

New Clinical Test Developed to Accurately Classify Pleural Effusions

Precision Epigenomics presents EPISEEK®-MPE clinical data at Association for Molecular Pathology (AMP)

TUCSON, AZ, UNITED STATES, November 18, 2025 /EINPresswire.com/ -- [Precision Epigenomics](#), a molecular diagnostics company developing next-generation epigenetic assays, today announced new results from a study conducted in collaboration with investigators at the University of Arizona and Midwestern University demonstrating performance of the EPISEEK®-MPE assay. The findings were presented in a scientific poster at the recent Association for Molecular Pathology (AMP) meeting in Boston, Mass.

When a patient presents with pleural effusion, or 'water on the lung', determining whether the effusion is malignant or not is critical to clinical management, yet cytology—the current standard-of-care—lacks sensitivity, and is widely known to miss ~50% cases (Gurung, Chest 2022). EPISEEK-MPE was developed to address this unmet medical need and provide pulmonologists and care teams with more accurate, timely information to inform treatment decisions.

The presented study evaluated 191 patients undergoing thoracentesis and compared EPISEEK-MPE performance with cytology and clinical diagnosis.

- EPISEEK-MPE accurately identified all clinically benign cases (63/63), demonstrating the test's specificity in this population for testing at presentation.
- EPISEEK-MPE detected malignancy-associated methylation in 50% of cases deemed inconclusive after imaging, cytology, and follow-up, proposing the test can be used to adjudicate confounding cases.
- EPISEEK-MPE may also add prognostic value to decisions, as the test was a statistically significant predictor of 24-month survival ($p < 0.005$), while cytology was not ($p = 0.643$).

"Pleural effusion is often a diagnostic gray zone, especially when cytology is indeterminate or negative," said first author Joshua K. Routh, Precision Epigenomics, Clinical Laboratory Medical Director. "Our data show that analyzing cfDNA methylation directly from pleural fluid can provide actionable clarity. EPISEEK-MPE not only improves diagnostic confidence where clinicians need it most, but its prognostic performance more accurately reflects patient outcomes."

About EPISEEK®-MPE

EPISEEK-MPE is a methylation-specific PCR assay that detects tumor-derived cfDNA directly in pleural fluid using only 10 mL of sample. The assay is designed to integrate seamlessly into existing laboratory workflows and provide etiology resolution for patients with pleural effusion.

About Precision Epigenomics

Precision Epigenomics is a molecular diagnostics innovator dedicated to delivering actionable healthcare insights through advanced technology and strategic collaboration. With a focus on cutting-edge R&D and partnership integration, the company is transforming diagnostic pathways to improve patient outcomes.

Forward-Looking Statements

Certain matters discussed in this press release may constitute forward-looking statements within the meaning of federal securities laws. Actual results and the timing of certain events could differ materially from those projected in or contemplated by the forward-looking statements due to a number of factors, some of which are not within the control of the Company.

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