qualified nonphysician practitioner. The initial screening visit must follow the established criteria and must be appropriately documented in the beneficiary’s medical record to be covered by Medicare.

- Must be a signed decisionmaking visit on one or more decision aids, and include discussion of the potential benefits and harms of screening, such as the possibility of false positive results, the risk of overdiagnosis, the life, post-positive rate, and total lifetime exposure. Shared decisionmaking is a communication process in which practitioners discuss options and work collaboratively with patients to arrive at informed decisions.
- Must include counseling on the importance of enrolling in annual lung cancer LDCT screening, the impact of enrollment on the likelihood of being able to benefit from screening due to the ability to undergo treatment, and willingness to undergo diagnostic and treatment.
- Must include counseling on the importance of not using cigarettes or other tobacco products, and must provide information on tobacco cessation interventions.

Subsequent LDCT Lung Cancer Screening Service: Although not required, a physician or qualified nonphysician practitioner may choose to provide a counseling and observed decision-making visit for subsequent screenings. The components of the visit are at the discretion of the initial visit.

The patient must receive a written order for LDCT screening at each visit.

Points to discuss with your patients:
- LDCT is the only currently approved screening approach for lung cancer.
- Smoking is not a substitute for quitting smoking.
- Smoking should be done entirely until the patient no longer believes he or she is a smoker.
- Screening is a process. An abnormal LDCT scan does not necessarily mean cancer. Additional testing may be needed to determine a diagnosis.
- Review the evidence about the benefits and harms of screening with your patients.

AHRQ Lung Cancer Screening Tools: A Summary Guide for Primary Care Clinicians

### Eligibility Criteria for Lung Cancer Screening

<table>
<thead>
<tr>
<th>Criteria according to:</th>
<th>USPSTF</th>
<th>CMS&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant group:</td>
<td>Persons with private health insurance</td>
<td>Medicare beneficiaries</td>
</tr>
<tr>
<td>Age (years):</td>
<td>55–80</td>
<td>55–77</td>
</tr>
<tr>
<td>Smoking status:</td>
<td>Current or former&lt;sup&gt;b&lt;/sup&gt; smoker</td>
<td></td>
</tr>
<tr>
<td>Smoking history:</td>
<td>30 pack-years&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Lung cancer signs:</td>
<td>Asymptomatic (no signs of lung cancer)</td>
<td></td>
</tr>
<tr>
<td>Screening frequency:</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>When to stop screening:</td>
<td>The patient exceeds upper age criterion, has not smoked for more than 15 years, and/or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative surgery</td>
<td></td>
</tr>
</tbody>
</table>

CMS = Centers for Medicare & Medicaid Services; USPSTF = U.S. Preventive Services Task Force

<sup>a</sup>CMS requires that the beneficiary receive a written order for LDCT by a physician or nonphysician practitioner, as outlined in CMS policies for initial or subsequent LDCT lung cancer screening.

<sup>b</sup>Former smokers must have quit within the last 15 years.

<sup>c</sup>[Number of pack-years = (Average number of packs smoked per day) X (Years smoked)] Note there are 20 cigarettes in 1 pack.

Evidence summary

- Side-by-side presentation of benefits
- Natural frequencies
- Common denominator
- Clear timeframe

**SUMMARY OF THE EVIDENCE FROM THE NATIONAL LUNG SCREENING TRIAL**

**Benefits:** How did LDCT scans compare with chest x-rays in reducing deaths from lung cancer per 1,000 people screened?

<table>
<thead>
<tr>
<th></th>
<th>LDCT</th>
<th>Chest x-ray</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths from lung cancer over 6.5-year followup period</td>
<td>18 in 1,000</td>
<td>21 in 1,000</td>
</tr>
<tr>
<td>Deaths from all causes over 6.5-year followup period</td>
<td>70 in 1,000</td>
<td>75 in 1,000</td>
</tr>
</tbody>
</table>

3 in 1,000 fewer deaths from lung cancer with LDCT

5 in 1,000 fewer deaths from all causes with LDCT

**Harms:** What are the harms of screening for lung cancer with LDCT?

<table>
<thead>
<tr>
<th>Of 1,000 people screened</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive (abnormal) results</td>
</tr>
<tr>
<td>False positives (“false alarms”)</td>
</tr>
<tr>
<td>Invasive diagnostic procedures (among people with a false positive result)</td>
</tr>
<tr>
<td>Major complications from invasive diagnostic procedures (e.g., infection, bleeding in lung, collapsed lung)</td>
</tr>
</tbody>
</table>

Overdiagnosis (diagnosed lung cancer that never would have progressed to cause the patient harm):

- Estimated at 10–20 percent of lung cancer cases diagnosed with LDCT

- Radiation exposure (from screening and diagnostic imaging, including cumulative exposure):
  - Harms of repeated exposure to radiation from LDCT and diagnostic imaging, such as causing new cancer, are unknown.

- Comparing sources of radiation exposure with a single LDCT scan:
  - Air travel, 10 hours: 0.04 mSv
  - Chest x-ray: 0.1 mSv
  - Screening mammogram: 0.4 mSv
  - LDCT scan: 1.4 mSv
  - Average background radiation in the United States (1 year): 3.0–5.0 mSv
  - Diagnostic CT: 7.0 mSv

mSv = millisievert, a measure of the amount of radiation absorbed by the body.

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AHRQ Lung Cancer Screening Tools: A Summary Guide for Primary Care Clinicians

QR Code plus link to Medicare approved lung cancer screening facilities.

Smoking cessation resources!

AHRQ Lung Cancer Screening Tools: A Clinician’s Checklist

This checklist was developed to help clinicians meet the Centers for Medicare & Medicaid Services (CMS) criteria for a lung cancer screening counseling and shared decisionmaking visit. All of the criteria listed below must be met for the screening to be covered as a preventive service benefit under Medicare.

Before...
The Clinical Encounter
Determine patient's eligibility. This checklist may be completed with the assistance of a nurse, physician assistant, or other medical assistant.
- Is the patient 55 to 77 years old? Yes ☐ No ☑
  (55 to 80 years old for patients with private insurance)
- Is the patient a current smoker or former smoker who has quit within the past 15 years? Yes ☐ No ☑
- Does the patient have at least a 30 pack-year smoking history? Yes ☐ No ☑
- Is the patient asymptomatic for lung cancer with no potential history of lung cancer? Yes ☐ No ☑
- Is the patient healthy enough to have lung surgery? Yes ☐ No ☑
- Is the patient willing to receive potentially curative treatment? Yes ☐ No ☑

During...
The Clinical Encounter
Complete all of the following activities.
- Documented all items in the patient's medical chart.
  - Used a decision aid
- Discussed potential benefits of lung cancer screening:
  - Reduced mortality from lung cancer
- Discussed potential harms of lung cancer screening, including:
  - False-positive results
  - Follow-up testing if an abnormality is found (and the possible complications of invasive testing)
  - Overdiagnosis
  - Total radiation exposure (screening and diagnostic testing, cumulative)
- Discussed other issues:
  - The impact of comorbidities on screening (the benefit of screening is reduced in patients with poor health)
  - The patient’s ability or willingness to undergo invasive diagnostic procedures and treatment
- Counseled about:
  - The importance of adherence to annual lung cancer screening
  - The importance of maintaining cigarette smoking abstinence or smoking cessation, as applicable
  - Tobacco cessation interventions (provided information, if appropriate)

Follows CMS eligibility criteria

After...
The Clinical Encounter
Establish the next steps.
- If the patient would like screening, provide a written order for the lung cancer screening visit with the following elements:
  - Patient’s date of birth
  - Actual pack-year smoking history
  - Current smoking status; for former smokers, the number of years since quitting
  - Statement that the patient is asymptomatic
  - National Provider Identifier (NPI) of the ordering practitioner
- If the patient declines screening, document the discussion and the patient’s decision in his or her medical record.
- If the patient is unsure about screening or wants more time, consider scheduling a follow-up visit to discuss the patient’s screening decision.
- For all patients, reinforce the importance of smoking cessation and abstinence.

Calculate Pack-Years
(20 cigarettes = 1 pack)

<table>
<thead>
<tr>
<th>Number of years smoked</th>
<th>Number of pack-years smoked per day</th>
<th>Pack-years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AHRQ Lung Cancer Screening Tools: A Clinician’s Checklist

The importance of shared decisionmaking
Lung cancer screening with low-dose computed tomography (LDCT) reduces mortality from lung cancer. There are also potential harms associated with lung cancer screening, including a high-false positive rate and the associated need for diagnostic followup, known and unknown risks of additional testing associated with incidental findings, cumulative radiation exposure, and overdiagnosis. Shared decisionmaking is a collaborative patient-centered process in which patients and clinicians make decisions together, within the context of the best evidence and recommendations and based on the patient’s values and preferences.

Tips To Promote a Shared Decision
Below is a five-step process for shared decisionmaking that includes exploring and comparing the possible benefits and harms of each option through meaningful dialogue about what matters most to the patient.

STEP 1: Seek your patient’s participation in the decisionmaking process.
STEP 2: Help your patient explore and compare the potential benefits and harms of lung cancer screening, and assess your patient’s level of understanding. (See the teach-back examples in the box to the far right.)
STEP 3: Assess your patient’s values and preferences about lung cancer screening.
STEP 4: Reach a decision about lung cancer screening with your patient.
STEP 5: Evaluate your patient’s feelings about the decision by having a followup discussion.

Talking Points
Below are specific points to address during the clinical encounter.

• Lung cancer screening can be effective if patients 1) follow the screening protocol, 2) undergo diagnostic followup procedures after a positive screening result, and 3) receive treatment, which has potential harms.
• Screening does not mean that smoking is OK. Smoking still causes lung cancer, cardiovascular disease, and other lung disease.
• Smoking can lead to early treatment that can prevent some, but not all, lung cancer deaths.
• False-positive results ("false alarms") are common, and additional scans or invasive procedures may be needed. Less commonly, major complications of invasive procedures can occur, including bleeding, infection, or a collapsed lung.
• Lung cancer screening may find lung cancer that would not have ever caused symptoms or harmed the patient in his or her lifetime if the cancer had not been found. This could lead to treatment of people who do not really need treatment.
• Screening and followup testing exposes patients to radiation. The harms associated with cumulative radiation exposure are unknown.
• Screening should stop if the patient 1) exceeds the upper age criterion, 2) no longer wants screening, 3) has a worsening health condition that limits their life expectancy or increases the risk of complications from lung surgery, or 4) has not smoked for 15 years.

Teach-Back Examples
“I know I have given you a lot of information. Tell me in your own words what you have heard.”

“What are your thoughts about lung cancer screening?”

“Let’s stop right there for a moment. What questions or comments do you have about the information I have given you?”

Ordering Information
Lung Cancer Screening with Low-Dose Computed Tomography (LDCT): Tools for Primary Care Clinicians, is a free multicomponent resource to support decisionmaking about lung cancer screening in the primary care setting. For electronic copies of this multicomponent resource, visit www.effectivehealthcare.ahrq.gov/LCS/

Referral Information
To find a radiology imaging facility that meets the CMS eligibility criteria, please visit www.cms.gov/Medicare/General-Information/Medicare-ApprovedFacilities/Lung-Cancer-Screening-Regulations.html
**AHRQ Lung Cancer Screening Tools:**
A Decision Aid for People Considering Lung Cancer Screening

[Image -4x419 to 724x434]
[Image 15x29 to 698x418]

**AHRQ Lung Cancer Screening Tools:**
A Decision Aid for People Considering Lung Cancer Screening

AHRQ Lung Cancer Screening Tools: A Decision Aid for People Considering Lung Cancer Screening

- Eligibility criteria (plus calculator)
- Facts about lung cancer
- Signs/symptoms of lung cancer
- Smoking cessation information

Possible signs and symptoms of lung cancer

- A new cough that does not go away or gets worse
- Chest pain that is often worse when you breathe deeply, cough, or laugh
- A hoarse voice
- Unexplained weight loss and loss of appetite
- Coughing up blood or rust-colored spit or phlegm
- Shortness of breath
- Infections such as bronchitis and pneumonia that do not go away or keep coming back
- Wheezing

Many patients with lung cancer do not have any symptoms when the cancer first starts. It is best to find lung cancer early before symptoms start, when the cancer is more easily treated. This is why screening is important.

If you have any signs or symptoms of lung cancer, be sure to tell your health care professional.

Remember, the best way to lower your chances of dying from lung cancer is to stop smoking.

More than 8 out of every 10 lung cancer cases in the United States are from smoking.

Lung cancer screening should not be done instead of quitting smoking. If you currently smoke, talk to your health care professional or call the nationwide quit line at

1-800-QUIT-NOW
(1-800-784-8669).

Communicating benefits and harms

- Lung cancer–specific mortality benefit
- Overall mortality benefit
- “False alarms”
- Invasive producers, and major complications

Design features – icon arrays

- Visual depiction
- Common denominator (1000)
- Clear timeframe
- Accompanying text to reinforce visual display
AHRQ Lung Cancer Screening Tools: A Decision Aid for People Considering Lung Cancer Screening

Comparing Sources of Radiation

- Air Travel 10 Hours: 0.04 mSv
- Chest X-Ray: 0.1 mSv
- Mammogram: 0.4 mSv
- LDCT for Lung Cancer Screening: 1.4 mSv
- Average Background Radiation (U.S., 1 Year): 3 to 5 mSv
- Diagnostic CT: 7 mSv

mSv = millisievert, a measure of the amount of radiation absorbed by the body.

AHRQ Lung Cancer Screening Tools:
A Decision Aid for People Considering Lung Cancer Screening

Challenges
- Consumers/patients confused about concept
- Quality of evidence has been questioned

Approach
- Communicate with text (not part of icon array)
- Provide a range of estimates (~ 1 to 2 in 10)

HARM: Overdiagnosis
Lung cancer screening may find a lung cancer that would not have ever caused symptoms or harmed the patient in his or her lifetime if the cancer had not been found. This could lead to treatment of people who do not really need treatment. At the time of diagnosis, there is no way for health care professionals to know if the lung cancer will cause health problems over a lifetime. For this reason, almost all people who are diagnosed with lung cancer are treated. Researchers found that out of every 10 people diagnosed with lung cancer after an LDCT scan, about 1 to 2 of those people are treated for cancer that likely never would have harmed them.

AHRQ Lung Cancer Screening Tools: A Decision Aid for People Considering Lung Cancer Screening

**Values clarification**

**WHAT IS IMPORTANT TO YOU WHEN DECIDING ABOUT SCREENING FOR LUNG CANCER?**
There are many things to think about when deciding whether lung cancer screening is right for you. Below is a list of questions that may help you decide.

<table>
<thead>
<tr>
<th>How important is:</th>
<th>Favors Screening</th>
<th>Favors No Screening</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Very Important</td>
<td>Not Important</td>
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<tr>
<td>Finding lung cancer early when it may be more easily treated?</td>
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<tr>
<td></td>
<td>Not Concerned</td>
<td>Very Concerned</td>
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<tr>
<td>Having a false alarm?</td>
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<td>Having other tests if you have a positive screening test?</td>
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<td>Being exposed to radiation from lung cancer screening?</td>
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<td>Being treated for lung cancer that never would have harmed you?</td>
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<tr>
<td>Being harmed by the treatments you receive for lung cancer?</td>
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</tbody>
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Guidance on deliberation

Question prompt list

TALKING WITH YOUR HEALTH CARE PROFESSIONAL ABOUT LUNG CANCER SCREENING

Making the decision to be screened for lung cancer is a personal decision. You should talk with your health care professional and make the decision based on what is right for you.

Below are some questions to think about at your visit with your health care professional. Keep in mind the possible benefits and harms that are most important to you.

- Am I eligible for lung cancer screening?
- What happens if I decide not to be screened for lung cancer?
- Does my insurance cover lung cancer screening?
- Where should I go for lung cancer screening?
- Do I have to do anything to prepare for screening?
- How soon will I know the results of screening?
- What happens if the lung cancer screening shows something of concern?
AHRQ Lung Cancer Screening Tools: A Decision Making Tool for You and Your Health Care Provider

Is lung cancer screening right for me?

A Decisionmaking Tool for You and Your Health Care Professional

If you have smoked for many years, you may want to think about lung cancer screening (testing) with low-dose computed tomography (LDCT). Before making a decision, you should think about the possible benefits and harms of lung cancer screening.

What are the possible benefits and harms of lung cancer screening?

**Benefits:**
- Greater chance of not dying from lung cancer.
- If 1,000 people are not screened for lung cancer with LDCT, 25 will die from lung cancer.
- If 1,000 people are screened once a year with LDCT for 3 years, 70 will die from lung cancer.
- This means that with LDCT screening, 5 fewer people will die from lung cancer.

**Harms:**
- False alarms and need for additional testing.
- A false alarm happens when a person has a positive screening test but does not actually have lung cancer.
- 1,000 people screened every year for 3 years, about 856 will have a false alarm.
- Of these 356 people with a false alarm, 18 will have an invasive procedure such as a biopsy in a tiny piece of lung tissue to remove to test for cancer.
- Of these 18 people, 2 will have lung cancer.

**HARM:**
- Radiation Exposure
- This includes radiation from screening plus radiation from additional testing. High doses (amounts) of radiation increase a person’s chance of developing cancer.

**HARM:**
- Overdiagnosis
- Screening may find lung cancer that would not have harmed the person in his or her lifetime.

What is important to you when deciding whether you should get lung cancer screening?

- Very Important
- Important
- Not Important
- Very Unimportant

- How important is finding lung cancer early when it may be more easily treated?
- How concerned are you about:
- Having a false alarm?
- Having other tests if you have a positive screening test?
- Being exposed to radiation from lung cancer screening?
- Being treated for lung cancer that never would have caused you harm?
- Being harmed by the treatments you receive for lung cancer?

What Other Questions Do You Have?

- Benefits of Quitting Smoking
- Lower risk for other types of cancer.
- Lower risk for heart disease, stroke, and narrowing of the blood vessels outside your heart.
- Fewer problems with breathing, such as coughing, wheezing, or shortness of breath.
- Lower risk for other lung diseases such as chronic obstructive pulmonary disease or COPD.

What is your decision about lung cancer screening?

- Screening is right for me. (Ask your health care professional about the screening center information.)
- Not right for me.
- I am unsure about screening.

Next Steps if Screening is Right for You

- Get a written order from your health care professional and go to the imaging facility listed below.

Website: https://www.effectivehealthcare.ahrq.gov/tools-and-resources/patient-decision-aids/lung-cancer-screening/
Concluding Comments

- Shared decision making is a process
  - “It’s about more than just the aid!”

- The effectiveness of patient aids in general is well-established
  - The main issue now is implementation
Concluding Comments

- Certification is gaining traction at the national level
  - All aids should follow IPDAS standards

- Implementation will require a variety of strategies, including processes to achieve the SDM visit for lung cancer screening
  - Developing the aid(s) may be the easy part.