For Ex-Smokers, One CT Scan May Be Enough

By Ruth Kava — March 22, 2016

Annual low-dose computed tomography screening is currently recommended for people at high risk of lung cancer — i.e., current or ex-heavy smokers. LDCT is better at finding early lung lesions than other screening techniques such as chest X-rays. The downside to this recommendation is that many irregularities may not be cancers at all, but that won't be clear until further investigations (e.g., biopsies) are performed. Also, of course, annual screenings will subject patients to more radiation, and will increase the cost of health care.

But a new study just published in *The Lancet Oncology* journal suggests that if the first LDCT screening is negative for lung cancer, additional annual screenings may not be necessary.

Using data from the National Lung Screening Trial (NLST), Dr. Edward F. Patz Jr. from the Duke University Medical Center in Durham, NC, performed a retrospective analysis of people who were either heavy smokers (at least a 30 pack-year history of cigarette smoking) or if an ex-smoker had quit in the 15 years before their initial LDCT. Their study population included over 26,000 individuals.

After these participants had had their second LDCT screening one year later, the researchers analyzed the incidence of lung cancer in the over 19,000 whose initial screening had been negative.

Compared to all 26,000 screened individuals, these initially negative individuals had a lower incidence of lung cancer and lower lung cancer mortality. The incidence of lung cancer was 0.34 percent in the initially negative people, compared to a 1.0 percent yield in the total 26,000 individuals at the initial screening.

The researchers estimated that if the initial negative screening were not followed by another one a year later, there might be, at most, an additional 28 deaths due to lung cancer over the course of the study (approximately five years).

They concluded:

"Participants with a negative low-dose CT prevalence screen had a lower incidence of lung cancer and lung cancer-specific mortality than did all participants who underwent a prevalence screen. Because overly frequent screening has associated harms, increasing the interval between screens in participants with a negative low-dose CT prevalence screen might be
warranted."

While these results are certainly positive news for those at increased risk of lung cancer, caution is advisable, since this was a retrospective analysis. Further, a longer follow-up period will be important in determining the preferred interval between LDCT screenings. However, if further research supports these conclusions it would be a benefit for these individuals, as well as for society as a whole.

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