Author’s response to reviews

Title: Impact of repeated percutaneous coronary intervention on long-term survival after subsequent coronary artery bypass surgery

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Version: 2 Date: 9 August 2011

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Response to Dr. Shinji Masuyama

Thank you for your kind review and comments to our papers.

Average 58±43 months is not long enough for long-term follow-up, however, 95 patients were followed for longer than 10 years. It could be justified to describe our study period as long-term follow-up”.

Hemodialysis has been known to be a strong independent risk factor after cardiac surgery in dialysis as shown in this study. We previously reported that CABG was superior to PCI with DES in terms of long-term outcomes (Ann Thorac Surg 2010;89:1896-9000). Given these facts, repeated PCI should be refrained in patients on hemodialysis. However, this issue would be beside the point of this study.

We also compared clinical results between group B and C. As described in the result section, all-cause death free rate and cardiac death free rate were significantly different between group B and C.

Response to Dr. Naoki Kanemitsu

Thank you for your kind review and comments to our papers.

Third paragraph of Discussion summarized previous reports concluding that CABG is superior to PCI in terms of MACE because of the persistently lower repeat revascularization rates.

1. In response to your suggestion, we added the information about use of OPCAB technique in table 2. The analysis revealed no significant impact of OPCAB on the results.

2. As you pointed out, severe renal failure requiring hemodialysis is a significant risk for the prognosis. When excluding the patients with hemodialysis from the analysis, similar results were obtained. We added preoperative serum creatinine levels in Table 1. They did not significantly differ among the groups.

3. Impact of number of previous PCI on survival and cardiac event was not statistically significant, however it showed trend toward. This might be due to
relatively small size of the study and it is one of the limitations of the study.

Response to Dr. Kohei Abe
Thank you for your kind review and comments to our papers.
1. We added the information about the use of OPCAB technique in Table 2.
2. We are sorry that we were lack of mid-term graft patency data. As you suggested, it is one of the important factor for the prognosis and might be affected by repeated PCI.
3. P value 0.06 was not considered statistically significant, as you pointed out. We omitted the sentence from the revised manuscript.
4. We believe that our cardiologists were much less interested in LVEF when determining the operative indication.

Response to Dr. Matthias Thielmann
Thank you for your kind review and comments on our papers.
1. The reason why the patients with more previous PCI received less bypass graft is unclear, however we speculated some reasons and commented on that in the section of discussion. First one is, as you pointed out, that multiple PCI might promote diffuse coronary artery lesion. Second one is that previous PCI treated some coronary lesion which did not require bypass grafting at the time of the surgery.
2. We added the information about the exact reasons for cardiac death (heart failure, acute myocardial infarction, sudden death) in the long-term. One patient in group A, no patient in group B, and 3 patients in group C died for acute myocardial infarction in the long term.
3. Following your suggestion, we referred the new ESC/EACTS guidelines in the introduction section.

Response to Dr. Vipin Zamvar
Thank you for your kind review and comments on our papers.
Following your suggestion, we referred the new ESC/EACTS guidelines in the introduction section.