

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Cardiology

**Manuscript NO:** 58071

**Title:** Medical Therapy vs Early Revascularization in Diabetics with CTOs;  
Meta-analysis and Systematic Review

**Reviewer's code:** 02890405

**Position:** Peer Reviewer

**Academic degree:** FRCP (C), MBBS, PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** Canada

**Author's Country/Territory:** United States

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**Reviewer chosen by:** Ya-Juan Ma

**Reviewer accepted review:** 2020-08-17 16:41

**Reviewer performed review:** 2020-08-26 16:03

**Review time:** 8 Days and 23 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## **SPECIFIC COMMENTS TO AUTHORS**

The question of whether optimal medical therapy or revascularization is more beneficial for diabetic patients with totally occluded coronary arteries is an interesting one. In order to address this question, the authors took the very unusual step of combining patients from one randomized controlled trial and three observational studies, to conclude that optimal medical therapy (OMT) is associated with a trend to higher all-cause and cardiac mortality, as well as higher risk of repeat revascularization. When compared to the PCI subgroup (excluding CABG), the rate of repeat MI was actually lower. The starting point for this current study is the Frye paper (NEJM 2009) that showed no real benefit to prompt revascularization. Damluji et al. extracted the CTO subset, but their analysis centered around CTO vs no CTO. The present paper looks at CTO, analyzing again OMT vs PCI/CABG similar to Frye et al. Comments 1. This paper will be more useful if the authors can first look at the data from the Damluji paper alone, to determine whether OMT vs PCI/CABG is equivalent or not. If someone else has already done this from the Frye paper, then please use that paper as the starting point rather than the Damluji paper which looks at CTO vs no CTO. 2. Assuming there is no difference between OMT and PCI/CABG from RCT data (Damluji or another spinoff from Frye) alone, it then is helpful to add observational data such as from the other three studies that are used in this meta-analysis, to see if a different conclusion is reached. 3. Please comment on the prevalence and importance of underlying chronic kidney disease since the study population has diabetes. 4. Please transfer the last paragraph of the results section (regarding quality assessment) to the methods section. 5. The authors may wish to speculate briefly why the results from the PCI subset are so different compared to the combined revascularization pool when compared to OMT. On the whole, this paper provides a very interesting read.