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97 (49%) patients, respectively. In 40 patients, SRS was administered after surgery (SF n=7, MF n=33). At a median (range) follow-up of 10 (0.93) months, 111 (57%) patients had intracranial progression, and 159 (81%) patients had local failure. The median time to local failure was 12.0 months. PS,2-3, surgery, stable extracranial disease and SF SRS were associated with a longer survival. CONCLUSION: SF SRS was associated with a higher rate of and shorter time to local failure, and was a poor prognostic factor for survival, which is in line with the selection of patients with more unfavorable brain metastases for this treatment.

P11.12.A. PRIMARY CENTRAL NERVOUS SYSTEM NEOBRASTOMA AND GANGLIONEOBLASTOMA IN ADULT PATIENTS. CLINICAL AND MOLECULAR FEATURES
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BACKGROUND: The clinical, morphological, molecular features, treatment modalities, and survival of primary central nervous system neuroblastoma and ganglioneuroblastoma (NGNB) in adults are still poorly understood. MATERIAL AND METHODS: The study included 15 patients with CNS-NB and 16 patients with CNS-GNB aged 18 years and older who were treated in our clinic from 2008 to 2020. Clinical, radiological data and surgical results were analyzed. Tumor molecular profile was performed using the gene panel, which contained the majority of clinically significant genes. RESULTS: Progression-free survival (PFS) and overall survival (OS) were higher in patients with CNS-NB than in patients with CNS-GNB. Median PFS in patients with CNS-NB and CNS-GNB was 136 and 46 weeks, respectively (p=0.022), and median OS was 541 and 82 weeks, respectively (p=0.00045). In both groups, disease progression was more favorable for tumor localization in the cranial hemispheres without involvement of basal structures (p=0.001). Differences for OS in patients with CNS-NB were obtained when tumor volume was reduced by more than 50% with a median of 541 weeks (p=0.042) compared to biopsy. In patients with CNS-GNB, total resection of the tumor increased both PFS and OS compared to subtotal resection (p=0.014 and p=0.017), respectively. In patients with CNS-NB, no benefit was observed for any of the different first-line chemotherapy regimens (p > 0.05). In the group of patients with CNS-GNB, 6 cycles of temozolomide increased median PFS compared to other chemotherapy regimens (p=0.021), and a high level of VEGF was observed in patients with CNS-NB and CNS-GNB. A significant difference in IDH1/2-mutation- and MGMT-promotor-methylation-status and dose in gray was observed. Single risk analysis of that parameters resulted in superiority of the RT before 2005 over RT after 2005 and RT before 2005 over RT after 2005 regarding the OS (p < 0.05). There have been several limitations in this study, for example the retrospective setting or the missing randomization of the patients. RT before 2005 resulted in the best long-term outcome, what has to be further investigated. However, RT/TMZ after 2005 showed a survival benefit for the OS in the long term vs. RT after 2005, supporting recent findings regarding the role of RT/TMZ in the therapy of WHO grade 3 gliomas.

C. Omar1, L. Lazaridis2, J. Feldheim3, T. Schmidt1, M. Glass1, S. Kebir1, A. Nechaev1, A. Zrelov1, 1Institute of Medical Informatics and Statistics, University Hospital Schleswig-Holstein, Kiel, Germany, 2Department of Neurology and Center for Translational Neuro- and Behavioral Sciences (C-TNBS), Essen, Germany, 3Department of Neurology. BACKGROUND: Despite a plethora of studies since the EORTC/NCIC trial in 2005, glioblastoma (GBM) prognosis remains poor. We here identify and compare glioblastoma phase III trials in terms of efficacy and baseline characteristics in an attempt to summarize the experience of the past 16 years. METHODS: A systematic literature search using PubMed and ClinicalTrials.gov was conducted to provide an overview of clinically relevant GBM phase III trials (years 2005-2021) of adult patients younger than 70 years of age. Search results were screened according to predefined inclusion criteria and other exclusion criteria. The trial was analyzed on study design, baseline characteristics, and survival results. RESULTS: Eleven trials from the literature and clinical trial database fulfilled the search criteria. Among these trials, a total of three GBM phase III trials reported overall survival (OS) benefit, including the EORTC/NCIC study (NCT00006353), EF-14 (NCT00916409) and CeTegNOA09 (NCT01149109). All three studies demonstrate similar hazard ratios, which translate into risk reduction of about 40%. Furthermore, low toxicity profile and mostly preserved quality of life were associated with the treatments tested. Looking at the study designs, eight out of eleven trials were open label randomized trials, including all of the positive ones, and only three negative trials employed treatment blinding and a placebo control. Canonical baseline characteristics (extent of resection, age, gender, MGMT promoter methylation status) did not significantly differ between positive and negative trials. IDH mutation status was analyzed in only two trials, each showing a small percentage of IDH1-mutant tumors only. CONCLUSION: This analysis on GBM phase III trials conducted between 2005 and 2021 revealed that the majority of trials did not show a significant improvement in overall survival. CeTegNOA09-09 and EF-14 are the only two studies with positive overall survival outcome since the EORTC/NCIC trial in 2005.

P11.15.B. FIRST MULTICENTRIC REAL-LIFE EXPERIENCE WITH THE COMBINATION OF LOMUSTINE AND TEMOZOLOMIDE IN NEWLY DIAGNOSED MGMT PROMOTER METHYLATED IDH WILDTYPE GlioBLASTOMA
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P11.17.B. MOLECULAR CHARACTERIZATION OF PRIMARY CENTRAL NERVOUS SYSTEM LYMPHOMA VS NON-CNS LYMPHOMA AND CORRELATION BETWEEN MUTATIONAL PROFILE AND TREATMENT RESPONSE
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BACKGROUND: Primary central nervous system lymphoma (PCNSL) is a unique subtype of tumor that occurs in the central nervous system. Most cases are diffuse large B-cell lymphomas, but prognosis is far less favorable compared to extracerebral cases. Many mutations found in PCNSL converge on the NF-kB signaling pathway, leading to downstream activation of B-cell receptor (BCR) and NF-kB pathway.

RESULTS: A total of 60 patients with PCNSL, 8 with secondary CNS lymphoma, and 202 with non-CNS-B-cell lymphomas underwent molecular profiling at Cars Life Sciences (Phoenix, AZ). Analyses included next-generation sequencing of DNA (592 Genes, NextSeq or WES, NovaSeq) and RNA (WTS, NovaSeq). X2/Fisher’s-exact U tests were used for comparison, and significance was determined as p-value adjusted for multiple comparison by the Benjamin-Hochberg method (q<0.05). Overall survival (OS) was calculated from the start of temozolomide (TMZ) treatment to last contact using insurance claims data. RESULTS: When compared to non-CNS lymphomas, PCNSL tumors showed significantly higher mutation rates in MYD88 (70% vs. 7%), PIM-1 (38% vs. 7%), CREBBP (70% vs. 7%), IDH1 (35% vs. 16%), IDH2 (30% vs. 1%), and MSH2 (28% vs. 10%) (q<0.01). In addition, mutations in CARD11 (12% vs. 4%) and IRF4 (8% vs. 1%) tended to be more prevalent in PCNSL (p<0.05). In contrast, mutations in KMT2D (35% vs. 16%), EZH2 (13% vs. 2%), CREBBP (12% vs. 7%), DNMT3A (10% vs. 0%), and ROBO (19% vs. 2%) were more common in non-CNS lymphomas compared to PCNSL (p<0.05). In patients with PCNSL, there was no difference in survival in those with or without MYD88, PIM1 or CD79B mutations. No between-group differences were observed in the small cohort of patients with secondary CNS lymphoma (n=8). The subgroup in whom these data were available, 25% of tumors were MGMT methylated, 71% had a "high or intermediate" tumor mutational burden, 8% were MSI high, and 54% were PD-L1 expression positive when tested by immunohistochemistry. Patients with PCNSL had worse overall survival (OS) than non-CNS lymphomas (30 vs 81 months, p<0.001). CONCLUSION: MYD88, PIM1, and CD79B mutations are more frequent in PCNSL compared to non-CNS lymphomas, but survival is worse in OS. Only a large proportion (19%) of PCNSL tumors are MGMT methylated, but a majority have expression of PD-L1 suggesting a benefit from PD-1 targeted therapy. Response and survival in patients with mutation-guided therapy will be presented.

P11.18.A. LOCALIZING VALUE OF EEG RECORDINGS IN PATIENTS WITH Glioblastoma
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BACKGROUND: Glioblastoma is associated with a high risk of epileptic seizures ranging from 40% to 60%. Before the advent of modern im-