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## Abstract

**Grant Number:** 1R01NR005342-01A1

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**Project Title:** Prospective Nursing Study of Breast Cancer Lymphedema

**Abstract:** *DESCRIPTION (provided by applicant): In the Western world, breast cancer and its treatment are the leading causes of lymphedema. More than two million women living with breast cancer in this country, accounting for nearly 25 percent of all cancer survivors, are at risk for development of lymphedema throughout their lifetimes. Lymphedema occurs as both an acute and chronic condition, characterized by significant persistent swelling associated with an abnormal accumulation of protein-rich fluid in the affected area. The impact of unmanaged and unresolved lymphedema on quality of life among women surviving breast cancer is extensive, encompassing interpersonal and family relationships, functional abilities, occupational roles, self-image, and self-esteem. The goal of the proposed nursing study is the description of measurement, incidence, management, and overall effect of lymphedema among women diagnosed with and treated for breast cancer and followed over 30 months. The primary aims of this study are two-fold: Aim 1: Compare the reliability and clinical validity of two measurement methods for limb fluid volume: (a) traditional circumferential arm measurement versus (b) infrared perometry, at pre-operative, postoperative, and routine follow-up points. Aim 2: Examine across time the type of symptoms experienced and functional health status of breast cancer patients with and without lymphedema. A secondary aim (Aim 3) is: Examine and compare over time the complex relations (main effects, moderators, mediators) between: (a) problem solving and social support, (b) lymphedema and coping effectiveness, and (c) post-treatment psychosocial adjustment and functional health. These aims will be met through a prospective, longitudinal design, which will support the examination of measurement, incidence, psychosocial adjustment, and health status among women treated for breast cancer through psychometrically sound face-to-face interviews, and physiological*

*measures. Some 200 women diagnosed and subsequently treated for breast cancer will be recruited and enrolled in years 1 and 2 and followed over 30 months. The study will provide new information about the measurement of lymphedema, which is a critical issue in furthering an accurate understanding of the incidence, management, and effect of lymphedema on the lives of breast cancer patients. Findings from this investigation will also provide important information about lymphedema signs and symptoms, self-care management, and its impact on psychosocial adjustment and functional health; this information will form the basis of subsequent interventions with lymphedema patients. The results identifying more complex relationships between the physiological and psychosocial variables will guide development and testing of nursing interventions to prevent, detect, and manage post-breast cancer treatment lymphedema.*

***Thesaurus Terms:***

*breast neoplasm, lymphedema*

*functional ability, longitudinal human study, measurement, sign /symptom, social adjustment, social support network*

*female, human subject, interview, patient oriented research, women's health*

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**Fiscal Year:** 2001

**Department:** NONE

**Project Start:** 15-JUL-2001

**Project End:** 30-APR-2006

**ICD:** NATIONAL INSTITUTE OF NURSING RESEARCH

**IRG:** NURS

