bread-and-butter coronary artery bypass graft operation to be performed by a first-day, first-year resident physician. Residency programs should focus on learning to harvest ITAs in skeletonized fashion, and how to use them. Considering that skeletonized BITA also substantially lowers sternal infection rate¹² compared with pedicled BITA, it should become the exclusive technique used with patients undergoing coronary revascularization.

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LEFT-RIGHT CHOICE IN CORONARY ARTERY BYPASS GRAFTING SURGERY

Reply to the Editor:

We thank Dr Karangelis for his comments on our recent article.¹ We agree that the left coronary system represents the first target for bilateral internal thoracic artery (BITA) grafts,

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and that the role of BITA grafting for right coronary artery revascularization is less relevant.² The BITA graft should be used for the right coronary artery when no targets suitable for the BITA graft are present on the left coronary artery system. As suggested by other reports,² BITA grafts to the right coronary artery should be used only in the presence of severe proximal stenosis and viable myocardium in its distribution (good runoff). In the case of BITA grafting to the left coronary system, the radial artery remains a valid alternative for right coronary artery revascularization, particularly in young patients with long life expectancy.³

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TOPOGRAPHIC MAPPING OF REGIONAL CONTRACTILE INJURY IN ISCHEMIC MITRAL REGURGITATION: ARE REGIONAL SHAPE DEFORMATION INDICES ANSWER ENOUGH?

To the Editor:

We read with great interest the article by Lancaster and colleagues¹ regarding regional left ventricular contractile injury in ischemic mitral regurgitation (MR). Magnetic resonance imaging-based multiparametric strain analysis demonstrated severe normalized contractile injury in the papillary muscle-related left ventricular subregions in

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patients with ischemic MR. The mean degree of normalized injury approached 2 standard deviations and was significantly worse than the levels seen in ischemic no-MR patients.

The ischemic MR group had markedly worse contractile injury in the basilar and mid levels of the anterolateral, posterolateral, and posterior subregions, mainly subtending the posteromedial papillary muscle. This regional ventricular dysfunction affecting the papillary muscles leads to tethering, deformation, and insufficiency of the valve leaflets. Recurrence of MR was not predictable by this analysis. The presence of basal aneurysm or dyskinesis was strongly associated with recurrent MR. The main limitation of their technique, as acknowledged by the authors themselves, is the cost of cardiac magnetic resonance imaging and the time-consuming postimaging analysis.

In the subgroup with ischemic MR associated with left ventricular scarring and dysfunction, analysis of the left ventricular cineangiograms demonstrated that those patients with lack of negative systolic curvature in the left ventricular inferobasal regions had MR and some of these patients without baseline MR developed late MR after left ventricular restoration.²

This led to tethering of papillary muscles and tenting of mitral leaflets as the pathophysiologic mechanism of MR.³ Although the greater asynergy of the anterolateral wall reflected the magnitude of the ischemic damage, asynergy of the inferior wall was unlikely related to an ischemic substratum because the entity of right coronary

disease was the same in patients with and without MR. This was independent of the sphericity of the left ventricle because global sphericity was not different between patients with MR and without MR.⁴

To enable predictability of occurrence of late MR in ischemic heart disease and timely mitral valve repair during revascularization, an easily reproducible index is necessary.

We request that the authors devise a left ventricular shape deformation index that could accurately quantify the degree of MR and the possibility of occurrence of late MR. Because cardiac magnetic resonance imaging has a better 3-dimensional spatial definition, an index thus defined may be less time-consuming and reproducible for this difficult and heterogeneous group of patients.

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