Predictors of Adherence to Hormonal Therapy in Breast Cancer

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Specific aims:
1. Describe the pattern of adherence to hormonal therapy in women with early stage breast cancer.
   Hypothesis 1a. Adherence to hormonal therapy will decrease over time in women with early stage breast cancer.
2. Determine the patient and illness/treatment factors that predict medication adherence in women with early stage breast cancer at risk for nonadherence to hormonal therapy.
   Hypothesis 2a: Impairment in cognitive function (attention, memory, executive function) will be associated with nonadherence to hormonal therapy in women with early stage breast cancer.
   Hypothesis 2b: Perceived poor treatment efficacy will be associated with nonadherence to hormonal therapy in women with early stage breast cancer.
   Hypothesis 2c: Perceived severe side effects of hormonal therapy will be associated with nonadherence to hormonal therapy in women with early stage breast cancer.
3. Explore possible moderation effects between patient factors and illness/treatment factors when predicting adherence to hormonal therapies in women with early stage breast cancer at risk for nonadherence to hormonal therapy.

Significance of the Study: This proposed study will provide critical information about the patient and illness/treatment factors related to nonadherence to hormonal therapy in women with breast cancer. Our results will provide the basis for the development of rational interventions to promote adherence to the prescribed dose and correct interval of administration for hormonal agents in women with breast cancer.

Conceptual Framework: This study is guided by Alan Christensen’s Interactionalist Framework of Adherence which posits that the interactive effects of patient factors and illness/treatment factors provide the dominant influence on adherence in chronic disease.

Main Research Variables:
Independent Variable: Hormonal Therapy will include; anastrozole 1 mg./day, letrozole 2.5 mg./day, exemestane 25 mg./day or tamoxifen 20 mg./day
Dependent Variable: Adherence to hormonal therapy is the proportion of eligible days that participants take their prescribed dose of hormonal therapy at the correct time interval.
Predictors: (Patient Factors and Illness Treatment Factors)
Patient Factors will include sociodemographic characteristics, socioeconomic status, cognitive function, depression, anxiety, physical functioning, perceived treatment efficacy and social support.
Illness/Treatment Factors will include participants’ stage of disease, use of chemotherapy, comorbidities, complexity of medication regimen, side effects of hormonal therapy, and financial hardship.
Design: This proposed prospective study will use a repeated measures design.
Setting: The primary settings for this study will be private conference rooms at the outpatient services in the sites of the Comprehensive Breast Program of the University of Pittsburgh Cancer Institute. We will also collect data in the homes of participants.
Sample: The sample will comprise 90 women with hormone-receptor positive early stage breast cancer who will be receiving hormonal therapy.
Methods: We will evaluate participants at four time-points (Time 1 to Time 4). Time 1 (baseline) will be within two weeks prior to the initiation of hormonal therapy. Times 2 to 4 will occur at 6 month intervals following Time 1, i.e., months 6, 12 and 18.
Implications for Practice: Ultimately our goal is to provide nurses with interventions to promote adherence to hormonal therapy in women with breast cancer.