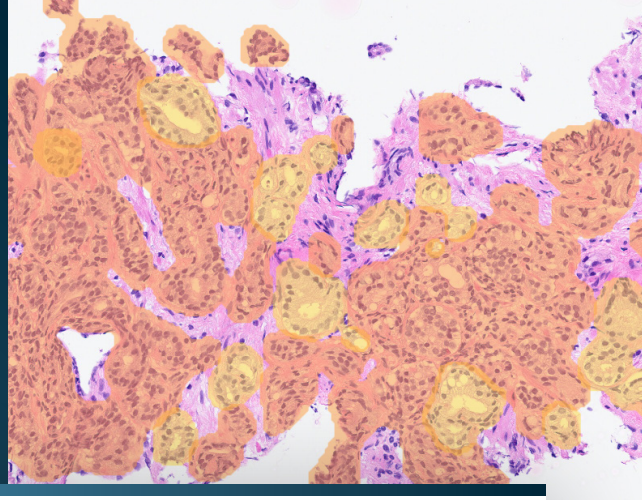
HALO AP® ENABLES SEAMLESS INTEGRATION OF THIRD-PARTY IMAGE ANALYSIS ALGORITHMS

A CASE STUDY OF DEEPDX® PROSTATE FROM DEEP BIO



DEEPDX® PROSTATE FROM DEEP BIO

DeepDx® Prostate is a clinically validated and CE-marked AI-based image analysis algorithm for prostate core needle biopsy analysis that detects cancer and grades its severity according to the Gleason scoring system. DeepDx® Prostate is designed to alleviate the shortage of pathologists and their heavy workload, while reducing diagnostic subjectivity and variability.

The DeepDx® Prostate algorithm analyses whole slide images of H&E stained biopsy specimens and provides color visualization and gland-level segmentation based on Gleason patterns. In addition, it supplies the proportion of each Gleason pattern among the three patterns, and automatically provides measurements of the total tissue and tumor lengths. The latest validation study of the DeepDx® algorithm demonstrated at 99% sensitivity and 97% specificity. Moreover, the algorithm has successfully analyzed more than 700,000 tissues cores between 2019 and 2021.

deep bio

Deep Bio, an IVD SaMD* developer for digital pathology, is based in Seoul, South Korea, and offers the clinically validated AI-based DeepDx® algorithms. Deep Bio envisions a suite of AI-based IVD for diagnosis and prognosis of multiple cancers.

** IVD SaMD: In-Vitro Diagnostic Software as a Medical Device*

HALO AP® by indica labs

HALO AP® is an AI-powered, pathologist driven computational image management platform that supports anatomic pathology workflows, including primary diagnosis, secondary consults, tumor boards, clinical trials, synoptic reporting, quantitative analytics, and AI.

"Deep Bio's partnership with Indica Labs is a step closer to our vision and goal of providing diagnostic support tools for pathologists and oncologists, for timely and accurate diagnosis and prognosis, leading to better treatment decision-making. We believe DeepDx® Prostate is a powerful addition to the robust clinical workflow afforded by HALO AP®."

Sun Woo Kim, CEO
Deep Bio, Inc

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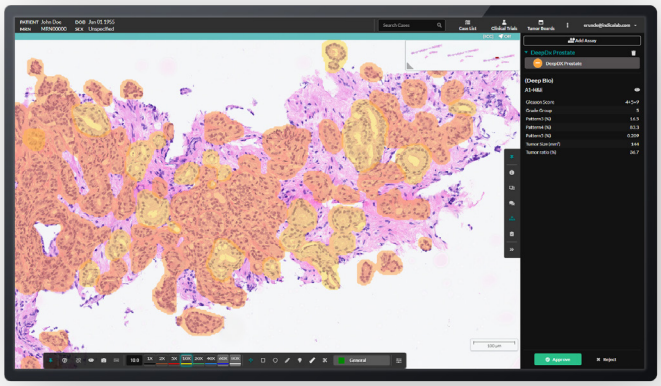


INTEGRATING WITH HALO AP®

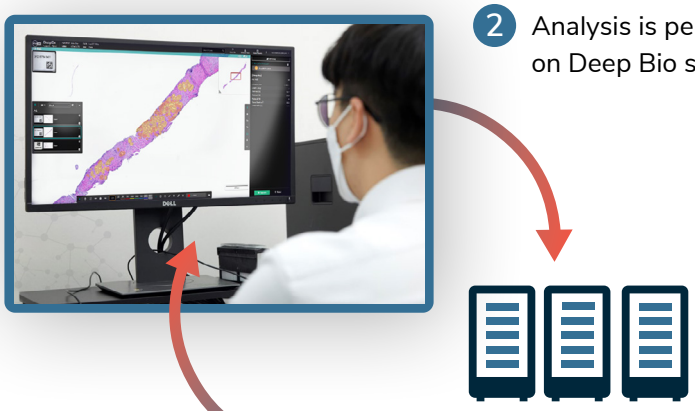
HALO AP® is a flexible platform and open to supporting integration from all AI vendors. To simplify integration, a HALO AP® analysis software development kit (SDK) including sample code detailing use of the analysis endpoints is available to all algorithm developers. The Deep Bio team utilized the SDK and a dedicated environment to develop, test, and validate the integration of DeepDx® Prostate into HALO AP®.

DEEPDX® PROSTATE INTEGRATION INTO HALO AP®

The DeepDx® image analysis workflow is seamlessly integrated into HALO AP® such that the customer never leaves the HALO AP® user interface.

In addition to triggering the DeepDx® Prostate workflow from HALO AP®, it can also be set to run automatically via the HALO AP® Application Programming Interface (API). Regardless of the pathway that the DeepDx® Prostate workflow was initiated, the user views analysis progress, results, and visual markup images in HALO AP®. A URL link back to the DeepDx® interface can also be included.

1 Launch DeepDx® Prostate from HALO AP®



2 Analysis is performed on Deep Bio servers

3 Image analysis results and markup images are returned to HALO AP® interface

READ MORE ABOUT DEEPDX® PROSTATE IN THESE PUBLICATIONS:

1. Jung M, Jin M, Kim C, et al. Artificial intelligence system shows performance at the level of uropathologists for the detection and grading of prostate cancer in core needle biopsy: an independent external validation study. Mod Pathol, 2022. https://doi.org/10.1038/s41379-022-01077-9
2. Mun Y, Paik I, Shin S, et al. Yet Another Automated Gleason Grading System (YAAGGS) by weakly supervised deep learning. NPJ Digit Med, 2021. https://doi.org/10.1038/s41746-021-00469-6
3. Ryu H, Jin M, Park J, et al. Automated Gleason Scoring and Tumor Quantification in Prostate Core Needle Biopsy Images Using Deep Neural Networks and Its Comparison with Pathologist-Based Assessment. Cancers, 2019. https://doi.org/10.3390/cancers11121860

HALO AP® is CE- marked for in-vitro diagnostic use in Europe and is For Research Use Only in the USA.

READY TO LEARN MORE?

Contact us to schedule a HALO AP® demo or reach out with questions on how to access HALO AP's software development kit.

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