

Using Artificial Intelligence to Predict Patient Lifespans



Computers may soon be able to predict a patient's lifespan by looking at images of their organs.

New research led by the University of Adelaide and published in the journal *Scientific Reports* uses artificial intelligence to analyse medical images of patients and predict which patients would die within five years with 69% accuracy. This is the first study of its kind to use medical images and artificial intelligence.

Lead author Dr Luke Oakden-Rayner, a radiologist and PhD student with the University of Adelaide's School of Public Health points out that the ability to predict the future of a patient can be useful and can enable doctors to tailor treatments accordingly.

To date, the ability to predict a patient's longevity has been limited primarily because of the inability to look inside the body and to measure the health of each organ. But this new research uses deep learning, a technique where computer systems learn how to both understand and analyse images.

The study was conducted with only 48 patients but findings suggest that the computer was able to recognise complex imaging appearances of diseases. Researchers are still unclear as to what the computer system saw in the images to make predictions but nevertheless, the automated systems were able to predict medical outcomes that doctors have so far been unable to do.

"Our research opens new avenues for the application of artificial intelligence technology in medical image analysis, and could offer new hope for the early detection of serious illness, requiring specific medical interventions," Dr Oakden-Rayner says.

Source: [University of Adelaide](#)

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