

### Facts About Brain Cancer

Primary brain cancer is less common than cancer which spreads to the brain (metastasis). Brain tumors can be non-malignant or malignant. Metastatic cancer to the brain is invariably malignant. More than 40,000 cases of brain cancer are diagnosed annually in the USA.

### Treatment

The treatment options and prognosis of brain cancer depend on many factors:

- Tumor type
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- Location and size of tumor
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- Tumor grade
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- Patient's medical health
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Depending on the exact type and location of brain cancer, the recommended treatment may involve surgery by an experienced neurosurgeon, chemotherapy by a medical oncologist, and radiation therapy delivered by a radiation oncologist.

### Radiation Therapy

Radiation therapy for brain cancer can be delivered by external beam radiation therapy or by brachytherapy (the placement of devices into the body to deliver internal radiation). Radiation therapy can play an important role in control of some brain cancers by shrinking the disease and preventing headaches, obstruction, and seizures.

### External Beam Radiation Therapy

We deliver external beam radiation therapy via 3-dimensional conformal radiotherapy (3D-CRT) which combines multiple radiation treatment fields which deliver CT guided photons and electrons precisely to the tumor while sparing healthy tissue. We often utilize Intensity Modulated Techniques (IMRT) for patients with brain cancer. Treatment planning for radiation therapy is performed using a 16 slice Philips Brilliance™ CT equipped with respiratory gating which enables 4-Dimensional planning for superior radiation treatment delivery.

### **Stereotactic Radiosurgery**

Certain patients may be candidates for receiving high doses of precision guided radiation on a daily basis for one to several days, i.e. Stereotactic Radiosurgery or Radiation Surgery Without Incisions. Stereotactic Radiosurgery utilizes very high doses of CT guided radiation beams and requires that the patient remain immobile during treatments to maintain the precision of therapy. This technique may sometimes be indicated in brain cancer, lung cancer, painful metastatic lesions to organs such as the liver, and even in certain benign conditions such as trigeminal neuralgia and brain blood vessel malformations.