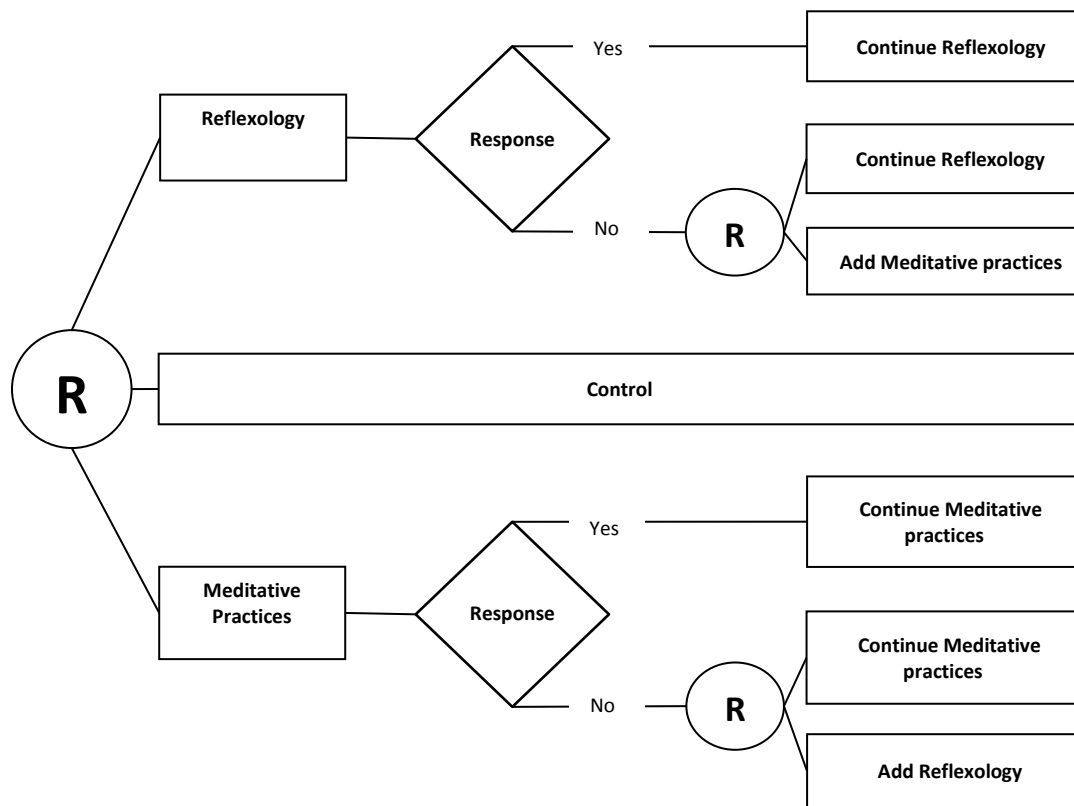


By 2030, cancer will surpass heart disease as the leading cause of death in the United States. These patients are likely to experience the burden of unmanaged symptoms resulting from cancer and its treatment,¹⁻³ leading to diminished health related quality of life (HRQOL).⁴⁻⁸ Solid tumors carry their own set of symptoms. In order to optimize symptom management, there must be a shift from fixed interventions “one size fits all” to adaptive interventions tailored to individual patients. This shift requires research on how to best arrange previously tested single fixed interventions into sequences and how to best operationalize the decision rules for switching from one intervention to another for individual patients.

Our team’s work to date with breast and lung cancer patients has shown efficacy for two home-based symptom management interventions, reflexology and meditative practices, delivered by or with friend or family caregivers. The proposed multi-staged interventions will be developed using the sequential multiple assignment randomized trial (SMART) design.

The sustainability of use of these two evidence-based therapies and improvements in symptom outcomes will be tested during weeks 5-8 and at the week 12 follow-up of 331 patients based on power analysis, against a control group. The specific aims are: **Aim 1.** To compare the reflexology and meditative practices groups weeks 1-4 (1st intervention stage) on the primary outcome of fatigue severity and 3 secondary symptom outcomes: a single summed score from the MD Anderson symptom inventory, depressive symptoms, & anxiety, so as to determine: a) the relative effectiveness of these therapies; and b) the characteristics of responders and non-responders to each therapy. **Aim 2.** Among patients who do not respond to reflexology on fatigue during the first intervention stage, to determine the value added by meditative practices during weeks 5-8 (2nd intervention stage) vs continuing with reflexology alone for severity of fatigue and the 3 secondary symptom outcomes. **Aim 3.** Among patients who do not respond to meditative practices on fatigue during the first intervention stage, to determine the value added by reflexology during weeks 5-8 (2nd intervention stage) vs continuing with meditative practices alone for severity of fatigue and the 3 secondary symptom outcomes. **Aim 4.** To compare improvements in fatigue severity and the 3 secondary symptom outcomes among two groups that received intervention sequences and the control group. **Aim 5.** To explore which dyadic characteristics observed during the first intervention stage are associated with optimal patient symptom outcomes during the 2nd intervention stage and week 12 follow-up, so as to determine tailoring variables for the decision rules of sequencing future intervention stages.

By sequencing two evidence-based interventions, the proposed research will impact research and practice by determining how to maximize the benefit of symptom management during cancer treatment.



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