ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #569

1. Full Title: Waist to Hip Ratio, Insulin Level, and Breast Cancer Risk
   Abbreviated title (length 26): Insulin and Breast Cancer

2. Writing Group (list individual with lead responsibility first):
Lead: Pamela J. Mink, MPH
Address: University of Minnesota
          Division of Epidemiology
          1300 South Second Street, Suite 300
          Minneapolis, MN 55454-1015
Phone: (612) 626-8873
Fax: (612) 624-0315
Email Address: mink@epivax.epi.umn.edu

Eyal Shahar
Aaron R. Folsom
Wayne Rosamond
Anthony Ahlberg

3. Timeline (anticipated completion dates):
Data analysis   7/98
Manuscript preparation   9/98

4. Rationale:
WHR has been associated positively with breast cancer in several case-control, but few
prospective, studies. High WHR has been associated with increased insulin levels, and
insulin may play a role in tumor promotion. To date, the association of pre-clinical
insulin level with breast cancer incidence has not been examined prospectively.

5. Main Hypothesis:
WHR and fasting serum insulin level are associated positively with breast cancer
incident.

6. Data (variables, time window, source, inclusions/ exclusions):
Incident breast cancer cases are identified as part of the ARIC Ancillary Cancer Study.
V1 values of insulin, WHR, BMI, weight at age 25, ages at menarche and menopause,
type of menopause, exogenous estrogen use, total energy and dietary fat intake, physical
activity, alcohol, smoking, race, age and education level.
AMHA form: age at first birth, mammography, lactation history, family history of breast
cancer.

Study design: prospective cohort study
Analysis: proportional hazards regression
Inclusions: females, post-menopausal, no self-reported history of cancer at V1, non-diabetic, completed fast (10 hours).