

MDCT helps better determine valve implant size for transcatheter aortic valve in patients with aortic stenosis

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MDCT is a better way to measure annular size in patients with aortic stenosis who are candidates for transcatheter aortic valve implantation (TAVI) than two dimensional echocardiography, a new study indicates.

The study included 69 patients who underwent an MDCT scan as well as transthoracic and transesophageal [echocardiography](#) before having a TAVI, said Dr. Vineeta Sethi, lead author of the study. TAVI is done to treat patients with [severe aortic stenosis](#) who are not surgical candidates. Aortic stenosis is a common disorder in the elderly.

"Measurement of the aortic annulus is crucial for implant size selection and procedure success," said Dr. Sethi. "If the implanted valve is too small, blood will leak outside of the valve apparatus back into the heart."

Measurements obtained on MDCT were significantly different than those obtained on echocardiography. "The decision to use a certain valve size would have been changed in about 55% of patients in our study if MDCT measurements had been used rather than echocardiography measurements," she said. "This includes patients who were wrongly sized as well as those who would have been disqualified from having TAVI due to the large size of their aortic annulus," she added.

She also stated that transesophageal/transsthoracic echocardiographically derived measurements of the aortic annulus are the current standard for measurement but with the increasing awareness of the [discrepancies](#) in measurement between MDCT and echocardiography, more people are using MDCT derived measurements to choose appropriate valve size.

The study will be part of the electronic exhibit program at the ARRS Annual Meeting in Washington, DC.

Provided by American Roentgen Ray Society

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