Lung cancer guidelines introduced

CLINICIANS SHOULD recommend annual lung-cancer screening by means of low-dose computed tomography (CT) for high-risk patients if both provider and patient meet certain conditions, according to the American Cancer Society Lung Cancer Screening Guidelines

The guidelines evolved from a systematic review of evidence related to low-dose CT lung-cancer screening undertaken by the American Cancer Society (ACS), the American College of Chest Physicians (ACCP), the American Society of Clinical Oncology (ASCO), and the National Comprehensive Cancer Network (NCCN). The analysis was launched following the November 2010 release of the initial findings from the National Cancer Institute's National Lung Screening Trial (NLST). NLST established that lung-cancer mortality in specific high-risk groups can be reduced by annual screening with low-dose CT. Participants who underwent low-dose helical CT scans had a 20% lower risk of dying from lung cancer than did participants who underwent standard chest radiographs.

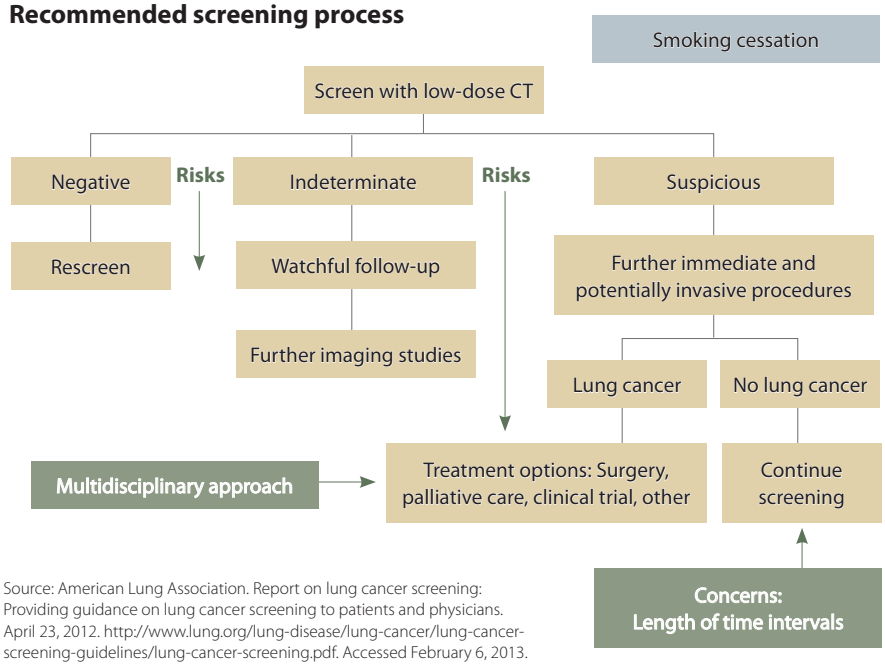
However, cautioned the authors of the new document, low-dose CT will not detect all lung cancers, nor will the imaging technique detect all lung cancers early. Moreover, not all patients who have a lung cancer detected by low-dose CT will avoid death from the disease.

Nevertheless, authors Richard Wender, MD, chair and alumni professor of the Department of Family and Community Medicine at Thomas Jefferson University Medical College in Philadelphia, Pennsylvania, and colleagues concluded that although this initial guideline will likely be revised as new data become available, sufficient evidence currently exists to support screening when the criteria presented in the recommendations are met.

Smoking cessation is still a mainstay of lung cancer prevention and treatment.

Specifically, clinicians who advise patients to undergo annual low-dose CT lung-cancer screening should have access to high-volume, high-quality lung cancer screening and treatment centers. Ideally, persons who choose to be tested should enter an organized screening program at an institution with expertise in low-dose CT screening, with access to a multidisciplinary team skilled in the evaluation, diagnosis, and treatment of abnormal lung lesions. If such a program is not available, the patient should be referred to a

Recommended screening process



Source: American Lung Association. Report on lung cancer screening: Providing guidance on lung cancer screening to patients and physicians. April 23, 2012. http://www.lung.org/lung-disease/lung-cancer/lung-cancer-screening-guidelines/lung-cancer-screening.pdf. Accessed February 6, 2013.

Chest radiography should not be used for [lung-cancer] screening, nor should screening be viewed as an alternative to smoking cessation counseling.

center that performs a reasonably high volume of lung CT scans, diagnostic tests, and lung cancer surgeries. Outside of such settings, screening risks may be substantially higher than those observed in the NLST, and screening is not recommended.

Patients can be considered candidates for annual low-dose CT lung-cancer screening if they are age 55 to 74 years; have a smoking history of at least 30 pack-years (pack-years are calculated by multiplying the number of packs of cigarettes smoked per day by the number of years a person has smoked); are current smokers or have quit smoking within the past 15 years; and have had a thorough discussion with a health care provider regarding the potential benefits, limitations, and harms associated with low-dose CT lung-cancer screening.

Due to the degree of uncertainty regarding the balance of benefits and harms of screening for persons who fall outside of the set criteria, clinicians are advised not to not discuss low-dose CT lung-cancer screening with such patients. Eligible adults who do choose to be screened should follow the NLST protocol of annual low-dose CT screening until they reach age 74 years. Chest radiography should not be used for screening, nor should screening be viewed as an alternative to smoking cessation. As the guideline authors pointed out, smoking-cessation counseling remains a high priority for clinical attention in discussions with current smokers, who should be informed of their continuing risk of lung cancer. ■

Leukemia arsenal has new drugs

PONATINIB (ICLUSIG), bosutinib (Bosulif), and omacetaxine (Synribo) are enhancing treatment for persons with certain forms of leukemia, according to Jorge Cortes, MD, deputy chair of the Department of Leukemia at The University of Texas MD Anderson Cancer Center in Houston, who led the facility's clinical trials for the three drugs.

"It's important to have as many therapies as we can, because rarely does one drug or combination succeed for all patients," explained Cortes. For example, although imatinib (Gleevec), nilotinib (Tasigna), and dasatinib (Sprycel) have shown strong efficacy in persons with Philadelphia chromosome–positive acute lymphoblastic leukemia (Ph+ALL) or chronic myelogenous leukemia (CML), up to 60% of persons with CML do not respond to these tyrosine kinase inhibitors (TKIs).

"It's important to have as many therapies as we can, because rarely does one drug or combination succeed for all patients."

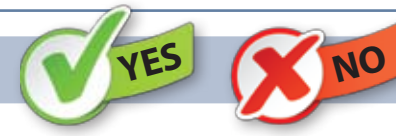
Ponatinib is expected to drastically improve outcomes for patients with CML and Ph+ALL.

Bosulif is a second-generation TKI that works as well as dasatinib and nilotinib, according to Cortes. "The significant difference is bosutinib is more specific in its activity, inhibiting [disease-causing] BCR-ABL and SCR, but not other tyrosine kinases; this leads to fewer harsh side effects."

Omacetaxine is a synthetic version of the CML drug homoharringtonine, which is derived from an evergreen tree found in China. It works in a completely different manner in that it stifles creation of the aberrant BCR-ABL protein rather than blocking the protein's activity.

"This is an important option for patients who've had several tyrosine kinase inhibitors fail and for those who cannot tolerate those drugs," observed Cortes. ■

ONA ASKS ...



The Affordable Care Act (ACA) could impact aspects of health insurance coverage for cancer as a previous condition, patients on Medicaid, routine costs in clinical trials, and prescription drugs.

Which aspect do you think will have the greatest impact?

Go online to answer our poll question. We'll publish the results and a new question in the next issue.

...AND YOU ANSWERED In the last issue, we asked if you think patients should have read/write access to their electronic health record. Interestingly, none of the responders answered "No."

Diet can thwart prostate cancer progression

MEN WITH early-stage prostate cancer may be able to inhibit tumor growth and progression by following a high-fiber diet, according to recent study results.

The research focused on inositol hexaphosphate (IP6), a major constituent of high-fiber diets. Prostate cancer occurs at similar rates in Asian and in Western cultures, yet tends to progress in the latter but not in the former. Asian diets are high in IP6, whereas Western culture diets generally are not, explained study coauthor Komal Raina, PhD, of the University of Colorado Cancer Center in Aurora, Colorado, in a statement issued by the facility.

Raina's team fed mice with transgenic adenocarcinoma of the prostate with 1%, 2%, or 4% IP6 in drinking water from age 4 weeks until age 28 weeks. Control mice received plain water.

Magnetic resonance imaging (MRI) showed a profound reduction in tumor size among the mice in the IP6 group, wrote Raina and colleagues in *Cancer Prevention Research* (2013;6[1]:40-50). IP6 also significantly decreased membrane phospholipid synthesis and glucose metabolism.

"The study's results were really rather profound," Raina emphasized. "We saw dramatically reduced tumor volumes, primarily due to the antiangiogenic effects of IP6."

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IP6, a major constituent of a high-fiber diet, was found to inhibit prostate cancer growth

Raina's team concluded that oral IP6 supplement blocks growth and angiogenesis of prostate cancer in transgenic adenocarcinoma of the mouse prostate in conjunction with metabolic events involved in tumor sustenance. This results in energy deprivation within the tumor, suggesting that IP6 has the potential to suppress growth and progression of human prostate cancer. ■

ONS addresses cancer genetics in oncology nursing

ONCOLOGY NURSES should integrate new evidence-based genetic and genomic information into practice and educate patients and the public about the potential benefits and limitations of genetics and genomic testing, asserts the Oncology Nursing Society (ONS) in a new position statement, "Oncology Nursing: The Application of Cancer Genetics and Genomics Throughout The Oncology Care Continuum," available at www.ons.org/Publications/Positions/HealthCarePolicy.

The authors affirm in the statement that advances in the understanding and application of cancer genetics (single-gene hereditary disorders) and cancer genomics (the identification of multiple genes, DNA sequences, and proteins and their interaction with one another) have dramatically changed the practice and implementation of cancer risk assessment, risk reduction, prevention, screening, diagnosis, therapeutics, and the options for personalized health care. Whole-genome sequencing, exome sequencing, and other high throughput technologies have increased the need for oncology nurses to incorporate genetic and genomic information into every aspect of oncology nursing, according to the ONS document.

Advances in cancer genetics and cancer genomics have dramatically changed practice.

The organization calls for oncology nurses to be able to demonstrate education and practice that is consistent with the American Nurses Association (ANA) *Essentials of Genetic and Genomic Nursing: Competencies, Curricula Guidelines, and Outcome Indicators,* 2nd Edition. (This and other ANA publications are available at www.nursingworld.org.) The ONS position statement offers several other recommendations for oncology nurses on the subject of cancer genetics and genomics, such as maintaining continuing education in cancer genetics and genomics to provide up-to-date care, advocating for the ethical and legal use of genetic and genomic information, and helping to reduce barriers to cancer-predisposition genetic counseling and testing in diverse populations. ■

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