

15 - Title: Mental Health Outcomes in Children with Head and Neck Cancers

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Background: Children and adolescents diagnosed with cancer may experience mental health challenges throughout their diagnosis and into adulthood, with approximately 50% of them exhibiting symptoms consistent with anxiety or depression. Despite significant advancements in treatment and survival rates, the mental health consequences among patients and survivors remain a major concern. Previous studies in adults have found that head and neck cancer (HNC) patients may face notable psychological sequelae of their disease due to the distinct risk of impact on appearance and functionality. There is a lack of similar research focused on the pediatric population; therefore, this study aims to assess the mental health outcomes of children with HNC.

Methods/Research Design: Records of pediatric patients under 18 diagnosed with solid tumors of the head and neck for 2011 to 2024 were examined using the TriNetX research network. A cohort of age, sex, and race-matched healthy controls was also outlined. The presence of mental health outcomes, including depression, anxiety, bipolar disorder (BPD), psychotic disorders, and obsessive-compulsive disorder (OCD), eating disorders, and suicidality among HNC patients and healthy controls was analyzed. Statistical analysis included propensity score matching, relative risk, and survival analyses to compare outcomes between the groups over time.

Results (or Preliminary Results, as applicable for a project in progress): The most common malignancies in pediatric HNC patients were bone and soft tissue sarcomas, thyroid cancers, salivary cancers, and cutaneous melanoma. HNC patients had significantly higher rates of depression (7.1% vs. 4.2%, RR 1.685, $p < 0.0001$), BPD (0.7% vs. 0.19%, RR 3.769, $p < 0.0001$), psychotic disorders (3.2% vs. 1.6%, RR 1.947, $p < 0.0001$), eating disorders (5.3% vs. 3.9%, RR 1.342, $p = 0.0002$), OCD (3.2% vs. 1.9%, RR 1.718, $p < 0.0001$), and tobacco use (6.8% vs. 2.2%, RR 3.065, $p < 0.0001$). HNC patients had significantly lower rates of anxiety (8.8% vs. 11.8%, RR 0.745, $p < 0.0001$) and suicidality (0.5% vs. 1.1%, RR 0.456, $p < 0.0001$), with female HNC patients were more likely to develop anxiety than males (RR 1.272, $p = 0.019$).

Conclusion (or Preliminary Conclusion, as applicable for a project in progress): Pediatric patients with HNC are at higher risk for developing depression, BPD, OCD, psychotic disorders, and eating disorders compared to healthy controls. Interestingly, they show lower rates of anxiety, potentially due to coping mechanisms developed through their experience with illness. Suicidality was also significantly lower in HNC patients. These findings describe the influence of HNC on the mental health of children and adolescents, highlighting the need for appropriate support for both patients and survivors