1. Title:
Active and Passive Smoking as Risk Factors for Incident Cardiovascular Events

2. Authors:
(lead) Wagenknecht, Burke, Folsom, Howard, Nieto, and others

3. Background:
Cross-sectional analysis of ARIC Visit 1 data has implicated smoking history as one of the strongest predictors of prevalent cardiovascular disease. In addition, smoking has been found to be related to carotid IMT (subclinical disease) in a graded response from never smokers, to ETS smokers, to past smokers, to current smokers in all four race-gender groups. However, little is known about the effect of passive smoking on incident CVD.

4. Timeline:
both the data and the analytic approach are available. Work can begin as soon as this proposal is approved.

5. Analytic Method:
Using an approach similar to the cross-sectional analysis of smoking and IMT, this paper proposes to examine the association of smoking with incident CVD. A proportional hazards analysis will relate smoking history to incident events. Smoking will be described as: (1) smoking status category (never smoker not exposed to ETS, never smoker exposed to ETS, past smoker not exposed to ETS, past smoker exposed to ETS, and current smoker) for all ARIC participants; (2) pack-years of exposure for current and past smokers, (3) time since quitting for past smokers, and (4) historic ETS exposure for ETS smokers (past + never). Cigar and pipe smokers will also be considered if the numbers allow. Incident events will be defined as per the Coordinating Center approach.

The impact of smoking will be estimated both unadjusted, and after adjustment for: (1) demographic factors (age, ethnicity, and gender), (2) traditional cardiovascular risk factors (HDL, LDL, hypertension, diabetes, etc.), and (3) life-style factors (measures of physical activity, adiposity, diet, and socio-economic status as measured by education and income, etc.). Interactions between smoking status and gender and between smoking status and race will be examined.

6. Data Needed:
All data is in the distributed data set with the exception of incident event information.