NELSON Study Shows CT Screening for Nodule Volume Management Reduces Lung Cancer Mortality by 26 Percent in Men

Toronto, Canada – September 25, 2018 – Findings from a recent study demonstrate that the use of computed tomography (CT) screening among asymptomatic men at high risk for lung cancer led to a 26 percent (9-41%, 95% CI) reduction in lung cancer deaths at 10 years of study follow-up (at 86% compliance). In the smaller subset of women, the rate-ratio of dying from lung cancer varied between 0.39 and 0.61 in different years of follow-up, indicating an even significant and larger reduction in lung cancer mortality than in men. Harry J. De Koning, M.D., Ph.D., Erasmus MC, Rotterdam, Netherlands, presented these findings today at the International Association for the Study of Lung Cancer’s (IASLC’s) 19th World Conference on Lung Cancer (WCLC) in Toronto, Canada.

The NELSON study was a population-based, controlled trial that enrolled 15,792 individuals, who were randomized 1:1 to either the study arm or control arm. Study arm participants were offered CT screenings at baseline, one, three and five and one-half years after randomization. No screenings were offered to control arm participants. Participants’ records were linked to national registries with 100 percent coverage regarding cancer diagnosis (Netherlands Cancer Registry), date of death (Centre for Genealogy) and cause of death (Statistics Netherlands). An expert panel reviewed 65 percent of cases. The follow-up period comprised a minimum of 10 years, unless deceased, for 93.7 percent of enrolled participants.

The results of the study showed an 86 percent average CT screening compliance rate, encompassing 29,736 scans. In 9.3 percent of participants, additional CT scans were performed within two months to estimate nodule volume doubling time, leading to an overall referral rate of 2.3 percent for suspicious nodules. Detection rates across the rounds varied between 0.8 and 1.1 percent, and 69 percent of screen-detected lung cancers were detected at Stage 1A or 1B. A total of 261 lung cancers (52 interval cancers) were detected before the fourth round of follow ups. In a subset of analyzed patients, surgical treatment was three times significantly more prevalent in study lung cancer patients than in control arm patients (67.7 percent versus 24.5 percent, p<0.001).

“These findings show that CT screenings are an effective way to assess lung nodules in people at high risk for lung cancer, often leading to detection of suspicious nodules and subsequent surgical intervention at relatively low rates and with few false positives, and can positively increase the chances of cure in this devastating disease,” said Dr. De Koning. “It is the second largest trial in the world, with an even more favorable outcome than the first trial, the NLST, showed. These results should be used to inform and direct future CT screening in the world.”
About the WCLC
The World Conference on Lung Cancer (WCLC) is the world’s largest meeting dedicated solely to lung cancer and other thoracic malignancies, attracting over 7,000 researchers, physicians and specialists from more than 100 countries. The conference will cover a wide range of disciplines and unveil research studies and clinical trial results. For more information, visit http://wclc2018.iaslc.org/. Follow the conference on social media with: #WCLC2018.

About the IASLC
The International Association for the Study of Lung Cancer (IASLC) is the only global organization dedicated solely to the study of lung cancer and other thoracic malignancies. Founded in 1974, the association's membership includes more than 7,500 lung cancer specialists across all disciplines in over 100 countries, forming a global network working together to conquer lung and thoracic cancers worldwide. The association also publishes the Journal of Thoracic Oncology, the primary educational and informational publication for topics relevant to the prevention, detection, diagnosis and treatment of all thoracic malignancies. Visit www.iaslc.org for more information. You can also follow the IASLC on Twitter, Facebook, LinkedIn and Instagram.

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