

0.008;  $\beta = 0.499$ ,  $t(43) = 3.260$ ,  $p = 0.002$ ;  $\beta = 0.438$ ,  $t(43) = 2.899$ ,  $p = 0.006$ ), respectively).

**Discussion or Conclusions:** SPBT and HC have similar brain volumes, however, effect sizes suggest that greater sample size may lead to significant effects of brain volume.

#### 74 | Psychosocial needs of cancer survivors: what factors impact needs met?

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**Background/rationale or Objectives/purpose:** The purpose of this study was to describe the psychosocial needs of cancer survivors and examine whether sociodemographic factors and health care providers accessed impacted needs met.

**Methodology or Methods:** All Nova Scotia survivors meeting specific inclusion and exclusion criteria were identified from the Nova Scotia Cancer Registry and sent an 83-item survey to assess psychosocial concerns and if their needs were met. Descriptive statistics (frequencies, percentages) and Chi-square analyses were used to examine and report survey findings.

**Impact on practice or Results:** The survey was sent to 3492 cancer survivors, with a response rate of 44.6%. Anxiety and FCR, depression and changes in sexual intimacy were major areas of concerns for survivors. Many survivors reported they chose not to seek help because they thought their concerns were normal or expected. Increased education level and internet use had a negative impact on having psychosocial and informational needs met but a positive impact on general emotional health. Having both a specialist and primary care practitioner in charge of follow-up care and accessing a patient navigator resulted in a significantly ( $p < 0.05$ ) higher degree of psychosocial and informational needs met compared to one or no follow-up physician or not accessing a patient navigator, respectively.

**Discussion or Conclusions:** Our study identified some of the psychosocial needs of cancer survivors and the factors that impact needs met, such follow-up care by both a primary care practitioner and specialist and access to a patient navigator. This will help inform future management of the psychosocial concerns of cancer survivors.

#### 76 | Self-Rated Fatigue, Perceived Cognitive Function, Depression, and Anxiety in Women with Breast Cancer in the First Year of Treatment

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**Background/rationale or Objectives/purpose:** The first year of cancer treatment is characterized by significant disruption. The objective of this study was to explore changes in fatigue, perceived cognitive function (PCF), depression, and anxiety during a 12-month time period in newly diagnosed women with breast cancer (BCa).

**Methodology or Methods:** This study is part of a larger ongoing prospective observation cohort study of sleep and cognition in women with early stage BCa. Participants completed the Multidimensional Fatigue Syndrome Inventory-Short Form (MFSI-SF), the Functional Assessment of Cancer Treatment-Cognition (FACT-Cog), and the Hospital Anxiety and Depression Scale (HADS). One-way repeated measures ANOVA analyses were used for each measure to determine statistically significant changes at four time-points (baseline [T1], 4-months [T2], 8-months [T3], 12-months [T4]), with T1 occurring prior to treatment initialization. Tukey HSD was used for pairwise comparisons.

**Impact on practice or Results:** Data were collected from 100 women with newly diagnosed BCa. Over the 12-month period, the means for total fatigue [ $p < .05$ ], PCF [ $p < .05$ ], and depression [ $p < .05$ ] significantly

changed. Post hoc comparisons showed that total fatigue was significantly lower at T1 ( $M=6.88$ ,  $SD=19.52$ ) than at T2 ( $M=13.27$ ,  $SD=19.67$ ) and T3 ( $M=12.87$ ,  $SD=18.35$ ), PCF was significantly lower at T1 ( $M=90.69$ ,  $SD=16.84$ ) than T2 ( $M=84.99$ ,  $SD=18.18$ ), T3 ( $M=84.10$ ,  $SD=16.73$ ), and T4 ( $M=84.70$ ,  $SD=16.45$ ), and depression significantly increased from T1 ( $M=3.24$ ,  $SD=3.39$ ) to T2 ( $M=4.00$ ,  $SD=3.65$ ). There were no changes to anxiety at any time-point.

**Discussion or Conclusions:** Fluctuations in cognitive function, fatigue, and depression occur during treatment. Research is needed to identify those most at risk for persistent problems to appropriately time intervention.

#### 86 | The buffering effect of social support in the relationship between stress, immune function and infections in women receiving chemotherapy for breast cancer

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**Background/rationale or Objectives/purpose:** The goals of this naturalistic study were: 1) to evaluate the associations between stress and infections and the mediating role of immunity; and 2) to investigate the buffering effect of social support in the relationship between stress, immune function, and infections during and after chemotherapy in women with breast cancer.

**Methodology or Methods:** Fifty women about to receive chemotherapy for breast cancer completed the Inventory of Recent Life Experiences for Cancer Patients (IRLE-C) and the Friends subscale of the Perceived Social Support from Friends and Family (PSS) and a semi-structured interview on infections, and provided blood samples for immune measures at pre- (T1) and post-treatment (T2), and 3-month follow-up (T3).

**Impact on practice or Results:** A higher stress level at baseline significantly predicted a greater occurrence of infections at T2 but not at T3. None of the immune markers significantly explained this relationship. Social support (marital status alone or combined with perceived support from friends) had a strong protective effect on the relationship between stress and infections at T2. Single patients with a lower perceived support from friends showed the strongest (significant) association between stress and infections at T2, while the weakest association was found in partnered patients with a higher support from friends.

**Discussion or Conclusions:** These findings suggest that women reporting more daily hassles related to cancer before initiating chemotherapy are at a higher risk of developing infections during chemotherapy and that social support, in particular having a life partner but also the perceived support from friends, protects women from experiencing this deleterious effect of stress.

#### 92 | Coping patterns and post-traumatic growth in young adults with cancer: A YACPRIME Study

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**Background/rationale or Objectives/purpose:** Patterns of coping with a life-threatening illness such as cancer varies by person. Certain coping patterns may promote better overall adjustment and the development of post-traumatic growth (PTG), wherein positive change arises from a major life crisis. Although coping style has been implicated in PTG, the nature of this association has yet to be explored among young adults (YAs) with cancer.

**Methodology or Methods:** In the present study, we employ factor analysis to examine responses of 548 Canadians diagnosed with cancer

as a YA on the Brief COPE, and assess how these factors are associated with PTG using the Post-Traumatic Growth Inventory (PTGI).

**Impact on practice or Results:** Our exploratory analysis suggests a 5-factor structure of the Brief COPE (final eigenvalues > 1), which accounts for 47.3% of the variance. These factors include coping approaches typified by “active coping/planning”, “self-blame/behavioural disengagement”, “humour”, “emotional support/instrumental support/venting”, and “substance use”. Derived scores for “active coping/planning” ( $R^2 = 0.04-0.18$ ,  $p < 0.001$ ) and “emotional support/instrumental support/venting” factors correlated significantly with all PTGI subscales ( $R^2 = 0.02-0.16$ ,  $p < 0.001$ ). Of the Brief COPE factors identified, “active coping/planning” and “emotional support/instrumental support/venting” also displayed the highest correlations with total PTGI scores ( $R^2 = 0.10-0.16$ ,  $p < 0.001$ ).

**Discussion or Conclusions:** These findings support an association between coping approach and PTG among YAs with cancer in Canada, particularly for those that endorsed the use of active coping/planning strategies. Our results may aid in identifying strategies that can improve recovery and long-term adjustment.

### 103 | Perceived Social Support in Young Adults with Cancer Compared to Matched Peers

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**Background/rationale or Objectives/purpose:** Oftentimes, young adults (YA) with cancer report feelings of isolation and lack of social support, particularly during the post-treatment survivorship phase. This matched case-control study examined the differences in perception of social support of YA diagnosed with cancer compared to their non-cancer peers.

**Methodology or Methods:** Canadian YA, recruited at Princess Margaret Cancer Centre and online, and diagnosed between the ages of 15-39, completed the 10-item Social Provisions Scale (SPS; range 10-40). They were age and sex matched (1:1) to a randomly selected sample from the 2015-2016 Canadian Community Health Survey. A multiple regression model was fitted to compare cases and controls, adjusting for socioeconomic and clinical variables.

**Impact on practice or Results:** A total of 326 YA were matched. SPS scores were not found to be statistically different between YA with cancer and matched peers (35.07 vs. 35.68,  $p=0.085$ ) in paired t-test, and adjusted linear regression analysis ( $p=0.635$ ). YA in post-treatment had lower SPS scores ( $\beta_{adjusted}=-1.709$ ,  $p=0.002$ ) than those in treatment. Lower scores were reported for breast cancer patients ( $\beta_{adjusted}=-2.634$ ,  $p=0.017$ , vs testicular cancer), single participants ( $\beta_{adjusted}=-1.578$ ,  $p<0.001$ , vs. married), and those who had not completed secondary school ( $\beta_{adjusted}=-1.772$ ,  $p=0.045$ ) or only secondary school ( $\beta_{adjusted}=-0.888$ ,  $p=0.049$ ) vs. postsecondary. SPS scores increased by 0.970 points for every point increase in life satisfaction ( $p<0.001$ ).

**Discussion or Conclusions:** YA in post-treatment experience lower levels of social support. This is associated with having breast cancer, being single and not having postsecondary education. Greater social support is associated with greater life satisfaction. Interventions need to address YA social support needs during the post-treatment survivorship phase.

### 104 | Feelings of loneliness and perceived social support in young adults with cancer

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**Background/rationale or Objectives/purpose:** Loneliness is associated with poor health. Young adults (YA) with cancer commonly report feeling socially isolated. This cross-sectional study examined associations between loneliness and perceived social support in YA cancer survivors.

**Methodology or Methods:** Canadian YA, recruited at Princess Margaret Cancer Centre and online, and diagnosed with cancer between ages 15-39 years, completed the UCLA Loneliness 20-item scale (range: 0-60). Multiple regression was utilized to examine the association between loneliness and perception of social support, measured by Social Provision Scale (SPS), while adjusting for relevant demographic characteristics and psychosocial factors (anxiety: GAD-7; depression: PHQ-9).

**Impact on practice or Results:** In a univariate analysis of 343 YA, for every 1 point increase of SPS, loneliness decreased by 1.97 points ( $p<0.001$ ). Disease characteristics were not associated with differences in loneliness score. Adjusting for other variables, loneliness decreased by 1.31 points for 1 point SPS increase ( $p<0.001$ ). Higher levels of loneliness were observed in females ( $\beta_{adjusted}=2.47$ ,  $p=0.046$ , vs. males), being single ( $\beta_{adjusted}=3.20$ ,  $p=0.013$ , vs. married or in a relationship), and living alone ( $\beta_{adjusted}=5.22$ ,  $p=0.004$ , vs. living with others). Loneliness increased by 0.45 ( $p=0.009$ ) and 0.53 ( $p=0.001$ ) points per 1 point increase in GAD-7 and PHQ-9 scores, respectively. Loneliness was not associated with number and method of contact with friends.

**Discussion or Conclusions:** YA with lower levels of perceived social support reported higher levels of loneliness. This was associated with being female, single, living alone, and increasing severity of anxiety and depression symptoms. Addressing loneliness in YA with cancer entails comprehensive promotion of psychosocial wellbeing.

### 123 | The relationship of stressors related to the COVID-19 pandemic with psychological symptoms in non-metastatic breast cancer patients

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**Background/rationale or Objectives/purpose:** The current COVID-19 pandemic is a highly stressful event that may lead to significant psychological symptoms, particularly in cancer patients. For instance, when immunosuppressed due to cancer treatments, they are at an increased risk for contracting viruses. This study examines stressors related to the ongoing coronavirus pandemic and its relationship with psychological symptoms (i.e., anxiety, depression, insomnia, fear of cancer recurrence) in breast cancer patients.

**Methodology or Methods:** Thirty-five women diagnosed with a non-metastatic breast cancer completed the *Insomnia Severity Index*, the *Hospital Anxiety and Depression Scale*, the *Fear of Cancer Recurrence Inventory*, and a COVID-19 stressors questionnaire (exposure to 10 stressors) developed by our research team. Participants either completed the questionnaires during (31.4%) or after (68.6%) their chemotherapy treatment.

**Impact on practice or Results:** Results revealed that most of the participants (62.9%) have experienced at least one stressor related to the COVID-19 pandemic (one: 25.7%; two: 22.9%; three: 11.4%; four: 2.9%). The most frequently reported stressors were the increased responsibilities at home (34.4%), difficulty getting the help or social support needed (20.0%), and the postponement or cancellation of their cancer treatments (20.0%). Higher levels of concerns related to the experienced COVID-19 stressors were significantly correlated with higher levels of anxiety, depressive symptoms, insomnia and fear of cancer recurrence,  $r_s(31) = .41$  to  $.60$ ,  $ps < .05$ .