CASE STUDY:

NEUROSCIENCE ASSOCIATES

(NSA LABS)

CRO leverages Proscia's Concentriq™ platform to manage its growing image volume and accelerate throughput times for its clients

PROSCIA

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PROBLEM

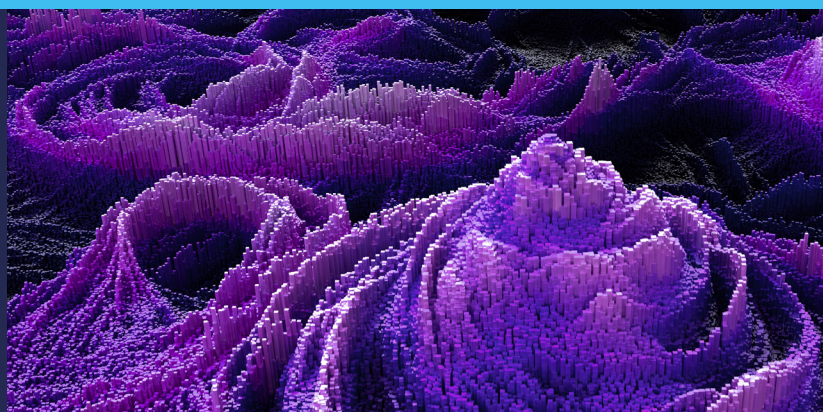
CRO's new digital imaging service was a hit with research clients, but manually managing and sharing images with clients was overwhelming.

KEYWORDS

- Animal studies
- High-volume scanners
- Flexible integration
- Complex workflow
- Remote access and collaboration

INTRODUCTION

CRO sees Proscia's Concentriq™ platform as a key piece of the puzzle in not only managing its growing image volume but also realizing the full promise of digitization.



SITUATION

NeuroScience Associates (NSA Labs®) was founded to empower researchers conducting pre-clinical animal studies with technology. In 1989, the CRO began offering unique MultiBrain® and MultiCord® technologies to deliver high-quality, efficient neurohistology processing. While the industry standard is to handle a single animal at a time, these solutions process multiple tissue specimens together as a single unit, reducing turnaround time for researchers from months to weeks.

"A large majority of our clients are in either academia or pharmaceutical research, and the results of these pre-clinical studies determine when a potential treatment can move into human clinical trials," said Jim Baun, Vice President of Scientific Operations at NSA Labs. "If they can get the results in three weeks versus three to six months, you can imagine how that helps accelerate their research."

Unwavering in its focus on accelerating throughput times with innovative solutions, NSA Labs turned to digital histology in 2017 to drive added efficiency and even enable researchers to entertain questions that would not otherwise be possible. Clients were eager to benefit from its new digital image and analysis offerings, and the CRO soon added two high-volume Whole Slide Imaging scanning systems from Huron Digital Pathology.

"Our digital imaging demand has gone through the roof. We currently scan around 100 slides a day, and each slide has 16, 25, or even 40 tissues on it," commented Tate York, Director of Imaging and Analysis at NSA Labs. "We're easily generating terabytes of image data each month. We were close to being overwhelmed. The scanned images need to be organized in a way that integrates seamlessly into our workflow, and we need to get them to clients quickly and easily."

For NSA Labs, it became clear that scanning slides was only the first piece in the much larger puzzle of its digital pathology adoption. The CRO had a complex operational workflow - from managing images and associated metadata to sharing results with clients for feedback – that incorporated several hardware and software systems. As for sharing with clients, the images were so large that they couldn't be emailed or downloaded via an FTP site, and NSA Labs sometimes resorted to express mailing hard drives to its clients. In an organization that prided itself on driving timeliness and efficiency, something had to be done.

SOLUTION

NSA Labs required a scalable digital platform that would streamline its complex workflow with powerful capabilities configured to its environment. This would mean transforming logistical and physical processes to a digital process that aligned with its current workflow and would grow with its digital evolution.

"Right off the bat, it seemed like Proscia's Concentriq™ platform would be a good fit for what we were looking for," remarked Tate.

The CRO's ideal digital solution would need to address numerous, wide ranging requirements. Image and data management were among the top priorities, as NSA Labs' sought a detailed organizational schema to intuitively manage its growing volume of images.

"Our images are broken down by the block ID we use to designate individual projects and then by the stain that was performed on the tissue. We create one more sub-folder for the animal IDs within that block, so that all of the images for a particular animal are going to be in their own folder. Concentriq could easily mirror this structure," explained Tate.

Concentriq also seamlessly integrated with NSA Labs' existing hardware and software, including its scanners and image analysis system. Concentriq's automated scanner upload and data import further decreased time spent on data management by reducing manual labor.

"What's made a real difference for us is tying the Concentriq platform into our high-throughput scanning systems," Tate continued. The scanners have been running nonstop ever since, and Concentriq has been managing and archiving all of the images for us automatically."

Once in Concentriq, the slide images are also immediately available for viewing by clients, who can easily access the images via the Internet. Tate concludes, "This efficiency saves us and our clients a tremendous amount of time. Concentriq keeps things organized."

BENEFITS

Tate characterizes Concentriq as a "silent assistant" and urges other labs who have implemented digital imaging to consider adopting the platform.

"Concentriq is the final piece of the puzzle we were looking for with our imaging workflow," he explained. "It rounds everything out. Digital imaging is a great tool, but there's a lot of back-end work to keep things organized, which is difficult to keep up with manually. Digital imaging promises greater efficiency, and Concentriq fulfills that promise in a way that keeps up with our needs."

NSA Lab's clients have been enthusiastic about using Concentriq. "Our clients noticed the change immediately, because they always want the simplest, most efficient, and expedient workflow possible," said Tate. "The user interface is very straightforward. Concentriq also makes it easy for them to share the slides with colleagues for improved collaboration."

Clients also love how quickly NSA Labs can deliver images back to them. This pays off particularly when running trial slides to ensure quality control and proper staining before the full project is begun. "In the past, we've had to send low-quality images via email, or even overnight a hard drive to a client," said Tate. "Now we can scan trial slides, deliver them to the client immediately via Concentriq, and get an answer back, usually same day. That helps us make decisions internally for scheduling and get work accomplished for clients even more quickly."

Tate marvels at Concentriq's ability to strengthen the connection and engagement that NSA Labs has with its clients. "Instead of telling clients that a hard drive will be arriving at their office in a couple of days, we are able to drop a note and tell them we just finished scanning the slides five minutes ago, and we're sharing the image repository with them right now. With just a couple of clicks, we're sending over gigabytes and gigabytes of image data."

"The speed, the efficiency, the better connection with our clients, the ability to expand our digital imaging services, all of that is possible because of Proscia," concludes Tate. "As a result, our relationship with our clients is only going to get more collaborative, more connected. Concentriq is a strong binding agent. Maybe that's a weird way of putting it, but I can see how Proscia will help build stronger connections for many years to come."

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