Insomnia may cause or worsen fatigue. This study examined the fatigue trajectory and the impact of poor sleep on fatigue among women with breast cancer.

Methodology or Methods: Forty women completed assessments at the time of diagnosis and 4, 8, 12, and 24 months later. Fatigue and sleep were measured using the Multidimensional Fatigue Symptom Inventory- Short Form (MFSI-SF), Insomnia Severity Index (ISI), and Pittsburgh Sleep Quality Index (PSQI). A RM-ANOVA was used to examine change over time. Women were grouped based on clinically significant increases in fatigue (8.6 point change on MFSI-SF) over the two years. T-tests were used to compare those who did and did not experience a clinically significant increase in fatigue.

Impact on practice or Results: Fatigue change was cubic with significantly increases from diagnosis (M = 3.26) to its peak at 24 months (M = 12.95), p = .005, $n\square^2$ = .09. Increases were observed for general (p = .016), physical, (p < .001), and mental (p = .015) fatigue. Women with a change score of 8.6 or more (N = 18) had higher scores on the ISI (11.83 vs 6.86, p = .03, d = 6.69) and PSQI (9.78 vs 6.82, p = .01, d = 3.63) than women with a lower change score.

Discussion or Conclusions: Women with breast cancer experience significant fatigue two years after their diagnosis. Poor sleep is associated with greater fatigue. Interventions that target these comorbid symptoms are needed.

147 | Executive Function Alterations During the First Year of Breast Cancer Treatment

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Background/rationale or Objectives/purpose: Treatment of breast cancer (BCa) is associated with deficits in various cognitive domains. This study sought to understand the longitudinal trends in self-reported executive functioning and examine factors associated with poorer executive function.

Methodology or Methods: Women with newly diagnosed early-stage BCa completed the Behavior Rating Inventory of Executive Function –Adult Version (BRIEF-A) at the time of diagnosis, 4, 8, and 12 months. BRIEF-A subscales include a behavioral regulation index, metacognition index, and an overall composite score. Participants also completed measures of anxiety, depression, vasomotor symptoms, fatigue, and insomnia severity. A repeated-measures MANOVA analyzed change in executive function over time. A multiple linear regression explored factors associated with poorer executive functioning at 4-months post-diagnosis.

Impact on practice or Results: Women (N = 74) had mean age of 59 years (range = 29-83). There was a significant quadratic effect of time on metacognition, F (2.638, 189.954) = 4.258, p =.009, = .056. Problems with metacognition peaked at 4 months before improving, but did not return to pre-treatment level. No differences in behavioral regulation or the overall composite score were observed. After adjusting for age, education, menopausal status, and comorbid illnesses (e.g., diabetes, hypertension, arthritis), poorer metacognition was associated with worse insomnia symptoms (β = .332, p = .016) 4-months post-diagnosis.

Discussion or Conclusions: Women with breast cancer can expect issues generating ideas and problem solving after beginning cancer treatment, which is associated with insomnia symptoms. Early detection and management of sleep problems may help mitigate the cognitive effects of breast cancer treatment.

155 | Genetic Predisposition to Depression Impacts Symptom Burden in Patients With Head and Neck Cancer: A Longitudinal Study

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Background/rationale or Objectives/purpose: The purpose of this study was to investigate the contribution of genetic predispositions to depression and inflammation on symptom burden and survival in head and neck cancer patients.

Methodology or Methods: Prospective longitudinal study of 223 adults (72% participation) newly diagnosed with a first occurrence of primary head and neck cancer, paired with genetic data (Illumina PsychArray), validated psychometric measures, Structured Clinical Interviews for DSM Disorders (SCID-I), and medical chart reviews.

Impact on practice or Results: Symptom burden at 3 months was predicted by (R2 adj.=0.38, p<0.001): a baseline SCID-I Anxiety Disorder (p=0.009), baseline levels of HADS anxiety (p=0.003), the polygenic risk score (PRS) for depression (p=0.049), and cumulated dose of radiotherapy (p<0.001). When controlling for factors known to be associated with cancer survival, patients with a higher polygenic score associated with anti-inflammatory cytokines presented higher risk of death at 24 months (p=0.007).

Discussion or Conclusions: Our results outline three potential pathways of symptom burden in patients with head and neck cancer: a genetic predisposition towards depression; an initial anxiety disorder upon being diagnosed with cancer or high levels of anxiety upon diagnosis; and a dose-related response to radiotherapy. One may want to investigate early interventions in these areas to alleviate symptom burden in patients with head and neck cancer, as well as consider treating genetic predisposition towards inflammation implicated in survival. The high prevalence of distress in patients with head and neck cancer represents an opportunity to study genetic predispositions, which could potentially be broadly generalized to other cancers.

157 | The Relationship Between Physical and Psychological Symptoms and symptoms management status in Hospitalized Patients With Advanced Cancer-A Multicenter Study

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Background/rationale or Objectives/purpose: The management of physical and psychological symptoms of cancer patients is an important component of cancer care. The purpose of this study is to evaluate the physical and psychological symptom burden and management status of hospitalized patients with advanced cancer in China.

Methodology or Methods: 2930 hospitalized patients with advanced cancer (six types of cancer) were recruited from 10 centers all over China. Patient-reported MDASI, HADS and PHQ-9 scales and symptom management related problems were collected and matched with the patient's clinical data. We describe the proportion of patients reporting moderate-to-severe symptoms and whether they are currently well managed. Multiple regression analysis models were created to determine the factors related to symptom management.