influence of family, educational, and hospital supports, and identify areas of unmet need. PARTICIPANTS AND METHODS: PBTS (N=56, M±SD=1 8.12,range=10–25) completed questionnaires on academic accommodations. Medical chart reviews provided diagnosis and treatment data. A subset of families, who did not significantly differ from the larger sample on demographics, completed qualitative interviews (N=25). Three coders identified themes separately for parents and survivors and reached consensus (highest thematic content analysis). RESULTS: Family size, the role of family support, including providing individualized help, setting up a structured learning environment, and suggesting metacognitive strategies. Parents also emphasized how they have adjusted their expectations. At school, 53% reported an individualized education plan. Formal accommodations (e.g., modified coursework, small group instruction, extra time) were helpful, yet some noted barriers, including embarrassment and lack of follow-through. Survivors emphasized the value of informal accommodations. Families described unmet needs related to connecting with other survivors, navigating community and educational resources, and transitioning to adulthood. CONCLUSIONS: PBTS seem to rely on systems-level supports to mitigate neurocognitive effects. Future work should strengthen communication between systems and adult transition services.

QOL-05. TUMOR LOCATION IS LESS INFLUENCE ON COGNITIVE DYSFUNCTION IN CHILDREN

Bonita Nakajima Koshino, Shigesato Nakazaka, and Mitsutoshi Nakazaka; 2Department of Occupational therapy, Kanazawa University, Kanazawa, Japan, 2Department of Neurosurgery, Kanazawa University, Kanazawa, Japan

INTRODUCTION: Though several factors are known to influence on long-term cognitive function in children with brain tumor, the impact of tumor localization to specific cognitive function was not well known. Here we investigated the influence of long-term sequelae by surgery on postoperative cognitive outcome in school-aged children. METHODS: Participants were seven pediatric patients who underwent craniotomy for tumor resection in our hospital (mean age, 13.9 years). Their diagnoses were WHO grade 1 or 2 glioma (n=6) and hemangiomata (n=1). Tumor were mainly located in following regions: frontal, n=2; parietal, n=2; temporal, n=3 (These lesions included hippocampus or were located very close to it). Temporal assessments for cognitive function of several functional domains were performed in accordance to tumor location until postoperative 1 year. Based on MRI, we estimated cognitive dysfunctions and compared them to observational symptoms. RESULTS: Preoperative cognitive function was normal in all patients. Cognitive dysfunctions estimated from resected area were as follows: (cognitive deficit number; memory on working memory disorder, n=0; visuospatial cognitive disorder, n=3; disorder of processing speed, n=2; facial or topographical agnosia, n=2; Gerstman syndrome, n=1. Just after surgery, cognitive function was declined in two functional domains of two patients, which were only 16.7% of estimated deficit from resected region. They recovered the cognitive function until 5 months postoperative, and returned to normal without any deficits. CONCLUSIONS: In pediatric lower-grade tumor, focal cognitive symptom was unlikely to be induced by local resection.

QOL-06. QUALITY OF LIFE IN MEDULLOBLASTOMA SURVIVORS IN WESTERN MEXICO

Regina M Navarro-Martín del Campo1, Jorge I Macias-Toscano1, Enza Toral-González1, Fernando Sánchez-Zubieta2, Ana L Orozco-Alvarado1, 1Hospital Civil de Guadalajara “Dr. Juan I Menchaca”, Guadalajara, Jalisco, Mexico, 2GAPNO, International, Mexico

BACKGROUND: Treatment of children with medulloblastoma (MB) can lead survivors to lidiate with long term sequelae and affect their communication between systems and adult transition services. PURPOSE: To evaluate QOL in MB survivors and all this has a negative impact in their QoL.

QOL-07. CORTICAL VOLUME AND THICKNESS IN ADULT SURVIVORS OF CHILDHOOD POSTERIOR FOSSA TUMORS

Charlotte Sleers1, Jurgen Lemerec2, Jeroen Blommaert1, Sabine Deprez1, Karen Van Beeck1, Anne Vytrblec2, and Sandra Jacobs1; 1IKU Leuven, Leuven, Belgium, 2UZ Leuven, Leuven, Belgium

PURPOSE: A brain tumor treatment including cranial radiotherapy has previously been associated with long-term neurocognitive sequelae. Since underlying neurological mechanisms remain inconclusive, we investigated cortical features in childhood posterior fossa tumor survivors. METHODS: T1-weighted MRI (MPRAGE, resolution=98x98x1.2mm) was acquired to investigate the cortical structure in adults with childhood infratentorial tumors (n=19, 15 males, 14.6-34.8 years old, 2-years after treatment). These scans were compared to age- and gender-matched controls. Supratentorial cortical volume and thickness were investigated using voxel-based morphometry (VBM) and surface-based morphometry (SBM), respectively. We compared patients and controls, irradiated (n=13) versus non-irradiated patients, and investigated the age at radiotherapy (peak level: p<0.01). RESULTS: Lower GM volumes were encountered in multiple brain areas of patients compared to controls at the right and left occipital lobe. Lower GM irradiated patients showed lower GM volumes than non-irradiated patients in the superior and middle frontal gyri, the right supramarginal gyrus and precuneus. Age at radiotherapy was associated with GM volume in the interior frontal gyri. SBM yielded larger cortical thickness in patients in the left precuneus, inferior temporal and fusiform gyri. The opposite effect was only marginally significant, in the left temporal lingual gyrus. Age at radiotherapy was not associated with cortical thickness, but radiotherapy was associated with the left parietal cortex. CONCLUSION: Widespread differences in cortical volumes and thickness were observed in posterior fossa tumor survivors. Both radiotherapy and age at radiotherapy could be suggested as risk factors for long-term cortical development.

QOL-09. WHOLE-BRAIN WHITE MATTER NETWORK CONNECTIVITY IS DISRUPTED BY PEDIATRIC BRAIN TUMOR TREATMENT

Adéove Ofiédè, Kiran Beera, Iska Moxon-Emre, Jovanka Skoic, Úte Bartels, Suzanne Laughlin, Vijay Ramaswamy, and Donald Mabbott; The Hospital for Sick Children, Toronto, ON, Canada

INTRODUCTION: Treatments for pediatric brain tumors (PBT) are neurotoxic and lead to long-term deficits that are driven by the perturbation of underlying white matter (WM). It is unclear if and how treatment may impact WM connectivity across the entire brain, and return to a healthy development.

QOL-11. COMPARISON OF TREATMENT BURDEN RATING SCALES ON NEUROCOGNITIVE OUTCOMES IN A MIXED SAMPLE OF PEDIATRIC BRAIN TUMOR SURVIVORS

Muhammad Raai1, Ikebe Okoli2, Grace Yang1, Wafik Zak1, and Peter Stavinoha1; 1MD Anderson Cancer Center, Houston, Texas, USA, 2Fielding Graduate University, Santa Barbara, CA, USA

BACKGROUND: Predicting neurocognitive outcomes in pediatric brain tumor (PBT) patients is challenging. Rarity of PBT makes inclusion of detailed risk factors (e.g., treatment modality, intensity, individual complications) difficult when sample sizes are small. The Neurological Predictor Scale (NPS) summarizes complications and treatment factors associated with adverse physical effects, followed by academic development, functional state and self welfare report and all this has a negative impact in their QoL.