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Vancouver Imaging to implement Real Time's AI-powered platform

BY JERRY ZEIDENBERG

VANCOUVER – Vancouver Imaging, a group of over 70 radiologists, has signed on to use Real Time Medical's smart workload-balancing, physician skills development and error-avoidance platform. Vancouver Imaging, which provides reading services for hospital and out-of-hospital imaging centres, will implement the system in the first half of 2020 at its non-hospital clinics.

Vancouver Imaging offers a wide variety of sub-specialty readings across all disciplines, including specialized expertise in emergency trauma radiology. The organization is the only group of radiologists in Canada offering around-the-clock, on-site, sub-specialty emergency reading services.

"Emergency radiology is itself a sub-specialty and requires a unique set of skills," said Dr. Savvas Nicolaou, the CEO of Vancouver Imaging and Director of Emergency & Trauma Imaging at Vancouver General Hospital. "It's unpredictable, with frequent interruptions. You often have to work with a limited amount of information from clinicians, and it can include everything from head-to-toe, including mass casualty situations that require proactive decision-making."

He added, "You're always on, and never off." The Emergency & Trauma sub-specialty requires "appropriate, patient-centered judgement in a matter of seconds."

Vancouver Imaging will deploy Real Time Medical's AICloudWorks and AICloudQA platforms within their clinics. Collectively, the offerings encompass sever-



Dr. Savvas Nicolaou says the platform improves the quality of diagnosis as well as diagnostic efficiencies.

al AI applications, including high throughput workload balancing.

Real Time Medical holds the U.S. and Canadian patents for its workload balancing algorithms and is one of only two patent holders for diagnostic workload balancing, along with the U.S. company, Virtual Radiologic.

The cases are assigned to the appropriate radiologists based on sub-specialty, current workload and other parameters, creating an intelligent, diagnostic operations platform that is "context aware", a term originally coined by Real Time Medical to describe the capabilities of the platform.

For example, radiologists with expertise in neurology will be the first to receive neuro cases, while thoracic or pediatric experts will be first to receive cases of that type. The system also "balances" the work, to ensure that radiologists are receiving equal caseloads, subject to the case specific service levels and business parameters established by the group.

"The AI additions to this proven platform make it even more advantageous for us as a group as we pursue the delivery of Emergency Radiology services globally," said Dr. Nicolaou, a world-renowned expert in Emergency & Trauma radiology, often referred to as the Founder and

Pioneer of Emergency/Trauma Radiology in Canada.

Dr. Nicolaou noted that AICloudWorks is vendor neutral and can work with any HL7 and DICOM-based HIS, RIS and PACS solutions. "PACS integration can be very problematic," said Dr. Nicolaou. "Being vendor neutral is important to our flexibility as a group." Vendor neutrality is important to Vancouver Imaging as their current environment includes workflows across multiple PACS solutions.

Real Time Medical also has a market-leading Total Quality Management (TQM) solution for radiologists, which provides quality assurance and improvement, along with educational capabilities to ensure that radiologists are continuously learning and improving their skills. The system automatically monitors the reading of radiologists and points out areas they might be overlooking or where they might want brush up on their skills.

AICloudQA uses AI to analyze the case being read to automatically bring up the latest journal articles applicable to the case at hand. This feature allows radiologists to have cutting-edge research and findings at their fingertips, reducing the amount of time spent researching the case.

Radiologists often conduct queries of this nature by stepping away from the case to do manual online searches of multiple data sources. They even spend time at home doing this work.

Importantly, AICloudQA provides ongoing, anonymous peer review. Cases of radiologists are anonymized and randomly reviewed by peers with the same sub-spe-

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ciality within or across sites, so that best practice sharing, collaboration, feedback and quality control between peers is possible on a continuous basis.

Moreover, the readings can be both prospective and retrospective. Dr. Nicolaou believes that these educational features can improve the quality of diagnosis by 40 percent while the smart load-balancing can improve diagnostic efficiencies by 25-45 percent.

Ian Maynard, CEO of Real Time Medical, said the solution currently orchestrates diagnostic exams received from 30 hospitals across Canada.

The technology is ideal for large scale hospital systems and radiology groups that need to deliver services at scale. "The solution is capable of handling extremely high exam volumes and a large number of sites and radiologists," said Maynard.

Dr. Nadine Koff, a radiologist and President of Real Time Medical, observed that the global platform can also be used for communication between radiologists and clinicians from one site to another. In this way, Vancouver Imaging can provide advice, education and coaching to clinicians anywhere in the world.

"Remote radiologists can easily communicate with other clinicians from within the system," said Dr. Koff.

For their part, Dr. Nicolaou and his team have been continuously breaking new ground in the area of emergency radiology. They have pioneered the sub-speciality in Vancouver and have also been working to help other sites in Canada and around the world to establish 24/7 emergency radiology services.

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