FDA Clears Software That Helps Radiologists Rapidly and Accurately Confirm Placement of Lifesaving Medical Devices

The Associated Press

DAYTON, Ohio--(BUSINESS WIRE)--Jan 9, 2013--ClearRead +Confirm, new software from Riverain Technologies that improves the clarity of conventional chest X-ray images and allows radiologists to rapidly confirm the proper placement of tubes, lines and wires, has received 510(k) clearance from the Food and Drug Administration (FDA).

Portable chest X-ray machines are routinely used to confirm the placement of lines and tubes; however, the quality of the image from a portable machine can make it challenging to see the devices. Chest X-rays on portable machines often need to be adjusted to make the edges and tips of the devices stand out, which is time consuming for radiologists.

ClearRead +Confirm greatly increases the readability of portable chest X-rays by selectively increasing contrast and suppressing the clavicles and ribs in the image, thus removing obstacles that could be obscuring the visibility of feeding, drug delivery and pain management tubes, lines and cardiac wires.

“ClearRead +Confirm gives radiologists a clearer view of portable chest X-ray images at a critical point in patient care, when treatment decisions depend on the confirmation of proper tube and line placement,” said Steve Worrell, Riverain’s Chief Executive Officer. “The software saves time without sacrificing precision, benefitting physicians and patients alike.” A Georgetown University reader study assessed the time it took radiologists to locate: PICC (peripherally inserted central catheter) lines, which are long, thin tubes that remain inside the chest for periods of time to deliver nutrients, fluid, blood, and medicines to treat pain, infection or cancer. PICC lines also are used to draw blood samples and provide kidney dialysis. Nasogastric tubes (NG tubes), which carry food and medicine to the stomach through the nose. Wires that conduct or measure electrical impulses, including electrodes for cardiac pacing and defibrillation. In the study, 334 chest X-rays were each reviewed by 10 radiologists with and without the enhanced ClearRead +Confirm image. The software reduced the reading time by approximately 19 percent, without compromising accuracy.

In a survey, participating study radiologists said that the enhanced image increased their confidence in confirming the placement of lines and tubes and made it easier to see venous catheters.

ClearRead +Confirm uses the clinically proven, proprietary machine learning and pattern recognition technologies in Riverain’s chest X-ray bone-suppression and computer-aided detection (CAD) software.

ClearRead +Confirm software was registered in the EU in November 2012.

Riverain Technologies An industry leader and technology innovator, Riverain Technologies applies proprietary pattern recognition and machine learning technologies in the creation of software applications for use globally in the health care industry and beyond. The Ohio-based company has developed practical solutions to save and improve the quality of people's lives through the early detection of disease. The company's ClearRead software enhances the expert skills of radiologists to improve patient outcomes using standard chest X-ray, without additional radiation dose or procedures for patients. For more information please visit .
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