

Featured Case Study

Spinal Technology Upgrades its Security Posture

TEXAS SPINE-IMAGING LEADER
PROTECTS PATIENT DATA IN THE CLOUD



ARMOR™

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Millions of Americans suffer from severe neck and back pain caused by spinal instability. It's No. 1 diagnosis driving the more than 500,000 spine fusion surgeries performed in the United States every year. Yet the diagnostic tools used to assess spinal motion, including spinal instability, haven't changed for more than 70 years.

This is where Ortho Kinematics, Inc., fits in. The Austin, Texas, company has revolutionized spine-imaging analysis with Vertebral Motional Analysis (VMA). For the first time ever doctors can use VMA to capture videos that show the spine in full motion, allowing them to derive much more reliable quantitative diagnostic data from these images than is possible with current technology.

Instead of trying to assess spinal motion, including spinal instability, from still X-rays that require hand measurement using a ruler and protractor, VMA empowers doctors with more accurate and complete information so they can quickly and more reliably identify a patient's problem area.

Ortho Kinematics' VMA is the only diagnostic technology that can produce quantitative data from video-type X-rays of spine bending.

"All other technologies are based on still images — 1940s-era technology," Bryant Miles, who oversees IT infrastructure for Ortho Kinematics, explained. "VMA has been a real game-changer in the industry."

Focused exclusively on spine-imaging informatics, Ortho Kinematics works with leading clinicians, researchers and developers in their quest to leverage spine biomechanical data to help improve diagnosis of spine pathology. The company is committed to the concept that both patients and surgeons deserve a diagnostic upgrade from traditional static X-rays, which simply don't capture the complexities of spinal motion.



Complexities in motion

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"This technology has the potential to help patients obtain a confident diagnosis and any necessary treatment, including surgery," Miles said. "We want to become the standard of care for spine functional testing."

When the company launched, the team was met with a welcome reception from the industry. Yet it faced a potential stumbling block: its need for a cloud provider that could provide the highest standards of security, performance and compliance. Because the VMA technology involves personal and medical data, Ortho Kinematics needs to meet HIPAA guidelines while maintaining a strong security posture.

The perfect tech match

Ortho Kinematics' search for an industry leader that could help reduce risk by providing a secure cloud and exceeding compliance requirements led the company to Armor.

"As for our earlier compliance-related issues, Armor addressed all of them on one call — and was able to answer all of our questions." He added, "When we looked at other providers and factored everything in, comparing apples to apples in terms of cost, the prices started skyrocketing compared to Armor's offering."

Ortho Kinematics also appreciated Armor's no-contract approach.

"We didn't want to get locked into a long-term contract," Miles said. "Armor was the only cloud provider that offered a month-to-month option, which was attractive to us."

"The way Armor has security locked down, and the data centers already being compliant, made it a very easy choice."

Bryant Miles | Ortho Kinematics



A reliable partnership

With VMA, doctors have access to sophisticated videos that show the human spine, one of the most complex structures in the human body, in fluid motion.

For example, a single VMA test involves capturing video-type X-rays of the spine as patients bend through several spine bending routines, and up to 1,000 individual images frames can be captured.

All of this data gets uploaded to cloud servers where custom VMA software is used to process the images to produce testing results. This software is extremely processor-intensive — processing a single test can take more than 24 hours if run locally on standard desktop workstations. Ortho Kinematics needed a solution that allowed all of this to be done in an hour or two.

“We needed to see it in real time and make sure the environment could support the aggressive turn-around time that our customers demand, while maintaining accuracy and full compliance,” said Bryant. “Speed and accuracy are paramount — after all, on the other side of each and every test is a patient who may be suffering. We owe it to surgeons and their patients to provide the right data, at the right time, 100 percent of the time.”

Since launching, Ortho Kinematics has been acknowledged for its innovation in developing groundbreaking diagnostic technology.

This drive to continually create and refine new tools was a primary driver in finding an experienced cloud provider; the team knew that by offloading the demands of security and compliance issues, they could focus more successfully on their goal of revolutionizing spine motion analysis.

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A design for the future

While protecting data is a top concern for any business in today's breach-plagued landscape, it is especially critical for Ortho Kinematics, which handles medical data and other patient information.

Armor has fulfilled this objective by providing a secure cloud featuring multiple layers of advanced protection backed by a security operations team with deep expertise.

"We have all our patients' healthcare information on Armor servers," Miles said. "We have to be compliant with HIPAA and FDA regulations. The Armor team of data security and compliance experts ensures our compliance in this area, which lets us get back to our core business. They've designed security architecture specifically for VMA. In addition, the response team is extremely attentive — they're always available and they have the skills to resolve any issues."

He added, "Not only does this let us focus on developing new innovations, the reduction in risk offers us a competitive advantage. In the healthcare technology field, you have to be able to tell customers that you can protect their data and meet HIPAA regulations. Armor enables us to do that. The company is HITRUST-certified too, which is another selling point as far as our customers are concerned."

"All in all," Miles concluded, "this partnership has helped design a roadmap for future Ortho Kinematics growth."

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A circle of trust

Ortho Kinematics' VMA technology was featured on the Today Show, a sure sign that the VMA is on its way to becoming a new standard of care for assessing spinal motion.



“With VMA, patients can trust that their surgeons will have access to the most precise information possible to best diagnose their condition and offer appropriate treatment. And thanks to Armor, Ortho Kinematics can trust that its data will stay secure not only now, but in the future.”

Bryant Miles | Ortho Kinematics



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