1. Title (length 26):
Lung Function and Ultrasound

2. Writing Group (list individual with lead responsibility first):
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3. Timeline:
Circulate Outline to Publications and Steering Committees                     1/29/90
Data Set Request                                                                                  2/19/90
Complete Analysis and Submit for CSCC Data Verification                   3/19/90
Circulate First Draft to Publications Committee                                      4/16/90
Submit to Journal                                                                                  5/1/90

4. Rationale:
Impaired lung function is a significant, prospective risk factor for cardiovascular mortality. Not only does
this risk persist after adjusting for smoking, but also can be demonstrated over a 10-year follow-up of never
seems to be an intermediate endpoint for this association. We have recently presented the results of a
nonconcurrent prospective study conducted among participants of the Baltimore Longitudinal Study of Aging
participants without questionnaire or ECG evidence of IHD which showed the significant association of
segmental perfusion defects on post maximal exercise thallium scans with impaired spirometric function
measured 5 to 15 years earlier (Rampal and Tockman, Presented at the Gerontological Society of America
mtg., Minneapolis, MN., Nov, 1989.)  This association held after adjustment for commonly measure
cardiovascular risk factors, including age, smoking, mean arterial pressure, cholesterol and obesity index. To
the degree that peripheral arterial narrowing reflects changes in the coronary arteries, we would expect to
demonstrate a similar association of ventilatory impairment with positive ultrasonography in ARIC
participants.

5. Main Hypothesis:
Impaired spirometry is significantly associated with abnormal ultrasonography among ARIC participants,
after adjustment for potential confounding variables.

6. Data (variables, time window, source, inclusions/exclusions):
Year 01 cohort data are to be used. Independent variables include age, height, sex, race, smoking history
(ever smoked, ever smoked cigarettes, age at start/stop, period of not smoking, and cigarettes per day),
histories of high blood pressure, heart attack, cancer, chronic lung disease, asthma, the study center,
technician number, acceptability code detail for best and second best tests, quality code, FEV1-6, FVC and
PEFR with corresponding predicted values, obesity, blood pressure, lipid profile, and the presence/absence of
ECG abnormalities. Dependent variables include the presence of plaques at 3 positions (optimal, anterior
and posterior) of the Common Carotid, the Bulb, and the Internal Carotid.