treatment initiation, neuropsychological assessment at transition times throughout treatment, cognitive remediation, and coordinated end of treatment transition planning. We gathered caregiver perspective on this approach within a tertiary care pediatric hematology/oncology setting.

Participants and Methods: Parents of children and young adults (ages 4-20) with PFS after medulloblastoma resection who received coordinated care as part of the ANI program (n=20) were interviewed at least 4 months following completion of cancer treatment. 75% experienced postoperative mutism while the remainder experienced significantly decreased speech without mutism. All received cranial-spinal irradiation and focal boosts to tumor sites followed by chemotherapy per multi-institutional treatment protocol. Caregivers were interviewed regarding perceived feasibility and utility of ANI program components including parent psychoeducation, neuropsychological assessment, cognitive remediation, and interdisciplinary team coordination/goal setting, as well as parental supports. Yes/no responses were gathered as well as responses regarding the perceived utility of aspects of the interdisciplinary ANI program approach via a five-point Likert scale.

Results: Surveys were completed by 66% of families contacted. Mean age at first contact with neuropsychology as part of the ANI program was 9.45 years (SD=4.4 years). Mean time between end of treatment and parent interview was 3.20 years (SD=2.01 years). Most parents reported that initial psychoeducation about PFS helped to decrease their concerns (81%) and increased their understanding of their child’s functioning in the context of PFS (88%). They reported benefit from neuropsychological assessment reports prior to initiating adjuvant treatment (92%), at end of treatment (90%), and one year following initiation of cancer treatment (100%), though they perceived less benefit from assessments intended to inform provider interventions during treatment (81% and 66%). Reports were shared most often with schools (75%), behavioral therapists (50%), physicians (50%), and rehabilitation specialists (25%). Parents indicated that the interdisciplinary ANI program approach was helpful (94%) and the coordinated interdisciplinary goal was beneficial (92%). Most parents favored the weekly frequency of cognitive remediation sessions (83%). Much interest was voiced in establishing a formal mentoring program to offer peer support by parents whose children have previously experienced PFS to those acutely managing a new PFS diagnosis (95%). Of note, all participants indicated that they would be willing to serve in a peer mentor role (100%).

Conclusions: The interdisciplinary ANI program approach is feasible with perceived benefits to families managing new PFS and medulloblastoma diagnoses and receiving active cancer treatment.

Categories: Cancer
Keyword 1: brain tumor
Keyword 2: pediatric neuropsychology
Keyword 3: cognitive rehabilitation
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7 Cognitive Functioning Among Patients Undergoing CAR T-Cell Therapy

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Objective: Chimeric antigen receptor (CAR) T-cell therapy is a novel treatment approach for refractory hematological malignancies. Risk factors for cognitive changes have been identified with CAR-T cell therapy, including severe cognitive problems due to neurotoxicity. Given the novelty of this treatment, research on this topic remains limited. Only one known study has examined cognitive performance following CAR T-cell therapy among patients diagnosed with non-Hodgkin’s lymphoma and observed a pattern of initial decline in executive functioning and visuospatial skills with improvement towards baseline one year following treatment. Additional research is needed to understand cognitive functioning in the context of CAR T-cell therapy. Our study presents preliminary descriptive longitudinal cognitive data among a small cohort of patients with mixed cancers undergoing CAR-T cell therapy.

Participants and Methods: Adult patients undergoing CAR T-cell therapy (N=16) completed the NIH-Toolbox core cognitive battery prior to treatment, and at 100-, 180-, and one-year post-treatment. Subtests of the Weschler Abbreviated Scale of Intelligence (WASI-II; block design, vocabulary) and the

Wide Range Achievement Test (WRAT-5; word reading, math computation) were administered at baseline and one year follow up. Mean age of participants was 51.6 (SD = 14.4). Most patients had completed high school or more education (89.7%) identified as male (56.3%) and were white (75%). Diagnoses included lymphoblastic leukemia (n=2), diffuse large B-cell lymphoma (n=7), follicular lymphoma (n=3), mantle cell lymphoma (n=1), metastatic sarcoma (n=1), myxoid liposarcoma (n=1), and synovial sarcoma (n=1).
Results: Mean cognitive scores (adjusted for age) were calculated. At baseline, mean cognitive performance was average across domains, except for inhibitory control, which was in the low average range. At day 100, mean cognitive performance showed the same pattern as baseline. At day 180, mean scores in all domains were within the average range. At one year, all scores were within the average range or higher, although only two participants have completed the one-year follow-up, as data collection is ongoing. One participant died due to neurotoxicity following treatment, thus did not complete follow-up evaluations.
Conclusions: Overall, cognitive performances were broadly within normal limits in the sample and demonstrated relatively stable performance over time. Interestingly, baseline and day 100 mean inhibitory control was an area of relative weakness across participants, which is consistent with prior research. CAR T-cell therapy is reserved for refractory malignancies; thus, patients may have executive functioning deficits at baseline due to prior treatments. One patient died due to neurotoxicity. Overall, although severe cognitive changes and neurotoxicity have been observed as a risk of CAR T-cell therapy, this may be a distinct adverse event rather than the norm, as surviving patients in our sample remained cognitively stable following treatment. Although a unique and important population of study, our sample is limited due to its size. Results should be considered preliminary, and data collection is ongoing.

Categories: Cancer
Keyword 1: cancer
Keyword 2: cognitive functioning
Keyword 3: neuro-oncology
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8 Self-Reported versus Performance-Based Cancer-Related Cognitive Impairment in Older Women with Nonmetastatic Breast Cancer

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Objective: The Functional Assessment of Cancer Therapy-Cognitive scale (FACT-Cog) is one of the most frequently used patient-reported outcome (PRO) measures of cancer-related cognitive impairment (CRCI) and of CRCI-related impact on quality of life (QOL). Previous studies using the FACT-Cog found that >75% of women with breast cancer (BCa) experience CRCI. Distress tolerance (DT) is a complex construct that encompasses both the perceived capacity (i.e., cognitive appraisal) and the behavioral act of withstanding uncomfortable/aversive/negative emotional or physical experiences. Low DT is associated with psychopathology and executive dysfunction. We previously found that women with BCa with better DT skills reported less CRCI on the FACT-Cog. However, this relationship has not been tested using a performance-based cognitive measure. Therefore, the aims of this study were to: (1) assess the relationship between the FACT-Cog and the Telephone Interview for Cognitive Status (TICS), a performance-based cognitive measure; and (2) test whether the association between DT and CRCI (using the FACT-Cog) was replicated with the TICS.
Participants and Methods: Participants completed the Distress Tolerance Scale (DTS), the FACT-Cog, and the TICS after undergoing BCa surgery and prior to starting adjuvant therapy [101 women, age >50 years, M(SD)= 61.15(7.76), 43% White Non-Hispanic, 34.4% White Hispanic, 10.8% Black, with nonmetastatic BCa, 55.4% lumpectomy, 36.6% mastectomy; median 29 days post-surgery].
Results: Although there was a significant correlation between the TICS total score and the FACT-CogQOL subscale ($r = 0.347$, $p < 0.001$), the TICS total score was not correlated with scores on the FACT-Cog perceived cognitive