

## ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #451

1. a. Full Title: Alcohol consumption and incident hypertension

b. Abbreviated Title: Alcohol and incident CHD

2. Writing Group:

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4. Timeline:

analysis can begin soon

5. Rationale:

Alcohol consumption has been recognized as a major risk factor for hypertension development. Most results come from non-representative studies, with approximate estimates of exposition and it is still lacking a clear definition of the shape of the association (directly proportional to the intake or a U or J shape relationship). The association with the kind of beverage still deserves a specific analysis, and certainly the ARIC cohort provides the opportunity to examine these issues. Beside, ARIC is unique among the observational studies because it has an estimate of alcohol consumption in visits 1 and 2, which can provide the observation of the effect of changing in behavior on hypertension incidence. A previous observation of an interaction with smoking habits can be looked on further.

6. Main Hypothesis:

1. Alcohol consumption is positively associated with hypertension incidence.
2. The risk increases above 30 g per day of mean alcohol consumption and in the abstemious.

3. The effect is independent of the type of beverage.
4. The associations with changing in behavior (same, start drinking and stop or decrease drinking) follow the same direction of the hypothesis 1 and 2.
5. There is an interaction with smoking patterns.

7. Data (variables, time window, source, inclusions/exclusions):

Sample: the whole cohort, stratified by prevalent hypertension in the baseline for the analysis of change in behavior

Dependent variable: incident hypertension or blood pressure normalization

Explanatory variables: alcohol amount ingestion, as a continuous variable and stratified by different cutpoints (none, 1-30, 30 to 80, 80 or more g per day = depending on the distribution of the exposition). The variable "change in behavior" (same, start drinking and stop or decrease drinking between visit 1 and 2).

Control variables: age, race, center, sex, BMI, drug treatment for hypertension, physical activity