RSNA Press Release

Researchers Use AI to Predict Cancer Risk of Lung Nodules

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OAK BROOK, Ill. — An artificial intelligence (AI) tool helps doctors predict the cancer risk in lung nodules seen on CT, according to a new study published in the journal *Radiology*.

Pulmonary nodules appear as small spots on the lungs on chest imaging. They have become a much more common finding as CT has gained favor over X-rays for chest imaging.

Anil Vachani, M.D.

“A nodule would appear on somewhere between 5% to 8% of chest X-rays,” said study senior author Anil Vachani, M.D., director of clinical research in the section of Interventional Pulmonology and Thoracic Oncology at the Perelman School of Medicine, University of Pennsylvania in Philadelphia. “Chest CT is such a sensitive test, you’ll see a small nodule in upwards of a third to a half of cases. We’ve gone from a problem that was relatively uncommon to one that affects 1.6 million people in the U.S. every year.”

Dr. Vachani and colleagues evaluated an AI-based computer-aided diagnosis tool developed

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**At A Glance**

- An AI tool improves estimation of the cancer risk in lung nodules seen on chest CT.
- Chest CTs were evaluated by radiologists and pulmonologists who made estimates of malignancy risk for nodules using CT imaging data alone and with the AI tool.
- Radiologist and pulmonologist estimations were reasonably accurate but improved when the AI algorithm was added.
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