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News Release

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VA, DeepMind develop machine learning system to predict life-threatening disease before it appears

WASHINGTON —The U.S. Department of Veterans Affairs (VA) in partnership with [DeepMind Health](#), published results in the July 31 edition of [Nature](#), on the development of an artificial intelligence (AI) system that can forecast a deadly kidney disease in advance.

In keeping with VA's efforts to help improve the lives of Veterans through research and innovation, the breakthrough finding shows the model developed by the researchers can predict the presence of [Acute Kidney Injury \(AKI\)](#) in patients up to 48 hours in advance, which could help doctors determine treatment options to prevent further deterioration of the kidney.

AKI is notoriously difficult for doctors and nurses to detect; when it occurs, patients often deteriorate very quickly. The AI model permitted identification of over 90 percent of the most severe Acute Kidney Injury (AKI) cases 48 hours sooner than with usual care. That early detection permits improved medical care that can reduce progression to serious consequences such as need for dialysis.

"These are exciting times for research and innovation at VA," said VA Secretary Robert Wilkie. "Studies like this can have a significant effect in not only the Veteran community, but people throughout the nation."

Moving forward, the [VA Palo Alto Health Care System](#) in California will be exploring ways to bring these advances into clinical use. The work leading up to this clinical trial involves complex interdisciplinary coordination to build and integrate a user-friendly platform to assist clinicians with treatment decisions. Leveraging the latest developments in AI technology is another innovation in health care that VA leadership is using to empower clinicians with timely, actionable data that improves the lives of Veterans.

For more information regarding [VA's Office and Research and Development](#) and AKI, visit https://www.research.va.gov/topics/kidney_disease.cfm.

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