Introduction: Heavy consumption of alcohol is a known risk factor for new-onset atrial fibrillation (AF). We aimed to evaluate the relative importance of frequent drinking vs. binge drinking.

Methods: A total of 9,776,956 patients without AF who participated in a national health check-up program were included in the analysis. The influence of drinking frequency (day per week), alcohol consumption per drinking session (grams per session), and alcohol consumption per week were studied.

Result: Compared with patients who drink twice per week (reference group), patients who drink once per week showed the lowest risk [hazard ratio (HR): 0.933; 95% confidence interval (CI): 0.916–0.950; Table 2] and those who drink everyday had the highest risk for new-onset AF (HR: 1.412; 95% CI: 1.373–1.453; Table 2), respectively. However, the amount of alcohol intake per drinking session did not present any clear association with new-onset AF. Regardless of whether weekly alcohol intake exceeded 210g, the frequency of drinking was significantly associated with the risk of new-onset AF. In contrast, when patients were stratified by weekly alcohol intake (210g per week), those who drink large amounts of alcohol per drinking session showed a lower risk of new-onset AF.

Conclusion: Frequent drinking and amount of alcohol consumption per week were significant risk factors for new-onset AF, whereas the amount of alcohol consumed per each drinking session was not an independent risk factor. Avoiding the habit of consuming a low but frequent amount of alcohol might therefore be important to prevent AF.