

Revolutionizing Cancer Care: BRECISE Project Launches in Madrid to Pioneer Precision Oncology

Madrid, Spain – March 20th-21st, 2024

The battle against cancer is about to take a transformative leap forward with the launch of the **BRECISE** project, a cutting-edge five-year research initiative co-funded by the Innovative Health Initiative (IHI) and private industry under the Horizon Europe program. BRECISE aims at accelerating the clinical validation and implementation of Next-Generation Sequencing (NGS)-based, multi-modality Artificial Intelligence (AI) biomarkers. The project commenced on January 1, 2025, and will officially kick off in Madrid on Thursday, March 20, 2024, with events continuing through Friday, March 21.

BRECISE aims to revolutionize the diagnosis, treatment selection, and disease monitoring of **prostate and bladder cancer** by addressing key regulatory and technical challenges. The project will establish a systematic integrated approach to biomarker development aiming at delivering clinical applications, ultimately improving patient outcomes and healthcare efficiency.

A New Era in Precision Oncology

Prostate and bladder cancers affect millions of patients globally, yet validated biomarkers that can reliably predict treatment response, disease progression, and therapy resistance remain scarce in clinical practice. BRECISE seeks to change this by integrating cutting-edge technologies such as **Next-Generation Sequencing (NGS)**, **Artificial Intelligence (AI)**, and **ex vivo drug testing** to refine personalized treatment pathways.

Dr. Ralf Hoffmann, Principal at Philips Research in Eindhoven, The Netherlands, and industry project leader, emphasized the transformative potential of BRECISE:

"BRECISE represents a paradigm shift in precision oncology and cancer care. By using advanced NGS technologies to validate biomarker models, we can enable personalised treatment for prostate and bladder cancer patients; providing more accurate diagnoses, predict treatment responses, and ultimately improve patient outcomes. By moving beyond trial-and-error treatment approaches, we are paving the way for more precise and individualised care. This project will integrate clinical data and biomarker insights into a comprehensive platform for revolutionising cancer treatments. This approach not only improves patient outcomes but also optimises healthcare resources by optimising treatment strategies. BRECISE is bringing the future of cancer care into the present."

Gary McMannus, Research Project Manager at South East Technological University and BRECISE coordinator, highlighted the importance of BRECISE:

"The BRECISE project strengthens Europe's position as a leader in innovative cancer research. By advancing biomarker-driven precision medicine, we are benefiting patients, healthcare systems, and society as a whole. With experts from both clinical and technical fields working together, we are eager to see how our discoveries can improve patient outcomes, reduce unnecessary treatments, and side effects."

In the view of **Dr. Maria Eugenia (Xenia) BELTRAN**, Senior Project Manager at Bridg-OU, and deputy coordinator of the project, added:

"The integration of multi-modal data—genomic, transcriptomic, and clinical—will allow us to develop more precise and personalized treatment strategies. BRECISE is not just about technology; it's about creating a framework that can be adopted across healthcare systems benefiting patients care. By bringing together key partners from the private and public sector, we can accelerate the development of advanced cancer biomarkers by leveraging the latest innovations, cutting-edge technologies, and industry best practices."

The Role of Policy and Collaboration

The success of BRECISE will depend not only on technological innovation but also on the alignment of policy and healthcare systems to facilitate the integration of these advancements into routine care. **Denis Horgan**, Executive Director, European Alliance for Personalised Medicine a leading voice in health policy, highlighted the importance of collaboration:

"For projects like BRECISE to succeed, it is crucial that policymakers, healthcare providers, and industry leaders work together. The European Union has a unique opportunity to lead the way in precision oncology, but this requires a coordinated effort to ensure that these innovations are accessible to all patients, regardless of where they live."

Key Objectives and Impact

BRECISE is structured around four core objectives:

1. **Clinical Validation of Biomarkers:** Conducting multi-center clinical studies to validate biomarkers for risk stratification, treatment response, and disease progression in prostate and bladder cancer.
2. **Integration of NGS and AI:** Developing AI-driven biomarker models to improve diagnostic accuracy and predictive capabilities.
3. **Ex Vivo Tumour Testing:** Utilizing micro-tumour and organoid models to assess real-time drug responses before treatment initiation.
4. **Regulatory and Market Adoption:** Ensuring compliance with the European Health Data Space, Artificial Intelligence Act, and Medical Device Regulation to facilitate biomarker integration into healthcare.

The project will have a profound impact on both patients and healthcare systems:

- **For Patients:** More accurate and early diagnoses, avoiding unnecessary treatments, and earlier detection of treatment resistance, enabling timely therapeutic changes.
- **For Healthcare Systems:** Optimized treatment allocation, reducing costs associated with ineffective therapies, and standardized biomarker validation to support the integration of precision medicine into routine care.
- **For Policymakers and Industry:** Regulatory alignment with EU healthcare frameworks, strengthening European leadership in precision oncology, and fostering public-private collaborations for sustainable innovation.

A Collaborative Effort

Led by Philips and the South East Technological University, BRECISE brings together a consortium of 12 private, 15 public, and 3 associate partners; linking academic institutions, research centers, healthcare providers, industry leaders, and patient organizations to ensure a holistic and multi-stakeholder approach to biomarker validation. This collaborative effort will be critical in translating scientific discovery into clinical impact.

Looking Ahead

The launch of BRECISE in Madrid marks the beginning of a new chapter in the fight against cancer. By establishing biomarker-driven solutions for oncology, the project aims to look forward the adoption of prostate and bladder biomarkers, integrating precision medicine into routine care, setting new benchmarks for personalized cancer treatment.

Join us in Madrid to witness the future of cancer care.

For more information please visit <https://projekti.vrisak.com/brecise/#> or <https://brecise.eu/>.
For project queries, please link to us through contact@brecise.eu

Website: <https://brecise.eu/>

Notes for Editors:

About BRECISE:

BRECISE is a multidisciplinary research initiative co-funded by the Innovative Health Initiative (IHI) under the Horizon Europe program. The project aims to accelerate the clinical validation and implementation of NGS-based, multi-modality AI biomarkers to improve diagnosis, treatment selection, and disease monitoring in prostate and bladder cancer.

About the Innovative Health Initiative (IHI):

The IHI is a public-private partnership that supports collaborative research and innovation in health. It receives funding from the European Union's Horizon Europe research and innovation program, as well as contributions from industry partners.

About Horizon Europe:

Horizon Europe is the European Union's key funding program for research and innovation, with a budget of €95.5 billion for the period 2021-2027. It aims to drive scientific excellence, tackle global challenges, and foster industrial competitiveness.



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