## Rcadia COR Analyzer® System Demonstrates Potential in Emergency Department Triage of Chest Pain Patients at Low to Moderate Risk of Coronary Artery Disease

*Beth Israel Deaconess Study Presented at Radiological Society of North America*

**Chicago, IL -- November 30, 2009** - Physicians at Beth Israel Deaconess Medical Center (Boston) reported today on results of a study demonstrating the potential for automated analysis of coronary CT angiography (cCTA) by Rcadia's COR Analyzer System® to assist in rapidly ruling out coronary artery stenosis in hospital emergency department (ED ) patients with chest pain. The ability of the automated system to enhance the use of cCTA has potential to significantly reduce unnecessary utilization of coronary observation beds in the low to moderate probability coronary artery disease (CAD) patient. The study, which describes the initial experience of the FDA-cleared system in analyzing cCTA images from ED patients, was presented in Chicago at the Radiological Society of North America (RSNA) Scientific Assembly and Annual Meeting.

Although an estimated six million patients enter the ED in the U.S. each year with chest pain, significant coronary disease is eventually ruled out in the vast majority. There are significant clinical and economic needs to improve this triage process for chest pain patients at low or moderate risk of CAD.  Because current diagnostic techniques are often equivocal, an estimated two million, primarily low risk patients, are admitted to the hospital for further testing at an annual cost of $10-$13 billion.  In an estimated 85 percent of these patients, acute coronary event is subsequently ruled out.

"In recent years, cCTA has proven to be an effective, non-invasive procedure for coronary artery analysis," said Girish Tyagi, MD, the study's principal investigator**,** radiologist at the medical center and Instructor at Harvard Medical School. "However, coronary CT angiography is under-utilized in the ED because the procedure relies on expert readers who may not be immediately available during 'off hours'. In our study, we asked whether this fully automated software tool could assist in patient triage by comparing the automated results with those of expert readers."

"The results of this initial study, particularly the system's high negative predictive value of 98 percent, suggest that this automated system can be a very useful tool," he continued. "The system may provide non-expert readers with confidence to rule out significant stenosis, leading to decreased length of stay for patients in the ED and improved throughput in the ED." He added that positive results from the automated analysis require further interpretation by an expert reader.

In the retrospective study,  images from cCTAs performed on 115 low to intermediate risk patients who entered the ED with suspected CAD were studied with the COR Analyzer System. The researchers compared analyses of the cCTA studies by the COR Analyzer System with the interpretation of the studies by consensus opinion of two expert readers who served as the gold standard.  For 100 analyzable studies, the automated results from COR Analyzer yielded a negative predictive value (NPV) of 98 percent, meaning that 98 percent of the patients determined by the COR Analyzer System to not have significant stenosis (>50 percent reduction in lumen area), were in agreement with the expert readers.  The COR Analyzer System identified five of six patients determined by the expert readers to have significant stenosis, for a sensitivity of 83 percent.  The specificity was 82 percent.

The presentation is entitled, "Segmental Accuracy of an Automated Analyzer of Coronary CT Angiography (CCTA) in ED Patients: Initial Experience**."**  In addition to Dr. Tyagi, the study's authors are: Atif Khan, M.D., Faisal Khosa, M.D., Sheryar Sarwar, M.D., Maya Tyagi, Marc Camacho, M.D., and Melvin E Clouse, M.D., all of Beth Israel Deaconess Hospital, Boston.

**About the COR Analyzer System**
The COR Analyzer® System automatically processes images acquired on cCTA and generates comprehensive results and corresponding reports within minutes. The system's algorithm determines the presence of significant lesions (more than 50 percent stenosis) in the coronary arteries and visualizes the results through the use of detection marks to indicate the location of candidate lesions. The COR Analyzer utilizes images from 64-slice or higher CT machines.

**About Rcadia Medical Imaging**
Rcadia Medical Imaging develops and markets automated image processing software products for blood vessel analysis in patients with suspected cardiovascular disease. The company's first FDA-cleared product, the COR Analyzer® System, provides fully automated, real-time analysis of Coronary CT angiography to enable the practical application of cCTA in detecting coronary artery disease. The COR Analyzer improves the utility of Coronary CTA studies in the emergency department to triage chest pain patients and optimizes work flow in cardiology and radiology departments. Learn more at www.rcadia.com.