The Japanese Association for Cardiovascular Surgery, The Japanese Association for Thoracic Surgery and The Japanese Association for Coronary Artery Surgery Do Not Endorse Chapter 7.1 in the 2021 ACC/AHA/SCAI Coronary Revascularization Guidelines

The new ACC/AHA/SCAI Coronary Revascularization Guidelines downgraded coronary artery bypass grafting (CABG) from a class of recommendation (COR) I to IIb in patients with stable ischemic heart disease (SIHD), normal ejection fraction, significant stenosis in 3 major coronary arteries (with or without proximal LAD), and anatomy suitable for CABG. The ISCHEMIA trial was cited by the guidelines committee to support these downgrades.

1. CABG and PCI are treatment modalities with different treatment effects. CABG has a preventive effect on myocardial infarction and all-cause mortality [Level of Evidence A][1-5], even in the current era of PCI and optimal medical therapy including statin and ARB. As for the treatment effect of PCI on stable coronary artery disease, in contrast, no randomized trial has yet demonstrated that the strategy of initial PCI is more effective in preventing myocardial infarction or all-cause mortality than the strategy of initial medical therapy alone. Since the randomized trial was an ITT (intention to treat) analysis, this does not mean that PCI is not necessary in the lifelong treatment strategy for stable coronary artery disease, since even patients in the initial medication strategy group underwent additional PCI if necessary, during the follow-up period.
2. We acknowledge the results of the ISCHEMIA trial. From the standpoint of cardiac surgeons, our interpretation of the results of this trial is summarized as follows. First, the initial invasive group included PCI (74%) and CABG (26%), and therefore the results were more influenced by treatment effect of PCI rather than CABG. Second, since the prevalence of proximal LAD stenosis for which CABG (ITA-LAD) is effective is 36.2% in this trial, CABG should have been selected at a higher rate (higher than 26%). Third, the median was follow-up 3.2 years, which is too short for the treatment effects of CABG to become apparent. Considering together, we think that this trial has no relevant impact on the COR for CABG.
3. We are disappointed that no surgical association such as AATS/STS was involved in developing this new guideline. In fact, the AATS/STS, EACTS, and LACES have already declared that they do not endorse Chapter 7.1 of this new guideline. We acknowledge that there can be divergent standpoints regarding the interpretation of the evidence. For this new guideline, surgeons were a minority on the writing

committee and had limited leverage in the consensus building process. We strongly believe that there should be equal representation of surgeons and cardiologists in the writing committee of a document that addresses a procedure-based approach.

Again, we do not endorse Chapter 7.1 and Figure 6 (Revascularization in Patients With SIHD) in the 2021 ACC/AHA/SCAI Coronary Revascularization Guidelines. We support the 2018 ESC/EACTS Guidelines on myocardial revascularization and the 2018 Japan Guideline, which have a Class I for CABG in patients with SIHD, normal ejection fraction, and significant stenosis in 3 major coronary arteries.

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