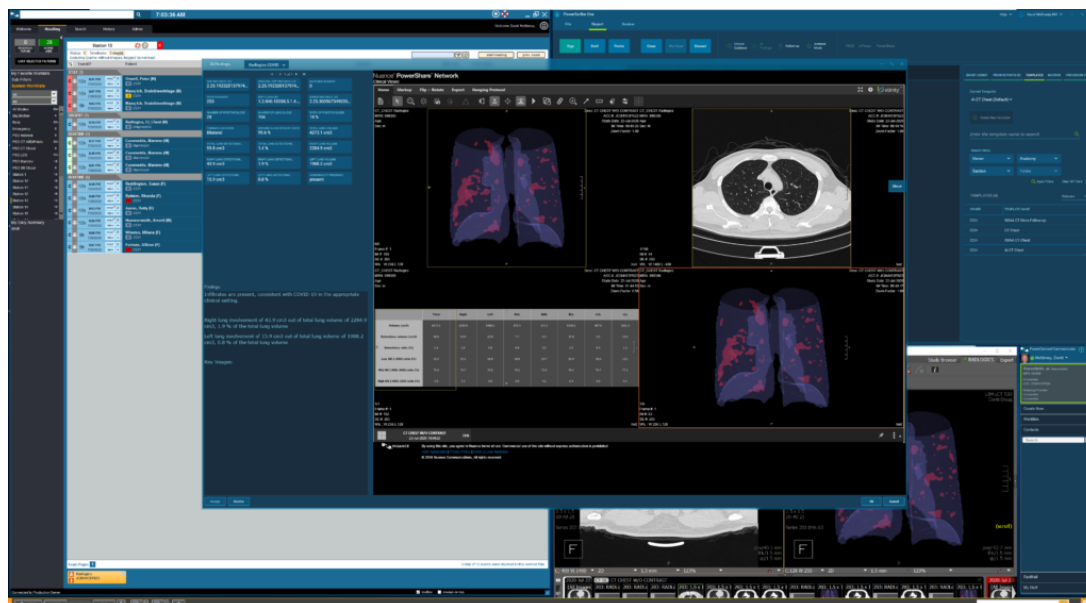


Healthcare AI, Radiology solutions

RADLogics' AI-powered solution supports the evaluation of COVID-19 patients

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AI developer RADLogics has developed solutions that harness AI-driven technology to automatically detect and measure abnormalities that improve efficiencies and expedite care. Their applications have been authorized by the FDA* to assist in the detection and quantification of findings associated with COVID-19. They include worklist triage and disease extent measurements using imaging findings on CT and X-ray scans. These solutions are being integrated into worklist and PowerScribe reporting workflows via the Nuance AI Marketplace and PowerShare Network, connecting over 7,500 healthcare facilities in the U.S.

** In accordance with FDA guidance for imaging systems and software to address the COVID-19 public health emergency*

Even before the COVID-19 pandemic, increasing workloads and exponential imaging complexity not only contributed to radiologist burnout, but also caused delays in diagnosis and critical time-to-treatment. In radiology, particularly in ED and ICU settings, minutes matter. Automating and improving diagnostic imaging with cloud-based technology and the power of machine learning can be life-saving and life-changing.

Moshe Becker, CEO and co-founder of RADLogics, shares his thoughts about the impetus behind RADLogics' software journey and the potential impact their machine-learning based solutions will have on the speed and accuracy of radiologic imaging – during the coronavirus pandemic and beyond – potentially reducing treatment turnaround time from hours to mere minutes. He'll discuss how access to RADLogics' applications will help meet the growing demand in the U.S. for AI-powered solutions to support the evaluation of COVID-19 patients.

RADLogics™

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

MB: Founded in 2010, RADLogics is one of the pioneers in using AI and machine learning image analysis and advanced big data analytics to search and analyze imaging data from CTs, MRIs, and PET scans. As an early mover, RADLogics has accumulated the best know-how and superior algorithm development tools. In response to the COVID-19 pandemic, RADLogics has dedicated the company's resources to modify, adapt, and deploy our algorithms to detect lung abnormalities that are compatible with COVID-19 in appropriate clinical settings.

JD: What AI solutions do you have and what do they do?

MB: Our initial offerings, specific to lung CTs and X-rays, include applications that not only detect abnormalities on chest CTs and X-rays, but also provide automatic triage alerts to the radiologist to help ensure potential findings are reviewed in a timely matter seamlessly within their existing workflows. In addition, our devices provide quantitative analysis of the CT and X-ray images for patients with suspected COVID-19 disease that can include a score to help monitor findings over time.

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

MB: The main attraction is the automatic assistance that the algorithm information can provide to help create a more accurate report more efficiently. In addition, the ability of the Nuance AI Marketplace integration to generate alerts upon detecting certain findings from our analysis is critical, as it can reduce treatment turnaround time from hours to minutes, saving lives. For the hospitals using our system for COVID-19 patient management, the ability to test and measure the progression of patients with severe or worsening respiratory status has been critical. The AI Marketplace integration has the ability to provide an alert on Nuance's proprietary worklist or third party worklists based on the suspicion of the illness, thus allowing doctors to better triage the patients based on those that urgently need intensive care such as ventilator support.

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

MB: As we have developed our algorithms and applications over the last ten years, we witnessed three main challenges that we are addressing in our solution:

1. Errors in radiological reports due to missed detection of important findings;
2. Significant time spent on repeated visual searches through the imaging data and performing quantitative measurements with tedious-to-use PACS-based tools;
3. All-too-frequent incidents in the ICU and ER in which patients with critical findings are not receiving timely treatment because their medical imaging studies are in queue to be read by over-burdened radiologists.

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

MB: Time savings both in terms of treatment turnaround-times – saving lives and in the time that it takes radiologists to produce their reports. In addition, as hospitals around the world are continuing to cope with the pandemic, with our solution being a fully automated process, it eliminates the bottleneck of availability of large numbers of radiologists by enabling automatic screening, which helps reduce the human errors that are inevitable in large-scale operations under time and patient treatment pressure.

JD: Are there any stories you can share about how your AI solutions drove measurable patient care outcomes?

MB: Since announcing the findings of the [initial study](#) that RADLogics' CT image analysis algorithm achieved a high level of accuracy for detecting COVID-19 on CT, we have processed hundreds of thousands of patient cases to be analyzed globally. For example, the Moscow Department of Healthcare's Diagnostics and Telemedicine Center, which serves over 130 hospitals in the Moscow metropolitan area, has rapidly scaled AI as part of their response to pandemic, and our solution has been a key part of this effort – reading thousands of patient scans on a daily basis. It is also worth noting that UCLA conducted a time-motion study using our solution to measure the impact of our solution on radiologists' productivity that found out using our solution saved up to 44 percent in radiologists' reading time. The study was published in 2018 in [Academic Radiology](#).

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?

MB: Nuance's AI Marketplace provides substantial advantage in the ability to provide our solution at scale to healthcare providers – especially in the critical U.S. market. A key benefit is that we solve the main

challenge of integrating seamlessly into the existing radiological workflow.

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

MB: We've been working with the Nuance engineering team for more than four years now, first integrating our solution with PowerScribe 360, and subsequently integrating with PowerScribe One. We've been delighted to have this very successful collaboration and we look forward to continuing to work with the Nuance team. On the commercial side, we recently signed a distribution agreement with Nuance to make our AI-powered medical imaging analysis solutions for COVID-19 available to U.S. clinicians and radiology teams through the Nuance AI Marketplace, and we look forward to working with Nuance to bring our fully integrated solutions to a growing customer base.

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

MB: Our plan over the next five years is to continue to develop our AI-powered solutions with the addition of more FDA-cleared applications for additional body parts (e.g., head and abdomen) as well as additional modalities (e.g., MRIs and PET scans). In addition, given the global deployment and adoption of our AI-powered solutions for COVID-19, we will have an excellent platform to extend our applications into these new market areas.

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

MB: Our vision is that in five to ten years, the review of most high-volume types of medical imaging studies will be enhanced with the use of AI-based tools that continue to improve both patient outcomes and radiologists' productivity.

Learn more

To learn more about RADLogics, please visit [RADLogics.com](https://radlogics.com), and follow us on [LinkedIn](#) or [Twitter](#).

Tags: [AI Marketplace](#), [COVID-19](#), [Medical imaging](#), [Radiology partner](#)

More Information

Unlock the power of AI

Learn more about Nuance AI Marketplace for Diagnostic Imaging

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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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