had already been linked with either GBM diagnosis, prognosis or associated signalling, suggesting that sEVs protein cargo could mirror the landscape of the original tumour and that selective circulating sEV-derived proteins might be used as hallmarks for GBM patients. CONCLUSION: This study is a step forward in the development of a non-invasive liquid biopsy approach for the identification of valuable biomarkers that could significantly improve GBM diagnosis and, consequently, patients’ prognosis and quality of life.

AWAKE CRANIOTOMY IS WELL-TOLERATED IN THE ELDERLY: OUR EARLY EXPERIENCE
Ms. Rosana Khan1, Mr. Magnus Okoh1, Dr. Ikenna Ogbo2, Mr. Huan Chua3, Ms. Ermita Albahni4, Keele University, 4University Hospital North Midlands, Royal Stoke

AIMS: Awake craniotomy for brain tumour resection aims to increase the extent of resection while minimising neurological deficit. The major concerns for patients during awake craniotomies include peri-operative discomfort/pain and anxiety for some patients. Older patients are generally not offered aggressive operative options due to longer lengths of hospital stay (LOS), expected higher rates of peri-operative morbidity/mortality, and poorer survival. However, increased extent of gloma resection is associated with greater overall and progression-free survival. Furthermore, previous studies have shown that awake craniotomies are well tolerated in elderly patients. This study aims to evaluate our experience in awake craniotomies in glioma resection in patients over 65 years old.

METHOD: Seventeen elderly patients who had undergone awake craniotomies at University Hospitals of North Midlands between 2015 and 2021 were included. Outcome measures included LOS, post-operative mortality and morbidity, and the difference between pre- and post-operative hospital Anxiety and Depression scores (HADS).

RESULTS: There was an 11% operative mortality rate in our cohort. The average LOS was 5.7 days. The median pre- and post-operative score at 6 months was 1 indicating that there is no difference post-operatively. There was a positive net difference between pre- and post-operative anxiety/depression scores in our cohort.

CONCLUSION: Awake craniotomies are generally well tolerated among the elderly patients with unchanged post-operative performance status and improved HADS scores. These findings suggest that awake craniotomies should be offered to elderly patients if deemed appropriate.

ANALYTIC APPROACHES TO CLINICAL VALIDATION OF RESULTS FROM PRECLINICAL MODELS OF GLIOBLASTOMA: A SYSTEMATIC REVIEW
Ms. Beth Fitt, Ms. Grace Loy, Dr. Edward Christopher, Dr. Paul Brennan, Dr. Michael TC Poon, The University of Edinburgh

AIMS: Analytic approaches to clinical validation of results from preclinical models are important in assessment of their relevance to human disease. This systematic review examined consistency in reporting of glioblastoma results from preclinical models published between 2000 and 2020. The aim was to determine whether studies included patient characteristics in their survival analyses.

METHOD: We searched Embase and Medline on 02Feb21 for studies using preclinical models of glioblastoma published 2000-2020 that used data from TCGA or CGGA to validate the association between ≥1 molecular marker and overall survival in adult glioblastoma patients. Studies that included patient characteristics in their survival analyses were included. A total of 17 studies were included.

RESULTS: The findings suggest that awake craniotomies should be offered to elderly patients if deemed appropriate.

LONG TERM QUALITY OF LIFE OUTCOMES FOLLOWING SURGICAL RESECTION ALONE FOR BENIGN PAEDIATRIC INTRACRANIAL TUMOURS
Dr. Siddhant Kumar1, Dr. Abdurrahman Islam2, Dr. Richard Moon1, Mr. Christopher Millward1, Ms. Dawn Hennigan1, Mr. Ali Bakhsh1, Ms. Antonia Thorpe1, Mr. Mitchell Foster1, Prof. Barry Fizzer2, Mr. Conor Mallon2, Mr. Paul Brennan1, Dr. Antonia Albanese1, Ms. Erminia Williams1, Mr. Rohit Okoh1, 1Department of Neurosurgery, The Walton Centre NHS Foundation Trust, Liverpool, UK, 2Department of Neurosurgery, Salford Royal NHS Foundation Trust, Manchester, UK, 3Department of Neurosurgery, North Bristol NHS Trust, Bristol, 4Alder Hey Children’s NHS Foundation Trust, Liverpool, UK

AIMS: Survivors of paediatric intracranial malignancies are at increased risk of psychosocial, neuro-developmental and functional impairment, important measures of patients’ well-being. This study aimed to evaluate long-term quality of life outcomes (QOL) in patients with benign paediatric brain tumours treated curatively with surgical resection alone.

METHOD: Cross-sectional cohort study of benign paediatric intracranial tumours managed surgically alone between 2000-2020. Patients’ parents or guardians completed QOL questionnaires: SF-36, QLQ-BN20, QLQ-C30 and PedsQLTM. RESULTS: Twenty-three patients participated (median age at surgery 13 years; range 1-18), twelve were male. The most common diagnosis was pilocytic astrocytoma (n=15). Median age from surgery to participation was 11 years (range 6-19). Fourteen patients achieved A-level qualifications and two obtained an undergraduate degree. Twelve patients were employed, eight were studying and three were unemployed or volunteering. Twelve patients were currently driving. QOL outcomes demonstrated significant impairment from time of initial treatment (TCGA) or Chinese Glioma Genome Atlas (CGGA) and assessed whether studies included patient characteristics in their survival analyses.

RESULTS: There were 58 eligible studies from 1,751 non-duplicate records. In 14 studies published before Jan2008 that used data from TCGA or CGGA to validate the association between ≥1 molecular marker and overall survival in adult glioblastoma patients, a total of 17 studies were included.

RESULTS: The findings suggest that awake craniotomies should be offered to elderly patients if deemed appropriate.

THE ANISOTROPIC COMPONENT OF THE DIFFUSION TENSOR (DTI-Q) IS CORRELATED TO OVERALL SURVIVAL IN GLIOBLASTOMA (GBM)
Dr. Natalie Simon1, Mr. Rohit Sinha1, Dr. Sanskriti Sravanam1, Ms. Roxanne Maynard1, Dr. Chao Li2, Mr. Yizhou Wan1, Mr. Yiran Wei1, Mr. Stephen Price1, 1Cambridge University Hospitals NHS Foundation Trust, 2University of Cambridge

AIMS: The aim of this study was to test if a correlation exists between the median voxel DTI-Q and overall survival in patients with GBM. METHOD: The median voxel anisotropic (DTI-Q) values, calculated for the whole brain, the contrast-enhancing hemisphere and the contralateral hemisphere, were calculated using FSL (FMIRB Software Library, Oxford) for 33 patients with GBM and a primary diagnosis of GBM. Overall survival was calculated by subtracting the date of initial resection surgery from the date of death, for each included patient. Using R statistical software, the Pearson’s correlation coefficient was computed to establish the significance of the relationship between overall survival and median DTI-Q values of the contrast-enhancing hemisphere and overall survival ($t = -2.1235$, df = 31, $p$-value = 0.0418) and the median voxel DTI-Q of the contralateral (non-contrast-enhancing) hemisphere and overall survival ($t = -2.5212$, df = 31, $p$-value = 0.01705).

CONCLUSION: The median anisotropic component of the diffusion tensor was a significant predictor of overall survival. This demonstrates the potential utility of DTI metrics as prognostic biomarkers that can readily be calculated in routine practice.

TRANSRIPTOME-WIDE MENDELIAN RANDOMISATION USING EXPRESSION, PROTEIN AND SPICING QUANTITATIVE TRAIT LOCUS TO IDENTIFY NOVEL DRUG TARGETS ASSOCIATED WITH RISK OF GLIOGENESIS
Mr. Zak Thornton1, Dr. Jamie Robinson1, Prof. Kathreena Kurian1, University of Bristol

AIMS: To use two-sample Mendelian Randomisation to prioritise novel genes for drug targeting in glioma risk using expression, protein and splicing quantitative trait loci (eQTLs, pQTLs and sQTLs, respectively).

METHOD: We used genetic variants from GWAS to compare the effects of eQTLs, pQTLs and sQTLs on genetic liability to glioma risk (n=12,496). eQTL data was retrieved from the MetaBrain study of five different brain tissues (n=17,080 to 2,970), pQTL data was retrieved from the BDNF eQTL study of dorsolateral prefrontal cortex tissue (n=330), and sQTL data was retrieved from Genotype-Tissue Expression (GTEX) Project (n=13 brain tissues (n=114 to 209)). SNPs which were trans-QTLs (>1 Mb) due to risk of horizontal pleiotropy, and greater than GWAS significance (P < 5 x 10^-8) were excluded. Inverse variance weighted (IVW) and kernel-weighted IVW (IVW2) methods were used. p-values were adjusted by the Benjamini-Hochberg method (q < 0.001). Results underwent relevant sensitivity analysis; colocalisation and