



## **STUDY FOR QUALITY OF OUTCOMES ON BRAIN TUMOR PATIENTS AT MIAMI CHILDREN'S HOSPITAL**

This study focused on the brain tumor patients seen at Miami Children's Hospital between 2003 and 2007 where a total of 102 astrocytomas, 36 of which were high grade gliomas, and 16 medulloblastomas as well were diagnosed. We focused on those three types of tumors because they are the most commonly seen in children. The demographic data including male and female ratio, racial origin and median ages are included in the attached tables. Most importantly the three year survival was calculated for those groups.

In the astrocytoma group, the three year survival was 95 % for the low grade tumors, gliomas Grade I and II and 30 % for the high grade III and IV gliomas. The average survival was 71 % for the group as a whole.

For astrocytomas, the median age of diagnosis was seven years for the high grade III and IV and ten years for the grades I and II. The male to female ratio was approximately 6 to 4. The patients were predominantly white, 79 % with 16 % black and 5 % other. The majority of the patients were from Dade County with Palm Beach County and Broward following that and 14 % were from out of state.

For the medulloblastoma group, the patients were divided into localized and metastatic. The survival was 91.6 % for the localized group and 75 % for patients with metastatic disease with an overall survival at three years of 83 %. The age distribution was predominantly below nine years of age with the median age of two years at diagnosis for the high risk group with metastasis and 11.5 years for the localized group. The distribution by race was 75 % white, 19 % black and patients were predominantly from Dade County followed by Palm Beach and out of state.

In conclusion, this data shows that the patients at Miami Children's Hospital with low grade astrocytomas have an excellent three year survival of approximately 95 %, as compared to the data from NCDB (National Cancer Data Base) for the 3 year survival rate yielded 77%. The patients who had high grade gliomas including those with brain stem gliomas remain with poor prognosis at 30 % which is comparable to the NCDB data average of 47%. Our patient population included a large number of diffuse Pontine Gliomas which is a subgroup of high grade gliomas that still has poor survival rates. For medulloblastoma, as well, the results at Miami Children's Hospital with survival of 91 % for the localized group is well above the NCDB data average of 58% and the results of 75 % for patients with distant metastatic disease are also excellent and above the national average.

Our future suggestions would include evaluating in more detail, the astrocytomas that receive therapy including chemotherapy and radiation therapy and compared to those patients that did not get any therapy after surgery. In the medulloblastoma group, we will evaluate the difference between patients treated with radiation versus no radiation therapy particularly in infants with this disease.

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