

"T'EMPUS

Tempus Announces Initial Results from its Multimodal Foundation Model Efforts for Novel and Scalable Insight Generation in Oncology

May 29, 2026

CHICAGO--(BUSINESS WIRE)--May 29, 2026-- Tempus AI, Inc. (NASDAQ: TEM), a technology company leading the adoption of AI to advance precision medicine, today announced the latest results from its mission to build Multimodal Foundation Models at the 2026 American Society of Clinical Oncology (ASCO) Annual Meeting. Tempus has been building novel biological foundation models and agentic workflows by leveraging its more than 500 petabytes of rich, molecularly grounded data—more than 45 million total de-identified patient journeys, 1.5 million with sequenced data, and over 400,000 records in cancer with full genomic, transcriptomic, imaging, and clinical data. These efforts transform this data into unified patient representations, unlocking actionable insights to speed precision medicine efforts in both the clinic and drug development.

Tempus' latest multimodal, transformer-based model was trained on 2.5 million longitudinal records encapsulating more than 250 million pages of clinical notes, 450,000 digitized medical images, and 500,000 genomic and transcriptomic sequences. By aggregating modalities derived from billion-parameter foundation models, it is designed to address thousands of prediction objectives anchored in overall survival (OS) and progression-free survival (PFS), without requiring additional data or model fine-tuning. This architecture significantly reduces the time and data required to produce hundreds of clinically relevant insights for clinical trial design, patient risk prediction, and novel multimodal diagnostics.

In a zero-shot setting without any further training, Tempus leveraged this patient trajectory model and a series of agentic workflows to unlock insights in a cohort of more than 1.2 million de-identified records with robust multimodal data.

As a primary proof of concept, Tempus' model was utilized to analyze *EGFR*-mutant NSCLC patients treated with osimertinib, the current frontline standard of care third-generation *EGFR*-inhibitor. Tempus assessed whether the model could accurately stratify response to the standard of care treatment of osimertinib in patients with known clinically actionable biomarkers like *EGFR*. This tests the model's ability to learn a composite of features that predict response outside of known biological and clinical features to identify patients more likely to experience poor response to current therapies.

Without any pre-specified training, the model demonstrated:

- **Predictive Accuracy:** A C-index of 0.802 for overall survival (p value < 0.001).
- **Significant Survival Stratification:** Hazard Ratio of 4.536 (95% CI: [3.289, 6.255]) between high- and low-risk subgroups.

The model was evaluated against a range of mutation profiles (including more than 30 *EGFR*-specific features including L858R, Exon 19 del); and the results still produced prognostic value independent of molecular and clinical subgroups, significantly stratifying the overall survival of TP53(+) patients (HR=5.96), as well as progression-free survival in patients without CNS metastasis (HR=1.94). This outcome is just one example of how Tempus' model can produce novel clinical insights, as similar results have been observed for predicting overall survival in other patient populations.

Tempus' multimodal patient trajectory models have also demonstrated substantial utility for drug development activities. For example, the models have successfully predicted outcomes of patient cohorts that mirrored pre-established clinical trials. In NSCLC, Tempus was able to assess cohorts mirroring those of practice-changing clinical trials (KEYNOTE-189, FLAURA-2, and DESTINY), and the multimodal patient trajectory model was able to zero-shot outperform standard approaches, such as Cox-PH modeling. These outcomes indicate substantial utility for biopharmaceutical developers, including the potential to assess features that may drastically impact clinical trial performance before a trial begins.

"Foundation models, combined with agentic workflows, will help unlock the full potential of precision medicine — enabling rapid hypothesis testing and dramatically compressing the time from discovery to clinical application," said Eric Lefkowsky, Founder and CEO of Tempus. "The fact that our general purpose models are already outperforming highly tuned smaller models bodes well for the ability of our novel biological multimodal foundation models to improve clinical trial design and biomarker development, empowering physicians and life science companies in the pursuit of new diagnostics and novel medicines."

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 multimodal data, and an operating system to make that data accessible and useful, Tempus provides AI-enabled precision medicine solutions to physicians 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.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended, about Tempus and Tempus' industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this press release are forward-looking statements, including, but not limited to, statements regarding expected outcomes and benefits of Tempus' suite of foundation models for insight generation into oncology. In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "going to," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will," or "would" or the negative of these words or other similar terms or expressions. Tempus cautions you that the foregoing may not include all of the forward-looking statements made in this press release.

You should not rely on forward-looking statements as predictions of future events. Tempus has based the forward-looking statements contained in this press release primarily on its current expectations and projections about future events and trends that it believes may affect Tempus' business,

financial condition, results of operations and prospects. These forward-looking statements are subject to risks and uncertainties related to: the intended use of Tempus' products and services; Tempus' financial performance; the ability to attract and retain customers and partners; managing Tempus' growth and future expenses; competition and new market entrants; compliance with new laws, regulations and executive actions, including any evolving regulations in the artificial intelligence space; the ability to maintain, protect and enhance Tempus' intellectual property; the ability to attract and retain qualified team members and key personnel; the ability to repay or refinance outstanding debt, or to access additional financing; future acquisitions, divestitures or investments; the potential adverse impact of climate change, natural disasters, health epidemics, macroeconomic conditions, and war or other armed conflict, as well as risks, uncertainties, and other factors described in the section titled "Risk Factors" in Tempus' Annual Report on Form 10-K for the year ended December 31, 2025, filed with the Securities and Exchange Commission ("SEC") on February 24, 2026, as well as in other filings Tempus may make with the SEC in the future. In addition, any forward-looking statements contained in this press release are based on assumptions that Tempus believes to be reasonable as of this date. Tempus undertakes no obligation to update any forward-looking statements to reflect events or circumstances after the date of this press release or to reflect new information or the occurrence of unanticipated events, except as required by law.

View source version on businesswire.com: <https://www.businesswire.com/news/home/20260529085034/en/>

Hanah Heintzelman
hanah.heintzelman@tempus.com

Source: Tempus AI, Inc.