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**PATIENTS UNDERGOING CARDIAC CT ANGIOGRAPHY NEED
“PROTECTION” FROM EXCESSIVE RADIATION**

Most Clinicians Unaware of Radiation Involved with Cardiac CT Studies

CHICAGO, IL – Cardiac CT angiography (CCTA) is useful for visualizing blocked coronary arteries, but its diagnostic utility comes amid fears of increased risk of cancer due to ionizing radiation exposure. According to a study presented today at the American College of Cardiology’s 57th Annual Scientific Session (ACC.08), radiation exposure differed significantly between study sites and CT systems, and dose-saving algorithms were not used as often as recommended during CCTA. ACC.08 is the premier cardiovascular medical meeting, bringing together cardiologists and cardiovascular specialists to further breakthroughs in cardiovascular medicine.

The study, called the PRospective Multicenter Study On RadiaTion Dose Estimates of Cardiac CT AngiOgraphy IN Daily Practice (PROTECTION 1) Trial, conducted at 44 sites in Germany, analyzed 1,729 consecutive CCTAs performed during one month to determine the magnitude of CCTA radiation dose estimates and the use and efficacy of radiation dose-saving algorithms. In 83 percent of cases, the CT angiography was done to visualize the coronary arteries to rule out significant stenosis. The mean length of the scanned arteries was 144 mm, and the mean dose of radiation used overall was 17 mSv.

The investigators report that radiation dose estimates differed significantly between the study sites, ranging from 9 mSv to 44 mSv. Radiation dose estimates also differed significantly between the different types of 64-slice systems. The dose-saving algorithm called “ECG-pulsing” was used in just over three-quarters of the CCTAs, and this resulted in a significant 25 percent reduction in dose estimates. Two other dose-saving

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algorithms, the “100 kV” and the “sequential scan dose-saving algorithm” resulted in significant reductions in dose estimates of 51 percent and 69 percent, respectively. However, both of these were used infrequently, in only 6 percent of all CCTAs.

“Although cardiac CT is a very promising technology, educational efforts and further technical developments are needed to keep the radiation exposure as low as reasonably achievable,” said Jörg Hausleiter, M.D., Associate Professor of Medicine, Deutsches Herzzentrum München, Technical University, Munich, Germany, and lead author of the study. “This study will increase the awareness of the radiation exposure of cardiac CTs. In addition, we think that this study will result in an increased use of already available dose-saving algorithms, which will lower the radiation exposure of patients substantially. Finally, this study strengthens the need for further education of cardiologists and radiologists about CT technology to ensure low radiation exposure to the patient.”

Dr. Hausleiter will present this study, “International PRospective Multicenter Study On RadiaTion Dose Estimates Of Cardiac CT AngIOgraphy IN Daily Practice,” on Monday, March 31, at 2:15p.m in Vista Room S406.

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The American College of Cardiology (www.acc.org) represents the majority of board certified cardiovascular physicians in the United States. Its mission is to advocate for quality cardiovascular care through education, research, promotion, development and application of standards and guidelines- and to influence health care policy. ACC.08 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.