Rcadia's Fully Automatic Calcium Score Assessment from Coronary CTA Shows Potential to Eliminate Need for Separate Scan

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NEWTON, Mass., July 14, 2011 /PRNewswire/ -- Rcadia Medical Imaging has achieved proof-of-concept with the first fully automated software that performs calcium scoring directly from a coronary CT angiography (cCTA) study. This technology, the first to show strong correlation with the standard, Agatston scoring, has the potential to eliminate the need for a separate calcium score (CS) exam, and thereby reduce costs and decrease patient radiation exposure. This work in progress is based on Rcadia's COR Analyzer System technology for fully automatic detection of stenosis in cCTA studies.

CS is an important predictor of coronary artery disease that is commonly used by cardiologists. Until recently, a separate calcium scoring CT study was frequently conducted prior to a cCTA exam. With the new generation of CT scanners, CS can be accomplished from cCTA; a separate CS study, which increases the patient's radiation exposure, has the potential to be avoided. The feasibility of this approach has been demonstrated by a number of studies using semi-automatic segmentation of calcified lesions. Rcadia is developing a system, based on a fully automatic approach designed to bring simplicity, robustness and consistency into this technique.

To assess the diagnostic performance of the system, a retrospective trial was conducted based on cCTA and standard calcium scoring studies of 215 patients. Calcium score automatically computed from cCTA by Rcadia's software was compared to Agatston score obtained from non-enhanced calcium scoring studies using the standard technique. The system demonstrated good correlation with the standard Agatston score, achieving 90% accuracy for the classification into five calcium score ranges (0, 1-10, 11-100, 101-400 and above 400). The company believes the trial is the first reported study to match an automatically computed calcium score from cCTA to the standard Agatston score from non-enhanced calcium scoring studies.

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SOURCE [1]

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