Why EBCT?

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From a scientific side, there are more data emerging on EBCT each month now than ever before. Over $100 million in research dollars have been spent on multi-center trials assessing coronary, calcium, each study using EBCT or a combination of EBCT and MDCT.

There will be incredible outcome data forthcoming on large studies using EBCT (the RECALL Study in Germany will publish data in 2008, scanning over 4800 persons with EBCT only and followed for 5 years). Furthermore, the PACC Study, Cooper Clinic Study, and St. Francis Study all used EBCT only and demonstrated powerful outcomes, along with the 10,000+ person study by Shaw et at. Most importantly, diagnostically it is not at all obsolete. We have both a 64-slice CT and EBCT, and use the EBCT for more cases each day than our 64-slice scanner. We do all screening studies on our EBCT (calcium scans, body scans, lung scans), and select EB angiograms as well. For those patients who need a CT angiogram, and when we cannot get the heart rate below 70 bpm, we use EBCT angiography instead of 64-slice CT. Also, for children and young adults, where the radiation dose is more of a sensitive issue, we only use EBCT. Finally, for those cases with irregular heart rates and arterial fibrillation, we do our CT angiograms on the EBCT, specifically as we can prospectively gate the study and track the R wave, making these studies diagnostic.

The recent Cardiac CT Scientific Statement from the AHA (published October 2006) stated EBCT remains the reference standard for coronary calcium assessment. The ALARA principal, to use the least radiation necessary to make the diagnosis, will always favor the EBCT over MDCT studies, and in the times of rising radiation safety awareness, this becomes increasingly applicable. EBCT, for the first time in November 2006, was reimbursed by Medicare for calcium scanning, and was not excluded from the LCD model, as it has been in the past.

Calcium scoring is just starting to get the recognition it deserves, and will start getting the insurance coverage it deserves as well. Since 99% of all published studies on coronary calcium are done with EBCT, it will always be a preferred modality to obtain these studies. Even Blue Shield's California Technology Assessment Forum approved calcium scanning with EBCT for both intermediate risk patients and symptomatic persons. We haven't seen reimbursement from Blue Shield of California yet, but that should be forthcoming, based on their own committee's decision. From an insurance reimbursement and scientific perspective, 2006 was the best year ever for EBCT, and I am confident that 2007 will be much better. MESA will publish very powerful outcome data soon and, Harbor-UCLA will be publishing outcome data on 25,000 persons undergoing EBCT (already in press in JACC).