ARIC MANUSCRIPT PROPOSAL #656

1.a. **Full Title:**
Association of visceral fat with asymptomatic carotid artery atherosclerosis: The Atherosclerosis Risk in Communities Study

**b. Abbreviated Title (Length 26):** IMT and MRI abdominal fat

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

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3. **Timeline:** Now

4. **Rationale:**

   Obesity is generally acknowledged as a risk factor for CVD. However, some studies have demonstrated an association between abdominal fat depots and CVD, even in the absence of generalized obesity. As part of an ARIC ancillary study, we have collected data on visceral and subcutaneous fat depots in the abdomens of thick-walled carotid cases and thin walled carotid controls from Forsyth Co using MRI. Data on the reproducibility of this technique (Terry et al, 1995) and relationships between these MRI measures and conventional anthropometric indices (Schreiner et al, 1996) for this sample have been published. Here, we ask whether these precisely measured MRI assessments are associated with early atherosclerosis, assessed by carotid artery IMT, and how the strength of these associations compares to that of conventional anthropometric indices.
5. **Main Hypothesis:**

1) Visceral, but not subcutaneous abdominal fat, assessed with MRI, will be associated with case-control status in this sample of individuals from Forsyth Co.

2) The association of visceral fat assessed by MRI with case-control status will be stronger than that observed for conventional anthropometric indices such as waist-hip ratio, waist circumference and BMI.

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

Ancillary study data include visceral, subcutaneous and total abdominal fat for 157 Forsyth Co. case/control participants. These data will be combined with Visit 2 data on age, gender, race, diabetes, hypertension, smoking history, lipids, triglycerides, IMT, BMI, waist circumference and waist-hip ratio for these participants.