Newsbytes

Pandemic spurs startup to launch collaboration platform

September 2020—While the SARS-CoV-2 outbreak has led many long-standing companies to zig instead of zag, it caused the computational and digital pathology startup Crosscope to switch gears in the midst of developing its first product.

In response to the pandemic, Crosscope, which will celebrate its first anniversary next month, detoured from focusing on its flagship analytics platform, Crosscope Dx, to quickly developing and launching Crosscope Scholar, a free cloud-based digital pathology platform to facilitate remote, collaborative viewing of whole slide images.

In March, Crosscope introduced Crosscope Scholar to help pathologists and researchers worldwide "transition to modern remote workflows" as they began to address COVID-19, says Jayendra Shinde, PhD, the company's cofounder and CEO. Users of the platform can upload digital slides to their own private and secure "digital slide boxes" and grant colleagues, who have registered as Crosscope users, permission to access them. They can also set up groups, giving colleagues access to certain slides at the same time, which is useful for multidisciplinary meetings, case review sessions, and remote academic instruction.

Pathologists and researchers can comment on slides and communicate with each other using any Web browser, and they can build their own libraries of stored digital images, explains Dr. Shinde. In addition to providing a crowdsourced library of image-based cases to aid pathology practice and education, the company has set a long-term goal of providing users with the ability to "view, annotate, and explore a searchable tissue library of approximately 30,000 cancer whole slide images," he adds.

Crosscope Scholar is a vendor-neutral collaboration system, making it a valuable tool for pathologists worldwide to share their perspectives on de-identified digital images, says Mark Zuckerman, MD, vice president of business development for Crosscope and a pathologist at Strata Diagnostics, Lexington, Mass. However, he notes that the platform is not intended to serve as a tool to obtain formal expert consultations from outside a pathologist's organization.

The Crosscope Scholar user base is growing organically, says Dr. Shinde, as the company introduces the platform to pathologists who then use it to share digital slides with colleagues and students. Between its mid-March debut and CAP TODAY press time, it had been used by more than 3,200 pathologists, residents, and medical students in more than 50 countries, he says. It is "highly popular in terms of educational use cases since work from home as well as learn from home is a top priority."

Dr.Shinde

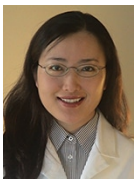
As part of the company's global health initiatives, also launched in March, Crosscope partnered with Microvisioneer, a company that provides software to upgrade microscopes to manual slide scanners, to offer Crosscope Scholar to Microvisioneer's customers. "The goal of this collaboration," says Dr. Shinde, "is to provide Crosscope Scholar's free cloud pathology access and tools to Microvisioneer users, making digital pathology affordable to most labs, including those in the developing world."

The level of interest in Crosscope Scholar validates for Dr. Shinde his decision to take a cloud-based approach to

image sharing and analytics for the company's core artificial intelligence-enabled platform, Crosscope Dx. "Although AI is making great strides in diagnosing and reading whole slide images, there are intrinsic infrastructure problems to support these applications in clinical or even research settings," he says. The costs related to scanning and storing digital whole slide images on site in a secure and HIPAA-compliant manner can be a strain for hospital information technology departments, he adds. And layering artificial intelligence on top of digital images can add even more cost.

While Crosscope has rolled out Crosscope Scholar, the company has continued to work on Crosscope Dx, which will assist with labor-intensive pathology tasks, such as mitosis counting; screening for early identifiable cancer types; and simplifying complex processes, such as biopsy triaging. Crosscope Dx is intended to provide pathologists with actionable insight to speed up diagnoses, Dr. Shinde says. And while some of the artificial intelligence-based algorithms for identifying and quantifying tumor regions will be available through Crosscope Scholar for a fee, Crosscope Dx will be a completely fee-based enterprise platform, with collaboration features and sophisticated imaging functionality.

The idea of developing Crosscope was sparked by discussions Dr. Shinde had with pathologists and data scientists while working toward his doctoral degree in computational biology and multiomics in Paris. To build a solution, he joined with Ketan Bacchuwar, PhD, a colleague in Paris who earned a doctorate in medical image processing. Dr. Bacchuwar is cofounder and chief technology officer of Crosscope. Both participated in the Stanford University School of Business Ignite entrepreneurship program before launching their company last October. Through the program, they obtained strategic professional advice about their business idea and met a pathologist who would become one of their company advisors.



Dr.Shen

Jeanne Shen, MD, an assistant professor of pathology at Stanford University School of Medicine and the aforementioned advisor to Crosscope, is using Crosscope Scholar to collaborate on an international research project with approximately a dozen cancer institutes, predominantly in Europe. "It's a huge challenge to do these multi-institutional studies with digital pathology because the data are so large that each file is on the order of several gigabytes," she explains. "What we used to do was just ship physical hard drives around with whole slide images on them. But with Crosscope, it has been a lot easier because everything [is] in the cloud and all you need to do is have your collaborators create an account, and then you can share your images with them."

Cloud-based computational pathology can give you "an ability to quickly do things that took a long time before or were a little bit more awkward," confirms Dr. Zuckerman.

As Crosscope undertakes proof-of-concept testing for Crosscope Dx, it is also participating, as a finalist, in the MassChallenge Rhode Island 2020 accelerator program, which culminates next month. The company's founders hope the latter will lead to additional funding and partnership opportunities.

"We are on a mission," concludes Dr. Shinde, "to democratize artificial intelligence-enabled pathology to transform the diagnosis and treatment of cancer."

—Renee Caruthers

Sysmex America releases workflow application

Sysmex America has introduced its cloud-based Caresphere workflow solution, hosted by Amazon Web Services.

“Caresphere WS is simple to implement, highly secure, and provides laboratorians with organized clinical data, standardized result interpretation and auto-verification, and comprehensive reports for regulatory compliance,” said Andy Hay, chief operating officer of Sysmex America, in a press release.

Sysmex supports the entire implementation process for Caresphere and provides real-time monitoring, security updates, unlimited training, and technical assistance for the life of the application. In addition, rules and configuration wizards allow laboratories to customize the software to fit their needs and standardize processing and resulting across all of their locations.

Sysmex America, 847-996-4500

Paige secures FDA clearance for digital pathology viewer

Paige has received FDA 510(k) clearance for use of its FullFocus digital pathology image viewer for primary diagnosis.

The clearance permits the in vitro diagnostic use of FullFocus with Philips’ high-throughput, bright-field Ultra Fast slide scanner and with other whole slide scanners in the future.

“The foundation for the FullFocus viewer was initially created and validated at Memorial Sloan Kettering Cancer Center to allow researchers and pathologists to intuitively view and navigate digital images of surgical pathology slides acquired on all major commercial brands of WSI scanners,” according to a press release from Paige. “After refinement based on 18 months of daily use for retrospective slide review by dozens of practicing pathologists at MSK, the viewer was further enhanced by Paige to meet the performance requirements for IVD use, with accurate color reproducibility, optimized viewing speeds, and adherence to a certified quality management system.”

Thermo Fisher implements LIMS via Amazon cloud

Thermo Fisher Scientific is offering its SampleManager laboratory information management system via the Amazon Web Services cloud.

Under this arrangement, Thermo Fisher will manage the entire deployment process, from installation and maintenance to backup and recovery. However, laboratory clients will retain control of software upgrades and validation schedules.

With this announcement, Thermo Fisher offers three deployment models for SampleManager to meet laboratories’ infrastructure needs: cloud services via Amazon, customer-managed cloud services, and traditional on-premise software installation at the customer site.

Thermo Fisher Scientific, 800-556-2323

Xifin index tracks COVID-19 and antibody testing volume

Xifin is providing on its website, as a free service, an index of lab testing volume data generated nationwide for SARS-CoV-2 and antibody testing, which is updated regularly.

“The lab volume index measures billing volume data against a baseline volume, expressed as a percent of baseline,” according to an explanation on the company website. “Baseline volume is an average of weekly volumes generated [from] late January through February 2020 and represents current year pre-Coronavirus testing volumes.”

The laboratory volume index chart displays weekly volumes of five categories of testing, beginning from March 9. The categories are COVID-19 testing, antibody testing, routine testing, routine plus COVID-19 testing, and routine plus COVID-19 plus antibody testing.

A separate laboratory testing volume chart shows rates of COVID-19, antibody, and routine testing within the

categories of pathology, clinical, hospital, molecular, pain/toxicology, and all segments.

Xifin, 858-793-5700

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