how patients handle the therapy was collected two months after TTFields treatment start. HRQoL was assessed in patients deciding for TTFields therapy at baseline and at 2 and 4 months using the EORTC-QLQ-C30/BN-20 questionnaire. RESULTS: Baseline values were compared against August 2017 data (n=18) from patients who refused TTFields therapy. HRQoL did not decline during TTFields therapy except for nausea, comparable to the EF-14 trial. A detailed analysis of the cohort as well as their reported QoL will be presented. CONCLUSION: The TIGER study is the largest non-interventional trial on the use of TTFields in routine clinical care. The use of TTFields in patients with nGDM did not impair HRQoL during the follow-up period, except for more nausea.

QOLP-12. EFFECT OF CANNABIS USE ON QUALITY OF LIFE AMONG GLIOMA PATIENTS: A LONGITUDINAL PERSPECTIVE

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BACKGROUND: Gliomas are devastating primary tumors of the central nervous system that often present with difficult to manage symptoms in addition to the antineoplastic tumor itself. Due to recent increase in popularity and societal acceptance of cannabis products, their use by glioma patients has increased. METHODS: We conducted a single center, prospective study: patients with glioma answered a locally validated survey to inquire about their cannabis use at baseline and every three months. Quality of Life was measured using the EORTC QLQ-C30, its complementary module BN-20 and the EQ-5D-5L instrument. Eligible participants were classified as cannabis users or non-users. We performed linear regression clustered by subjects to see differences by user group and trends overtime. RESULTS: To date, 112 patients decided to participate, enrolled, and answered the baseline questionnaires, and 64 have answered the 3 month follow up survey. The mean age was 49.7(SD 13.74), 55 were male, 55 were cannabis users at baseline (61.8%) and 34 at 3 months (53.13%). Patients who were cannabis users scored 11.73 lower points at baseline when compared to non-users (79.65 [SD 18.93] vs 67.92 [SD 19.22]) in the QLQ-C30 instrument. Similarly, cannabis users recorded 9.624 lower points at 3 months compared to non-users (70.1 [SD 21.53] vs 79.72 [SD113.95]). The difference-in-difference estimator was 2.108 (p<0.7). CONCLUSION: Although we observed cannabis users scoring lower QoL measurements (p<0.05) at baseline and 3 months, we observed a slight improvement in QoL of cannabis users while observing no change or decline (in some measures) among non-users. Our findings provide insight to the impact that cannabis has in QoL over time. While not conclusive, these preliminary results need to be studied on a longer-term basis with a larger sample size in order to detect trends on quality of life among patients with different tumor types.

QOLP-13. EVIDENCE OF FINANCIAL TOXICITY IN PRIMARY CENTRAL NERVOUS SYSTEM TUMOR PATIENTS: CORRELATIONS BETWEEN EMPLOYMENT STATUS, SYMPTOM BURDEN AND HEALTH-RELATED QUALITY OF LIFE

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BACKGROUND: Patients with primary and metastatic brain tumors are particularly susceptible to psychiatric comorbidities. Adjustment disorder (AD) and post-traumatic stress disorder (PTSD) are particularly prevalent in cancer patients and benefit from focused treatment; however, few studies have assessed these conditions in both brain tumor patients and their caregivers. The prevalence of cancer-related AD and PTSD in both brain tumor patients and caregivers, including patients with gliomas, meningiomas, metastases and other brain tumor types. Patients and caregivers at the University of Washington's Alvord Brain Tumor Center completed measures of cancer-related AD and PTSD, respectively. Cutoff scores for a positive screen were set at 44 for ADNM-20 and 30 for the PCL-5. The TIGER study: patients with glioma answered a locally validated survey to inquire about their cannabis use at baseline and every three months. Quality of Life was measured using the EORTC QLQ-C30, its complementary module BN-20 and the EQ-5D-5L instrument. Eligible participants were classified as cannabis users or non-users. We performed linear regression clustered by subjects to see differences by user group and trends overtime. RESULTS: To date, 112 patients decided to participate, enrolled, and answered the baseline questionnaires, and 64 have answered the 3 month follow up survey. The mean age was 49.7(SD 13.74), 55 were male, 55 were cannabis users at baseline (61.8%) and 34 at 3 months (53.13%). Patients who were cannabis users scored 11.73 lower points at baseline when compared to non-users (79.65 [SD 18.93] vs 67.92 [SD 19.22]) in the QLQ-C30 instrument. Similarly, cannabis users recorded 9.624 lower points at 3 months compared to non-users (70.1 [SD 21.53] vs 79.72 [SD113.95]). The difference-in-difference estimator was 2.108 (p<0.7). CONCLUSION: Although we observed cannabis users scoring lower QoL measurements (p<0.05) at baseline and 3 months, we observed a slight improvement in QoL of cannabis users while observing no change or decline (in some measures) among non-users. Our findings provide insight to the impact that cannabis has in QoL over time. While not conclusive, these preliminary results need to be studied on a longer-term basis with a larger sample size in order to detect trends on quality of life among patients with different tumor types.

QOLP-14. MENTAL HEALTH OF CANCER PATIENTS WITH COGNITIVE IMPAIRMENT

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BACKGROUND: Obtaining post-mortem tissue from pediatric oncology patients is not only critical to research, but studies show that participating in the process can also help grieving families heal. Since 2019, the national Gift from a Child program — a multi-institutional effort to increase the rate of rapid autopsies for pediatric CNS tumor patients — has made significant progress. Collecting high-quality post-mortem tissue has advanced research through cell line generation and genomic analyses. Unfortunately, some autopsy programs temporarily shut down during the COVID-19 pandemic. METHODS: We retrospectively reviewed autopsies of four patients treated at Memorial Sloan Kettering (MSK) who underwent limited brain post-mortem examination at Weill Cornell Medicine College (WCMC) from June 2020 to June 2021. We collected patient demographics; DNR status; time of death and procedure; restrictions due to the COVID-19 pandemic; and results of the tissue analysis. Each case presented unique challenges and the timing of securing parental consent varied. RESULTS: Three of four specimens were processed within 12 hours of the time of death. Two Spanish-speaking families required interpreters services to obtain consent. In all cases tumor aliquots were flash frozen for further study. All specimens contained viable tumor and cell line generation was successful in one case.
All families/caregivers expressed gratitude for the opportunity to participate and for the handling of the procedures. DISCUSSION: Despite the sensitive nature of these cases, clinicians should offer the option of a rapid autopsy to caregivers of pediatric patients based on the scientific need and the positive effect it has on grieving families. This paper outlines the logistical efforts required for these donations to take place and provides a framework for providers to offer rapid autopsies as an option for families through this program.

QOLP-16. PATTERN OF CARE OF BRAIN TUMOR PATIENTS IN THE LAST MONTHS OF LIFE: ANALYSIS OF A COHORT OF 3045 PATIENTS IN THE LAZIO REGION IN THE LAST 10 YEARS
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The final days of life of Brain Tumor patients (BT) present special challenges and often palliative care approach is underutilized. Several studies reported that BT patients in the last months of life receive frequent hospital readmissions and ER accesses as result of bad quality of care. Early integration of palliative care has been demonstrated to improve quality of care in advanced stage of disease and quality of death in cancer patients. With the aim to evaluate pattern of treatment and the rate of hospital readmission in the last months of life, we retrospectively analyzed a consecutive serie of BT patients discharged after a diagnosis of BT. METHODS: Data regarding hospital readmission and treatment received in the last two months of life were collected from the Lazio Region Healthcare database. Adult patients discharged with diagnosis ICD-S1-191 between 1/1/2010 until 31/12/2019, were included in this study. RESULTS: 6672 patients were identified and 3045 death before 31/12/2019 were included (median age 67 y;M1700). In the last month of life 42.6% received hospital readmission (6.6% intensive care unit) and 37.9% had ER accesses. 24.5% received chemotherapy and 12.1% radiotherapy. In the last 30 days 33% were readmitted in hospital and 24.2% were admitted in ER. 11.7% were treated with chemotherapy and 6% with radiotherapy. CONCLUSION: Strategies to improve quality of care at the end of life and to decrease hospitalization and futile treatments are becoming increasingly important to improve quality of death and to reduce costs of Healthcare System.

QOLP-17. MOOD DISTURBANCE IN PATIENTS WITH CENTRAL NERVOUS SYSTEM (CNS) TUMORS DURING THE COVID-19 PANDEMIC
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BACKGROUND: Primary CNS tumors are associated with uncertainty likely contributing to mood disturbance that is common throughout the disease trajectory. The intersection of the COVID-19 pandemic with a CNS tumor diagnosis may further impact the anxiety/depression experienced in this population. This study assessed key anxiety/depression symptoms in patients with CNS tumors prior to and during the COVID year. METHODS: Patient reported outcomes (PROs), including the PROMIS Anxiety and Depression Short Forms and EQ-5D-3L, were collected at the time of clinical or telehealth evaluation from the COVID year (March 2020-February 2021) and were compared to assessments through February 2020 (a NOB-nornative sample), reflecting what we would typically see in our regular clinic evaluations. RESULTS: The COVID sample (N = 178) was primarily White (82%), male (55%), median age of 43 (range 18-79), and KPS ³90 (50%). The majority had high grade (70%) brain (83%) tumors with ³1 prior recurrence (60%) and 25% were on active treatment. Visits were primarily conducted via telehealth (64%) and 20% had progression at assessment. Compared to the NOB-nornative sample, patients reported significantly higher depression (4.6% moderate-severe vs. 1%, p < 0.05) and anxiety (18% vs. 16%). Eleven percent reported both moderate-severe anxiety and depressive symptoms (8% pre-COVID). Overall health assessed by the EQ-5D-3L was similar to the normative sample in all dimensions, apart from impact of moderate/extreme mood disturbance, which was more prevalent in the COVID year (53% vs. 43%, p < 0.05%). CONCLUSION: Patients with CNS tumors are at risk for significant symptoms of depression and anxiety; this risk was heightened during the COVID year. Further evaluation of clinical factors associated with risk are underway. These findings highlight the need for assessments and interventions that can be administered via telehealth to address the mental health needs of this vulnerable population.

RADIOBIOLOGY
RBIO-01. DEVELOPING THE FRAMEWORK FOR TUMOR TREATING FIELDS (TTFIELDS) TREATMENT PLANNING FOR A PATIENT WITH ASTROCYTOMA IN THE SPINAL CORD
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The use of Tumor Treating Fields (TTFields) following resection and chemoradiation has increased survival in patients with Glioblastoma. Patient-specific planning for TTFields transducer array placement has been demonstrated to maximize TTFields density. The frameless approach to the tumor: providing higher TTFields intensity (≥ 1.0 V/cm) and power density (≥ 1.1 mW/cm³) which are associated with improved overall survival. Treatment planning was performed for a 48 year old patient following T10-L1 laminectomy, gross total resection, and postoperative chemoradiation for an anaplastic astrocytoma of the spinal cord. An MRI at 3 weeks following chemoradiation showed tumor recurrence. Based on the post-chemoradiation MRI, a patient-specific model was created. The model was created by modifying a realistic computational phantom of a healthy female. To mimic the laminectomy, the lamina in T10-L1 was removed, and the region assigned electric conductivity similar to that of muscle. A virtual mass was introduced into the spinal cord. Virtual transducer arrays were placed on the model at multiple positions, and delivery of TTFields simulated. The dose delivered by different transducer array layouts was calculated, and the layouts that yielded maximal dose to the tumor and spine identified. Transducer array layouts, in which the arrays were placed on the back of the patient with one array above the tumor and one array below the tumor, yielded the highest doses at the tumor site. Such layouts yielded TTFields doses of over 3.4mW/cm³ which is well above the threshold dose of 1.1 mW/cm³ reported previously [Ballo et al. and Red Joor 2019]. The framework developed for TTFields dosimetry and treatment planning for this spinal tumor will have the potential to increased we deliver to the tumor bed while optimizing placement that may enhance comfort and encourage device usage.

RBIO-02. THERAPEUTIC EFFECTS OF RADIOThERAPY WITH CONCOMITANT IN CHILDREN WITH DIPG
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OBJECTIVE: To retrospectively analyze the therapeutic effects of radiotherapy with concomitant and adjuvant temozolomide (TMZ) versus radiotherapy with concomitant TMZ alone for pediatric diffuse intrinsic pontine glioma (DIPG), and to evaluate the value of radiotherapy and TMZ treatment in the treatment of pediatric DIPG. METHODS: The clinical data of children with confirmed DIPG in Guangdong Sanju Brain Hospital between January 1, 2010 and March 31, 2020 were collected. The inclusive criteria included (1) receiving a total radiotherapy dose of 54 Gy in 27 fractions, (2) treated with concomitant TMZ chemotherapy, and (3) with or without adjuvant TMZ chemotherapy. A total of 85 pediatric patients were eligible for the study. The Kaplan-Meier method was used for survival analysis, and a multivariable Cox proportional hazards regression model was used to assess the independent prognostic factors. RESULTS: Among 83 cases with a median age of 7 years (range 2-16 years), the median follow-up was 9 months (range 3-28 months) and the median survival time was 9 months. The median survival time of 66 patients treated with radiotherapy with concomitant and adjuvant TMZ was 10 months, longer than 6 months of the other 19 patients treated with radiotherapy with concomitant TMZ alone, with statistical differences (p=0.002). Moreover, bevacizumab and nimotuzumab did not bring survival benefits to patients with disease recurrence or progression. The prognosis in DIPG patients with H3K27M positive expressed is poor. Hematological toxicity (Grade IV) was not found. CONCLUSION: Radiotherapy with concomitant and adjuvant TMZ prolongs the survival time of children with DIPG.

NEURO-Oncology • November 2021 v191