Background Plasma fibrinogen, which is an inflammation marker, is known as a risk factor for myocardial infarction among Caucasians. However there is only one study examined among Japanese, which recruited from urban area. We examined the relation between plasma fibrinogen level and myocardial infarction by using data of JMS cohort that the participants were rural Japanese.

Methods Study subjects were 6599 participants (2645 men and 4254 women) who were free of myocardial infarction, and fibrinogen level was measured in the JMS cohort study. The samples were taken between 1992 and 1995 in 12 rural areas in Japan. Cox’s proportional hazard model was used to calculate the HR of myocardial infarction.

Results The average period of follow-up was 10.7±2.3 years. Mean age was 54.7±15.4 years in men and 55.0±12.5 years in women. Plasma fibrinogen concentration and body mass index were significantly higher in women. The RR of myocardial infarction in the higher tertile of fibrinogen concentration was significantly higher than that in the lower tertile, after adjustment for age in men (lower vs higher tertile; HR 2.6), but not significant association was seen in women. However, even in men after adjustment for age, systolic blood pressure and smoking, the association was not significantly (lower vs higher tertile; HR 2.5).

Conclusion Our data suggest that in Japanese rural residents, high fibrinogen concentration elevated risk of myocardial infarction men, but that there is no tendency between plasma fibrinogen level and myocardial infarction in women.

Introduction Metabolic syndrome is a cluster of cardiovascular risk factors. From the viewpoint of preventive medicine, it is essential for early diagnosis and appropriate treatment to subjects with metabolic syndrome. The objective in this study is to explore the prevalence and associated risk factors of metabolic syndrome among hospital staff based on the health examination.

Methods Based on the cross-sectional study design, the database of the health examination of the workers in a medical center on the northern Taiwan is analysed. The definition of metabolic syndrome is according to the criteria proposed by Department of Health in 2007, Taiwan. Due to the limitation of the examination, the total cholesterol is used to replace the HDL-C value.

Results The prevalence of metabolic syndrome is 16.3% (24.8% in male and 11.7% in female) among 1203 screened subjects. The highest proportion of abnormal index of metabolic syndrome is central obesity combined with higher blood pressure and total cholesterol. Based on the multinomial logistic regression, the significant factors related to 1–2 abnormal index of metabolic syndrome include gender (male vs female, OR 1.85, 95% CI 1.31 to 1.47), age (OR 1.04, 95% CI 1.02 to 1.06) and obesity (OR=1.39, 95% CI 1.31 to 1.47). In addition, the significant factors related to 3–5 abnormal index of metabolic syndrome also include gender (male vs female, OR 2.08, 95% CI 1.28 to 3.45), age (OR 1.12, 95% CI 1.09 to 1.14) and obesity (OR 1.73, 95% CI 1.60 to 1.87).

Conclusion To promote the health promoting hospital, the priority of metabolic syndrome prevention is controlled waist circumference and body weight.