Review of: "Coronary Artery Bypass Graft Surgery Clinical Quality: A Network-DEA approach"

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Potential competing interests: No potential competing interests to declare.

Journal: **Qeios**

Article title: **Coronary Artery Bypass Graft Surgery Clinical Quality: A Network-DEA approach**

General Comments:

This article studies the clinical quality levels of patients who underwent CABG surgery with NDEA (two-stage) method in managerial and clinical efficiency stages. The authors use the Network Data Envelopment Analysis (NDEA) method with the structure, process, and outcome measures of the Coronary Artery Bypass Graft (CABG) surgery, in a tertiary training and research hospital as a prospective, cross-sectional and registry research. The findings suggest that the Intensive care unit (ICU) and postoperative inpatient day, cardiopulmonary bypass (CPB) and cross-clamp (CC) duration, and the use of fresh frozen plasma (FFP) were determined as the CABG surgery points requiring quality improvement.

Overview:

The paper is well written and the empirical work appears to be carefully and correctly done. The research question is VERY GOOD and it does make a sufficient new contribution to the literature to be suitable for the **Qeios**. In fact, the literature on Coronary Artery Bypass Graft Surgery Clinical Quality is quite inexistent.

The MAJOR contribution of the paper is the analysis of clinical quality levels of patients who underwent CABG surgery with NDEA (two-stage) method in managerial and clinical efficiency stages.

The paper is very interesting; and in my view, it needs to be MINOR improved (the methodology is somehow large, technical and need to be more applicative and easy to read) to reach the standard required for publication in this journal.

Specific Comments:

1. Introduction: quite large; reduce to maximum 2 pages; introduce one phrase with novelty and one with Turkey health system
2. Literature review: introduce it (maximum 1 page)
3. The model: quite large and very detailed 4 pages; try to reduce it to maximum 2 pages;
4. Introduce at least one table with descriptive statistics for: First Stage Inputs; Intermediate products and Outputs of second stage

5. How we can generalize the results obtained from a tertiary training and research hospital
6. Conclusions: enlarge at least 1 page. Policy implications? Limitations?

General considerations: the idea of the article is very interesting; the results are good and with better respect for Guidelines for Contributors, Explications of the results and limitations (the introduction is somehow large, article is technical and need to be more applicative and easy to read MINOR CHANGES), it can be published in Qeios.