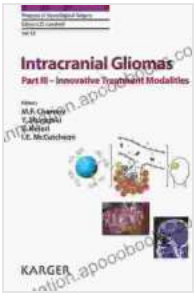
Intracranial Gliomas Part III: Innovative Treatment Modalities - Advancing Progress in Neuro-Oncology

Intracranial gliomas are a type of brain tumor that arises from the glial cells, which are the cells that support and protect the neurons. Gliomas are the most common type of brain tumor, accounting for approximately 80% of all cases. They can occur at any age, but they are most commonly diagnosed in adults between the ages of 40 and 60.

Gliomas are classified into different grades based on their appearance under a microscope. The lower-grade gliomas (grades I and II) are typically slow-growing and have a relatively good prognosis. The higher-grade gliomas (grades III and IV) are more aggressive and have a poorer prognosis.

The treatment of intracranial gliomas depends on the grade of the tumor, its location, and the patient's overall health. Treatment options include surgery, radiation therapy, chemotherapy, targeted therapy, and immunotherapy.



Intracranial Gliomas Part III - Innovative Treatment Modalities (Progress in Neurological Surgery Book 32)

by Christian Seiler

★★★★★ 5 out of 5

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Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 222 pages

Surgery is the primary treatment for intracranial gliomas. The goal of surgery is to remove as much of the tumor as possible without damaging the surrounding healthy brain tissue. Surgery can be performed using a variety of techniques, including open surgery, endoscopic surgery, and laser surgery.

Radiation therapy is a type of treatment that uses high-energy beams to kill cancer cells. Radiation therapy can be delivered externally, using a machine called a linear accelerator, or internally, using radioactive implants.

Chemotherapy is a type of treatment that uses drugs to kill cancer cells. Chemotherapy can be administered orally, intravenously, or directly into the tumor.

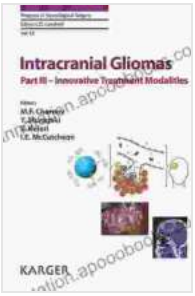
Targeted therapy is a type of treatment that uses drugs to target specific molecules that are involved in the growth and survival of cancer cells. Targeted therapy can be more effective than traditional chemotherapy drugs because it is more specific to cancer cells and less likely to cause side effects.

Immunotherapy is a type of treatment that uses the patient's own immune system to fight cancer. Immunotherapy drugs can help the immune system to recognize and destroy cancer cells.

In addition to the traditional treatment options listed above, a number of new treatment strategies are being developed for intracranial gliomas. These strategies include:

- **Gene therapy:** Gene therapy is a type of treatment that uses genes to treat cancer. Gene therapy drugs can be used to deliver genes that can kill cancer cells or to stimulate the immune system to fight cancer.
- **Stem cell therapy:** Stem cell therapy is a type of treatment that uses stem cells to treat cancer. Stem cells are unspecialized cells that can develop into any type of cell in the body. Stem cell therapy drugs can be used to deliver stem cells that can differentiate into healthy brain cells and replace the damaged cells that are killed by cancer.
- **Nanotechnology:** Nanotechnology is a type of technology that uses nanoscale materials to treat cancer. Nanoparticles can be used to deliver drugs directly to cancer cells or to target specific molecules that are involved in the growth and survival of cancer cells.

Intracranial gliomas are a challenging type of brain tumor to treat, but significant progress has been made in recent years. The development of new treatment strategies, such as gene therapy, stem cell therapy, and nanotechnology, has the potential to further improve the outcomes for patients with this disease.



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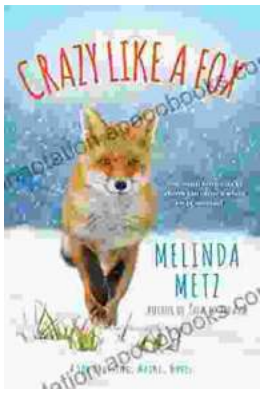

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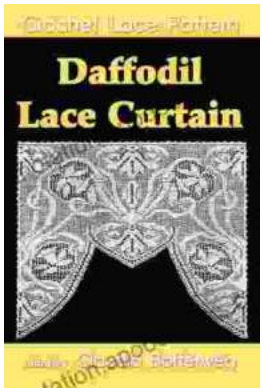

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