Tempus Announces Six Abstracts Accepted for Presentation at the American Heart Association Scientific Sessions 2022

November 4, 2022

Tempus, a leader in artificial intelligence and precision medicine, today announced that six abstracts, resulting from its strategic partnership with Geisinger, were accepted for presentation at the American Heart Association (AHA) Scientific Sessions 2022, which convenes in Chicago, Illinois from November 5-7, 2022. This is the fourth year that Tempus has presented work at the AHA Scientific Sessions as Tempus continues to expand its work into the cardiology space. Of the six abstracts, three are oral presentations and the other three are poster presentations.

"We are thrilled to be presenting our research at the AHA," said Brandon Fornwalt, MD, PhD, Senior Vice President of Cardiology at Tempus. "Our six abstracts all focus on our mission to build data-driven solutions to help doctors and care teams find patients suffering from undiagnosed or undertreated cardiovascular disease."

This year, Tempus and Geisinger will share their latest collaborative scientific and clinical research findings via oral discussion and poster presentations. Highlights include:

- **Poster Presentation (#2030): An EHR-based machine learning model predicts myocardial infarction better than both an ECG-based machine learning model and the pooled cohort equations**
  - **Session Date & Time**: Sunday, November 6, 3:45 – 4:45 p.m. CT
  - **Location**: Zone 2, Science and Technology Hall, Level 3
  - **Overview**: Compared to the widely-used Pooled Cohort Equations, an EHR-based machine learning model predicted risk of future heart attacks more accurately. Moreover, this EHR-based machine learning model was superior to a neural network model that used 12-lead electrocardiogram data as input. Importantly, there was a high rate of future heart attacks in the 9% of patients that were predicted to be 'high risk' by the EHR-based model, but low risk by the Pooled Cohort Equations, suggesting substantial opportunity for improved risk-based treatment relative to the current clinical standard.

- **Oral Presentation (#235): Composite deep learning ECG algorithm trained to identify structural heart diseases can identify clinically ascertained hypertrophic cardiomyopathy**
  - **Session Date & Time**: Saturday, November 5, 4:42 – 4:52 p.m. CT
  - **Location**: McCormick South, 104B Conference Room
  - **Overview**: This study showed that Tempus published a 12-lead ECG algorithm based on deep learning to find any of seven undiagnosed structural heart diseases, called rECHOmmend, was able to accurately identify patients with hypertrophic cardiomyopathy (HCM) despite not being trained with HCM-specific labels. The study leveraged 2,898,979 ECGs collected over a 37-year period from 661,366 patients. Moreover, rECHOmmend demonstrated comparable performance to a model specifically trained to identify only HCM, and supports the concept that multiple structural heart diseases can be identified with a single prediction model to streamline clinical actionability and workflow.

- **Poster Presentation (#3080): The impact of time censoring on machine learning models which identify patients with undiagnosed cardiac amyloidosis**
  - **Session Date & Time**: Sunday, November 6, 3:45 – 4:45 p.m. CT
  - **Location**: Zone 3, Science and Technology Hall, Level 3
  - **Overview**: This study showed that Tempus' algorithm was able to effectively identify patients at high risk of undiagnosed cardiac amyloidosis. The study also demonstrated a

novel technique of excluding post-diagnosis features (i.e. clinical symptoms or findings only known after a patient receives a diagnosis of amyloidosis) from model evaluation.

To learn more, visit https://tempus.co/3SSGS5l.

About Tempus

Tempus is a technology company advancing precision medicine through the practical application of artificial intelligence in healthcare. With one of the world's largest libraries of clinical and molecular data, and an operating system to make that data accessible and useful, Tempus enables physicians to make near real-time, data-driven decisions to deliver personalized patient care and in parallel facilitates discovery, development and delivery of optimal therapeutics. The goal is for each patient to benefit from the treatment of others who came before by providing physicians with tools that learn as the company gathers more data. For more information, visit tempus.com.

About Geisinger

Geisinger is committed to making better health easier for the more than 1 million people it serves. Founded more than 100 years ago by Abigail Geisinger, the system now includes 10 hospital campuses, a health plan with more than half a million members, a Research Institute and the Geisinger Commonwealth School of Medicine. With nearly 24,000 employees and more than 1,600 employed physicians, Geisinger boosts its hometown economies in Pennsylvania by billions of dollars annually. Learn more at www.geisinger.org, or connect with us on Facebook, Instagram, LinkedIn and Twitter.