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vRad Reaches Milestone: Deep Learning Algorithm Successfully Identifies Potential Intracranial Hemorrhaging; Operational Implementation Pending Regulatory Approval

First Machine-Learning Powered Workflow to Get Radiologists' "Eyes on Images" on Thousands of Studies More Quickly for Better Patient Care

MINNEAPOLIS, MN — (December 8, 2015) vRad (Virtual Radiologic), an affiliate of MEDNAX, Inc. (NYSE: MD) and the leading national teleradiology services and telemedicine company, has successfully reached a critical milestone outlined as part of its commitment to the growing branch of artificial intelligence known as "Deep Learning" announced in June 2015. vRad's anonymized and extensive clinical data sets and clinical expertise provided by their medical leadership team drove the successful development of an algorithm that reviews CT images in real-time and identifies potential intracranial hemorrhaging (ICH). After securing necessary regulatory approvals, the next step will be to implement this process into vRad's patented telemedicine workflow immediately so radiologists will have the ability to optimize diagnostic review time for these life-threatening abnormalities. ICH requires immediate medical treatment, otherwise it quickly leads to increased pressure in the brain, and potentially damaged brain tissue or death. vRad will commence the process to obtain regulatory approval before the end of 2015.

"Once approved and implemented into vRad's telemedicine platform, the deep learning algorithm can immediately identify—or 'recall'—a potential ICH and automatically prioritize that patient's study so that it is reviewed by the most appropriate radiologist more quickly," said Shannon Werb, Chief Information Officer of vRad. "While many are talking about machine-assisted diagnostics, like IBM's Watson and Google, vRad will be the first to leverage deep learning in a real-time practice environment. Our radiologists will have an additional tool to help maximize the speed at which they can get 'eyes on images' to determine if there is a diagnosis of ICH. This milestone shows how the right clinical and technical collaboration can empower radiologists, increase their time being doctors and diagnosticians—and ultimately improve patient outcomes."

vRad's physicians used anonymized data from vRad's extensive clinical database to train AI software to search, analyze and correctly recall positive cases of ICH. vRad interprets approximately ninety-thousand head CTs monthly, thousands of which are diagnosed with ICH. With the deep-learning-powered workflow, all potential ICH cases recalled by the algorithm will be "flagged" so that the patient's study can be automatically prioritized within the radiologist's reading queue. vRad can then assign cases with potential ICH to the most appropriately trained/experienced radiologist (e.g., a neuroradiologist), so they can direct their attention to the image, diagnose the condition, and relay critical findings to the attending physician as quickly as possible. Adding this capability to other priority-based workflows, including the practice's Trauma Protocol, will allow vRad to target radiologists' "eyes on the images" in less than the current average of four minutes after receipt from a client's referring facility. Based on most recent test results for recall and precision, vRad expects that over five thousand studies could be identified for potential ICH from the patent-pending ICH workflow in 2016, creating faster delivery of care to those patients.

"The combination of deep learning technology with our large clinical datasets and expertise serves as a model of how cutting-edge technology can be used to complement—not supplant—clinicians and improve care," said Dr. Benjamin Strong, vRad's Chief Medical Officer. "We are encouraged by the algorithm's precision performance to date in the test environment and will continue to focus on continuous improvement of the algorithm's recall levels of ICH so that once it is implemented, we can optimize the study distribution workflow. We look forward to extending deep learning to additional life-threatening abnormalities so vRad's clinicians can deliver high-quality, accurate diagnoses to referring physicians as quickly as possible."

About vRad

vRad (Virtual Radiologic) is the leading national teleradiology services and telemedicine company with over 350 U.S. board-certified and eligible physicians, 75% of whom are subspecialty trained. Its clinical expertise and evidence-based insight help clients make better decisions about the health of their patients and their imaging services. vRad is an affiliate of MEDNAX, Inc. (NYSE: MD), a national medical group specializing in neonatal, anesthesia, maternal-fetal, pediatric cardiology and other pediatric physicians services.

vRad interprets and processes patient imaging studies on the world's largest and most advanced teleradiology PACS for 2,100+ client hospital, health system and radiology group facilities in all 50 states. The practice has 15 issued patents for innovation in telemedicine workflow, and is a recognized leader in imaging analytics and deep learning-assisted diagnostics. It is also a past winner of Frost & Sullivan's Visionary Innovation Award for Medical Imaging Analytics (North

America). For more information, please visit www.vrad.com. Follow us on Twitter, Facebook and LinkedIn.

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