**Title page**

# Title: Letter to the Editor: Preoperative assessment of aortic calcification by computed tomography in thoracic aortic disease

# Article type: Letter to the editor

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Letter:

The article "Preoperative assessment of aortic calcification by computed tomography in thoracic aortic disease" by Ryo Suzuki MD et al.1 was read with great enthusiasm. It was instructive to read the concisely written study, and we commend the writers for their diligence. The article concludes that Preoperative examination of maximal CT attenuation values predicts whether simple anastomosis is suitable in thoracic aortic surgery. If CT attenuation is 325 HU or above, a manipulation method or another anastomosis location should be planned. Maximal CT attenuation levels predict late death. CT attenuation values increase long-term mortality through unknown processes. However, we believe it is necessary to include other important aspects that would enhance the quality of this article and contribute to the current body of information.

Firstly, as a result of the potential for recollection bias and inaccurate documentation of patients, retrospective studies have raised various problems, which could have been alleviated if the authors had included cases from the time in question. In addition, socioeconomic, health, and environmental circumstances in a given area could introduce bias into a study. In addition, the tiny sample size, which affects the study's statistical power, raises substantial doubts about the study's reliability. If the authors had included a greater number of participants, the effect magnitude and statistical significance could have been increased. First, the distinctive centered study and the absence of specific socioeconomic status and behaviors like smoking, alcoholism, and other addictive substances were not highlighted. For example, a 2008 study conducted by Alon Eisen et al.2 prospective cohorts of 361 stable angina pectoris patients (307 men, 54 women; age range, 37 to 83 years) were assessed for aortic calcification using chest spiral computed tomography. The ACTION trial calcification sidearm study was offered to all patients enrolled in the primary study at sixteen regional facilities. Between June 1997 and October 1998, 518 patients were enrolled over 16 months. Second, no data analysis method was employed to define or explain the link between one dependent binary variable and one or more independent nominal, ordinal, interval, or ratio-level variables. For representation, the independent variables linked with CC (coronary calcium) and thoracic aorta calcification were determined using stepwise logistic regression analysis.3

Transesophageal echocardiography is the preferred way to evaluate the ascending and descending thoracic aorta in patients with aortic dissection or following thoracic trauma. However, transesophageal evaluation of the aortic arch is limited. However, detailed transesophageal echocardiographic information about the size of the typical thoracic aorta is currently lacking. Such structural alterations have been evaluated and tracked using a variety of ways. Frequently, comparing measured aortic diameters to normal values is a major factor in determining management recommendations. Specifically, for defining and categorizing structural anomalies such as aneurysm, aortomegaly, ectasia, stenosis, coarctation, and hypoplasia, knowledge of normal aortic diameters at various levels is required.4

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