PRESS RELEASE

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ARTIFICIAL INTELLIGENCE–BASED MODEL PREDICTS PATIENTS' RISK OF ACUTE KIDNEY INJURY

Highlights

- Investigators recently developed and validated an artificial intelligence–based model that can help clinicians predict which patients in the intensive care unit are most likely to develop acute kidney injury.
- Results from the study will be presented at ASN Kidney Week 2022 November 3–November 6.

Orlando (November 3, 2022) — Acute kidney injury (AKI) is common in patients in intensive care units, and predicting which patients are at risk can help clinicians take appropriate preventive measures. Investigators recently developed an artificial intelligence–based model to help make such predictions. The research will be presented at ASN Kidney Week 2022 November 3–November 6.

Among 16,785 adults admitted to the intensive care unit in 2015–2020 in Taichung Veterans General Hospital, 30% developed AKI. An artificial intelligence–based AKI prediction model based on these patients' data (21 features including urine trend and serum creatine) was validated in patients from 4 other medical centers (2,874, 10,758, 12,299, and 12,483 patients, respectively, with a wild range of AKI incidence of 24.9–67.2%). The model was accurate at predicting AKI 24 hours ahead of time.

"Early prediction of AKI ahead of 24 hours may help clinicians initiate timely interventions to prevent AKI from happening or alleviate its severity," said corresponding author Chun-Te Huang, MD, of Taichung Veterans General Hospital, in Taiwan. "Our model could be easily shared and integrated to different hospitals to provide a real-time risk prediction in electronic health information systems."

Study: "Machine learning for development of a real time AKI risk prediction model in ICU with external validation and federated learning at five medical centers: From model development to clinical application"

ASN Kidney Week 2022, the largest nephrology meeting of its kind, will provide a forum for nephrologists and other kidney health professionals to discuss the latest findings in

research and engage in educational sessions related to advances in the care of patients with kidney diseases and related disorders.

Since 1966, ASN has been leading the fight to prevent, treat, and cure kidney diseases throughout the world by educating health professionals and scientists, advancing research and innovation, communicating new knowledge, and advocating for the highest quality care for patients. ASN has more than 20,000 members representing 132 countries. For more information, visit www.asn-online.org and follow us on Facebook, Twitter, LinkedIn, and Instagram.

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