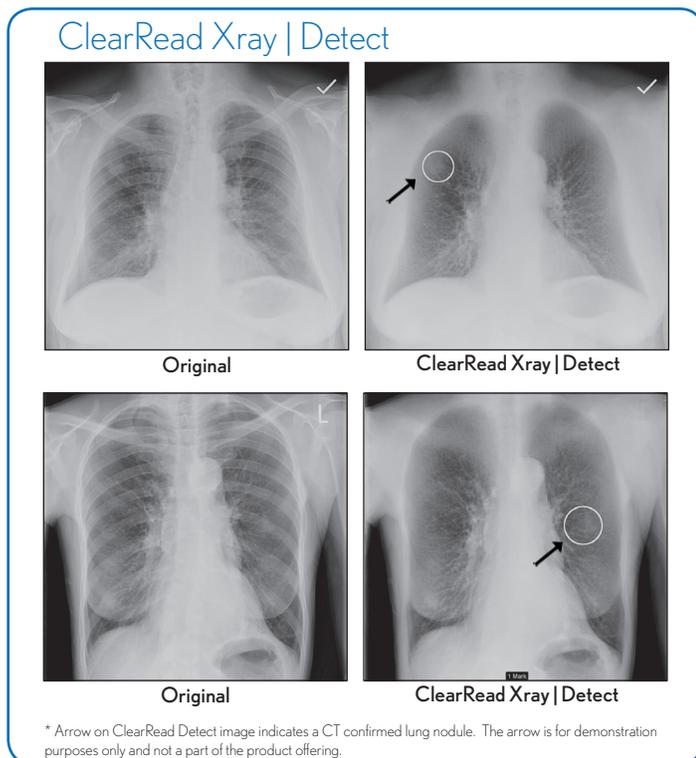# ClearRead Xray | Detect
Clinical AI in Action

Building Confidence Through Enterprise Imaging

Riverain Technologies' ClearRead Xray | Detect augments the standard PA/AP chest X-ray by marking the regions of interest on the ClearRead Xray | Bone Suppress image that warrant a second look by a radiologist. With no additional radiation dose to the patient or changes to existing imaging protocols, radiologists are able to detect more actionable nodules sooner, leading to improved patient outcomes.

Detect helps radiologists identify nodules that may be early-stage lung cancer[1], while offering high sensitivity with minimal false positives.[2]

ClearRead Xray | Detect

Original	ClearRead Xray	Detect

Original	ClearRead Xray	Detect

* Arrow on ClearRead Detect image indicates a CT confirmed lung nodule. The arrow is for demonstration purposes only and not a part of the product offering.

Key Advantages of ClearRead Xray | Detect

- Identifies lung cancer up to 18 months sooner[5]
- Enables detection of 1 in 2 previously missed subtle and very subtle nodules[3]
- Produces a 75% detection sensitivity of hard to find lung nodules with 0.5 false positives per image[4]
- Markers are scaled to reflect the nodule size without obscuring the boundary
- No additional radiation dose or changes to existing imaging protocols are required
- Seamlessly displays CAD results on existing PACS reading workstations
- Easy, one-click access to the CAD results
- FDA approved

18 mos.

Detect lung cancer up to 18 months sooner with the use of ClearRead Xray | Detect.[5]
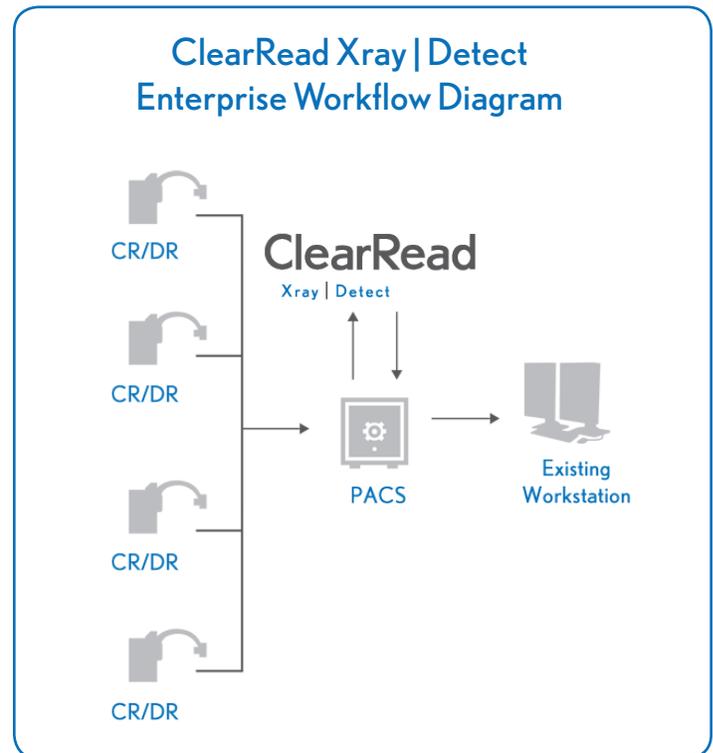
"We could have significantly decreased the time to diagnosis if we had used the ClearRead CAD system. The performance of the software at detecting early, subtle lung cancers was really good and the false positive rate was very low - less than one per image."

- Dr. Chip Gilkeson, University Hospitals Case Medical Center/Case Western Reserve University

Riverain
TECHNOLOGIES
See the Potential.

ClearRead
Xray | Detect

Studies prove that Detect aids radiologists in more effectively detecting subtle, actionable nodules. With a false positive rate of 0.5 per image and a 75% sensitivity for the most subtle nodules,[4] Detect provides a critical second pair of eyes without additional patient dose or changes to existing imaging protocols. A study presented at RSNA 2013 showed that with the use of Detect, radiologists were able to detect lung cancer up to 18 months sooner.[5]

Early detection of lung cancer is the key to improving patient outcomes, and chest X-rays continue to be a critical modality in the battle against lung cancer. Getting more out of the most common radiological exam based on Detect is a simple, cost effective addition to any thoracic program.

Undetected nodules of actionable size create a risk that radiologists or hospitals can't afford to take. Studies show that Detect can find up to 1 in 2 actionable nodules that were previously missed.[3]

ClearRead Xray | Detect
Enterprise Workflow Diagram

CR/DR

ClearRead
Xray | Detect

PACS

Existing
Workstation

* Modality licensing is also available

About Riverain

Riverain Technologies is a medical software innovator that develops solutions to aid radiologists in the early detection of disease. With the use of Riverain's ClearRead Xray and ClearRead CT product suites, radiologists are able to optimize the use of existing equipment for enhanced image interpretation. This enables radiologists to better utilize their diagnostic expertise for identification of diseases, such as lung cancer.

References

1. http://lungcancer.about.com/od/typesoflungcancer/a/spn.htm

2. Riverain Medical OnGuard FDA PMA Reader Study Results 2009

3. Chen J and White C (2008). Use of CAD to Evaluate Lung Cancer on Chest Radiography. Journal of Thoracic Imaging. 23:93-96

4. Use of Bone Suppression in Computer-Aided Detection for Chest Radiographs: Analysis of a new Scheme with High Sensitivity and Greatly Improved Specificity, Heber MacMahon MD, RSNA Meeting presentation. November 2011 CODE SSJ05-06

5. Performance of a Next Generation Computer-Aided Detection Algorithm for the detection of overlooked lung cancers on Chest Radiographs. RSNA 2013. Gilkeson, Robert C., Frolkis, Calen

*Requires ClearRead Xray | Bone Suppress