Higher body fat in postmenopausal women with normal BMI is associated with cancer risk.

- In postmenopausal women with normal BMI, higher body fat is associated with elevated risk of breast cancer.¹
- Concluded based on analysis of 3460 postmenopausal women with normal BMI ages 50-79 years from the Women’s Health Initiative (WHI) conducted 1993-1998.

Project TONE: Decreasing body fat in postmenopausal women with normal BMI

- Project TONE is an ongoing intervention to reduce body fat in postmenopausal women with normal BMI but higher body fat.
- Intervention emphasizes strength and aerobic training, as well as high-quality diet with increased protein.

Research Question: How do body fat levels differ between postmenopausal women with normal BMI screened for Project TONE and those analyzed in the WHI?

Body fat and cancer risk potentially higher now (2020s) than before (1990s)

- Central adiposity, as indicated by trunk fat mass, is higher on average in postmenopausal women with normal BMI screened for Project TONE compared to those analyzed in WHI.
  - Could be a result of changes in diet, food culture, and physical activity.
  - Could also be related to differences between the two groups in age, BMI, location, etc.
- Given that higher body fat is a potential risk factor for breast cancer, lifestyle strategies are needed to promote favorable body composition phenotypes (e.g., lower body fat, adequate muscle mass) in our population of interest.

Next Steps: Completion of Project TONE and further exploration of body fat variables in participants

- Assess efficacy of Project TONE by measuring changes in body fat, as well as circulating biomarkers of inflammation and metabolism before and after intervention.
- Assess feasibility of Project TONE based on rates of eligibility, intervention adherence, and retention.
- Continue to analyze body fat variables in screened participants outside of just trunk fat mass.

References


Responsible Conduction of Research

The MD Anderson PI Dr. Karen Basen-Engquist submitted a research protocol for Project TONE and obtained research approval from partner institutions. We worked to protect data from participants recruited and screened for Project TONE.

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