

AS 191 - Biomarkers and genetic factors related to sarcopenia in older women (includes AS199)
Sample Selection

Skeletal muscle mass and sarcopenia

Cases will be defined as OS participants who had the largest annual age-adjusted rate of skeletal muscle mass (SMM – see below) loss assessed from DXA scans (top 10% of SMM loss) will be included. The identification of cases will be done in the WHI AS 153 - Longitudinal changes in hip geometry and skeletal muscle (PI: Zhao Chen, funded by NIAMS).

DXA measures body soft tissue mass (lean and fat tissue) and bone density. However, DXA scans do not provide direct measurements of SMM. In AS153, a mathematical model will be developed using MRI scans as the standard to estimate SMM from DXA measurements. The SMM will be assessed for the entire WHI DXA cohort and will be used in the proposed study. To define sarcopenia, we use the residuals method developed in Health ABC Study: appendicular SMM adjusted for height and body fat mass. Based on available cross-sectional results in the Health ABC Study, the sarcopenia defined by the residuals method has the highest correlation with functional impairments, since it is better in identifying people with sarcopenia-obesity.

Cohort participants

- Number of matched controls (subcohort) per case: 2.5 frequency matched by DXA center and randomly selected from the cohort at each DXA center.
- Randomly selected from the entire DXA cohort.
- Matched by clinical center, age, and race/ethnicity

Exclusion Criteria:

- Not DXA cohort participants or without follow-up DXA scans.
- Participants who developed any form of cancer during the follow-up

Final selection

A list of participants will be sent to CCC for preparing blood samples.