ent TCGA dataset. The Carmustine wafer group patients with low miRNA-181d expression also had a significantly longer progression-free (p = 0.049) and overall survival (p = 0.034), compared with control group patients. Growth in total resection correlated significantly with longer overall survival (p = 0.023). CONCLUSION: MiRNA-181d expression significantly affects treatment responses to carmustine wafer implantation.

P01.026 LOCAL CONTROL AND RADIOLOGIC EFFECTS IN A Glioblastoma Patient Treated with Tumor Treating Fields (TTFields) and CHEMOTHERAPY

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BACKGROUND: Tumor Treating Fields (TTFields) are non-invasive, loco- regional, anti-mitotic treatment comprising low intensity alternating electric fields. In the phase III EF14 study in newly diagnosed glioblastoma (GBM), TTFields significantly improved survival compared with that reported for the 466 TTFields patients treated with TTFields in combination with TMZ. Here, we report on a GBM patient who received TTFields as 1st-line and 2nd-line therapy in combination with chemotherapy. CASE PRESENTATION: A 50-year-old male patient was diagnosed with an IDH1/IDH2-mutated glioblastoma and treated with TMZ and radiotherapy for 6 weeks and TMZ + RT at a total dose of 60 Gy. The patient then received radiochemotherapy with TMZ followed by chemotherapy with procarbazine/CCNU in combination with TTFields therapy. Under this regimen, a change was observed in radiologic imaging: the recurrent tumor appeared to be very homogenous with a smooth structure. However, to our knowledge, in this typical appearance of glioblastoma, where such cases presented, the combination of TTFields with procarbazine/CCNU was feasible and safe. Local control and a unique radiologic response to TTFields therapy in combination with chemotherapy upon recurrence of the tumor were detected. Follow-up radiologic assessments of patients treated with TTFields therapy may provide additional insights on tumor response to this therapy.

P01.027 PSEUDOPROGRESSION IN Glioblastoma: HOW SURE ARE RADIOLOGISTS IN LOCATION OF “HIGH-DOSE RT REGION”?

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BACKGROUND: In the glioblastoma follow up evaluation, the awareness of radiologists about the spatial location of high-dose RT region, which is needed for valid differential diagnostics. MATERIAL AND METHODS: Four radiologists worked with MR images which were used for patients treated within clinical trials. Thus, we questioned the general awareness of radiologists about the spatial location of high-dose RT region, which is needed for valid differential diagnostics. RESULTS: The Dice index (range 0.14 - 0.78), median distance (mean 11 mm ±6mm) with median Hausdorff distance 25 mm. CONCLUSION: Large inaccuracy in the awareness of location where pseudoprogression is considered based on RANO criteria was observed with almost one-third size of estimated volume of target volume. Close collaboration between radiation oncologists and radiologists is needed to correctly evaluate follow up MRI after treatment of glioblastoma patients in daily routine practice as well as in clinical trials.

P01.028 TUMOR TREATING FIELDS AND RADIOTHERAPY FOR NEWLY DIAGNOSED GLIOBLASTOMA: SAFETY RESULTS FROM A PILOT STUDY

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BACKGROUND: Tumor Treating Fields (TTFields) are non-invasive, loco-regional, anti-mitotic treatment comprising low intensity alternating electric fields. In the glioblastoma follow up evaluation, the awareness of radiologists about the spatial location of high-dose RT region, which is needed for valid differential diagnostics. BACKGROUND: Tumor Treating Fields (TTFields) are non-invasive, loco-regional, anti-mitotic treatment comprising low intensity alternating electric fields. In the phase III EF14 study in newly diagnosed glioblastoma (GBM), TTFields significantly improved survival compared with that reported for the 466 TTFields patients treated with TTFields in combination with TMZ. Here, we report on a GBM patient who received TTFields as 1st-line and 2nd-line therapy in combination with chemotherapy. CASE PRESENTATION: A 50-year-old male patient was diagnosed with an IDH1/IDH2-mutated glioblastoma and treated with TMZ and radiotherapy for 6 weeks and TMZ + RT at a total dose of 60 Gy. The patient then received radiochemotherapy with TMZ followed by chemotherapy with procarbazine/CCNU in combination with TTFields therapy. Under this regimen, a change was observed in radiologic imaging: the recurrent tumor appeared to be very homogenous with a smooth structure. However, to our knowledge, in this typical appearance of glioblastoma, where such cases presented, the combination of TTFields with procarbazine/CCNU was feasible and safe. Local control and a unique radiologic response to TTFields therapy in combination with chemotherapy upon recurrence of the tumor were detected. Follow-up radiologic assessments of patients treated with TTFields therapy may provide additional insights on tumor response to this therapy.

P01.029 OPEN-LABEL PHASE 1 CLINICAL TRIAL TESTING PERSONALIZED AND TARGETED SKULL REMODELING SURGERY TO MAXIMIZE TTFields INTENSITY FOR RECURRENT Glioblastoma: INTERIM ANALYSIS AND SAFETY ASSESSMENT

OPTIMAL-TTF-1

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BACKGROUND: We present a pre-specified interim analysis of an ongoing open-label, investigator-sponsored phase 1 trial (NCT02893137) testing safety/efficacy of a new rGBM treatment. The intervention combines personalized skull-remodeling (SR) surgery with TTFields. SR surgery involves minor cranectomy, burr-holes, and/or skull thinning personalized to enhance TTFields intensity focally in the tumor. MATERIAL AND METHODS: Accrual began Dec 2016 (planned total 15 patients). Eligibility: Age ≥ 18 years, first recurrence focal supratentorial GBM (RANO), and KPS ≥ 70. Personalized electric field calculations...