1. Full Title: Association of prothrombin activation (F1.2 elevation) with risk of myocardial infarction: the ARIC Study
   Abbreviated Title (Length 26): Prothrombin fragment F1.2 and MI

2. Writing Group (list individual with lead responsibility first):
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3. Timeline:
   Measurement of F1.2 has been completed in the ARIC 3-group, CRS, African-American and CHD incident events as approved by the CC.
   Preliminary analysis 02/98
   Manuscript preparation 03/98
   Circulation to co-authors 04/98
   Submission to journal 05/98

4. Rationale:
   While acute myocardial infarction is the result of an thrombotic event leading to complete obstruction of a coronary artery, it is postulated that there is an underlying chronic hypercoagulable state in patients with coronary heart disease. A clear biochemical definition of the prothrombotic state, however, has proved elusive due in part to the lack of reliable techniques for monitoring pertinent changes in blood coagulability. F1.2 levels reflect the extent of the early prothrombin activation in plasma (1-3) and have been demonstrated to correlate with thrombotic risk associated with certain patient populations, including SLE, unstable angina, cancer, diabetes, leukemia (4). Previous studies also demonstrated elevated plasma F1.2 were associated with a
prethrombotic state in congenital ATIII and Protein C deficiencies (5). It is proposed that F1.2 levels can be measured (6,7). There is no data on comparison of prothrombin activation in Whites and African-Americans and ARIC provides excellent opportunity to get this information.

5. Main Hypothesis:
High level of plasma F1.2 fragment, a measure of activation of prothrombin, is associated with an increased risk for acute myocardial infarction. Analysis will also focus on differences, if any, between whites and African-Americans.

6. Data (variables, time window, source, inclusions/exclusions):
Data will be sent to the CC and also analyzed locally by Dr Chul Ahn, with supervision from the CC. Covariants to be analyzed include: FVIIIc, FVIIc, D-dimer, fibrinogen, vWF, ATIII, PC, CRP, as well as main CHD risk factors.

REFERENCES: