

What's next



Healthcare, R&D

Intelligence at Work: Zebra Medical Vision AI1 (All-in-One) solution transforms patient care with the power of AI

The demand for imaging services is increasing, outpacing radiologist supply and stretching them to output more without compromising care. Technology that enhances their capabilities can help mitigate risk. Zebra-Med empowers radiologists and transforms care with its revolutionary AI1 offering, which helps manage increasing radiology workload while optimizing quality. Zebra's FDA-cleared AI solutions are available on the Nuance AI Marketplace for Diagnostic Imaging and will be integrated into Nuance's PowerScribe reporting and worklist suite, leveraging the Nuance PowerShare platform that connects 7,000+ healthcare facilities across the US.

Jonathon Dreyer

Posted January 21, 2020



Eyal Gura, Co-founder, CEO, and Chairman, shares his insights about how Zebra Medical

Vision's AI1 bundle solution automates detection and analysis of findings, making AI accessible to radiologists by integrating it into their native workflow.

Zebra Medical Vision transforms vast amounts of medical imaging data into actionable insights, allowing doctors to better detect diseases, tumors, and fractures while giving patients more information about their health. Zebra works with tens of millions of imaging and correlated clinical records to create high-performance AI solutions that automatically detect medical conditions more quickly, for numerous findings on a single image. This helps radiologists provide more comprehensive, accurate outcomes faster, without compromising quality of care.



Q&A

Jonathon Dreyer: *Tell us about your business when and how you started and your development journey.*

Eyal Gura: It all started when I had a scuba-diving accident in Mexico. Back then, I was the CEO of an image-search company called PicScout (later acquired by GettyImages). A technician took several X-rays of my chest but couldn't make heads or tails of the resulting images. I had to wait a few days for the radiologist to come from the big city to diagnose what I had.

While delaying my treatment, I did not understand why they didn't have a centralized reference database of all the X-rays for people like me so they could run a computer vision comparison against it and receive a diagnosis of what I had. That was the seed of the idea that became Zebra Medical Vision.

Zebra-Med's AI solutions allow healthcare institutions to identify patients at risk by detecting various acute and chronic medical conditions, using millions of clinical images to provide a range of products. Zebra provides an All-In-One (AI1) bundle solution, thus providing clients with access to a growing amount of FDA-cleared solutions integrated into a radiologist's native workflow, at a fixed and affordable annual fee.

JD: *What FDA-cleared AI models do you have, and what do they do?*

EG: Zebra-Med was the first company to get its AI solution for X-ray pneumothorax triage FDA cleared and has recently received FDA clearance for its 4th solution. This latest FDA-cleared product is part of our Multi-Modality AI Triage Solution providing automated alerts on positive urgent cases, which are flagged and prioritized into the radiologist's worklist. The Triage solution is a first of its kind in the market for both CTs and X-rays, and currently addresses

three acute conditions: intracranial hemorrhages (head CTs), pneumothorax (chest X-rays), and pleural effusion.

In addition, Zebra-Med's FDA-cleared cardiology solution automatically calculates coronary calcium scores. This solution and other solutions that are coming are designated as population health management tools and can use ongoing and existing scans to risk-stratify large cohorts of patients. For example, our compression fractures detector (VCF) is deployed to increase patient flow into Oxford's (UK) Fracture Liaison Service and other sites with fracture prevention programs.

JD: *What's the big Aha moment when you first show users what your AI model(s) can do for them?*

EG: Our team gets frequent messages from doctors who have "Aha" moments. In this [video](#), you can see Dr. Terence Matalon and Dr. Ryan Lee of Einstein Healthcare Network discuss the impact of the pneumothorax triage AI in their practice, and we have such cases with brain bleeds (ICH) as well.

JD: *What challenges or needs did you see that drove you to focus on this?*

EG: The personal challenge I faced in the clinic in Mexico was just a hint to the much larger global challenge—the shortage in medical experts. Zebra-Med's mission is to impact hundreds of millions of patients' lives by teaching computers how to read and diagnose medical imaging scans. In a world where 4 billion people cannot get radiology expert advice, with an expanding aging population and burnt-out and retiring radiologists, there is an acute need to leverage all the already-diagnosed imaging data in order to quickly build AI solutions that will help doctors and patients. To meet this vision and indeed impact millions of lives, we need to innovate around how to create ten different medical device products all at once and how to regulate products in parallel while keeping quality; we need to innovate on working with doctors in new ways and we need to innovate around scaling AI talent; each step of the way counts!

JD: *What's the number one benefit you offer?*

EG: The "All-In-One" (AI1) affordable and transparent bundle, a "one-stop-shop" for most of the AI needs of care providers, combined with a unique customer success approach.

In our solutions, a complete dictionary of normal and abnormal findings is automatically detected and analyzed. Zebra-Med's AI1 is an all-in-one AI offering that allows radiologists to experience all Zebra-Med's AI solutions at a flat transparent fee. Given Zebra-Med's growing number of FDA cleared solutions, we provide all our current and future AI-driven algorithmic capabilities under the all-in-one model.

JD: *Are there any stories you can share about how your AI model(s) drove measurable patient care outcomes?*

EG: Here is [another great testimonial](#) we heard from Sally Bromley, an Oxford FLS patient who was detected by Zebra technology (BBC, David Prever's Breakfast Club). Over there, the

NHS calculators indicate around £570K GBP (\$700K USD) annual NHS savings rates.

From a turnaround time (TAT) perspective, Zebra-Med's Multi-Modality Triage AI solutions have been shown to save physicians more than 80% of the time taken to reach the acute condition in the worklist, compared to the traditional methodology. Hospitals with emergency rooms, ICUs, teleradiology, large academic centers, and others use the Zebra Triage Multi-Modality AI solution as an alert for stat-positive cases to attend to those in a timely manner and improve the patient outcome.

JD: *What benefits does Nuance and its AI Marketplace for Diagnostic Imaging bring to your users? What problems does the Marketplace and integration into Nuance's workflow solve?*

EG: Zebra-Med's users will enjoy an easy and simple integration into Nuance's industry-leading reporting and worklist platform. Nuance provides integration directly into the reporting workflow and a feedback loop for Zebra to upgrade and improve our solutions. Users who pick Zebra Medical Visions' AI solutions will enjoy one professional service for all their AI needs.

JD: *What has been your experience working with the Nuance team?*

EG: We have been working with the Nuance team for several months, and the process has been productive and efficient. The teams are working in collaboration and managing to support each other on the specific needs towards the joint goal.

JD: *What is your vision for how your solution(s) will evolve over the next 5 years?*

EG: We will see more and more solutions that will affect the day-to-day workflow but will also help the radiologist shine and provide more value to different departments in the hospital (such as orthopedics, cardiology, and population health). Zebra Medical Vision will be expanding its AI1 portfolio with additional solutions for X-rays and CT scans with more medical findings and providing solutions in more modalities. Zebra-Med's AI solutions will continue to be seamlessly integrated into the radiologist's workflow, while empowering radiologists and impacting patient care, globally.

JD: *In one sentence, tell us what you think the future of medicine will look like.*

EG: With two billion people to join the middle class, the aging population and the growing shortage in medical experts, AI will enable humanity to keep providing health services in a more productive and consistent way; from medical imaging analysis to sensors and smart alerts, we are going to witness much improved and personalized care.

Learn more:

To learn more about Zebra Medical Vision AI, visit www.zebra-med.com, or follow us on [Twitter](#), [LinkedIn](#), [Facebook](#), and [Instagram](#).

To learn more about Nuance AI Marketplace for Diagnostic Imaging, please visit <https://www.nuance.com/healthcare/diagnostics-solutions/ai-marketplace.html>

Intelligence at Work is a blog series by Jonathon Dreyer, Vice President, Solutions Marketing,

Nuance Communications. Intelligence at Work showcases projects and applications that demonstrate how Nuance technologies extend the value, use, and performance of integration and development partner offerings. This blog series focuses on inspiring the healthcare developer community to think beyond their current state and take their innovations to new heights by tapping into the latest in artificial intelligence.

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About Jonathon Dreyer

Jonathon Dreyer is the vice president of solutions marketing for Nuance where he is driving a physician-first approach to medicine by bringing cloud-based speech recognition and clinical language understanding technology to a worldwide community of healthcare IT developers and provider organizations. Prior to his current role, Jon worked as the solutions marketing manager for Diagnostic Imaging at Nuance and previously headed up marketing at Commissure Inc., a provider of clinical documentation and healthcare communication solutions. Jon graduated with Summa Cum Laude honors at Wayne State University where he earned a B.S business administration.

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