in the spinal cord/cauda equina. For pilocytic tumors located in the cerebellum, 10-year relative survival was similar for the 0–4 year (100%), 5–9 year (100%), 10–14 year (96.4%), and 15–19 year (98.2%) age groups, while survival was significantly lower for the ≥20 age group (84.3%). Ten-year relative survival estimates did not significantly differ between males and females either overall or by site or age group. Overall, 10-year survival for pilocytic astrocytomas on a population-based level is quite good; however, long-term survival data and quality of life measurements will be necessary to more accurately define the clinical aspects of the disease.

EPI 11. EPIDEMIOLOGY AND TREATMENT OUTCOME OF CHILDBIRTH EPENDYMOMA: REPORT FROM THE HONG KONG PEDIATRIC HEMATOLOGY ONCOLOGY STUDY GROUP

Chau-Chin Chan¹, Matthew Ming-Kong Shing,² Hui-Leung Yuen,¹ Anselm Chi-Wai Lee,¹ Chi-Keung Li,¹ Chung-Wing Luk,¹ Shau-Yin Ha,¹ and Chi-Kong Li²; ¹Paediatrics and Adolescent Medicine, University of Hong Kong, Hong Kong, China; ²Paediatrics and Adolescent Medicine, Chinese University of Hong Kong, Hong Kong, China; ³Paediatrics and Adolescent Medicine, Queen Elizabeth Hospital, Hong Kong, China; ⁴Paediatrics and Adolescent Medicine, Tuen Mun Hospital, Hong Kong, China; ⁵Paediatrics and Adolescent Medicine, Princess Margaret Hospital, Hong Kong, China.

Objective: Ependymoma is the fourth commonest childhood brain tumor, but there was little information on its epidemiology and outcome in Chinese children. We reviewed our data and provide some insight in this aspect.

Materials and Methods: Prospective collection of childhood cancer data was performed since early 1990s from the five major public hospitals, which captured almost all children with cancers locally. Standard data accrual was performed by designated data managers. The data was further crosschecked with the Hong Kong Cancer Registry database, which collected all the local pathology reports for cancers. Chemotherapy regimen was baby-POG before 2003 and SIOP-99 after 2004.

Results: From January 1995 to December 2006 (12 years), a total of 20 cases of childhood (≤18 years) ependymoma were diagnosed. Their median age was 3.4 years (range, 0.5–16.3 years), and male:female ratio was 8:12. Excluding one non-Chinese and one >15 years, the incidence of ependymoma was 1.3/1,000,000 per year for children ≤15 years. The distribution was fairly even between the cerebral (n = 9) and posterior fossa (n = 9), and two were in the spinal cord region. Chemotherapy was given to 10 children, mostly for children <3 years in order to delay cranial radiation therapy (RT) (n = 6) or for children with incomplete surgical excision (n = 4). The 5-year overall survival rate was 69% but was 87.5% for cerebral and 53.3% for posterior fossa location (p = 0.14), mainly because seven of nine (77%) children with posterior fossa ependymoma were ≤3 years (median age 1.5 years; range, 0.5–1.1 years) and RT was not performed. On the contrary, only two of nine children with cerebral ependymomas were ≤3 years (median, 5.8 years; range, 2.3–16.3 years). Eight of 10 patients with either cerebral or posterior fossa ependymoma who did not receive upfront cranial RT (>3 years or parents refused) relapsed, irrespective of the completeness of the initial surgical resection or chemotherapy used. The two patients with spinal ependymoma were treated with surgery alone, and one relapsed; he was successfully treated by intrathecal chemotherapy.

Conclusion: Ependymoma is less common among Chinese children, and the majority of our children with posterior fossa ependymoma were ≤3 years. Without upfront cranial RT, 80% of our cerebral or cerebellar ependymomas relapsed. The data managers were supported by the Children’s Cancer Foundation of Hong Kong.

EPI 12. EPIDEMIOLOGY OF PEDIATRIC CNS GERM CELL TUMORS: A CALIFORNIA CANCER REGISTRY STUDY

Sonia Partap,¹ Julie Von Behren,² Jane Malec³, Paul Fisher,¹ and Peggy Reynolds;¹ Stanford University, Palo Alto, CA, USA; Northern California Cancer Center, Berkeley, CA, USA.

Background: Pediatric CNS germ cell tumors (GCTs) are reported to comprise 2%–4% of childhood brain tumors, with an even greater prevalence in Asians. In the United States GCTs have historically been separated from other brain tumors when sorted by the International Classification of Childhood Cancer and thus are often neglected in analyses. Past Western studies of GCTs have also been limited by small sample sizes.

Methods: We aimed to perform a rigorous, descriptive analysis of childhood CNS GCTs, using data from the population-based California Cancer Registry (CCR).

Results: We obtained data on 4,070 CNS cancers, diagnosed from 1988 through 2004 in children ages 0–14 years; 214 (5.3% of sample) primary CNS GCTs were identified in 213 children. CNS GCTs in our series comprised 5.3% of all childhood cancers, with 2%–4% of CNS tumors. 10-year survival for primary CNS GCTs in children was 91.6%, whereas 86.1% of children with other CNS tumors survived at least 5 years. CNS GCTs were less common in females than males (185:275, 65:74, and 14:30 in males, females, and both sexes, respectively). Median age at diagnosis was 9.1 years, and 64% of tumors occurred in males. The most common childhood tumor location was the pineal gland (93 cases, 43%) with 7.5% of cases occurring in the sellar region. Of the cases, 43% were Hispanic children, 35% white, 16% Asian, and 6% African American, compared to general California childhood population ethnic frequencies of approximately 42% Hispanic, 37% white, 10% Asian, and 7% African American. Histologically, 31% (61 cases) were reported as germinomas, with the remainder distributed among various pathologic classifications. The overall frequency of CNS GCTs in our cohort was 5.3%, with 11% of cases occurring between ages 0 and 1 year and 62% between ages 10 and 14 years old. The most common childhood GCT was germinoma, with 66% of males and 73% of females. 70% of all cases occurred in children <15 years of age.

Conclusion: With the largest pediatric intracranial and intraspinal germ cell tumor series in the United States to date, our study reveals that CNS GCTs may be more prevalent among Western pediatric brain tumors than initially reported. Overall, these tumors were more common among males; however, female infants were affected more than males, a difference that has not been previously reported. While our sample might be influenced by a high proportion of Asian Americans, the patterns observed differ from Asian series.