In a 5-year review of 3180 cases from Beijing Tiantan Hospital Epidemiological characteristics of central nervous system tumors in children intracranial and spinal tumors account for 96.4% (3066) and 3.6% (114) of all tumors, with a preponderance of supratentorial tumors (57.9%). Among all pediatric patients, low-grade tumors comprise 67.1% (2 135). The integral gender ratio of males to females is 1.47: 1 and the average age of patients is 7.59 years old. The five most common intracranial tumors are craniopharyngioma (15.4%), medulloblastoma (14.3%), pilocytic astrocytoma (11.8%), diffuse astrocytoma (9.8%), and anaplastic ependymoma (4.8%) [1)]

Incidence of 0.13 cases per 100,000 people every year. They represent approximately 2%–5% of all primary brain tumors and have a bimodal presentation in children aged 5–14 and adults aged 55–65 years

The incidence of craniopharyngioma in the United States was estimated from two population-based cancer registries that include brain tumors of benign and borderline malignancy: the Central Brain Tumor Registry of the United States (CBTRUS) and the Los Angeles county Cancer Surveillance Program. Information on additional pediatric tumors was available from the Greater Delaware Valley Pediatric Tumor Registry (GDVPTR). The overall incidence of craniopharyngioma was 0.13 per 100,000 person years and did not vary by gender or race. A bimodal distribution by age was noted with peak incidence rates in children (aged 5-14 years) and among older adults (aged 65-74 years in CBTRUS and 50-74 years in Los Angeles county). Survival information was available from GDVPTR and the National Cancer Data Base (NCDB), a hospital-based reporting system. In the NCDB, the 5-year survival rate was 80% and decreased with older age at diagnosis. Survival is higher among children and has improved in recent years.

Craniopharyngioma is a rare brain tumor of uncertain behavior that occurs at a rate of 1.3 per million person years. Approximately 338 cases of this disease are expected to occur annually in the United States, with 96 occurring in children from 0 to 14 years of age [2)].

The Childhood Cancer Registry of Piedmont, Italy, estimates an incidence of 1.4 cases per million children per year. Similar data are provided by other registries in Western countries, while higher rates have been observed in Asia and Africa. There are no known specific environmental risk factors for craniopharyngioma, and genetic predisposition is not demonstrated [3)].

Zacharia et al., used the surveillance, epidemiology and end results program (SEER) database to identify patients who received a diagnosis of craniopharyngioma during 2004-2008. They analyzed clinical and demographic information, including age, race, sex, tumor histology, and treatment. Age-adjusted incidence rates and age, sex, and race-adjusted expected survival rates were calculated. They used Cox proportional hazards models to determine the association between covariates and overall survival. We identified 644 patients with a diagnosis of craniopharyngioma. Black race was associated with an age-adjusted relative risk for craniopharyngioma of 1.26 (95% confidence interval [CI], 0.98-1.59), compared with white race. One- and 3-year survival rates of 91.5% (95% CI, 88.9%-93.5%), and 86.2% (95% CI, 82.7%-89.0%) were observed for the cohort; relative survival rates were 92.1% (95% CI, 89.5%-94.0%) and 87.6% (95% CI, 84.1%-90.4%) for 1- and 3-years, respectively. In the multivariable model, factors associated with prolonged survival included younger age, smaller tumor size, subtotal resection, and radiation therapy. Black race, on the other hand, was

associated with worse overall survival in the final model. They demonstrated that >85% of patients survived 3 years after diagnosis and that subtotal resection and radiation therapy were associated with prolonged survival. They also noted a higher incidence rate and worse 1- and 3-year survival rates in the black population. Future investigations should examine these racial disparities and focus on evaluating the efficacy of emerging treatment paradigms [4].

1)
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