

Predictive Oncology subsidiary, Helomics uses data from the 100,000 Genomes Project to better predict ovarian cancer outcomes

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Initial results demonstrate that AI models of genomic data can predict cancer outcomes. This has the potential to help personalize ovarian cancer treatments and drive the discovery of new therapies.

MINNEAPOLIS, Aug. 03, 2021 (GLOBE NEWSWIRE) -- Predictive Oncology (NASDAQ: POAI), a knowledge-driven company focused on applying artificial intelligence (“AI”) to personalized medicine and drug discovery, is excited to report initial results on AI-driven models of ovarian cancer. POAI subsidiary Helomics, working on data from the 100,000 Genomes Project in Genomics England’s National Genomic Research Library (NGRL), has developed a new AI-driven model that can predict survival rates for ovarian cancer patients, post-treatment. These AI models have the potential to improve treatment paths for ovarian cancer and drive the development of new therapies. The results of the study will be available as a preprint on Biorxiv in the late summer.

Helomics used a machine learning approach to extract the key genomic features from nearly 500 ovarian cancer participants of the 100,000 Genomes Project. The AI model learns patterns in the genetic mutations of patients’ tumors, to then predict their survival rates post-treatment, with close to 70% accuracy. Helomics is now working to refine their AI models with the aim of even greater accuracy for predictions.

These developments represent an important step forward in oncology. There are currently no biomarkers for prognosis and treatment responses in ovarian cancer, making it challenging to tailor treatments to individual patients. Doctors must choose from a set ‘menu’ of drugs and therapies that have not changed much in the last two decades, despite extensive research efforts. The Helomics AI model has the potential to be used to narrow down ovarian cancer treatment choices as it predicts patients’ responses to specific therapies, improving patients’ prognosis and offering clinicians a more efficient and cost-effective precision medicine approach to treatment. Importantly, these models also provide doctors and scientists better insights into which genes are involved in response to treatment, allowing for the development of new precision medicines.

J. Melville Engle, CEO of Predictive Oncology Inc, said: “We are excited to be able to show the impact of using our AI and machine learning approach that leverages complex genomic data to deliver improved, more personalised therapy for ovarian cancer that, worldwide, affects over 300,000 women. We are continuing to refine these AI models with the goal of providing highly-accurate predictive models of ovarian cancer to help oncologists and drive the development of the next generation precision ovarian cancer therapies.”

Parker Moss, Chief Commercial & Partnership Officer at Genomics England, said: “We’re delighted that our multi-year partnership with Helomics has resulted in this important research into ovarian cancer – a disease with significant unmet need. We are incredibly grateful to the around 900 participants in the 100,000 Genomes Project who suffer from ovarian cancer and have made their data available for this ground-breaking research. Genomics England is pleased to have contributed to Helomics’ work through our ovarian cancer dataset, as this has allowed them to validate their discoveries and create predictive models that will advance drug discovery and support ovarian cancer patients and their doctors.”

About Helomics

About Predictive Oncology Inc.

Predictive Oncology (NASDAQ: POAI) operates through three segments (Skyline, Helomics and Soluble Biotech), which contain four subsidiaries: Helomics, TumorGenesis, Skyline Medical and Soluble Biotech.

Helomics applies artificial intelligence to its rich data gathered from patient tumors to both personalize cancer therapies for patients and drive the development of new targeted therapies in collaborations with pharmaceutical companies. TumorGenesis Inc. specializes in media that help cancer cells grow and retain their DNA/RNA and proteomic signatures, providing researchers with a tool to expand and study cancer cell types found in tumors of the blood and organ systems of all mammals, including humans. Skyline Medical markets its patented and FDA cleared STREAMWAY System, which automates the collection, measurement, and disposal of waste fluid, including blood, irrigation fluid and others, within a medical facility, through both domestic and international divisions. Soluble Biotech is a provider of soluble and stable formulations for proteins including vaccines, antibodies, large and small proteins, and protein complexes.

About Genomics England

Genomics England works with the NHS to bring forward the use of genomic healthcare and research in Britain to help people live longer, healthier lives. It was launched by the UK’s Department of Health and Social Care in 2013 to deliver the 100,000 Genomes Project, a ground-breaking initiative to demonstrate how genomic insights can help doctors across the NHS, and to build a foundation for the future by assembling a unique dataset. The Project provides evidence of the benefits of whole genome sequencing in routine healthcare, through addressing the unmet clinical need of pre-defined rare diseases and cancers. The ultimate aim is to transform healthcare delivery in the NHS through the NHS Genomic Medicine Service.

Genomics England is now expanding its impact. Our next chapter involves working with patients, doctors and scientists to improve genomic testing in the NHS and help researchers access the health data and technology they need to make new medical discoveries and create more effective, targeted medicines for everybody.

Forward-Looking Statements

Certain Matters discussed in this release contain forward-looking statements. These forward-looking statements reflect our current expectations and projections about future events and are subject to substantial risks, uncertainties and assumptions about our operations and the investments we make. All statements, other than statements of historical facts, included in this press release regarding our strategy, future operations, future financial position, future revenue and financial performance, projected costs, prospects, plans and objectives of management are forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “would” “target” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Our actual future performance may materially differ from that contemplated by the forward-looking statements because of a variety of factors including, among other things, factors discussed under the heading “Risk Factors” in our filings with the SEC. Except as expressly required by law, the Company disclaims any intent or obligation to update these

forward-looking statements.

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