

Introducing PathExplore, a Game-Changing AI Tool for In-Depth Tumor Microenvironment Exploration

April 6, 2023 by Bohdana Sokolova

As we continue to make progress in oncology therapeutics, researchers are constantly seeking ways to improve patient outcomes by understanding the complexities of the tumor microenvironment (TME). In response to this demand, PathAI, an innovator in AI-powered pathology, has announced the launch of PathExplore™, an innovative solution that could potentially propel a new era of precision medicine.

PathExplore™ is the world's first structured, standardized, and scalable panel of human interpretable features (HIFs) that offers unprecedented resolution of the TME from H&E whole-slide images. Powered by artificial intelligence, PathExplore™ spatially characterizes the TME with single-cell resolution, providing oncology drug developers with invaluable insights to inform the next phase of targeted oncology drug development.

The launch of PathExplore™ comes at a critical time in oncology research. Although significant strides have been made in the past decade, many cancer patients still don't respond to available treatments, and others are ineligible for potentially life-changing therapies due to a lack of actionable insights into their disease. By enabling researchers to identify novel spatial signatures predictive of outcomes, PathExplore™ could help drive advances in cancer therapy development, as Andy Beck, M.D., Ph.D., CEO and co-founder of PathAI, explains.

One of the biggest challenges faced by researchers in the analysis of the TME is finding a balance between resolution and scalability. PathExplore™ eliminates this trade-off by offering a scalable platform capable of analyzing the TME with deep resolution, deployable on a massive number of patient samples. The platform produces a panel of over 600 quantitative HIFs, enabling standardized and reproducible measures across cell types and tissue regions, as well as overlay visualizations delivered on PathAI's AISight™ Translational Research platform.

Trained using more than 6.5 million pathologist annotations on 66,000 slides, PathExplore™ is available for various types of cancer, including breast, colorectal, gastric, melanoma, non-small cell lung, pancreatic, prostate, and renal cell carcinoma. The platform is expected to expand to other indications, such as ovarian and bladder cancers, later this year. This standardized, structured quantification of the

TME across disease areas allows for reproducible, comparable, and scalable analysis across drug programs.

Mike Montalto, Ph.D., chief scientific officer at PathAI, believes that PathExplore™ will significantly change the research landscape, allowing for more open exploration and discovery of relationships that were previously unidentifiable through human analysis alone. The level of granularity, speed, efficiency, and scale provided by the platform promises to revolutionize our understanding of the tumor microenvironment.

To learn more about PathExplore™, visit www.PathExplore.com or check out PathAI's booth 315 at the American Association for Cancer Research (AACR) from April 14th to 19th in Orlando, FL.

- PathAI