Brain Neoplasms

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Mini Review

Brain tumors may additionally originate from neural factors in the mind, or they may represent spread of remote cancers. Number one mind tumors get up from CNS tissue and account for more or less half of all cases of intracranial neoplasms. The remainder of brain neoplasms are as a result of metastatic lesions.

In adults, two thirds of number one mind tumors rise up from systems above the tentorium (supratentorial), whereas in youngsters, two thirds of brain tumors get up from systems below the tentorium (infratentorial). Gliomas, metastases, meningiomas, pituitary adenomas, and acoustic neuromas account for 95% of all brain tumors.

A brain tumor is an abnormal growth of tissue in the brain. The most common surgical treatments are removal via craniotomy or transsphenoidal surgery. Other common surgical treatments include radiosurgery and laser interstitial ablation therapy. In some cases, a tumor may not be amenable to surgical removal, but a surgical biopsy may still be necessary to definitively diagnose the tumor before proceeding with medical treatments.

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Depending on a brain tumor’s origin, it is classified as either primary or secondary, and depending on a brain tumor’s behavior, it is classified as either benign or malignant.

Malignant brain tumors contain cancer cells, are usually fast growing and invade surrounding tissue. Malignant brain tumors very rarely metastasize outside of the brain, but they often spread beyond the margins of the resection and thus, may recur after treatment.

The World Health Organization grades tumors on a scale of one to four on the basis of tumor cell appearance and tumor behavior. The higher the grade, the more aggressive and abnormal the tumor. Grade 1 tumors are slow growing and benign, and they do not spread in the brain; Grade 2 tumors are slow growing but the cells have an abnormal appearance and can progress to higher grades over time; Grade 3 tumors are fast growing and malignant; Grade 4, the most malignant and aggressive tumors, are fast growing with highly abnormal cellular appearance. There are also some molecular features that have great influence on prognosis for brain tumors, the most important of which is the mutation of a gene called IDH1.

Conclusion

The most common brain tumors among adults are secondary brain tumors, also called metastatic brain tumors. These are tumors that begin to grow in another part of the body, then metastasize to the brain through the bloodstream. When the tumors metastasize to the brain, they commonly go to the cerebrum and sometimes to the cerebellum. Often, an individual may have multiple metastatic tumors in several different areas of the brain. Common types of cancer that can travel to the brain include lung cancer, breast cancer, melanoma and colon cancer, all of which are considered malignant once they have spread to the brain.