

Lung Cancer Screening Perceptions in Both Patients and Clinician: What Do We Know?

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Financial and Research Disclosures:

- Dr. David Yankelevitz is a named inventor on a number of patents and patent applications relating to the evaluation of diseases of the chest including measurement of nodules. Some of these, which are owned by Cornell Research Foundation (CRF) are non-exclusively licensed to General Electric. As an inventor of these patents, Dr. Yankelevitz is entitled to a share of any compensation which CRF may receive from its commercialization of these patents
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Panel Members

- Wendy Everett, ScD, Avalere
- Joelle Fathi, DNP, RN, ARNP, CTTS, FAAN, GO2 Foundation for Lung Cancer
- Tessa Flores, MD, Roswell Park Comprehensive Center
- Andrea B. McKee MD, Lahey Hospital and Medical Center and Radiation Oncology Associates
- Providencia Morales, MSN, RN, RT, CCRC, Phoenix VA Medical Center

Table 1. Components of a conversation about CT screening

Topic	Sample statements
1. Quantify the benefits:	<ul style="list-style-type: none"><li data-bbox="950 204 2005 318">• "One study has shown that being screened each year for 3 years will reduce the chance you die of lung cancer over the next 7 years by about 0.3%. If 1,000 people (like you) are screened, 3 of those people will not die of lung cancer as a result." (applies only to individuals like those enrolled in the NLST study)<li data-bbox="950 339 2005 425">• "4 out of 5 people who are going to die of lung cancer will die of it even if they are screened. Screening prevents one in five deaths from lung cancer."
2. Quantify the harms:	<ul style="list-style-type: none"><li data-bbox="950 432 2005 546">• "Regarding false positives, if you are screened, we are likely to find nothing, but about one in five people have something that shows up on the scan that will lead to more scans and maybe even tests like biopsies. For every 100 times we find something, roughly 95 times it will not be dangerous, but we still have to do a work-up to evaluate what we see."<li data-bbox="950 568 2005 682">• "Regarding overdiagnosis, you are more likely to be diagnosed with and treated for lung cancer if you are screened than if you are not, because when we screen we sometimes find slow growing cancers that would not be discovered otherwise and would not lead to death if left alone. We don't know which ones these are so we have to treat all of them."<li data-bbox="950 704 2005 818">• "Regarding radiation exposure, radiation from the CT scanner does cause cancer, more so in women than in men. But in people who have smoked a lot, the benefits of screening are greater than the risks from CT radiation."
3. Emphasize not smoking:	<ul style="list-style-type: none"><li data-bbox="950 825 2005 903">• "Screening for lung cancer is not a substitute for stopping smoking. The most important thing you can do to prevent lung cancer is not smoke."
4. Point to useful tools:	<ul style="list-style-type: none"><li data-bbox="950 911 2005 1032">• If you want to gauge your risk of lung cancer, you can refer to the following sources: http://www.mskcc.org/mskcc/html/12463.cfm, http://jnci.oxfordjournals.org/content/99/9/715.long, http://www.spandidos-publications.com/ijo/28/5/1295<li data-bbox="950 1068 2005 1132">• If you want to know more about the radiation from CT scanning: http://www.radiologyinfo.org/en/safety/index.cfm?pg=sfty_xray<li data-bbox="950 1168 2005 1239">• If your institution does not have a tobacco cessation program, refer your patients to any of the free resources listed at: http://www.cdc.gov/tobacco/quit_smoking/how_to_quit/index.htm

Further explanation

- “only about 1 in 5 individuals that were, if you will, destined to die from lung cancer had their deaths prevented (that is what that relative risk reduction means). Which means that 4 out of 5 of the lung cancers in laymen’s terms snuck through and were incurable despite the routine screening.”

Harvard Medical Blog

- “To keep one person from dying of lung cancer, an estimated 320 heavy smokers need screening. Or put another way, 319 out of 320 people who get screened will not benefit from screening. And some will be harmed”

Cautionary Notes

- But screening has a dark side: research shows that over three years of annual scans, 40 percent of people will have an abnormal finding that often leads to follow-up tests such as a lung biopsy, and complications of those can be fatal, said Dr. Otis Brawley, the American Cancer Society's chief medical officer.
- "I'm committed to telling people the truth and letting people decide for themselves," Brawley said, but added that if he were a candidate for screening, "I don't think I would do it."

IMPLEMENTATION OF Lung Cancer Screening

Proceedings of a Workshop

Erin Balogh, Margie Patlak, and Sharyl J. Nass, *Rapporteurs*

National Cancer Policy Forum

Board on Health Care Services

Health and Medicine Division

CMS National Coverage Determination on Lung Cancer Screening

The MEDCAC concluded that there was low confidence that there was adequate evidence of the benefits of lung cancer screening outweighing the harms in the Medicare population (Crawford, 2014).

CMS specified a number of requirements for coverage: “We did not feel comfortable just saying that we would cover it straight out without any other criteria. Instead we have a number of specific criteria for coverage, probably more than for our typical coverage decisions,” Chin noted. For example, Medicare patients need to participate in a counseling and shared decision-making visit with their clinician prior to lung cancer screening.

Bach added that investigators from the International-Early Lung Cancer Action Program (I-ELCAP)—....concluded that LDCT screening could prevent 80 percent of deaths from lung cancer (The International Early Lung Cancer Action Program Investigators, 2006).

Bach and Wood noted that this estimate was much greater than the 20 percent mortality reduction seen with NLST.

Reconsideration

- There is nothing inherently inconsistent with a high cure rate of (80%) and that 20% reduction in mortality rate.
- How would it affect perceptions if instead of saying 4 out of 5 will die to 4 out of 5 will be cured?
- How would it affect perceptions if instead of saying 320 people need to be screened to save a life, that 20 people need to be enrolled in a screening program to save a life?

END