PC Reviewed: 10/ 17/ 00   **Status:** __A__   **Priority:** __1__
SC Reviewed: _____   **Status:** _____   **Priority:** _____

1.a.   Full Title: Impact of decision rules for choosing obesity cutpoints: Examples from African American and White women.

 b. Abbreviated Title (Length 26 characters): Decision rules for obesity

2.   Writing Group (list individual with lead responsibility first):
Lead: Dr. June Stevens
Address: Department of Biostatistics-Collaborative Studies Coordinating Center, CB#8030
          Suite 400 Nations Bank Plaza, 137E. Franklin St.
          Chapel Hill, NC 27599-8030
          Phone: (919) 966-1065   Fax: (919) 962-3265
          E-mail: june_stevens@unc.edu
Writing group members: June Stevens (lead) Juhaeri, Jianwen Cai, Daniel Jones

3.   Timeline:
    We plan to begin the data analysis immediately after the proposal is approved. We expect to complete the project in one year.

4. Rationale:
     Within the past five years, the National Institutes of Health and the International Obesity Task Force have provided guidelines for the definition of overweight and obesity that use body mass index (BMI) as the criterion measure. Cutpoints of 25 kg/m^2 for overweight and 30 kg/m^2 for obesity have been promoted by both organizations and these definitions have been rapidly adopted by many clinicians and researchers in the United States and Europe. This year a report was issued by the Regional Office for the Western PacificWorld Health Orgnaization, the International Association for the Study of Obesity and the International Obesity Task Force which addressed the definitions of overweight and obesity in Asian populations. In this report they state "In Pacific Island populations e.g. Somoa, the recommended BMI standards should be higher than those recommended by WHO, whereas in certain other Asian populations such as Chinese and Japanese it is likely that they should be lower."
     Although no such statements were made in regard to other ethnic groups, there are many studies showing that the risks of obesity may differ from that seen in Caucasian in other ethnic groups including African Americans, Mexican Americans and Native Americans. The issue of whether different cutpoints should be used for different ethnic groups is a complex one. The IOTF report, the NIH "Evidence report" and the more recent report focused on Asia all relied heavily on published results on the associations between BMI and mortality and morbidity. Yet nowhere in these reports were the criteria for determining the BMI cutpoints for overweight or obesity explicit listed. In addition, a decision rule for determining whether different BMI cutpoints are needed in different ethnic groups was not stated.
     There are many different decision rules that could be devised to address the need for different BMI cutpoints in different groups. Traditionally mortality has been the outcome used in studies to define weight categories, although the use of morbidity or other measures has been advocated by some. Options of measurements to use to evaluate the impact of BMI on

morbidity or mortality include absolute levels of risk (or rate), multiplicative measures and differences.

The purpose of this paper is to compare the results obtained if different decision rules are used to evaluate BMI cutpoints across ethnic groups. The results of using outcome criteria other than mortality are examined as are the consequences of using different types of risk estimates. To illustrate these effects, we used data from African American women and calculated the BMI level that was associated with risk equivalent to that seen in white women at a BMI of 30kg/m^2, the currently accepted cutpoint for obesity.

5.   Main Hypothesis/Study Questions:

1. At what BMI level (if any) is the incidence rate of hypertension, diabetes, low HDL and death in African American women equivalent to that in white women who have a BMI of 30?

2. At what BMI level (if any) is the relative rate of hypertension, diabetes, low HDL and death in obese vs. lean African American women equivalent to that in obese vs. lean white women?

3. At what BMI level (if any) is the difference in the incidence rate of hypertension, diabetes, low HDL and death in obese vs. lean African American women equivalent to that in obese vs. lean white women?

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

Exposure Variables (visit 1): BMI
Other Variables (visit 1):
     Age
     Center
     Ethnicity
     Education
     Smoking
     Physical activity
Outcomes (using all follow-up):
     Mortality
     hypertension
     diabetes
     low HDL

7.a. Will the data be used for non-CVD analysis in this manuscript?   ____ Yes   __x__ No
   b. If Yes, is the author aware that the file ICTDER01 must be used to exclude persons with a value RES_OTH = "CVD Research" for non-DNA analysis, and for DNA analysis RES_DNA = "CVD Research" would be used?   ____ Yes   ____ No
   (This file ICTDER01 has been distributed to ARIC PIs, and contains the responses to consent updates related to stored sample use for research.)

8.a. Will the DNA data be used in this manuscript?   ____ Yes   __X__ No
8.b. If yes, is the author aware that either DNA data distributed by the Coordinating Center must be used, or the file ICTDER01 must be used to exclude those with value RES_DNA = "No use/storage DNA"?   ____ Yes   ____ No