ICCS Directed Physical Activity Enhancement for Colon Cancer Survivors

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Project Summary

There are over one million colon cancer survivors. There is strong evidence that a sedentary lifestyle contributes not only to the initial diagnosis of colon cancer but an increased risk of mortality after diagnosis. Thus, colon cancer survivors are an important group to target with effective physical activity interventions and, compared to breast and prostate cancer have been an understudied population. In addition, the transition from initial treatment to extended survival has been identified as a difficult time for survivors with little guidance or support.

Physical activity programs for cancer survivors have been delivered in face-to-face, by phone and with print interventions which are costly and have limited reach. Interactive cancer communication systems (ICCS) have the ability to deliver tailored physical activity interventions to promote healthy lifestyle behaviors and improve quality of life to a larger group of survivors and potentially be more effective than other delivery methods. We propose to develop and test a new ICCS, Mobile Comprehensive Health Enhancement Support System (mCHESS). This innovative smart phone intervention draws on our previous successful research to increase physical activity and to improve quality of life of cancer survivors; mCHESS will provide health information, tools, and a support system adapted from these evidence-based programs (FRESH START and CHESS).

Self Determination Theory (SDT) provides the theoretical framework for the development and testing of mCHESS. It hypothesizes that as survivors develop 1) competence in information gathering, decision-making, and behaviors they are trying to change, 2) social support systems to help deal with the cancer experience, and 3) autonomy that comes with regaining a sense of control over their lives, they will adopt or maintain healthy lifestyle behaviors that are in their best interests and their distress and quality of life will improve. We propose to develop and test a smart phone ICCS, mCHESS, to increase physical activity, decrease distress, and improve quality of life in 294 colon cancer survivors in a randomized controlled trial at three National Cancer Institute-designated cancer centers (University of Wisconsin, University of North Carolina at Chapel Hill, and MD Anderson Cancer Center) for men and women with stage I-III colon cancer.

The primary aims of the study are to determine whether stage I-III colon cancer survivors who are randomized to mCHESS, as compared to those who are assigned to usual care: demonstrate significantly greater increases in levels of physical; demonstrate significantly greater levels of physical activity long-term; demonstrate significant improvements in secondary outcomes, such as improved weight status, decreased distress, and improved quality of life; and To explore associations between various moderators, mediators and intervention efficacy.

This research will test an innovative new approach to inform the development of more effective behavioral change interventions that can be applied to survivors of other types of cancer.