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Current State of Our Knowledge on Brain Tumor Epidemiology.

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Abstract

The overall incidence of brain tumors for benign and malignant tumors combined is 18.71 per 100,000 person-years; 11.52 per 100,000 person-years for benign tumors and 7.19 per 100,000 person-years for malignant tumors. Incidence, response to treatment, and survival after diagnosis vary greatly by age at diagnosis, histologic type of tumor, and degree of neurologic compromise. The only established environmental risk factor for brain tumors is ionizing radiation exposure. Exposure to radiofrequency electromagnetic fields via cell phone use has gained a lot of attention as a potential risk factor for brain tumor development. However, studies have been inconsistent and inconclusive due to systematic differences in study designs and difficulty of accurately measuring cell phone use. Recently studies of genetic risk factors for brain tumors have expanded to genome-wide association studies. In addition, genome-wide studies of somatic genetic changes in tumors show correlation with clinical outcomes.

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