Deep Bio to present their research findings at the poster sessions during the USCAP 113th Annual Meeting

Four research results will be presented to validate Deep Bio's pioneering research and breakthroughs in AI advancements in digital pathology.

SEOUL, SOUTH KOREA, March 19, 2024 /EINPresswire.com/ -- Deep Bio, a leader in AI-driven solutions for cancer diagnostics, announced that four different research results will be presented at the poster presentations during the 2024 United States and Canadian Academy of Pathology (USCAP) Annual Meeting, to be held in Baltimore from March 23 to March 28. The posters will describe Deep Bio's pioneering advancements in AI-driven pathology, demonstrating how novel AI techniques enhance the company's expertise across diverse tissue and cancer types.

Sun Woo Kim, CEO of Deep Bio, said, "With the increasing demand for advanced medical technologies based on AI, digital pathology has recently emerged as a significant topic. We proudly present the meaningful research results of deep-learning-based cancer diagnosis at the world-class pathology conference for six consecutive years since 2018. We will continue our research to ensure that our deep learning technology contributes to a new era of diagnosis, ranging from cancer diagnosis and prognosis to treatment, across various types of cancer."

Innovative Research Highlights at USCAP:

- Poster Presentation (#167): A Deep Learning-Based Tumor Area Identification Using a Semi-Supervised Approach for IHC Stained Images in Non-Small Lung Carcinoma

o Session Date & Time: March 25, 2024, From 1:00 to 4:30 p.m.
o Lead Author: Yunseob Hwang
o Overview: This research evaluates a semi-supervised approach to cancer area detection models in cMET IHC-stained whole slide images (WSIs) of non-small cell lung cancer (NSCLC). Manually delineating entire cancer areas in large tissues like resection slides remains a labor-intensive task for developing AI models. Due to this fact, this research introduces a simple yet effective semi-supervised learning approach for tumor area segmentation deep learning models using IHC stained images.

- Poster Presentation(#180): Enhancing Multi-organ: Frozen Section Cancer Discrimination Model with Additional Formalin-Fixed Paraffin-Embedded Whole Slide Images

o Session Date & Time: March 26, from 9:30 to 12:00 p.m.
o Lead Author: Joonho Lee
o Overview: This research explores the automated analysis of H&E-stained Frozen Section (FS) WSIs using a deep learning model across various tissue types to enhance the accuracy of FS cancer discrimination. This deep-learning model is specially developed to determine the presence of cancer in H&E-stained FS whole slide images in the Breast, Lung, Stomach, Breast Sentinel Lymph Node, and Prostate, using H&E-stained and Formalin-Fixed Paraffin-Embedded (FFPE) WSIs.

- Poster Presentation(#210): Enhancing Frozen Section Whole Slide image classification by Style transfer with CycleGAN

o Session Date & Time: March 27, from 1:00 to 4:30 p.m.
o Lead Author: Junho Lee
o Overview: This research introduces a style transfer model to transform the delineation of FFPE data into Frozen Section (FS) data, enriching the data and enhancing feature discrimination. Unlike the Formalin-Fixed Paraffin-Embedded (FFPE) tissue slides, the FS Whole Slide Image (WSI) often has low slide quality due to artifacts, leading to inferior prediction performance compared to the FFPE WSI. Therefore, training-styled-transferred FFPE slides can enhance the predictive performance of FS slides at the slide level and improve the discriminative feature of patch-level images.

- Poster Presentation(#173): Storage Optimization for Digital Pathology Images: Super-Resolution based image compression

o Session Date & Time: March 26, from 9:30 to 12:00 p.m.
o Lead Author: Soyeon Jang
o Overview: This research proposes a super-resolution-based image compression technique to reduce storage demands without sacrificing image quality since storing large volumes of digital pathology data requires monetary investment for institutions to process high caseloads.

About Deep Bio

Deep Bio is an AI healthcare company dedicated to advancing the field of cancer pathology.

Focusing on deep learning, the company develops cutting-edge In Vitro Diagnostic Software as Medical Devices (IVD SaMDs) to empower pathologists and medical professionals with state-of-the-art tools for more accurate cancer diagnosis and prognosis. Deep Bio is committed to improving cancer treatment decisions and patient outcomes by harnessing the power of artificial intelligence.

For more information, visit the website: www.deepbio.co.kr.

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