
AI Improves Lab Workflow while Cutting Costs



Continued advancement of AI application in healthcare leads to improvement in workflows, reducing the workload not just of physicians and nurses but even of laboratorians as well. For the latter, in particular, **increased digitalisation of the workflow** helps decrease physical demands of peering through a microscope for extended periods of time, including eye fatigue and neuromuscular tension.

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This is exactly what the world's first AI-augmented ova and parasite detection tool promises to do. The technology can rapidly screen out negative results, allowing laboratorians to spend more time analysing positive slides. Ensuring faster turnaround times in the lab, this innovation will result in **greater employee satisfaction, improved patient care, and reduction in costs**, according to [ARUP Laboratories \(ARUP\)](#), which developed the tool in collaboration with Techcyte.

"The collaboration with Techcyte has produced an AI-augmented detection tool that significantly advances our diagnostic capabilities in our parasitology lab," says Adam Barker, PhD, director of Research and Development at ARUP, a global leader in innovative laboratory R&D. Techcyte, on the other hand, is a leading developer of artificial intelligence (AI) based image analysis solutions for the diagnostics industry.

For the new ova and parasite tool, Techcyte applies the latest in convolutional neural networks to pre-classify the faecal sample images captured by a 3DHISTECH Panoramic 250-Flash III scanner. Pre-classifying the images using the Techcyte tool allows ARUP's technologists to efficiently read stained glass slides manually and improves the accuracy of parasite detection.

"We have successfully developed a pioneering breakthrough with this tool, the likes of which had previously been unimaginable by classically trained microbiologists," says Dr. Marc Couturier, medical director of ARUP's Parasitology labs, who has noted that microscopy-based diagnostic parasitology has "remained woefully static for decades."

The ova and parasite tool is the first of many projects that ARUP and Techcyte are co-developing. ARUP's vast medical expertise and access to samples combined with Techcyte's technical ability and digital evaluation platform will produce high-quality algorithms that can be developed and applied to future [unmet laboratory needs](#).

Ralph Yarro, CEO of Techcyte, states: "This revolutionary partnership will combine ARUP's vast expertise and reputation in the market with Techcyte's **AI-based image analysis capabilities to change the way lab diagnostics are performed**." Techcyte provides wide-ranging solutions for medical labs, hardware manufacturers, hospitals, and clinics. In 2019, the company says it will deliver solutions for blood analysis, cervical cytology, and bacteriology.

Source: Business Wire

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Published on : Tue, 20 Aug 2019