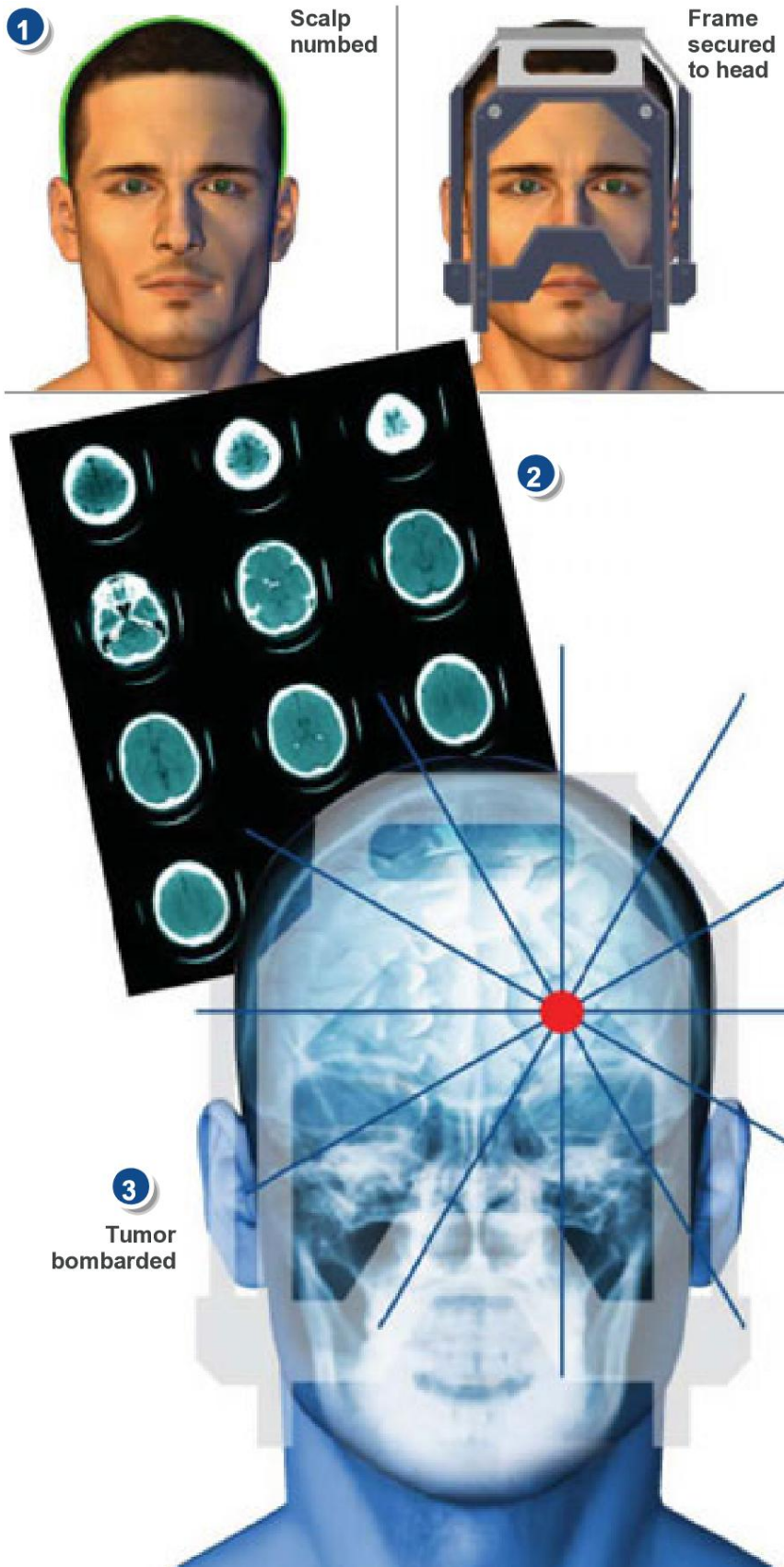




## Gamma Knife Radiosurgery for Tumor



### Overview

This nonsurgical procedure uses beams of radiation to treat tumors or lesions deep inside the brain. The treatment may take several hours. Children may be given general anesthesia to keep them from moving during the procedure, but adults are usually kept awake.

### Preparation

In preparation for the procedure, the patient's scalp is numbed. A frame is secured to the head with pins that push just under the skin.

### MRI Scan

The patient is given an MRI. This scan produces a three-dimensional map of the tumor. Reference points on the frame will allow the physician to accurately target the tumor while avoiding healthy parts of the brain.

### Planning the Procedure

Using the MRI scan, the physician creates a treatment plan that will deliver the correct amount of radiation precisely into the tumor. This planning process can take more than an hour.

### Gamma Treatment

The patient is put inside a machine called a Gamma Unit. The machine bombards the tumor with beams of gamma radiation from many angles. Each individual beam is too weak to cause damage by itself, but the beams' combined power injures the tissue at the selected target site.

### End of Procedure and After Care

When the procedure is complete, the head frame is removed. The four pin holes on the scalp may be a bit sore, and the patient may have a headache or feel nauseated. The patient may not notice results of the procedure for several weeks, months or even years. Follow-up imaging scans will be necessary.