Comment on the 2013 ACC/AHA Guidelines on Lifestyle Management to Reduce Cardiovascular Risk by the JAS Guidelines Committee

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The American College of Cardiology/American Heart Association (ACC/AHA) announced jointly with the National Heart, Lung, and Blood Institute (NHLBI) guidelines on Lifestyle Management to Reduce Cardiovascular Risk in November 2013. The Japan Atherosclerosis Society (JAS) herein expresses its opinion concerning the guidelines based on internal discussions.

Outline of the ACC/AHA Guideline

The ACC/AHA Guideline targets primary care providers. The guideline comprises answers to developed critical questions (CQs) based on results from randomized controlled trials (RCTs), observational studies, meta-analyses, and systematic reviews of studies carried out in adults (≥18 years) and were reported between 1998 and 2009.

There are two CQs concerning diet: “what is the effect of dietary patterns and/or macronutrient composition on cardiovascular disease (CVD) risk factors, when compared to no treatment or to other types of interventions?” and “what is the effect of dietary intake of sodium and potassium on CVD risk factors and outcomes, when compared to no treatment or to other types of interventions?” Dietary patterns and particular macronutrient compositions were investigated for their effect on blood lipids and blood pressure and recommendations were made only with regard to effects on plasma LDL-cholesterol (LDL-C) and blood pressure (Table 1). Data on nutritional supplements provided in pharmaceutical preparations was excluded from the analysis because such supplements may not have similar effects and are not considered “lifestyle” interventions.

The CQ concerning physical activity was “what is the effect of physical activity on blood pressure and blood lipids when compared to no treatment, or to other types of interventions?” The effects of aerobic exercise and resistance exercise training on LDL-C, non HDL-cholesterol (non HDL-C), HDL-cholesterol (HDL-C), triglycerides (TG), and blood pressure were investigated, and aerobic physical activity was recommended to reduce LDL-C and non HDL-C and to lower blood pressure (Table 1).

The Opinion of JAS

The JAS Guideline for the Diagnosis and Prevention of Atherosclerotic Cardiovascular Diseases in Japan—2012 Version (JAS Guideline 2012) highlights the importance of comprehensive management, and we believe that lifestyle modification for management of blood lipids and blood pressure according to the current ACC/AHA Guideline is consistent with the essential views of the JAS. Some differences that do exist are noted below.

Diet

The current ACC/AHA Guideline emphasizes adoption of dietary patterns rather than intakes of individual dietary components. The DASH dietary pattern, the USDA Food Pattern and the AHA diet are recommended specifically. These dietary patterns are low in saturated fat, total fat, and cholesterol, and are rich in potassium, magnesium, and calcium, as well as protein and fiber. The traditional Japanese diet (“the Japan Diet”) represents an analogous dietary pattern, and “the Japan Diet” was previously shown to have anti-atherogenic properties1). The JAS Guideline 2012 recommends consumption of a traditional Japan
The individual meta-analyses used in the ACC/AHA Guideline include only several papers concerning Japanese individuals, with the majority comprising RCTs conducted in Caucasian subjects. On the other hand, the JAS Guideline 2012 was prepared by examining epidemiological research and RCTs conducted in Japanese individuals, as well as evidence from outside of Japan. The JAS guideline 2012 also differs in that its endpoint was the onset of atherosclerotic CVD. The effects of exercise on Japanese individuals have been shown to include TG reduction and HDL-C elevation, rather than reduction of LDL-C; reduction of non-HDL-C has also been suggested.

We summarize the new ACC/AHA Guideline with the opinion of the Japan Atherosclerosis Society. We have concluded that it is not necessary to correct or change the diagnostic and therapeutic policies recommended in the JAS Guideline 2012. We hope that the JAS Guideline 2012 will continue to serve a good guide for clinical practice in the field.

**Conflicts of Interest**

None.

**References**

1) Tada N, Maruyama C, Koba S, Tanaka H, Birou S, Tera-


