SCCT expert consensus document on computed tomography imaging before transcatheter aortic valve implantation (TAVI)/transcatheter aortic valve replacement (TAVR).

Computed tomography (CT) plays an important role in the workup of patients who are candidates for implantation of a catheter-based aortic valve, a procedure referred to as transcatheter aortic valve implantation (TAVI) or transcatheter aortic valve replacement (TAVR).

Contrast-enhanced CT imaging provides information on the suitability of the peripheral access vessels to accommodate the relatively large sheaths necessary to introduce the prosthesis. CT imaging also provides accurate dimensions of the ascending aorta, aortic root, and aortic annulus which are of importance for prosthesis sizing, and initial data indicate that compared with echocardiographic sizing, CT-based sizing of the prosthesis may lead to better results for postprocedural aortic valve regurgitation. Finally, CT permits one to predict appropriate fluoroscopic projections which are oriented orthogonal to the aortic valve plane.

This consensus document provides recommendations about the use of CT imaging in patients scheduled for TAVR/TAVI, including data acquisition, interpretation, and reporting.