Dual-axis rotational coronary angiography reduces X-ray dosage and use of contrast agent

At the annual conference of the European Society of Cardiology (ESC) in Munich, Philips unveiled its latest advancement in coronary angiography. In a recent study XperSwing allowed a reduction in the number of X-ray runs, total radiation exposure and contrast dose.

“What XperSwing does is to project the full coronary artery in just one swing, so the cardiologist needs only one contrast injection and one X-ray dosage per artery,” said Frans Venker, Director Global Product Marketing Cardiovascular for Philips Healthcare. This is possible because a ‘C’ arm with XperSwing functionality rotates with curved trajectories around the patient, which allows different anatomical views to be imaged in a single run. In standard coronary angiography solutions, rotations are made around a single axis in a single plane.

A recent study with 26 patients at Toyohashi Heart Center in Japan evaluated the new technique. On average, 3.5 runs of the ‘C’ arm were needed for a diagnostic coronary angiography in those 13 patients who were diagnosed using the XperSwing system.

By contrast, on average 9.1 runs were needed for those 13 patients who underwent standard angiography.

Using the XperSwing system not only cut the X-ray dosage in half, but also led to a 18% reduction in the amount of contrast agent needed. Patients with impaired renal function in particular will benefit from the use of less contrast agent. XperSwing was developed in close collaboration with experts at the Centre Cardiologique du Nord in Paris.