

AI can predict 10-year risk of heart attack or stroke with an X-ray scan

Researchers used nearly 150,000 chest X-rays to [train an artificial intelligence program](#) to identify patterns in the images associated with risk from major cardiovascular disease events. They tested the program on a separate group of about 11,000 people and found “significant association” between the risk level predicted by the AI and the actual occurrence of a major cardiovascular disease event.

The clinical standard for analyzing risk from cardiovascular disease is the atherosclerotic cardiovascular disease (ASCVD) risk score, a calculator that weights various patient data points that have been found to have a high association with adverse cardiovascular events, including age, blood pressure and history of smoking.

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Statin medication is recommended for people with a 10-year risk of 7.5% or higher. The AI model uses the same risk thresholds as the established risk calculator, and early findings suggest that it works just as well.

“We’ve long recognized that X-rays capture information beyond traditional diagnostic findings, but we haven’t used this data because we haven’t had robust, reliable methods,” said Dr. Jakob Weiss, the lead researcher and a radiologist affiliated with Massachusetts General Hospital and the AI in Medicine program at Harvard Medical School’s Brigham and Women’s Hospital.

Sometimes, the AI findings align with a traditional radiology reading, but other times, it picks up on things that may have been missed, he said.

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