**Supplementary material**

**Validation studies of alcohol assessment**

In the most recent validation study, the intraclass correlation coefficient between the average of four 3-day food records and the FFQ for alcoholic intake was 0.82 (95% confidence interval [CI]: 0.76-0.87) (Fernández-Ballart JD et al. Br J Nutr 2010;103:1808-16).

Average (SD) consumption of alcoholic drinks (not pure alcohol, but all amounts of the full alcoholic beverages) was 143.4 g/d (198.7) according to the FFQ and 145.1 g/d (231.0) according to repeated food records. In the reproducibility study, the correlation of total alcohol intake between 2 successive FFQs completed less than one year apart was 0.85 (95% CI: 0.77-0.91) (de la Fuente-Arrillaga C et al. Public Health Nutr 2010;13:1364-72).

**Identification of potential under-reporters**

To address potential underreporting of alcohol intake among heavy drinkers, we explored inconsistencies in other aspects of the alcohol drinking pattern. We compared the association of categories of alcohol intake with mortality after recategorizing in the immediate upper category those participants who presented inconsistencies in their reporting of alcohol habits. For this aim, we took advantage of the rich information on alcohol collected in the SUN cohort, including specific additional questions, apart from the FFQ, on the habit of consuming wine with meals, the consumption of alcohol in special days (celebrations, holidays, week-ends) and the exposure to driving under the effects of alcohol. For example, participants who reported no consumption of alcoholic beverages in the FFQ and thereafter reported consuming some wine with meals were considered as potential under-reporters. In an attempt to correct for their underreporting, in these analyses we added an additional unit of alcohol intake (+10 g/d) to those participants who were deemed to be likely under-reporters given their inconsistencies in self-reports. We further expanded this correction when we found alternative inconsistencies in their self-reports of smoking or other food habits. We compared the results obtained on the association (both with alcohol grouped in categories and linearly) between alcohol intake and premature mortality in models both with and without these corrections. These comparisons were also repeated using instead an upgrading procedure. We did a simple imputation of alcohol consumption for participants with inconsistencies in their self-reported alcohol intake. We imputed the median of their counterparts with the same characteristics of sex and drinking pattern to upgrade their alcohol intake (Gea A et al. Br J Nutr 2014;111:1871-80).

**Sensitivity analyses**

Finally, we conducted a wide array of sensitivity analyses, always comparing uncorrected and corrected classifications of alcohol intake. Under different assumptions we estimated the hazard ratios of early death (<65 years old) for low consumption (>0 but <10 g/d) versus abstention or for the linear dose-response association (for each +10 g/d of intake).

In each of these analyses we tested departures from linearity using restricted cubic splines. This was done separately for men and women, for different allowable limits of total energy intake, after excluding mismatches in alcohol consumption and participants with 70 or more items missing in the FFQ or those with a history of chronic diseases, after excluding early deaths (in the 2 first years of follow-up) and after excluding those occurring after 55 years, after excluding participants with more than 50% of their alcohol consumption from sources other than wine, when assessing only cancer deaths or when assessing only non-cancer deaths. Additionally, we excluded abstainers to assess the HR (95% CI) of early mortality associated with each 10 g/d increase in alcohol intake only among drinkers. Moreover, based on an additional questionnaire for self-reported abstainers, we excluded those who reported any alcohol intake previous to baseline (former drinkers), and those abstainers who did not complete the additional questionnaire. Finally, we adjusted the multivariable model for avoidance of binge-drinking to additionally consider the drinking pattern as a potential confounder in the alcohol-early death association.