Preparing for Session 4 and 5

All TREC meetings follow rules of confidentiality. All meeting participants sign a confidentiality form at the registration table the day of the meeting.

Guidance for discussion: Today will focus on thoughtful discussion with colleagues to identify new research topics to move TREC science forward. Therefore, please come prepared with ideas to discuss. Recommendations that identify what has been gained, where the critical gaps remain, and how can the TREC Consortium continue to grow the field of Transdisciplinary Science in Energetics and Cancer. Please bring a laptop if you can! Session 4-5 will find a laptop useful. Team reports will be collected and shared with NCI staff (Tanya Agurs-Collins and Linda Nebeling).

Transdisciplinary Research on Energetics and Cancer (TREC)

Introduction:

In 2005 and again in 2011, NCI funded the Transdisciplinary Research on Energetics and Cancer (TREC) initiative to foster the integration of social, behavioral and biological sciences to address, physical inactivity, poor diet, and obesity within the cancer prevention context. Developed as a U54/U01 cooperative agreement, the TREC Research Centers and the Coordination Center became a comprehensive network. The Centers include scientists from multiple disciplines and encompass projects spanning the biology and genetics of behavioral, socio-cultural, and environmental influences on nutrition, physical activity, weight, energy balance, and energetics. Ideally this diverse group would further the understanding of the mechanisms underlying the association between energy balance and cancer, from causation and prevention through survivorship and recurrence. Second, each Center provided career development, training, and transdisciplinary mentorship opportunities. Work groups were established based on shared interests to support research teams focused on challenges and developed collaborations. In addition to the transdisciplinary research occurring within each site, new collaborations were fostered with non-funded affiliates. A coordination center provided the supportive framework for TREC and was instrumental in the evaluation activities lead by NCI during the duration of the initiative.

TREC Common Research Objectives:

- Elucidate underlying biological mechanisms of obesity as a risk factor for cancer, from cellular, animal or human models to genetics and genomics and across the cancer continuum.

- Integrate individual and social-environmental approaches to explaining and modifying energy balance-related health behaviors.
- Expand translational research focus with an emphasis on cancer survivors.
- Strengthen development, use and integration of validated measures and theoretical constructs.

Accomplishments:

During the 11 years of funding, 31 primary research projects and over 200 pilot projects were supported. A strength of this initiative has been the ability to support TREC developmental pilot projects that enabled cross-site collaborations. TREC investigators have also developed a textbook series on Energy Balance and Cancer related topics for Springer Publishing, 12 issues have been published since 2010. The first TREC Training Workshop, a week-long course for 20 new investigators and hosted by Yale University, will occur in June 2017.

A comprehensive publication listing can be obtained at:
http://www.trecscience.org/trec/bin/scientist/pubs.aspx?j=21

TREC to Where? Transdisciplinary Research on Energetics and Cancer.
https://www.ncbi.nlm.nih.gov/pubmed/27130486

Advancing Transdisciplinary Research: The Transdisciplinary Research on Energetics and Cancer Initiative. https://www.ncbi.nlm.nih.gov/pubmed/25356437

Influence of a NCI transdisciplinary research and training initiative on trainees' transdisciplinary research competencies and scholarly productivity. TBM, 2012
https://www.ncbi.nlm.nih.gov/pubmed/24073146

Session 4(a-c) and 5: The day of the meeting.

Energy Balance, Obesity and Cancer: Session 4, held in three parts, encourages dynamic thinking that encompasses the common research objectives from TREC. Specific topics for discussion have not been predetermined. Each team should identify a research topic of interest to the group during the first hour of this session. ***Each team is expected to select a representative at the start of Session 4. The representative will report the summary of the group's discussion and recommendations in the final session (Session 5) of the day. This information will enable the TREC Leadership Team to identify future priorities for the TREC Consortium and provide recommendations to NCI program staff.***

Note: NCI program staff will take notes during Session 5, tape recorders may be used.

Example topics might be:

What are the mechanisms underlying the association between weight/obesity, exercise, and cancer? This could include biological, behavioral, psychological, social, and environmental mechanisms. What do we know, what do we need to know, and how can we translate this knowledge into effective interventions for cancer patients, survivors, or those at risk?

Exercise, Diet and Cancer: What are the exposures across the lifespan and how does this effect cancer risk – cancer survivorship? What do we know, and what do we need to know?

Discussion Guide: Each team should consider the following questions. They should help start the discussions during Session 4 and guide framing any recommendations for Session 5. Each group should plan to report on the following questions.:

- What is the problem?
- What have been the key accomplishments (limit to three or less) in this area during TREC?
- How has the field changed? What is known now versus 5 years ago.
- What are the critical questions that still need to be answered to make substantial progress in this area?
- How are these new areas informed by recent scientific discoveries in energy balance, obesity and cancer?
- What is needed for substantial progress in this area for the next 5 years? In the next 10 years?
- Are you interested in continuing as a team/consortium to further develop the area?

Additional points to consider:
Would this area potentially impact Cancer Health Disparities? Or a High-Risk Population?

Your recommendations should be visionary and aspirational.