third ventricle. Methods: 56 year old female presented with amenorrhea, hyperprolactinemia, and progressive bitemporal hemianopsia. MRI revealed a suprasellar mass located within the third ventricle and appearing separate from the pituitary. A supraciliary and translamina terminalis surgical approach to tumour resection was completed without complication. Post-operatively, she developed transient DI which resolved by post-opertaive day 3 and she was discharged hoem without any neurological deficits. Pathology revealed pituicytoma, WHO grade I. Results: Pituicytomas are rare tumours arising from neuroepithelial cells of the pituitary. The majority of cases are pure sellar or sellar with suprasellar extension, or at least have some connection to the pituitary. In many cases, imaging findings are synonymous to pituitary adenomas. We present a unique case in which the tumour was suprasellar but appeared separate from the pituitary. Surgical intervention is the most highly predictive factor of recurrence, as gross totoal reseciton can be curable. Conclusions: Here we present a unique location of pituictyoma. Due to the exceedingly rare nature of pituicytoma, unique presentations and management help to provide better understanding of the breadth of this disease presentation.

P.091

Synthetic data reliably reproduces brain tumor primary research data

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Background: Synthetic data has garnered heightened attention in contemporary research due to confidentiality barriers and its capacity to simulate variables challenging to obtain. This study aimed to evaluate the reliability and validity of synthetic data in the context of neuro-oncology research, comparing findings from two published studies with results from synthetic datasets. Methods: Two published neuro-oncology studies focusing on prognostic factors such as serum albumin and systemic inflammation scores were selected, and their methodologies were replicated using *MDClone* Platform to generate five synthetic datasets for each. We used Chi-Square test to assess inter-variability between synthetic datasets. Survival outcomes were evaluated using Kaplan-Meier and t-test was used to determine statistical significance. Results: Findings from synthetic data consistently matched outcomes from both original articles, with serum albumin and systemc inflammation scores correlating with survival prognosis in glioblastoma and metastasis patients ($p<0.05$) Reported findings, demographic trends and survival outcomes showed significant similarity ($P > 0.05$) with synthetic datasets. Conclusions: Synthetic data consistently reproduced the statistical attributes of real patient data. Integrating synthetic data into clinical research offers excellent potential for providing accurate predictive insights without compromising patient privacy. In neuro-oncology, where patient follow-up pose challenges, the adoption of synthetic datasets can be transformative.

P.092

Incidence of tissue-sampled brain metastases pre- and post-COVID-19 in Newfoundland and Labrador: an eight-year review

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Background: Brain metastases indicate an advanced tumour stage for many cancers. We sought to investigate the incidence change of tissue-sampled brain metastases and its relation to staging challenges during the COVID-19 pandemic in Newfoundland and Labrador. Methods: We reviewed all brain metastasis cases from 2015-2022 requiring first-time tissue sampling according to pathology reports from the St. John's Health Sciences Centre. Incidence rates were calculated using yearly population data by regional health authorities and standardized using the 2011 Canadian standard population. Results: We included 173 cases. The average annual age-standardized incidence rate of brain metastases requiring tissue sampling per 100,000 increased from 2.5 (95% CI: 2.0-3.1) pre-COVID-19 to 4.1 (95% CI: 3.3-5.0) post-COVID-19. Brain metastases from lung primaries accounted for 69% of this increase. While incidence declined to near-baseline in the Eastern provincial population by 2022 (3.3; 95% CI: 1.5-5.1), incidence rose into 2022 in the Western population (8.6; 95% CI: 3.9-13.2). Conclusions: These data suggest a delayed presentation of malignancies during the COVID-19 pandemic and underscore the importance of prioritized staging during times of strain on healthcare systems. Regional, temporal trends suggest regions distant from tertiary care centres could face challenges in resolving cases with delayed presentation post-COVID-19.

P.093

BMI as a predictor of recurrence in high-grade meningioma: A single center retrospective cohort study

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Background: Elevated BMI has been proposed as a risk factor for the development of meningioma. The relationship between body mass index (BMI) and disease control in high-grade meningioma has not yet been examined. A retrospective cohort study was performed to assess the relationship between high-grade meningioma recurrence and BMI. Methods: This is a retrospective cohort study of patients with Grade 2 or Grade 3 meningioma at a single tertiary care center between 2008 and 2017. We collected clinical data including age, sex, BMI, location, Simpson grade, brain invasion, and radiation treatments. Disease control was monitored on followup MRI scans.

We stratified patients by BMI greater than or less than 25. Results: A total of 45 patients were included. Recurrence was observed in 15 patients (33.3%). There were 32 (71.1%) patients with BMI > 25, and 13 (28.9%) patients with normal BMI. Patients with elevated BMI had higher risk of recurrence (p=0.04). Multivariate analysis identified BMI as an independent predictor of recurrence. Conclusions: Our results suggest that overweight patients with a Grade 2 or Grade 3 meningioma are at higher risk of recurrence than patients with normal BMI. The explanation for this association unknown. Further research is suggested to confirm and better characterize this association.

P.094

Incidence of pathologically confirmed primary malignant brain tumours in Newfoundland and Labrador: an eight-year review spanning 2015-2022

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Background: Considering regional and temporal trends, we sought to explore the incidence of primary malignant brain tumours in Newfoundland and Labrador. Methods: We reviewed all primary, malignant brain tumour cases from 2015-2022 confirmed by St. John's Health Sciences Centre pathology reports. Incidence rates were standardized using the 2011 Canadian standard population. Results: We included 362 cases. The average annual age-standardized incidence rate of primary, malignant brain tumours per 100,000 was 7.0 (95% CI: 6.3-7.7), lower than the national average (7.93; 95% CI: 7.78-8.08). The incidence of glioblastoma (5.1; 95% CI: 4.5-5.7) was significantly higher than the national average (4.05; 95% CI: 3.95-4.16). Temporal trends revealed that oligodendroglioma incidence spiked from 0.5 (95% CI: 0.2-0.7) in 2015-2019 to 1.5 (95% CI: 0.4-2.6) in 2020 before returning to baseline in 2022. Regional trends indicated a lower incidence of malignant tumours in Labrador-Grenfell (5.1; 95% CI: 2.5-7.6), compared to 6.9 (95% CI: 6.2-7.6) averaged elsewhere. Conclusions: Higher rates of glioblastoma in Newfoundland and Labrador could have a genetic or multi-factorial cause. The increased occurrence of oligodendroglioma during the COVID-19 pandemic necessitates broader investigation, potentially linked to delays in patient care during this period. Regional trends could suggest less access to care in rural populations and underestimated incidence.

P.095

Role of selective neck dissections in the management of carotid body tumours

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Background: Carotid body tumours (CBT) are rare neoplasms of the paraganglia at the carotid bifurcation. Histopathologic analysis alone is insufficient to confirm malignancy, requiring metastases to non-neuroendocrine tissue including cervical lymph nodes for definitive diagnosis. The role of selective neck dissection (SND) during CBT surgeries in detecting malignancy and guiding subsequent management remains uncertain. Methods: A retrospective case series was performed on all patients undergoing CBT surgeries with SND between 2002 and 2022. Data collection included demographics, genetic and laboratory testing, imaging, intra- and post-operative complications, follow-up and histopathology. Results: Twenty-one patients underwent CBT resection with SND. Of these, 3 had carotid artery injuries, and 5 had nerve injuries. One patient experienced peri-operative embolic strokes, presumed related to tumour embolization. Three patients were found to have lymph node involvement, confirming malignancy. Malignancy was significantly associated with the risk of carotid injury (p = 0.04.) Conclusions: SND is a useful adjunct in detecting malignancy during CBT resection. The incidence of malignancy in CBT is low but not negligible and SND should be considered in patients with suspected malignancy or high-risk factors. This study's 14% incidence of malignancy suggests there may be a rationale for considering universal implementation of SND during CBT resection.

P.096

Hearing preservation and quality of life outcomes in partial labyrinthectomy petrous apicectomy for microsurgical resection of large posterior fossa skullbase tumors

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Background: The Partial Labyrinthectomy Petrous Apicectomy (PLPA) aims to give transpetrosal access whilst preserving hearing for challenging tumors such as petroclival meningioma. There are few studies assessing resection and morbidity and no large studies that document hearing preservation and quality of life (QOL). We present the first large series to do so. Methods: A retrospective review was performed of all PLPA cases between 2005 and 2023 at a tertiary center. Demographics, tumor characteristics, neuromonitoring, hearing and surgical outcomes were collected. QOL was measured with the 36-item short form survey (SF-36). Results: Of 73 PLPAs, data for 56 patients undergoing 57 surgeries was obtained. Petroclival meningioma (57.8%) and epidermoid tumors (21.0%) were common indications . The mean patient age and tumor size were 51.6 years and 44mm. Gross total resection was achieved in 40.3%, near total in 15.8% and subtotal in 43.8% of cases with no perioperative mortality and was not influenced by attempted hearing preservation (p=0.183). Of 39 hearing preservation cases, 27 (69.2%) were preserved, 10 (25.6%) were lost and 2 had unclear outcomes. Conclusions: Improved microsurgery and neuromonitoring during PLPA leads to decreased mortality and morbidity compared to historical cohorts while achieving a high rate of resection, hearing preservation and maintained QOL.