

Powerful Precision, Shorter Treatment

New CyberKnife® robotic radiation technology offers unmatched accuracy and patient comfort

Although it kills cancer cells, radiation can take a toll on patients. The therapy often requires weeks of hospital visits that disrupt work and life, and can leave patients struggling with fatigue and other side effects.

But now there's a new technology that delivers radiation in a matter of days — with better accuracy and fewer side effects.

Southeast Georgia Health System is the only center in Georgia to offer the CyberKnife® M6 Series, a robotic radiation delivery system. The M6 Series, featuring enhanced precision that shortens treatment times, will replace the original CyberKnife technology that the Health System has used since 2011. The Health System Cancer Care Center is using CyberKnife technology to treat prostate, lung, brain and liver cancer, trigeminal neuralgia, acoustic neuroma, recurrent disease and metastatic disease.

Despite its intimidating name, CyberKnife treatment is noninvasive. The system uses real-time imaging: The technology automatically tracks the targeted area and projects beams of intense energy directly to cancerous cells.

Because conventional radiation is less accurate — sometimes damaging healthy tissues and organs surrounding the tumor — it must be administered in lower doses over time. “CyberKnife offers sub-millimeter precision, which allows for higher doses and substantially shortened treatment duration,” says Timothy A. Jamieson, M.D., Ph.D., a board-certified radiation oncologist and medical director of the Cancer Care Centers and CyberKnife program.

In cases of prostate cancer, for example, CyberKnife radiation can be delivered in five consecutive days, whereas traditional radiation might require nine weeks of treatment. A typical CyberKnife session lasts about 20 minutes while the patient lies comfortably and watches TV mounted on the ceiling overhead.

“It's a short amount of time, with minimal disruption to the patient's daily activities and work,” Dr. Jamieson says. “Not only is it convenient, it's very effective.”

Greater accuracy also means fewer side effects. Prostate cancer patients typically experience fewer urinary and potency issues when treated with CyberKnife, while lung cancer patients can preserve pulmonary function when healthy areas of the lung are protected from radiation.

CyberKnife also shows promise for early-stage breast cancer, along with other tumors that are inoperable or complex.

Dr. Jamieson expects the new machine will be a regional draw for cancer patients. The Health System is already one of the busiest CyberKnife centers in the country, as it treats about 300 patients annually. •

*CyberKnife M6
Series technology*

