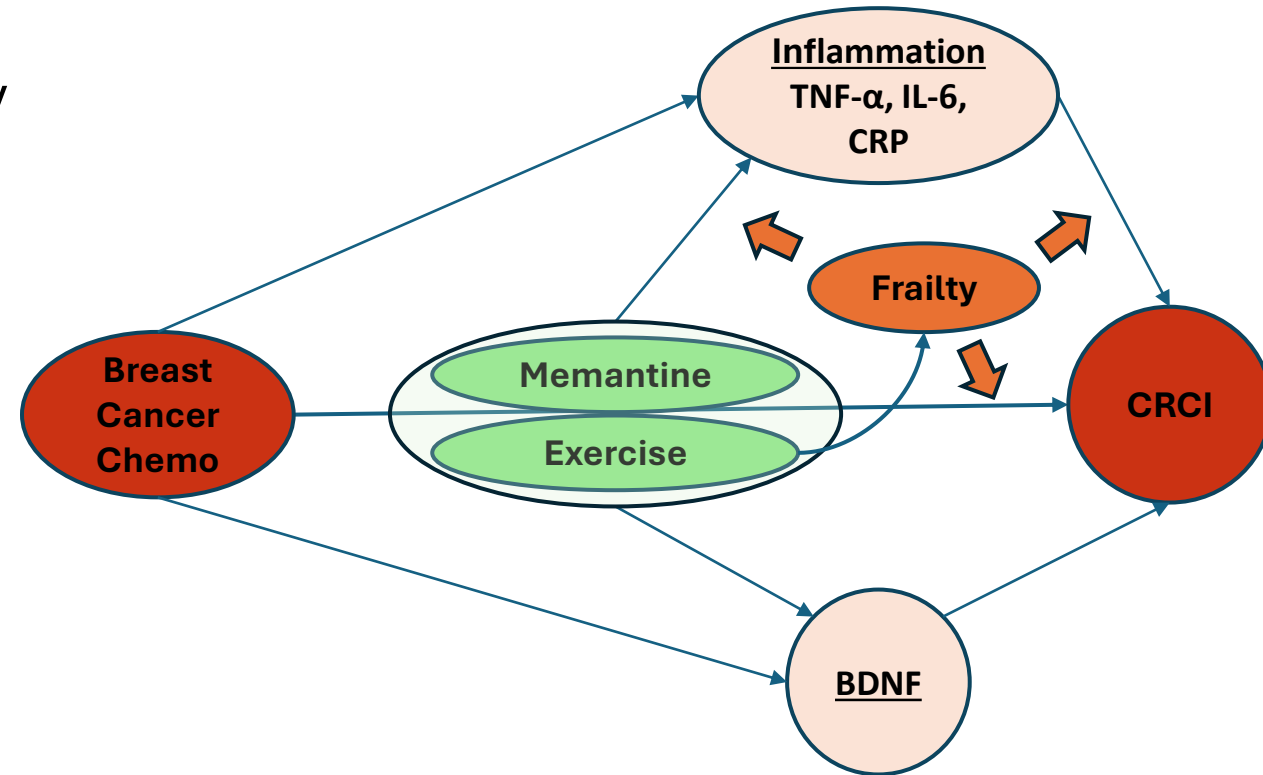


Memantine and Exercise for Cancer-Related Cognitive Impairment during Chemotherapy for Breast Cancer

- Up to 75% of breast cancer patients experience cancer-related cognitive impairment (CRCI) during chemotherapy
- Profound consequences on mental health, function, and survival
- Heterogenous clinical presentation and underlying biological mechanisms
- Prior trials monotherapeutic and untargeted → limited benefit
- Multicomponent intervention of the NMDA-R antagonist memantine and physical exercise is a promising, mechanistically-based treatment strategy



Memantine and Exercise for Cancer-Related Cognitive Impairment during Chemotherapy for Breast Cancer

- 90 patients with stage I-III breast cancer, within first 3 cycles of chemotherapy
- Randomized 1:1:1 to memantine + exercise, memantine, or placebo
- Baseline, post-intervention (1 mo post-chemo), and 6 mo
- Feasibility and acceptability (primary)
- Preliminary efficacy (secondary)
 - CRCI
 - AE and LM domain composite
 - Self-report
 - BDNF and inflammation (TNF- α , IL-6, CRP)
- Timeline
 - First participant enrolled: 8/19/25
 - Complete enrollment: 8/31/28*
 - Complete data collection: 6/15/29*

**anticipated*

