Manuscript #115

1. Title: Atherosclerosis Risk Profile in Low-Risk Subjects

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3. Timeline: Analyses to be done immediately.

4. Rationale: For independent risk factors, joint effect is less than multiplicative; thus, selected risk factors should show stronger associations with disease in low risk profile subjects in whom major risk factors are absent (Cornfield et al, 1959; Cornfield and Haenszel, 1960; Schlesselman, 1982). Risk factors showing inconsistent relationships to atherosclerosis can be assessed in subjects at low risk for the disease (e.g., never smokers, low blood pressure and total cholesterol, high HDL).

5. Main Hypothesis: In subjects at "low risk" for atherosclerosis (never smokers, total cholesterol <200, HDL >50, blood pressure <140/90 --N approx. 450), several variables presumed to be weakly or inconsistently associated with atherosclerosis are more strongly associated than in the total cohort, and than in subjects with "high risk" profile (smokers in the last 5 yrs., total cholesterol >240, HDL <50, blood pressure >140/90 --N approx. 450).

6. Data: Subsets of ARIC population according to the above criteria will be defined. Data on wall thickness (averages, imputed values) to allow classification of outcome, and data on risk factors. These include risk factors comprising the restriction/inclusion criteria (smoking, cholesterol, HDL, blood pressure) and risk factors to be assessed (passive smoking, education, physical activity, anthropometric variables, diet, family history, apolipoproteins, hemostatic factors, etc.). Stratified analyses including only women or excluding those with prevalent CHD will be carried out.

Keywords: Artery, BP, lipids, smoking