Beyond the Algorithm: What Does It Take to Make AI Work in Everyday Pathology?

Mindpeak highlights the practical requirements for integrating AI into digital pathology workflows at ECP 2026

HAMBURG, GERMANY, September 14, 2026 /EINPresswire.com/ -- Artificial intelligence is becoming increasingly established in digital pathology. Algorithms can quantify biomarkers, analyse tissue morphology and support pathologists with tasks that have traditionally relied heavily on manual assessment. But introducing new technology into a laboratory involves more than making an algorithm available.

Pathologists need to be able to use the technology within their existing digital environment. Laboratories need reliable processes for validation and implementation. And users need confidence that new tools will fit into the way they already work.

These practical considerations are becoming increasingly important as digital pathology and AI move further into routine use.

Integration is part of the solution

For laboratories, interoperability can have a very practical impact. AI tools that operate within existing digital pathology environments can reduce the number of steps between the slide and the result. They can also make it easier for users to work with different applications without having to manage a collection of disconnected systems.

The collaboration between Mindpeak and Leica Biosystems is one example of this approach. Six Mindpeak algorithms - covering the company's Breast suite as well as Pan-Tumor H&E and Pan-Tumor PD-L1 - are now available through the Leica Biosystems Aperio AI Store and can be launched within the Aperio HALO AP software environment. This gives users access to these applications within a single viewer that is already part of their digital pathology workflow, without introducing another separate platform into the process. There is considerable work behind making this possible. Integration involves much more than connecting two pieces of software. Metadata, slide overlays, result presentation and validation requirements all need to work consistently. These details may not be visible in a product demonstration, but they determine how reliably a solution performs in the laboratory environment.

Building an ecosystem around pathology

Integration is one part of a broader shift in digital pathology: creating an ecosystem in which different technologies can work together within established laboratory environments. AI developers bring expertise in algorithm development, validation and tissue analysis. Platform providers bring the infrastructure and workflows used by laboratories every day. Bringing these elements together can make it easier for laboratories to introduce new capabilities without adding unnecessary complexity to their existing setup.

“Developing a strong algorithm is only one part of solving a pathology problem. We also need to consider where that algorithm is used, how results are integrated into the workflow and what is required to deploy it consistently. Our collaboration with Leica Biosystems is a practical example of why those considerations matter,” says Felix Faber, CEO of Mindpeak.

“The true value of AI in pathology is realized when pathologists can access the right tools at the right time, without navigating multiple systems,” said Naveen Chandra, Vice President and General Manager of Digital Pathology at Leica Biosystems. “With the Aperio AI Store and Aperio HALO AP, we're connecting leading AI innovations within a single workflow, making it possible for laboratories to translate advances in AI into meaningful improvements to ultimately benefit efficiency, confidence, and the future of patient care.”

At ECP 2026, under the theme “Innovation Driving Excellence in Pathology,” these questions are becoming increasingly relevant. How should new technologies fit into established workflows? How can they be validated and deployed consistently? And how can pathologists be supported as the tools and biomarkers they work with become more sophisticated?

For pathology teams, innovation only becomes useful when it fits into the systems and workflows they use every day.

High-performing algorithms and integrated workflows both play a role in making innovation useful in everyday pathology.

About Mindpeak

Mindpeak is the leading company in AI-powered digital pathology, bridging the gap from biomarker development to clinical diagnostics. Founded in 2018, Mindpeak’s AI technology enables laboratories to extract actionable insights from H&E, IHC and mIF tissue images - ranging from subcellular biomarker quantification to predictive patient stratification. The solutions support both routine diagnostics and the translation of novel biomarkers into real-world clinical applications.

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