

[ LETTERS TO THE EDITOR ]

**Author's Reply: How to Demonstrate the Impact of Cardiac Rehabilitation on Cardio-renal Protection**

**Key words:** elder cardiovascular disease patients, long-term program, outpatient cardiac rehabilitation

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*The Authors Reply* We greatly appreciate the interest that Dr. Teruhiko Imamura have shown in our article (1) and read the Letter to the Editor with interest. As noted, at end of the five-year observation period in the present study, the number of patients had decreased from eighty-eight to fourteen (1). Since the age of the patients at the beginning was 73 years, the age at the end of this study would have been 78 years. As the age of cardio-vascular patients increases it becomes more difficult to continue long-term cardiac rehabilitation (CR) programs. We believe that the next study should be focused on elderly patients who complete a five-year program based on a proper research plan, as a five-year complete cohort.

In response to the second point, since only a small number of these patients participated in CR as outpatients after hospital discharge, the rate of outpatient participation in the CR program was as low as 9% in hospital facilities (2). Thus, it would be difficult to continue the comprehensive CR program that is delivered to hospitalized inpatients to outpatients as cardiovascular disease (CVD) therapy. Onishi

et al. reported that the incidence of major adverse cardiac events (MACE) in a CR group was significantly lower than that in a non-CR group (used as a control group) of elderly male CVD patients (eleven patients, 30% vs. forty-six patients, 62%,  $p=0.001$ ) who were followed for up to 3,500 days (3). However, the rates of all-cause mortality and cardiovascular death in the CR and non-CR groups in their study did not differ to a statistically significant extent. Since the CR program is clearly effective for maintaining the cardiac function, we should not perform a randomized study.

**The authors state that they have no Conflict of Interest (COI).**

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**References**

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