

*The CyberKnife system is the latest in cancer-fighting technology.*

# THE FUTURE IS NOW



Southeast Georgia Health System joins the ranks of the world's most advanced cancer fighters with its new **CyberKnife** System

What do you call a treatment to remove cancer that can be performed without scalpels, stitches or anesthesia? A great new option, says Timothy A. Jamieson, M.D., Ph.D., a board-certified radiation oncologist with Southeast Georgia Health System who is among a growing number of cancer fighters performing this non-invasive procedure. The new tool he uses that's revolutionizing cancer care is called CyberKnife®, the world's first robotic radiosurgery system designed to treat tumors anywhere in the body without making a single cut.

With no incision, there's also no pain, anesthesia or hospital stay and less recovery time. Cancer treatments using the CyberKnife can be completed in as few as one to five treatments, versus 25 to 40 treatments of traditional radiation therapy, and side effects are minimal.



*From left to right, Timothy A. Jamieson, M.D., Ph.D., Bruce G. Tripp, M.D. and Kenyon M. Meadows, M.D., radiation oncologists at Southeast Georgia Health System.*

## AN ALTERNATIVE TO SURGERY

Too good to be true? That's what a patient may have thought—until January 2011, when the Southeast Georgia Health System Cancer Care Center on the Brunswick Campus becomes only the second facility in the state to offer the CyberKnife treatment.

“CyberKnife has a proven track record of success with thousands of cancer patients worldwide,” says Dr. Jamieson, who has performed the procedure for four years and served as the medical director of the CyberKnife center in Arlington, Va.

“Having this technology will give our patients yet another treatment option without having to travel away from home. CyberKnife uses the latest real-time imaging guidance to deliver beams of high-dose radiation to tumors with extreme accuracy. It can be used throughout the body on patients with inoperable or surgically complex tumors.”

## SAVING PROSTATES IN PERIL

Across the country, one of the fastest-growing uses of the CyberKnife has been for the treatment of prostate cancer, the second most common cancer in men. The

## KNOW THE BENEFITS

The team of board-certified radiation oncologists: Timothy A. Jamieson, M.D., Ph.D., Bruce G. Tripp, M.D. and Kenyon M. Meadows, M.D., says the CyberKnife offers key advantages by:

- + Treating tumors anywhere in the body.
- + Improving a patient's quality of life during and after treatment. This noninvasive alternative to surgery is pain-free, requires no anesthesia, has minimal side effects, is an outpatient procedure with little or no recovery time and allows for an immediate return to normal activities.
- + Providing an option for patients diagnosed with previously inoperable or surgically complex tumors.
- + Delivering high-dose radiation with submillimeter accuracy, minimizing damage to surrounding healthy tissue.
- + Continually tracking, detecting and correcting for tumor and patient movement during the treatment.
- + Treating tumors from virtually unlimited directions with flexible robotic mobility.

# 3-5

Number of treatments typically required with CyberKnife, as opposed to 25 to 40 treatments of traditional radiation therapy.

American Cancer Society estimated that 217,730 men were diagnosed with prostate cancer in 2010 and 32,050 died from it, making it the second-leading cause of cancer-related death among men in the U. S.

While the jury is still out on how to prevent prostate cancer, the good news is, in general, it tends to be a slow-growing cancer. So the earlier a physician diagnoses prostate cancer, the greater the likelihood for successfully treating it. “Prostate cancer can be effectively and safely treated in only five short, noninvasive CyberKnife treatments with excellent results,” Dr. Jamieson says. “This allows patients to maintain their busy schedule with minimal interruption or side effects.” In contrast, prostate cancer treatment using intensity-modulated radiation therapy (IMRT) spans 42 treatments, five days per week for eight and a half weeks.

CyberKnife treatments typically leave prostate cancer patients with fewer unpleasant side effects than prostate seed implants—an invasive procedure during which radioactive seeds are placed in the prostate—or extended IMRT. “Over the course of five CyberKnife treatments, a patient might develop urinary urgency, some burning, diarrhea and some fatigue,” Dr. Jamieson says. “But those symptoms are typically relatively mild, and within a few weeks they’ll be back to normal.”

David Kranc, M.D., Ph.D., a board-certified urologist on the Brunswick Campus medical staff, adds, “Having CyberKnife technology makes us feel much more confident in treating patients with prostate cancer without causing some of the side effects that result from some types of radiation therapy.”

## THE VALUE OF SCREENING

To fight prostate cancer in its earliest, most treatable stages, most men should talk to their doctors about screening at age 50, according to the American Cancer Society. But men in high-risk groups, such as African-Americans or those with a family history of the disease, should start this discussion earlier.

If your doctor recommends screening, it will likely include a digital rectal exam, or DRE, and a prostate-specific antigen, or PSA, test. The test reports the level of PSA, a substance produced only by the prostate, detected in the blood. The higher a man’s PSA level, the more likely cancer is present.

If the DRE/PSA screen reveals a suspicious growth, the doctor will order a biopsy. If a malignancy is found, the patient has several treatment options, including surgery, IMRT, prostate seed implants and the CyberKnife. “For prostate cancer, people have alternatives,” Dr. Jamieson says. “CyberKnife is unique in combining tremendous efficacy, speed and convenience with minimal side effects.”

## BEYOND PROSTATE CANCER

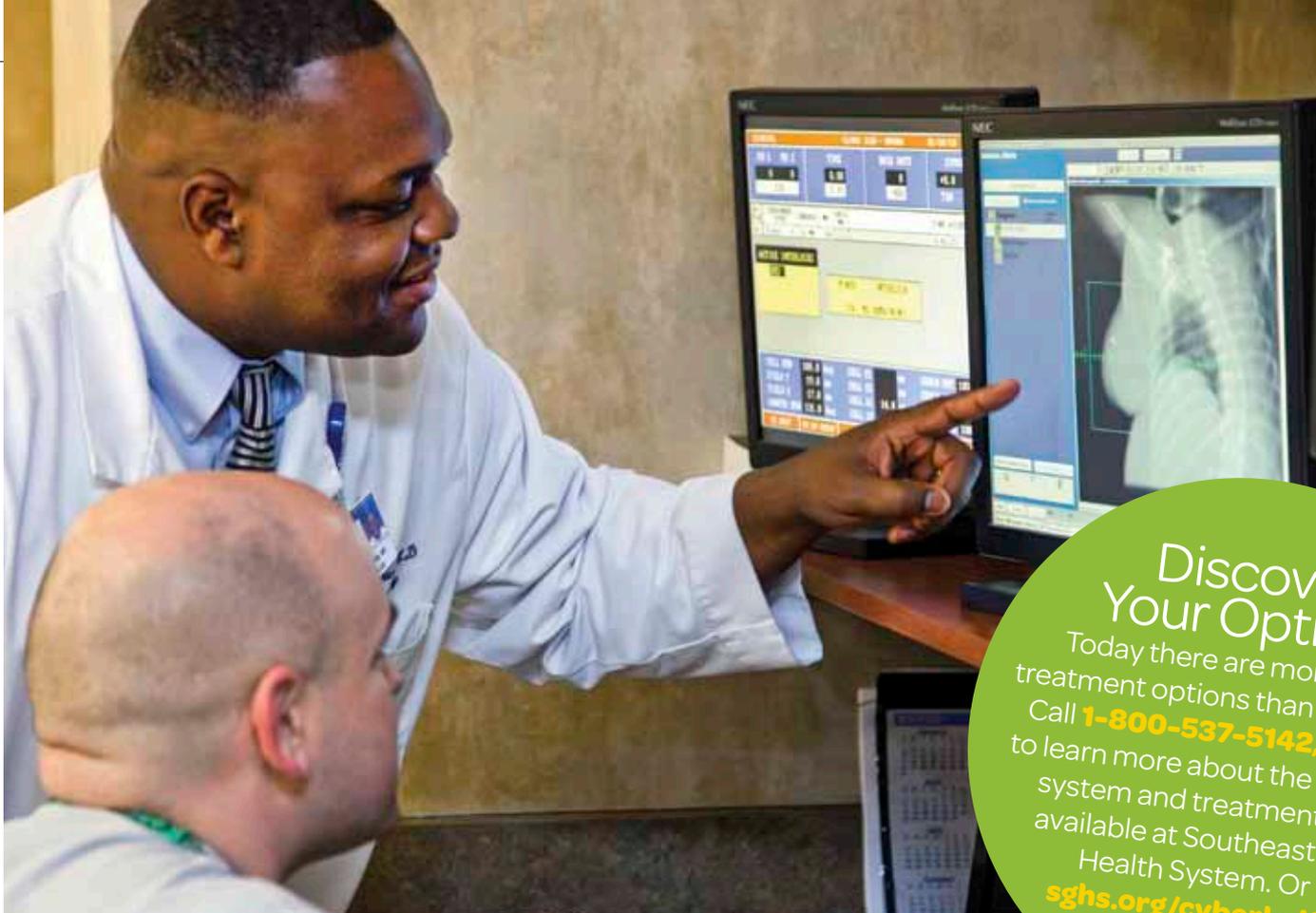
The CyberKnife effectively treats a variety of cancers, including ones found in the brain, spine and lungs, and some tumors that were once considered inoperable. “It was invented by a neurosurgeon at Stanford, so it was initially used on brain tumors and spine tumors,” Dr. Jamieson says.

Mark A. Gold, M.D., a board-certified neurosurgeon on the Brunswick Campus medical staff, calls CyberKnife “a significant advancement in the care of patients with neurological disorders, especially those with cancer of the brain or spine.” Experts also have discovered that the CyberKnife can banish cancer that has spread—known as metastases—in the brain, liver, lung or bone. “For brain metastases, the smaller the amount of brain that’s treated, the less risk of nausea, headaches, fatigue and lethargy,” Dr. Jamieson says.

At Southeast Georgia Health System, a cancer patient undergoing CyberKnife treatment is under the care of an experienced and knowledgeable cancer care team that plans all aspects of care.

“CyberKnife treatment entails a team approach with close interaction in patient selection and treatment planning with not only the radiation oncologist but the surgeons, including urologists, neurosurgeons, thoracic surgeons, general surgeons and pulmonologists,” Dr. Jamieson says. Other members





*Kenyon M. Meadows, M.D., reviews a patient's treatment.*

**Discover Your Options**  
Today there are more cancer treatment options than ever before. Call **1-800-537-5142, ext. 5149** to learn more about the CyberKnife system and treatment options available at Southeast Georgia Health System. Or visit **[sghs.org/cyberknife](http://sghs.org/cyberknife)** and click "Our Services."

of the health system's CyberKnife team include board-certified radiation oncologists Kenyon M. Meadows, M.D., and Bruce G. Tripp, M.D.; nurse navigator Brenda C. Vashaw, R.N., OCN, BSN; and radiation physicist R. David McNally, M.S., MHSA, DABR "This is the cutting edge of stereotactic radiotherapy," says Walter W. Scott, M.D., a board-certified thoracic surgeon with Southeast Georgia Health System. "The advent of the CyberKnife in Brunswick will bring the Cancer Care Center into the top tier of lung cancer treatment centers in the region."

### HOW THE TREATMENT WORKS

During the CyberKnife treatment, patients lie comfortably on a treatment table, which automatically positions them. Anesthesia is not required because the procedure, which lasts between 30 and 60 minutes for most procedures (45 to 75 minutes for prostate), is painless and noninvasive.

The CyberKnife system uses an integrated image-guidance camera, similar to those used for cruise missile guidance, to target just the right spot with a small radiation beam. Before delivery of each radiation beam, the CyberKnife system simultaneously takes

a pair of X-ray images and compares them with the original computerized tomography (CT) scan.

It achieves pinpoint accuracy through two X-ray cameras that work together with powerful software to track even the smallest of patient movements, such as breathing. The robotic arm locks the radiation beam on the tumor as it constantly readjusts its aim in response to the movements detected by the cameras. The patient typically leaves the facility immediately after the procedure and can resume normal activities.

"I'm excited because I realize the power of CyberKnife," Dr. Jamieson says. "Study data shows tremendous results, and I've seen the beneficial impact for patients. The utility is not only in the convenience of treatment and in curing many types of cancer, but in also being able to effectively treat those patients who, in many cases, have no alternatives, including patients who have previously received conventional radiation."

As a physician who has dedicated his life to fighting cancer, Dr. Jamieson says he is thrilled to be among the first to perform stereotactic radiotherapy, which is another way to refer to this precise form of radiation therapy. And best of all, he can now offer hope to more patients. ❏