Manuscript #413

1. a. Full Title: Fat Patterning and sex differences in lipids
   b. Abbreviated Title: WHR and sex diff in lipids

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

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3. Timeline: Data analysis will begin immediately; abstract for ICPC; draft manuscript by August.

4. Rationale:
   Background: It is well known that there are sex differences in the levels of lipids and lipoproteins. It is also well established that the patterns of fat distribution differ between males and females. Freedman, et.al. showed that much of the difference between males and females with respect to HDL-C and triglycerides disappears after adjustment for fat patterning. Their study was in a white population in the midwest United States. It is proposed to repeat their analysis in four ethnically different populations: Poland (Warsaw and Tarnobzeg), South China (Guangzhou urban and rural), White Americans (Minneapolis, MN, Forsyth Co., NC and Washington Co., MD) and African Americans (Forsyth Co., NC and Jackson, MS).

5. Main Hypothesis: Sex differences in HDL-C and triglycerides will be reduced when adjusted for patterns of fat distribution in all ethnic groups.

6. Data (variables, time window, source, inclusions/exclusions):
   1. Samples: The data will use screen 1 in ARIC, screen 2 in Poland and screen 2 in
Guangzhou. Exclusions: persons on lipid lowering medications, diabetics (self report), non-whites in Minnesota and Washington Co. age<45 or >64.

2. Variables: sex, age, cholesterol, LDL-C, HDL-C, triglycerides, HDL-2 (if available), HDL-3 (if available), BMI, waist, hip, WHR, alcohol (gm/day) smoking, and education category (<HS vs. >HS).