Author’s reply

We appreciate the interest and comments from Dr. Lin and colleagues about our recently published study “Prognostic Impact of Preexisting Hypertension and High Systolic Blood Pressure at Admission in Patients Hospitalized for Systolic Heart Failure” [1]. We agree with Dr. Lin’s comments regarding the possibility of overadjustment in our multivariable analysis model because the model included hypertension and systolic blood pressure (SBP) at admission as variables simultaneously. At the beginning of the study, we were eager to show prognostic benefits of previous hypertension history, and we had created a lot of multivariable models. However, we could find the prognostic benefits of the hypertension in only limited adjusted models while the SBP at admission showed significant benefits consistently. We had deliberated when we selected the final multivariable model which variables should be included. We believed that the blood pressure (BP) at admission reflects functional cardiac reserve against the stress rather than just BP. Thus, we decided to put these variables together in the analysis.

In the aspect of the obesity paradox, we fully agree with Dr. Lin’s comments. We also believe in the presence of obesity paradox in heart failure. When we had assessed the clinical impact of the body mass index (BMI) in our study population, it showed a strong association with 1-year mortality rate (Fig. 1, log rank p < 0.001). However, when evaluating the presence of the obesity paradox, we need to exclude the patients with low BMI (< 18.5 kg/m²) because these patients may have cardiac cachexia that is associated with poor prognosis in heart failure [2,3]. Because we did not exclude these patients, the clinical impact of BMI could be overestimated in the multivariable model. Now, we are studying the obesity paradox in heart failure and hope to publish the data soon.

References


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Fig. 1. Kaplan Meier’s curves for cumulative incidence of all-cause death according to BMI categories. BMI, body mass index.