Development and Evaluation of a Lung Cancer Screening Decision Aid

Katelyn Hart, DNP, ARNP-C, Cindy Toft Hansen, PhD, ARNP, AOCNP®, FAANP, FAAN, and Hsiao-Lan Wang, PhD, RN, CMSRN®, HFS

Lung cancer is the leading cause of cancer-related death (27%), with a five-year survival rate of just 18% (American Lung Association, 2015). Early-stage lung cancer is curable, but screening tools are not usually implemented in practice because of a lack of provider awareness. A lung cancer screening decision aid may increase screening use and, ultimately, reduce lung cancer deaths.

At a Glance
• Lung cancer screening decreases mortality.
• Informed decision making is crucial in optimizing screening.
• A majority of prescribers surveyed believe that the lung cancer screening decision aid described in this article is beneficial to their patients.

Katelyn Hart, DNP, ARNP-C, is a nurse practitioner at Florida Cancer Specialists and Research Institute in Brooksville and was, at the time of this writing, a DNP student in the oncology/adult-gerontology primary care concentration in the College of Nursing at the University of South Florida in Tampa; Cindy Toft Hansen, PhD, ARNP, AOCNP®, FAANP, FAAN, is an associate professor and director of oncology, and Hsiao-Lan Wang, PhD, RN, CMSRN®, HFS, is an assistant professor, both in the College of Nursing at the University of South Florida. The authors take full responsibility for the content of the article. The authors did not receive honoraria for this work. No financial relationships relevant to the content of this article have been disclosed by the authors or editorial staff. Hart can be reached at katelyn_hart@yahoo.com, with copy to editor at CJONEditor@ons.org.

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Lung cancer is the second most common cancer; however, it often is not diagnosed until the advanced stages. Early-stage lung cancer is curable, but screening tools are not usually implemented in practice because of a lack of provider awareness. A lung cancer screening decision aid may increase screening use and, ultimately, reduce lung cancer deaths.

A major portion of prescribers surveyed believe that the lung cancer screening decision aid described in this article is beneficial to their patients.

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A literature search was conducted using PubMed, Cochrane, and CINAHL® databases from January 2011 to January 2016. The Johns Hopkins Model (JHM) for the evaluation of evidence was used to evaluate the publications. Research-based articles that employed a quasi-experimental or experimental design and were determined to be of good or excellent quality, according to JHM, were included (Dearholt & Dang, 2012). Evidence-based clinical guidelines, position statements, and systematic reviews were also considered for inclusion. Ten articles regarding the use of low-dose CT for lung cancer screening and five articles pertaining to the use of decision aids were included.

Three major randomized clinical trials (Aberle et al., 2011; Infante et al., 2015; Saghir et al., 2012) studied the efficacy of using low-dose CT compared to chest radiography for the detection of lung cancer among those at high risk. The largest study with the highest level of evidence was the National Lung Screening Trial (NLST). From 2002–2009, the NLST enrolled 53,454 participants aged 55–74 years who had at least a 30 pack-year history of smoking and, if former smokers, had quit within the past 15 years (Aberle et al., 2011). Participants were randomized into the low-dose CT screening group or the chest radiography group. The NLST found that screening with low-dose CT resulted in a 20% reduction in mortality because of early detection of lung cancer (95% confidence interval [6.8, 26.7], p = 0.004). This momentous trial showed that screening those at high risk with annual low-dose CT was useful in reducing lung cancer mortality (Aberle et al., 2011). Although other studies have not been able to replicate the benefits of decision aids cited in the PubMed, Cochrane, and CINAHL® databases from January 2011 to January 2016. The Johns Hopkins Model (JHM) for the evaluation of evidence was used to evaluate the publications. Research-based articles that employed a quasi-experimental or experimental design and were determined to be of good or excellent quality, according to JHM, were included (Dearholt & Dang, 2012). Evidence-based clinical guidelines, position statements, and systematic reviews were also considered for inclusion. Ten articles regarding the use of low-dose CT for lung cancer screening and five articles pertaining to the use of decision aids were included.

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