



Mark Brenner, M.D., medical director of the CyberKnife center reviews patient X-rays that reveal the position of each mass.

have to put the patient in a skull frame, we can add an extra margin of safety by spreading the treatment out over multiple sessions. In her case, we spread it over three consecutive days. This allows any nearby critical structure—in her case, the optic chiasm—to repair itself between radiation doses in a way that the tumor cannot.”

The patient reports that she was feeling fine after each of the 38-minute sessions. “I was able to go home and do anything I could do before the procedure,” she says. “There were no complications—no burns, no nausea, no hair loss or anything—and no chance for infection because there was no cutting. I am excited about the results—if they have gotten it all. Time will tell.” Mrs. Steele will be monitored regularly by MRI to determine how well the delivery of radiosurgery controls the tumor growth.

The CyberKnife is designed, manufactured and distributed worldwide by Accuray of Sunnyvale, CA. “The support from this company has gone far beyond a business relationship,” says Dr. Brenner. “It’s

truly been a wonderful experience. I feel like a kid let loose in Toys-R-Us! I have a sense that I’m truly on the cutting edge, without doing any cutting!”

Dr. Naff believes that the most exciting advance with the CyberKnife is going to come not in neurosurgery, but in the application of radiosurgery outside of the brain. “It’s important to understand that radiosurgery has been available to treat brain lesions for about 50 years with the GammaKnife,” he says, “...but confined to those applications essentially until the development of the CyberKnife. So, the most exciting advances, I think, are going to be in gynecologic oncology, surgical oncology, pediatric oncology. Surgeons are justifiably conservative people, so there is going to be a slow, methodical process, but it is starting. We’re beginning to treat unresectable liver, pancreas, pelvic tumors, prostate and ophthalmologic tumors. I don’t see anything overtaking the CyberKnife in the near future for what it does, but who knows what new and exciting technology will emerge in other fields of surgery?” ■