

Journal Article



Family cancer history and risk of brain tumors in children: results of the SEARCH international brain tumor study

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Abstract

Objective To examine whether childhood brain tumors (CBTs) are associated with a family history of brain tumors or other cancers in an international case-control study.

Methods Cancers in children's first- and second-degree relatives were ascertained by interview with parents of 620 children with astroglial tumors, 255 with primitive neuroectodermal tumors, 324 with other CBTs, and 2,218 controls from Australia, Canada, France, Israel, Italy, Spain, and the US. These were used with histories of neurofibromatosis or tuberous sclerosis to exclude in subanalyses children with Li-Fraumeni or other hereditary syndromes predisposing to brain tumors.

Results A first- or second-degree relative of 4% of children with astroglial tumors, 6%

with PNET, 5% with other CBTs, and 5% of controls had had a brain tumor. Any potential differences were statistically non-significant, including when focusing on relatives diagnosed in childhood. In the US, where anatomical sites of relatives' other cancers were known, CBT occurrence was not associated with any other specific site. Results were not markedly altered by exclusion of children with hereditary syndromes. *Conclusion* Consistent with most prior studies using these methods, we observed no strong relationship between CBT occurrence and cancers in family members.

Keywords Children - Heredity - Nervous system neoplasms

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References secured to subscribers.

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