1.a. Full Title: Alcohol consumption and risk of congestive heart failure

b. Abbreviated Title (Length 26 characters): Alcohol and heart failure

2. Writing Group (list individual with lead responsibility first):

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3. Timeline:

   Submit proposal to publications committee  February 2003
   Preliminary data analysis    April 2003
   Complete data analysis    August 2003
   Submit manuscript to publications committee October 2003

4. Rationale:

   In the United States an estimated 500,000 new cases of congestive heart failure (CHF) occur annually (AHA 2002). The number of hospitalizations for CHF increased from 377,000 in 1979 to 999,000 in 2000, an increase of 165% (AHA 2002). Risk factors for CHF include male sex, lower education, physical inactivity, smoking, diabetes, hypertension, valvular heart disease, and coronary heart disease (He et al). The role alcohol plays on the development of CHF is controversial. While heavy, regular drinking has been associated with impaired left ventricular function, leading to alcoholic cardiomyopathy, the effect of light to moderate alcohol consumption on CHF risk is unclear. A recent article based on the Framingham Heart Study found alcohol consumption at any level was not associated with an increased risk of CHF whereas Walsh et al and Abramson et al found that moderate alcohol consumption protected against CHF. The extent to which moderate alcohol consumption is protective against CHF development warrants further evaluation because of the potential hazards of alcohol consumption (i.e. addiction and known alcohol related diseases), the large number potentially impacted, and the opportunity for intervention.
5. **Main Hypothesis/Study Questions:**

This study will prospectively examine the relationship between alcohol consumption and heart failure risk among participants in the ARIC cohort. The study will address the following hypotheses:

1) CHF risk is reduced among those who consume light to moderate amounts of alcohol compared with those who consume no alcohol.
2) CHF risk is increased among those who consume large amounts of alcohol compared with those who consume no alcohol.
3) CHF risk does not vary by type of alcohol consumed. Those drinking equivalent amounts of beer, wine, or hard liquor will experience the same HF risk.
4) Assess the interaction effects of alcohol consumption and other environmental (smoking) variables.

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

**Exposure:** alcohol consumption (continuous as well as categorized)

**Outcome:** heart failure (defined using hospital discharge diagnosis during follow-up)

**Potential covariates:** age, race, sex, blood pressure, body mass index, clotting factors, diabetes, lipids, physical activity, smoking, socioeconomic status (education), study center, left ventricular hypertrophy (LVH) by ECG, use of antihypertensive medications, ischemic heart disease, family history of CHF

**Exclusions:** Study participants with prevalent heart failure at visit 1 (as assessed by CHF medication use at baseline)

7. a. **Will the data be used for non-CVD analysis in this manuscript?**  ____ Yes  ____ No

b. If Yes, is the author aware that the file ICTDER02 must be used to exclude persons with a value RES_OTH = “CVD Research” for non-DNA analysis, and for DNA analysis RES_DNA = “CVD Research” would be used?  ____ Yes  ____ No

(This file ICTDER02 has been distributed to ARIC PIs, and contains the responses to consent updates related to stored sample use for research.)

8. a. **Will the DNA data be used in this manuscript?**  ____ Yes  ____ No

b. If yes, is the author aware that either DNA data distributed by the Coordinating Center must be used, or the file ICTDER02 must be used to exclude those with value RES_DNA = “No use/storage DNA”?  ____ Yes  ____ No

9. **The lead author of this manuscript proposal has reviewed the list of existing ARIC Study manuscript proposals and has found no overlap between this proposal and previously approved manuscript proposals either published or still in active status.**

ARIC Investigators have access to the publications list under the Study Members Area of the web site at: [http://bios.unc.edu/units/cscs/ARIC/stdy/studymem.html](http://bios.unc.edu/units/cscs/ARIC/stdy/studymem.html)  ____ Yes  ____ No

10. **What are the most related manuscript proposals in ARIC (authors are encouraged to contact lead authors of these proposals for comments on the new proposal or collaboration)?**
References


