Protocol & Statistical Analysis Plan

Project Title: Self-Care for Head and Neck Cancer Survivors with Lymphedema and Fibrosis

NCT 03030859

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SECTION 1. SCIENTIFIC AIMS

Aim 1: To determine the feasibility of a program of Lymphedema and Fibrosis – Self-Care Program (LEF-SCP) with or without follow-up to usual care for HNC survivors with LEF, specifically to: 1) obtain recruitment estimates and determine barriers to recruitment; 2) identify barriers to implementation; 3) assess safety; and 4) evaluate patient satisfaction.
Aim 2: To determine if the LEF-SCP with or without follow-up enhances self-efficacy and adherence compared to usual care in HNC survivors with LEF.
Aim 3: To determine the preliminary efficacy of the LEF-SCP with or without follow-up as compared to usual care for the following outcomes: 1) LEF progression; 2) symptom burden; and 3) functional status.

SECTION 2. INCLUSION AND EXCLUSION CRITERIA

Inclusion criteria: 1) post HNC primary treatment (chemotherapy and/or radiation and/or surgery); 2) no evidence of cancer (NED); 3) no more than 12 months after completion of initial lymphedema therapy for head and neck lymphedema; 4) > 18 years of age; 5) ability to understand English in order to complete questionnaires; 6) able to complete the onsite training and home self-care activities for LEF management; and 7) able to provide informed consent. Patients will be excluded if they have any of the following medical conditions that would prohibit the safe implementation of self-care of LEF: recurrent or metastatic cancer; any other active cancer; acute infection; congestive heart failure; renal failure; cardiac or pulmonary edema; sensitive carotid sinus; severe carotid blockage; uncontrolled hypertension; and venous thrombosis.

SECTION 3. DESIGN/RECRUITMENT/ENROLLMENT/RANDOMIZATION

We will conduct a prospective, randomized controlled trial to compare: Group 1-usual care, Group 2-usual care plus LEF-SCP, and Group 3 - usual care plus LEF-SCP plus follow-up. Outcome measures include: 1) feasibility (barriers to implementation, safety, and satisfaction) of the proposed intervention [Aim 1]; 2) self-efficacy and adherence to self-care [Aim 2]; and 3) preliminary efficacy (LEF progression, symptom burden, and functional status) of the proposed intervention [Aim 3]. Our previous studies of HNC survivors with LEF support that 12-month follow-up assessments are possible. Thus, study follow-up assessments will take place at four points in time, 3-, 6-, 9-, and 12-month post-intervention.

Randomization: After completion of baseline measures, participants will be randomized via the use of a computer-generated, permuted block program, to one of three arms: Group 1 (usual care), Group 2 (usual care plus LEF-SCP), and Group 3 (usual care plus LEF-SCP plus follow-up).

SECTION 4. STUDY PROCEDURES

Permission to conduct the proposed research will be obtained from the UPenn IRB. Written informed consent will be obtained from all participants. Potential participants will be approached and recruited at the Abramson Cancer Center. After signing informed consents participants will undergo baseline assessment measures. Upon completion of the baseline assessment, they will be informed of the subsequent study activities based on the groups they are assigned per randomization.

SECTION 5. RISKS OF INVESTIGATIONAL AGENTS/DEVICES/SIDE EFFECTS

Although this is an interventional study, there are no investigational devices or agents included in this study. Foreseeable physical, psychological, financial, legal, or other risks from study participation are believed to be minimal.

SECTION 6. REPORTING OF UNANTICIPATED PROBLEMS INVOLVING RISK TO PARTICIPANTS OR OTHERS

The PI Deng will review any adverse events, unanticipated problems, or side effects. PI Deng will report any adverse events, unanticipated problems, or side effects to: the UPenn IRB and the American Cancer Society.

SECTION 7. STUDY WITHDRAWAL/DISCONTINUATION/ENDPOINTS

Withdrawal and Discontinuation: Participants will be withdrawn from the study if they develop recurrent or metastatic cancer and any other active cancer.
Endpoints: Final study visit 12 months after the study entry.

SECTION 8. STATISTICAL ANALYSIS

Statistical software (SPSS, STATA) will be used for the quantitative summarization of data collected in this study. Assumptions underlying each of the proposed statistical summaries and comparative analyses will be evaluated. Transformation of continuous data distributions will be completed as necessary to meet those assumptions. While this study is a preliminary study of efficacy and effect sizes, a maximum alpha level of 0.05 will be used for the statistical tests.

Aim 1: Feasibility of the LEF-SCP. Descriptive statistical and graphical methods will summarize the rates of participation (recruited vs. consented), log data (e.g., sessions completed), completion of assessments throughout the study, adverse events (safety) and satisfaction data.
Aim 2: Self-Efficacy and Self-Care Adherence. Descriptive statistical and graphical methods will be used to summarize and visually inspect the PMCSMS scores (self-efficacy), the number and types of self-care activities reported on the LEF Self-Care Checklist within the 3 study groups throughout the study period. Mixed effects generalized linear models that correct the standard errors for repeated assessments and incorporate appropriate distributional link functions (e.g., log-link for skewed distributions) will be used to generate estimates of the effect of the LEF-SCP on self-efficacy and rates of self-care.
Aim 3: Preliminary Efficacy of the LEF-SCP. As with the previous aim, descriptive statistical and graphical methods will be used to summarize and visually inspect the measures of LEF, symptom burden, and functional status within the 3 study groups throughout the study period. Mixed effects generalized linear models with the appropriate link function for the nature of the specific outcome variable being analyzed will be used to generate estimates of the effect of the LEF-SCP on the progression of head and neck LEF, symptom burden, and function measures.

SECTION 9. PRIVACY/CONFIDENTIALITY ISSUES

Privacy: The following procedure will be utilized to protect the privacy of the research participant. All data will be coded and filed without any name or other identifiable information. All files will be saved in both hard copies and one password protected safe electronic database by the researcher. All hard copies will be placed in a locking file cabinet. Only the study team members have access to the file cabinet and electronic database. All research team members will be certified with the IRB training and undergo HIPAA training. Privacy will be protected by conducting all study activities in a private room with a closed door. Careful training and supervision of all study staff will ensure procedures are carried out in accordance with established protocols.
Confidentiality: All participants will be assigned a study ID number. Numbers will be assigned by trained study staff.

SECTION 10. DATA AND SAFETY MONITORING PLAN

The data and safety monitoring plan will adhere to ACS policy guidance and standards set by the UPenn IRB. The PI will monitor all the study procedures, processes and data (including hard copy forms and electronic databases) monthly to ensure protocol compliance and data integrity and on an as-needed basis if significant issues arise that impact the study participants or any study activities.