Responses to Comments from Reviewer #1 and Science Editor (WJC #65983)

We appreciate the opportunity to resubmit our manuscript which has been revised in accordance with the suggestions of the Reviewer and Science Editor.

Response to Reviewer #1. Our study is corroboration of the Reviewer's initial comment that PCI in vein grafts "is always rather disappointing". The Reviewer asks, "…how many years of inclusion what is this meaning as a percentage of the whole PCI procedures at your institution?" The study is taken from the drug-eluting stent era that began in 2004. We do not have an exact accounting of the total number of PCI done during this extended period but we know that this represents less than 1% of all PCI. Accordingly, the revision has added the following comment (page 9, paragraph 2): "These patients were treated in the drug-eluting stent era which now spans over the past decade and a half; the study population of this report represents less than 1% of patients undergoing PCI at our institution during this time."

The Reviewer asks, "Biggest problem/criticism is of course selection bias, the reason this option was made instead of tackling the native vessel do you have any idea how many patients presented with occluded vein grafts and another strategy, native vessel PCI, was done?" Given the retrospective nature of this study, this information is not accessible. However, since these are excellent questions, in response we now highlight these issues of selection bias by adding an expanded section (entire 2nd paragraph on page 9) describing these study limitations: "Limitations of the current study should be recognized. This study was retrospective and we do not have information as to why PCI of the occluded vein graft was undertaken as opposed to other treatment options. Data is not available on the number of patients who were treated by other means such as PCI of the native vessel, redo CABG, or medical therapy alone. Patients in this study who underwent PCI likely represent a small select group with totally occluded SVG. These patients were treated in the drug-eluting stent era which now spans over the past decade and a half; the study population of this report represents less than 1% of patients undergoing PCI at our institution during this time. Accordingly, the outcomes of these patients could have been affected by the selection bias of the operators."

The question was asked, “how was the duration of occlusion evaluated?” This is now answered in the revision (page 5, lines 4 and 5): “Duration of occlusion was estimated on the basis of the patient’s history of symptom onset.” This is the conventional definition used in total occlusion studies. Reviewer asks, “how did you define occlusion grade: acute, subacute, and late?” The Methods section of the resubmission (page 5, lines 3 and 4) states the classification of the duration of occlusion as “…acute (< 24 hours), subacute (> 24 hours to 30 days), or late (> 30 days).”

The Reviewer asks, “was the procedure success and outcome linked to clinical presentation?” and speculates on the possible relation of timing to outcomes, “…it seems that the option for treatment of an occluded vein in the setting of ACS is feasible..” Based on these queries, we analyzed both acute procedural success and long-term outcome as a function of clinical presentation and as a function of the duration of graft occlusion. There was no significant relation between either presentation or occlusion duration to acute or longer term outcomes. The results of these analyses have been added to the revised Results section: “Procedural success was not correlated with either clinical presentation (p=0.99) or duration of graft occlusion (p=0.33)” [page 6, paragraph 3]. “Longer term outcome was not related to the initial duration of SVG occlusion (Figure 2) (p=0.60) or clinical presentation (p=0.87)” [page 6, paragraph 4].

The paper has been revised in response to each of the Reviewer’s comments. We appreciate the Reviewer’s thoughtful input which has helped improve the manuscript.

Response to Science Editor. As detailed above, the questions raised by the Reviewer have all been answered and the manuscript has been revised accordingly. The Editor states that “There are 10 self-cited references.” Please note that the resubmitted manuscript has only 5 citations from the authors who have published extensively on vein graft PCI (specifically References #1, 8, 23, 25, and 31). It is noted that the title should be no longer than 18 words; the current title is well within the recommended length with 14 words. With respect to grant support, this study did not receive specific funding and therefore there is no approved grant application form to upload. Our research has been supported in

part by unrestricted philanthropic gifts. Accordingly, the cover page includes the following acknowledgement: “Supported in part by unrestricted philanthropic donations from the Stanley and Arlene Ginsburg Family Foundation and from the Aileen K. and Brian L, Roberts Foundation.” Original Figures will be submitted as a separate PowerPoint document as instructed. “Article Highlights” have been added at the end of the main text as instructed.