

Mayo Clinic News Network

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Intro: Less than 10 days. That's all it takes for some early-stage breast cancer patients to complete their treatment, including surgery and a full course of radiation.

"For those patients who have small tumors that are completely removed with a lumpectomy and have no evidence of [cancer] in the lymph node, it's an outpatient procedure," says Dr. Tina Hieken, a Mayo Clinic surgeon.

Patients leave the operating room the same day as surgery with a catheter in place, which is used to administer a type of radiation therapy called brachytherapy. "Treatments are delivered over five weekdays, twice a day, approximately six hours apart, for a total of 10 treatments," says Dr. Sean Park, a Mayo Clinic radiation oncologist.

Brachytherapy itself is not new, but this fast-track treatment option, developed by Dr. Park and Dr. Hieken, is. Dennis Douda shows how it works.

Video

Audio

Total running time [0:59]	/// VIDEO
Dennis Douda speaking	<p>The expedited brachytherapy treatment process is for low-risk, early-stage breast cancer patients and involves a single surgery. First, special dyes are injected to identify any cancer cells that may have spread beyond the tumor site or to the lymph nodes under the arm. That allows a pathologist to immediately screen the lymph nodes and a safe margin of tissue around the tumor, while the patient is still under anesthesia. Once the all-clear's given, the surgery continues with a second incision to insert the brachytherapy catheter and expand it, filling the lumpectomy cavity. The very next day, the patient's radiation plan is mapped out. The following morning, a computer-controlled robotic machine manipulates a single radioactive seed, smaller than a grain of rice, within the implanted catheter. The seed stops at different locations for varying amounts of time, thus shaping the radiation dose. Unlike externally-delivered radiation, brachytherapy strikes the target area more precisely, without passing through healthy tissue. For the Mayo Clinic News Network, I'm Dennis Douda.</p>

Anchor Tag: It's hoped the expedited brachytherapy option encourages more women to receive the full benefit of their recommended post-surgery radiation. Dr. Hieken says the completion rate for breast cancer patients, in general, may be as low as 60 to 70 percent.