Understanding the downstream procedures and complications associated with lung cancer screening

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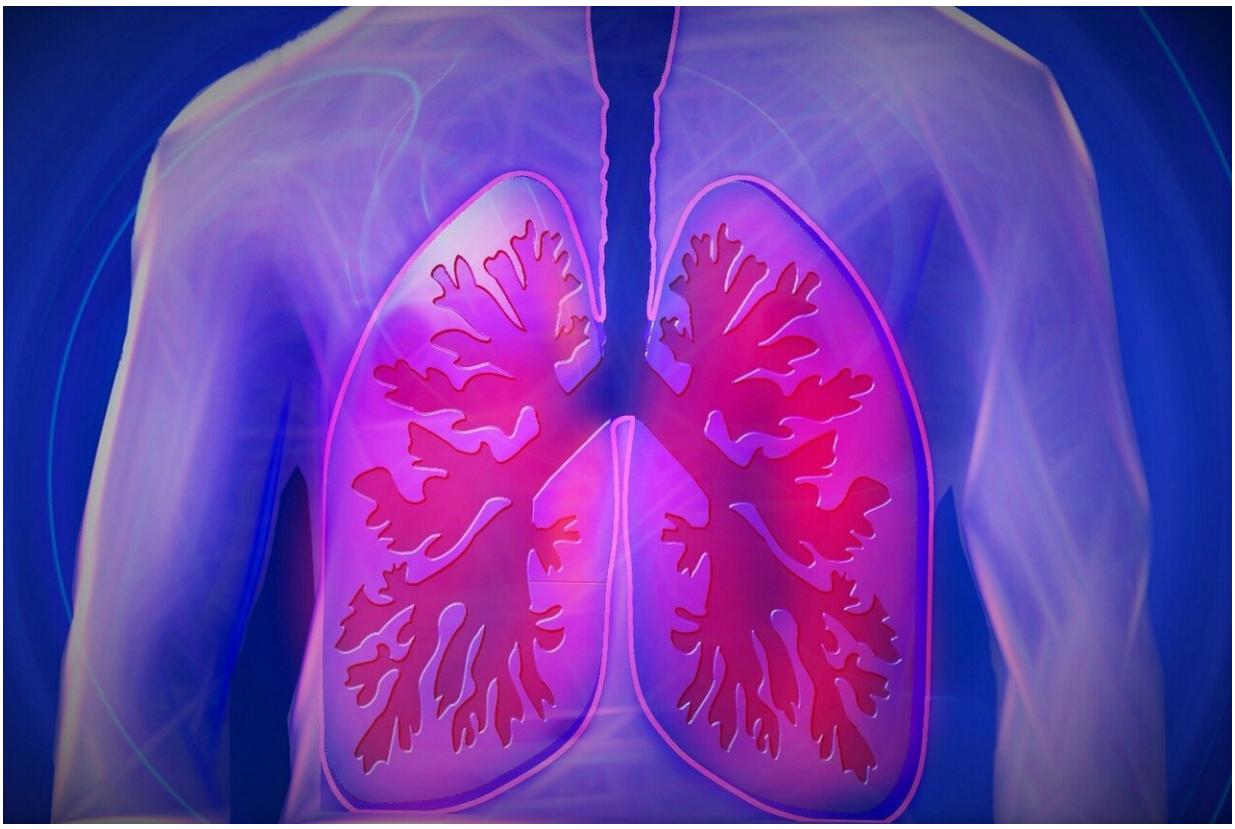

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A study of more than 9,000 persons screened for lung cancer found that rates of downstream procedures and complications associated with

screening are substantially higher in routine clinical practice than previously observed in the National Lung Screening Trial (NLST). The study is published in *Annals of Internal Medicine*.

Lung cancer screening using low dose computed tomography (LDCT) reduces lung cancer mortality and can help catch lung cancer earlier in high-risk patients. As with any cancer screening exam, lung cancer screening can also lead to downstream procedures, complications, and other potential harms. The rates of these harms and how often they may occur in clinical practice are unclear and may deviate from the NLST.

With support from the National Cancer Institute, researchers from the Perelman School of Medicine at the University of Pennsylvania in collaboration with researchers across the Population-based Research to Optimize the Screening Process (PROSPR) network studied health care data for 9,266 persons screened for lung cancer across five U.S. health care systems between 2014 and 2018 to identify rates of downstream procedures and complications associated with screening.

The authors found that among all screened patients, 15.9% had a baseline LDCT showing abnormalities. Of those patients presenting abnormalities, 9.5% were diagnosed with lung cancer within 12 months. Of all patients, 31.9% underwent downstream imaging and 2.8% underwent downstream procedures.

In patients undergoing invasive procedures after abnormal findings, complication rates were substantially higher than those in NLST.

According to the authors, their findings highlight the need for practice-based strategies to assess and improve variations in the quality of care and to prioritize LCS among those patients most likely to receive a net benefit from screening in relation to potential complications and other harms.

More information: *Annals of Internal Medicine* (2023). https://www.acpjournals.org/doi/10.7326/M23-0653