■ Article

Planning and Implementation of Low-Dose Computed Tomography Lung Cancer Screening Programs in the United States

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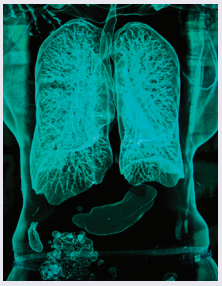

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Background: One of the largest, most expensive randomized, controlled trials, the National Lung Screening Trial, found that annual low-dose computed tomography (LDCT) scans led to a 20% reduction in lung cancer deaths.

Objectives: This study describes the characteristics and program implementation barriers experienced by LDCT screening programs in the United States.

Methods: Using a mixed-methods approach, Lung Cancer Alliance Screening Centers of Excellence were surveyed and interviewed in 2013. Representatives from 65 centers completed an electronic questionnaire, followed by in-depth interviews with 13 physicians and nurse navigators regarding their institution's screening programs.

Findings: Participants cited low patient demand and few physician referrals as barriers, but few centers reported needing additional staff or equipment. Those interviewed discussed the importance of a multidisciplinary team and overcoming barriers related to insurance reimbursement, costs, and physician knowledge to improve program implementation.

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The high incidence and mortality rates for lung cancer, coupled with a very low five-year survival rate of about 17%, demonstrate that lung cancer is a global health threat (Siegel, Naishadham, & Jemal, 2013). When diagnosed early, individuals have a greater chance of long-term survival, whereas late-stage lung cancer is difficult to treat successfully (Kathuria, Gesthaler, Spira, Brody, & Steiling, 2014; Siegel et al., 2013). However, findings from the National Lung Screening Trial (NLST) showed a 20% reduction in lung cancer–related death among those who underwent an annual screening with low-dose computed tomography (LDCT) compared to screening with a chest x-ray (National Lung Screening Trial Research Team, 2013).

In response to these results, recommendations for lung cancer screening are being refined by federal, professional, and nonprofit organizations with involvement in cancer prevention (American College of Radiology [ACR], 2013; American Lung Association, 2013; Jaklitsch et al., 2012; U.S. Preventive Services Task Force [USPSTF], 2015). USPSTF updated its screening recommendations in December 2013 to include annual LDCT screening for individuals at high risk for lung cancer (aged 55–80 years who have a smoking history of 30 or more pack-years and currently smoke or quit within the past 15 years) (USPSTF, 2015). In February 2015, the U.S. Centers for Medicaid and Medicare Services (CMS) issued its final coverage decision to offer full Medicare coverage of LDCT lung cancer screening for all