1. Title: Body Mass and Renal Function in ARIC

2. Writing Group:
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3. Timeline:
Data analysis by 12/98
Manuscript by 4/99

4. Rationale, Hypothesis, Variables:
Body Mass (BMI) is a strong predictor of vascular disease and total mortality. However, when one looks at lists of risk factors for CVD, obesity is often missing. In traditional approaches to analysis of population data, adjustments are made for confounding risk to find attributable risk for any given factor. Most of the risk of obesity is manifested through hypertension, diabetes mellitus and dyslipidemia. When these adjustments are made, apparent risk from obesity appears diminished.

This is an important problem for several reasons. Primary prevention of CVD mandates prevention of risk factors. The most important risk factor for the development of hypertension, diabetes and dyslipidemia is obesity. Obesity rates continue to increase in this and many other countries. There needs to be a clear understanding of the role of body weight in development and prevention of CVD. The etiology of renal disease is likely also strongly influenced by body mass. Renal disease is associated with hypertension and diabetes. Recent reports suggest that dyslipidemia may be associated with renal dysfunction as well.

Obesity, again, is the apparent common denominator. This may explain some of the black-white difference in renal disease. This analysis will explore the adjusted and unadjusted relationships between body weight and renal function (serum creatinine) and obesity and renal dysfunction (hypercreatinemia).

Hypotheses: There will be a direct relationship (adjusted and unadjusted) between body mass (BMI, WHR) and Serum creatinine. There will be a direct relationship (adjusted and unadjusted) between Obesity (as previously defined in ARIC using sex specific BMI, WHR) and hypercreatinemia. In a case control analysis, body mass will predict incident hypercreatinemia. Confounders include BP, DM, LDL, HDL, Trig, Lp(a), Tob use, race.