itional radiotherapy after surgery. CONCLUSION: Our experience with meningioma patients under 40 revealed a different grade segregation than the older population, with younger patients showing a higher incidence of grade II tumors. These tumors are generally more aggressive, and require careful resection and consideration for post-surgical radiotherapy. Further validation with population based databases is required.

P14.40 TRENDS IN DISTRIBUTION OF GLIOBLASTOMA CARE AND PATIENT'S TRAVEL DISTANCE; RESULTS FROM THE DUTCH BRAIN TUMOR REGISTRY

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BACKGROUND: Over the past years, increasing worldwide attention towards centralization of complex cancer care has been pursued as higher volume centers have shown improved outcomes. Changes in distribution of care and the impact on travel distance in glioblastoma patients have not been determined yet. In this study, we determine trends in distribution of glioblastoma care in the Netherlands over the last three decades and assess whether the observed trends affected travel distance for individual patients. MATERIAL AND METHODS: Data were obtained from the Dutch Brain Tumor Registry from 1989 to 2018. All glioblastoma patients (≥18 years) were included for analysis. Patients, neurosurgical centers and radiotherapy centers were geocoded. Data were analyzed in six time intervals of 5 years. High volume hospitals were defined as >50 cases per year. Travel distance was examined in two categories, ≤60km and >60km respectively. Trend analyses for proportions were used to analyze hospital volume changes and travel distances. RESULTS: A total of 16.477 glioblastoma patients were registered, with an annual increase from 203 patients in 1989 to 917 patients in 2018. Neurosurgical centers increased from 16 to 17 and for radiotherapy from 19 to 22 centers between 1989–1993 and 2014–2018. Mean neurosurgical- and radiotherapy center volumes increased from 12 to 39 (P=0.025) and 7 to 27 (P=0.025) patients per hospital per year from 1989–1993 to 2014–2018. High volume neurosurgical centers were observed since 2004, and an increased number of patients were treated in these centers, 27.8%, 52.6% and 64.1% in the time periods 2004–2008, 2009–2013, and 2014–2018 (P<0.001). High volume radiology centers were observed since 2009, and 15.0% and 27.3% of patients were treated in these centers in the time periods 2009–2013 and 2014–2018 (P<0.001). Patients with a travel distance >60km to the neurosurgical center reduced from 15.8% to 13.2% (P=0.033). Travel distance >60km to the radiotherapy center did not reduce significantly (10.4% to 8.8%, P=0.601). CONCLUSION: An increasing number of glioblastoma patients were differentially treated in high volume neurosurgery and radiotherapy centers. The observation that this did not translate into increased travel distances, indicates accessible specialized Neuro-Oncology care for glioblastoma patients in The Netherlands.

P14.41 COST-EFFECTIVENESS OF FET PET FOR EARLY TREATMENT RESPONSE ASSESSMENT IN GLIOMA PATIENTS FOLLOWING ADJUVANT TEMOZOLOMIDE CHEMOTHERAPY

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BACKGROUND: In light of increasing healthcare costs, higher medical expenses should be justified socio-economically. Therefore, we calculated the effectiveness and cost-effectiveness of PET using the radiolabeled amino acid O-(2-[^{18}F]-fluoroethyl)-L-tyrosine (FET) compared to conventional MRI for early identification of responders to adjuvant temozolomide chemotherapy. A recent study in IDH-wildtype glioma patients suggested that after two cycles, FET-PET parameter changes predicted a significantly longer survival while MRI changes were not significant. MATERIALS AND METHODS: To determine the effectiveness and cost-effectiveness of serial FET-PET imaging, we analyzed published clinical data and calculated the associated costs in the context of the German healthcare system.Based on a decision-tree model, FET-PET and MRI's effectiveness was calculated, i.e., the probability to correctly identify a responder as defined by an overall survival ≥15 months. To determine the cost-effectiveness, the incremental cost-effectiveness ratio (ICER) was calculated, i.e., the cost for each additionally identified responder by FET-PET who would have remained undetected by MRI. The robustness of the results was tested by deterministic and probabilistic (Monte Carlo simulation) sensitivity analyses. RESULTS: Compared to MRI, FET-PET increases the rate of correctly identified responders to chemotherapy by 26%; thus, four patients need to be examined by FET-PET to identify one additional responder. Considering the respective cost for serial FET-PET and MRI, the ICER resulted in €4,396.83 for each additional correctly identified responder by FET-PET. The sensitivity analyses confirmed the robustness of the results. CONCLUSION: In contrast to conventional MRI, the model suggests that FET PET is cost-effective in terms of ICER values. Concerning the high cost of temozolomide, the integration of FET-PET has the potential to avoid premature chemotherapy discontinuation at a reasonable cost.

P14.42 NERATINIB FOR TREATMENT OF LEPTOMENINGEAL METASTASES FROM HER2-POSITIVE BREAST CANCER IN EXTENDED ACCESS PROGRAM: PRELIMINARY RESULTS

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BACKGROUND: Leptomeningeal metastases (LM) occur in 5% of human epidermal growth factor receptor 2 (HER2) breast cancer (BC) with a poor overall survival (OS) of 3 months. Neratinib is an oral, irreversible tyrosine kinase pan-inhibitor that was approved by FDA for the treatment of HER2-enriched BC, who completed a prior adjuvant trastuzumab-based therapy. The aim of the study was to evaluate the activity of neratinib in LM from HER2-positive BC after the failure of multiple lines of treatment, including trastuzumab. PATIENTS AND METHODS: Inclusion criteria were as follows: age ≥ 18 years; histological diagnosis of primary HER2-positive BC; newly-diagnosed LM according to LANO criteria; KPS ≥60 at the time of diagnosis of LM; coexistence of BM that have or not received WBRT or radiosurgery; systemic disease with a life expectancy of at least 3 months; concomitant drugs, including capecitabine, trastuzumab, TDM-1, pertuzumab, and hormone therapy were allowed, with the exclusion of lapatinib or other investigational agents. Neratinib was administered 240 mg daily continuously. The primary endpoint was the OS after the diagnosis of LM. Secondary endpoints were progression-free survival (PFS) following the diagnosis of LM, neurological benefit, radiological response rate, and tolerability. RESULTS: From January 2018 to April 2021, 9 patients with LM have been enrolled. Median age at the time of diagnosis of LM was 44 years (95%CI 36–59) with a median KPS of 80 (95%CI 60–90). Median time since LM onset from the diagnosis of primary BC was 42 months (95%CI 11–166), and patients underwent a median number of adjuvant treatments before LM of 3 (95%CI 2–5). Three patients developed LM alone, and other 6 had LM associated with multiple brain metastases. Six-months and 1-year OS were 66.7% and 22.3%, respectively, with a median OS of 8 months (95%CI 3–13*). Median PFS was 3.5 months (95%CI 2–6) after the start of treatment. A neurological improvement was reported in 2/9 patients (22.2%), while in other 4/9 patients (44.5%) was achieved a neurological stabilization lasting for a median time of 5 months (95%CI 2–19). The best radiological response was a stable disease in 5/9 patients (55.6%), while no complete or partial response were achieved according to LANO and RANO criteria, respectively. A CSF clearance was observed in 1 patient only (11.1%) following two months of neratinib. Grade III-IV adverse events were not reported, and 2 patients only (22.2%) had mild diarrhea correlated with neratinib. CONCLUSION: This is the first study that shows that neratinib might be a safe and effective treatment in LM from heavily pretreated HER2-positive BC.

P14.45 THE INCIDENCE OF MAJOR SUBTYPES OF PRIMARY BRAIN TUMOURS IN ADULTS IN ENGLAND 1995–2017

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BACKGROUND: Primary brain tumours are a complex heterogenous group of benign and malignant tumours. Reports on their occurrence in the English population by sex, age, and morphological subtype and on their incidence are currently not available. Using data from the National Cancer Registration and Analysis Service (NCRAS), the incidence of adult primary brain tumour by major subtypes in England will be described. METHODS: Data on all adult English patients diagnosed with primary brain tumour between 1995 and 2017, excluding spinal, endocrinal and