

Endothelial function and 6-year outcomes following an acute coronary syndrome in patients with a history or presence of cancer

Y. Matsuzawa¹, T.Y. Yoshii¹, R.S. Sato¹, H.N. Nakahashi¹, E.A. Akiyama¹, M.K. Konishi¹, K.O. Okada¹, N.M. Maejima¹, N.I. Iwahashi¹, T.E. Ebina¹, K.H. Hibi¹, M.K. Kosuge¹, K.T. Tamura², K.K. Kimura¹

¹Yokohama City University Medical Center, Yokohama, Japan; ²Yokohama City University Hospital, Yokohama, Japan

Funding Acknowledgement: Type of funding source: None

Background: It has been reported that in the primary prevention settings, patients with cancer are exposed to an increased risk of cardiovascular disease through multiple mechanisms. However, among patients with established coronary artery disease, it is unknown whether cancer is an additional risk for endothelial dysfunction, mortality, and subsequent cardiovascular events.

Purpose: To determine endothelial function, mortality and cardiovascular events following acute coronary syndrome according to history/presence of cancer on (ACS).

Methods: Patients who were admitted to our university medical center for ACS were enrolled, and were divided according to the history/presence of cancer. We measured reactive hyperemia index before discharge in all patients to evaluate endothelial function. The logarithmic value of RHI (LnRHI) was used in the analyses. All patients were followed for cardiovascular death, non-cardiovascular death, myocardial infarction (MI), and stroke.

Results: Six-hundred and ninety patients with ACS were enrolled (mean

age [SD] was 66 [12] years, male was 78%), and 73 patients (10.6%) had a history or presence of cancer. Endothelial function was not significantly different between ACS patients with and without the history/presence of cancer (LnRHI 0.64 (0.26) versus 0.59 (0.26), $p=0.10$). During the follow up period (the median 6.1 years), cardiovascular death occurred in 48 patients, non-cardiovascular death in 36, MI in 46, and Stroke in 31, respectively. The composite outcomes with all cause death, MI, and stroke occurred more frequently in the patients with the history/presence of cancer than those without (Figure A). However, the risk for cardiovascular death, MI, and stroke was similar between the two groups, and only non-cardiovascular mortality was significantly higher in the patients with the history/presence of cancer than those without (Figure B and C).

Conclusion: Among patients with ACS, the history/presence of cancer is associated with the risk of non-cardiovascular death, but not the risk of endothelial dysfunction and subsequent cardiovascular events.

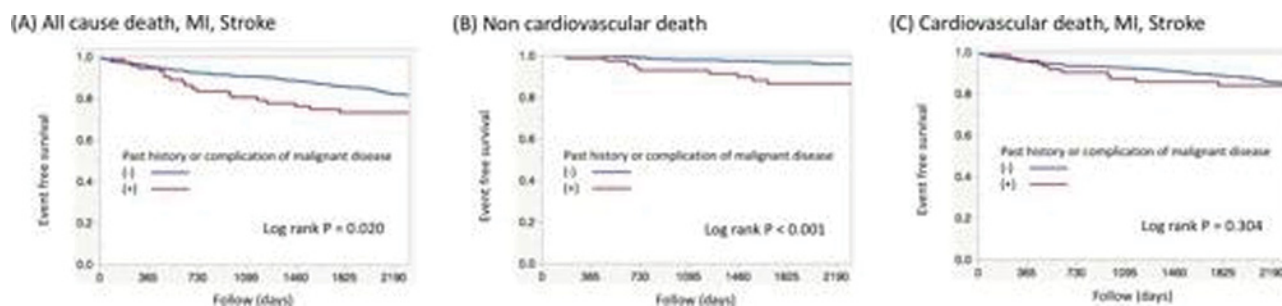


Figure 1