Reviewer 1

Autosegmentation of cardiac substructures in respiratory-gated, non-contrasted CT images This is an interesting manuscript as it is a comprehensive study on the feasibiliity of Autosegmentation of cardiac substructures in respiratory-gated, non-contrasted CT images. As radiation dose to specific cardiac substructures can have a significant on treatment related morbidity and mortality which limited the radiation dose to tumor located closely attach to cardiac structure and subsequently decreased the local control rate as well as overall survival. Previous studies such as RTOG 0617 and Thor et al, show dose escalation reduced patient survival, in part due to excessive cardiotoxicity in SBRT of lung ca. These findings have been supported by several other groups. However, despite these findings, definition of such structures is not standard in radiation planning at this time. This is one of the few early study investigated the feasibility of autosegmentation of the cardiac substructures in four-dimensional (4D) computed tomography (CT), respiratory-gated, non-contrasted imaging. There remain a few limitation in this study need to be address.

1.) number of patients study was too small to have a final strong conclusion. **Thank you for this suggestion. We added a sentence in the conclusion addressing this limitation**

2.) these studies have reported success in autocontouring the great vessels and heart chambers, whereas the coronary arteries and heart valves still failed autosegmentation or required complete recontouring. Damage of coronary vessels was one of the major problem of the late toxicity of radiation therapy, which until now still needed to be solved. Hopefully with continue innovation and advancement of computer technology this problem could be curbed in the near future. Nevertheless, this manuscript will add to a growing knowledge of AI contouring of cardia structures. and eventual lay as a foundation for the future treatment of thoracic tumors.

Science editor

This is an interesting manuscript as it is a comprehensive study on the feasibiliity of autosegmentation of cardiac substructures in respiratory-gated, non-contrasted CT images. However, this is one of the few early study investigated the feasibility of autosegmentation of the cardiac substructures in four-dimensional CT, respiratory-gated, non-contrasted imaging. The questions raised by the reviewer should be answered; and (3) Format: There are 3 figures. A total of 17 references are cited, including 8 references published in the last 3 years. There are no self-citations. 2 Language evaluation: Classification: Grade A. 3 Academic norms and rules: The authors provided the Biostatistics Review Certificate, The ARRIVE Guidelines, and the Institutional Review Board Approval Form. The authors should provide the signed Conflict-of-Interest Disclosure Form and Copyright License Agreement. No academic misconduct was found in the CrossCheck detection and Bing search. 4 Supplementary comments: This is an unsolicited manuscript. The topic has not previously been published in the WJCO. 5 Issues raised:

(1) The "Author Contributions" section is missing. Please provide the author contributions; **Thank you for this comment. This has been done**

(2) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor; **Thank you for this comment. Figures in original powerpoint provided**

(3) PMID and DOI numbers are missing in the reference list. Please provide the PubMed numbers and DOI citation numbers to the reference list and list all authors of the references. Please revise throughout; **Thank you for this suggestion. This has been done**

(4) The "Article Highlights" section is missing. Please add the "Article Highlights" section at the end of the main text; and **Thank you for this suggestion. This has been done**

(5) The reference cited in the text should be put in the square bracket. **Thank you for this suggestion. This has been done**

6 Re-Review: Not required.

7 Recommendation: Conditional acceptance.