New therapy shortens uterine cancer treatment

By Terri Yablonsky Stat

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A breakthrough radiation technique is being used to treat women with endometrial cancer, which doctors say results in shorter treatment times, reduced recurrence of cancer and safer outcomes.

In September, Swedish Covenant Hospital treated its first patient using electronic brachytherapy, which delivers therapy directly to cancer sites with minimal exposure to surrounding healthy tissue, said Dr. Gary Schreiber, radiation oncologist at Swedish Covenant Hospital. Electronic brachytherapy uses electricity to generate very low-powered X-rays, similar to a chest X-ray.

Low-energy X-rays emit a type of radiation that isn't radioactive. This means the physician and others can be in the room during treatment. The therapy can be given in any room, not just a shielded vault reserved for radiation. Because the source of radiation is electricity, physicians can turn it on and off for added patient safety.

Endometrial cancer is the most common gynecologic cancer in the United States. It occurs when malignant cells form in the tissues of the lining of the uterus, or endometrium. According to the National Cancer Institute, more than 40,000 cases will be diagnosed in 2008 and will result in nearly 7,500 deaths. When treated in its early stages, the cure rate is very high.

Treatment for endometrial cancer often includes hysterectomy. In the past patients have required additional treatments including external beam radiation and radioactive implants.

The Axxent Electronic Brachytherapy System from Xoft, cleared in May by the FDA for the treatment of endometrial cancer, has been used to treat early-stage breast cancer and other



Cancer survivor Carol Banks is one of the area's first patients to be treated with electronic brachytherapy. ABEL URIBE/TRIBUNE

cancers as well. While traditional external beam radiation targets the body from outside, electronic brachytherapy works from within. Along with Swedish Covenant, Little Company of Mary Hospital in Evergreen Park also offers the therapy for endometrial cancer.

With electronic brachytherapy, treatment is delivered through the vagina. A CT scan allows doctors to see critical structures such as the bladder and rectum so they can tailor treatment, said Schreiber.

"We use a team approach," said Schreiber. "A physicist and I will analyze the CT scan and come up with a detailed plan to program the machine so it gives radiation to the area we want to target while minimizing radiation to other areas."

Electronic brachytherapy requires fewer treatments typically three treatments one week apart—compared with daily treatments for five to eight weeks with external beam radiation. It takes only three to four minutes to complete the procedure. There is no need for anesthesia, said Schreiber.

"The treatment is going to become increasingly popular because recent studies show that patients who previously received external beam radiation don't necessarily have to have it and can have surgery and brachytherapy alone," said Schreiber. External beam radiation holds greater risk for injury to the bladder or bowel.

"Brachytherapy is tried and true," said Schreiber. "This system is a newer and safer way of administering treatment that has been around for a long time."

Other treatment options exist too. "We've been using high-dose-rate brachytherapy following surgery, an alternative that has worked very well for a long time," said Dr. William Small Jr., professor of radiation oncology at Northwestern University Feinberg School of Medicine.

Small believes more study is needed on electronic brachytherapy. "My main concern is whether the new machine is delivering a different dose of radiation than traditional brachytherapy to the regions at risk for recurrence and the normal tissues. The current way of delivering brachytherapy that we use has been done in many institutions very well. Can you reproduce those outcomes with electronic brachytherapy?"

smart@tribune.com