had CO develop from TAVR so that these models can be validated.

There are other challenges with predicting CO after TAVR. Assumptions about the path of the native leaflet on valve expansion, which may vary in terms of calcification (thus width), and degree of prosthesis expansion are crude at best. Delayed CO, occurring after the patient has left an operating room after successful TAVR, may occur in 0.18% of native valve TAVR and is similarly difficult to predict.

We congratulate Heitkemper and colleagues⁴ for their continued work to improve prediction of CO after TAVR. We believe, given the devastating consequences of CO, that models should favor a high sensitivity over specificity. This is especially important as the age and risk profiles of patients undergoing TAVR decrease. Teams should consider techniques such as BASILICA (or referral to centers that

perform this) or surgical aortic valve replacement if there is potential for obstruction.

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Commentary: Preprocedural diagnostic imaging for transcatheter aortic valve implantation—*Videri quam esse*

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Esse quam videri: To be, rather than to seem.

Videri quam esse: To seem, rather than to be.

Transcatheter aortic valve implantation (TAVI)-related technology and techniques have rapidly evolved and improved almost continuously since the initial work of

CENTRAL MESSAGE

Coronary arterial complications are major adverse sequelae of transcatheter aortic valve implantation. Different approaches to ascertaining risks of such complications exist, each of which has flaws.

Cribier almost 2 decades ago. As expected, the benefits of TAVI have increased, the risks have decreased, and the indications have consequently expanded. Several important complications continue to exist, however, the risks of which may be anticipated by diagnostic studies. Coronary arterial ostial complications are noteworthy among these because of

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Disclosures: Author has nothing to disclose with regard to commercial support.

Received for publication Sept 27, 2019; revisions received Sept 27, 2019; accepted for publication Sept 27, 2019; available ahead of print Oct 8, 2019.

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J Thorac Cardiovasc Surg 2021;162:1085-6

0022-5223/\$36.00

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<https://doi.org/10.1016/j.jtcvs.2019.09.125>

the mortality and substantial morbidity that they incur. Consequently, accurately ascertaining the risks of potential coronary arterial complications prior to TAVI is of great worth, and may appropriately guide some patients toward surgical aortic valve replacement or, rarely, nonprocedural therapies.

In this issue of the *Journal*, Heitkemper and colleagues¹ from Ohio State University report the development of a novel yet simple anatomic geometric index (DLC_{2D}/d , the distance from the left aortic valve cusp to the left main coronary artery [LMCA] ostium, indexed to LMCA diameter), which they hypothesized would correlate better with LMCA complication risk than the standard criteria of coronary arterial height (high risk at <14 mm) and sinus of Valsalva diameter (high risk at <30 mm). Risks for the right coronary artery were not assessed. From an initial population of 600 patients who underwent TAVI evaluation (it is unknown how many actually underwent TAVI), 28 patients were identified as at high risk according to standard criteria. Of these 28 patients, however, 23 successfully underwent TAVI. Of the remaining 5 patients, 1 sustained a complication of the LMCA during TAVI, and the other 4 patients were not offered TAVI: (1) 2 patients underwent surgical aortic valve replacement, during which a surgical maneuver to simulate TAVI suggested that coronary arterial obstruction would have occurred had TAVI been performed; and (2) 2 patients with extremely low-lying coronary arterial ostia were not considered appropriate candidates for surgical aortic valve replacement. DLC_{2D}/d was significantly different between the 23

patients who underwent TAVI successfully and the 5 patients who did not, whereas all 28 patients were considered at high risk for coronary arterial complications according to conventional criteria.

Heitkemper and colleagues¹ suggest that their index identifies LMCA obstruction risk better than the standard criteria. Perhaps; however, their patient population was extremely small. The validity of the surgical maneuver to assess LMCA obstruction risk is unclear, and risks to the right coronary artery were not studied. Most importantly, *Heitkemper and colleagues¹ used conventional criteria as a screening test*, and only applied their index to the prescreened patients. Consequently, without further information, the value of DLC_{2D}/d can only be assessed as an adjunct to initial screening with conventional criteria. What about the patients who were *not* at high risk according to conventional criteria? Did some of these patients have high-risk DLC_{2D}/d values, did coronary arterial complications occur in some of these patients, and how accurately did DLC_{2D}/d identify those who did or did not have complications? As it stands currently, this is an example of a test whose diagnostic value has been overestimated, rather than appropriately or even underestimated, and it appears to be a case of *videri quam esse*, rather than *esse quam videri*.

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