### ARIC MANUSCRIPT PROPOSAL FORM

# Manuscript #629

1. Full Title: Pulmonary Function and Stroke in the Atherosclerosis Risk in Communities Study Abbreviated Title (Length 26): PFT and Stroke

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

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#### 3. Timeline:

Analysis and writing will be completed by June 1999.

# 4. Rationale:

Several large cohort studies have examined the relation between decreased lung function in particular FEV1 as a risk for CVD or CHD mortality outcomes. Fewer studies have investigated the relation between lung function and stroke (1-7). There was evidence of an association between decreased lung function and stroke in these studies. Only two studies included women and used peak flow or vital capacity as a predictor of the outcomes investigated. Pulmonary function tests were obtained at baseline and at three year follow-up. Cerebrovascular events are available through 1995.

# 5. Main Hypothesis:

Decreased pulmonary function is associated with an increased risk of stroke.

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

Exclusions: No PFT data.

Dependent variable: Incident stroke.

Independent variables: pulmonary function data obtained at baseline and at followup.

Covariates: Smoking data, blood pressures measurements, blood sugar and diabetic history, lipid profile, family history, body mass index, age, race, sex, waist/hip ratio, education, fibrinogen, Von Willebrand factor, ECG LVH, ATS questions on chronic cough and phlegm.

### References

Kannel WB, Hubert H, Lew EA Vital Capacity as a Predictor of Cardiovascular disease: The Framingham Study. American Heart Journal 1983;105:311-315.

Persson C, Bengtsson C, Lapidus L, Rybo E, Thiringer G, Wedel H. Peak Expiratory Flow and Risk of Cardiovascular Disease and Death: A 12 Year Follow-up of Participants in the Population of Study of Women in Gothenburg, Sweden. American Journal of Epidemiology 1986; 124:942-948.

Farchi G, Menotti A, Conti S. Coronary Risk Factors and Survival Probability From Coronary and Other Causes of Death. American Journal of Epidemiology 1987; 126:400-408.

Welin L, Svardsudd K, Wilhelmsen L, Larsson B, Tibblin G. Analysis of Risk Factors for Stroke in a Cohort of Men Born in 1913. The New England Journal of Medicine 1987; 317:521-526.

Strachan D. Ventilatory Function as a Predictor of Fatal Stroke. British Medical Journal 1991; 302:84-87.

Menotti A, Lanti M, Seccareccia F, Giampaoli S, Dima F. Multivariate Prediction of the First Major Cerebrovascular Event in an Italian Sample of Middle-Aged Men Follow Up for 25 Years. Stroke 1993; 24:42-48.

Wannamethee SG, Shaper AG, Ebrahim S. Respiratory Function and Risk of Stroke. Stroke 1995; 26:2004-2010.